
REMEDIAL INVESTIGATION REPORT

for

**45 COMMERCIAL STREET
BROOKLYN, NY 11222
NYSDEC BCP Site No.: C224304**

Prepared for:

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LANGAN

CERTIFICATION

I, Michael D. Burke, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.



Michael D. Burke, PG, CHMM

TABLE OF CONTENTS

LIST OF ACRONYMS	vi
1.0 INTRODUCTION	1
2.0 SITE PHYSICAL CHARACTERISTICS.....	2
2.1 Site Description	2
2.1.1 <i>Description of Surrounding Properties</i>	<i>2</i>
2.1.2 <i>Topography</i>	<i>4</i>
2.1.3 <i>Stormwater Runoff and Drainage</i>	<i>4</i>
2.1.4 <i>Wetlands</i>	<i>4</i>
2.2 Geology and Hydrogeology	4
2.2.1 <i>Regional and Site Geology</i>	<i>4</i>
2.2.2 <i>Regional and Site Hydrogeology</i>	<i>5</i>
3.0 SITE BACKGROUND	6
3.1 Historical Site Use.....	6
3.2 Redevelopment Plan	6
3.3 Previous Environmental Reports	6
3.4 Summary of Areas of Concern.....	9
4.0 FIELD INVESTIGATION	11
4.1 Geophysical Investigation and Utility Location	11
4.2 Soil Investigation	11
4.2.1 <i>Soil Boring Investigation.....</i>	<i>11</i>
4.2.2 <i>Soil Sampling and Analysis.....</i>	<i>12</i>
4.3 Groundwater Investigation	14
4.3.1 <i>Monitoring Well Installation and Development</i>	<i>14</i>
4.3.2 <i>Groundwater Sampling and Analysis</i>	<i>14</i>
4.4 Soil Vapor Investigation	15
4.4.1 <i>Soil Vapor Point Installation.....</i>	<i>15</i>
4.4.2 <i>Soil Vapor Sampling and Analysis</i>	<i>15</i>
4.5 Quality Assurance/Quality Control Sampling	16
4.6 Data Validation.....	17
4.6.1 <i>Data Usability Summary Report Preparation</i>	<i>17</i>
4.7 Field Equipment Decontamination.....	18
4.8 Investigation-Derived Waste Management.....	18
4.9 Community Air Monitoring Program	19
5.0 FIELD OBSERVATIONS AND ANALYTICAL RESULTS	20
5.1 Geophysical Investigation Findings	20
5.2 Geology and Hydrogeology	20
5.2.1 <i>Historic Fill.....</i>	<i>20</i>
5.2.2 <i>Native Soil Layers.....</i>	<i>20</i>
5.2.3 <i>Bedrock</i>	<i>20</i>

5.2.4 Hydrogeology	20
5.3 Soil Findings	21
5.3.1 Field Observations	21
5.3.2 Analytical Results	21
5.4 Groundwater Findings	25
5.4.1 Field Observations	25
5.4.2 Analytical Results	25
5.5 Soil Vapor Findings	27
5.5.1 Field Observations	27
5.5.2 Analytical Results	27
5.6 QA/QC Sample Results	28
5.7 Data Usability	28
5.8 Evaluation of Areas of Concern	28
5.8.1 AOC 1: Prior Site Use	28
5.8.2 AOC 2: Petroleum-Impacted Soil	29
5.8.3 AOC 3: Historic Fill	31
5.8.4 AOC 4: Historical Use of Surrounding Properties	32
6.0 QUALITATIVE HUMAN AND FISH/WILDLIFE EXPOSURE ASSESSMENT	34
6.1 Current Conditions	34
6.2 Post Redevelopment Conditions	34
6.3 Conceptual Site Model	34
6.3.1 Potential Sources of Contamination	34
6.3.2 Exposure Media	35
6.3.3 Receptor Populations	35
6.4 Potential Exposure Pathways – On-Site	35
6.4.1 Current Conditions	35
6.4.2 Construction/Remediation Condition	35
6.4.3 Proposed Future Conditions	35
6.5 Potential Exposure Pathways – Off-Site	36
6.5.1 Current Conditions	36
6.5.2 Construction/Remediation Condition	36
6.5.3 Proposed Future Conditions	36
6.6 Evaluation of Human Health Exposure	37
6.6.1 Current Conditions	37
6.6.2 Construction/Remediation Activities	37
6.6.3 Planned Future Conditions	38
6.6.4 Human Health Exposure Assessment Conclusions	38
7.0 NATURE AND EXTENT OF CONTAMINATION	40
7.1 Soil Contamination	40
7.1.1 Historic Fill	40
7.1.2 Petroleum-impacted soil	40
7.2 Groundwater Contamination	41
7.2.1 CVOC-Impacted Groundwater	41
7.2.2 Metals-Impacted Groundwater	41

7.2.3	<i>Emerging Contaminants in Groundwater</i>	41
7.3	Soil Vapor Contamination	41
8.0	CONCLUSIONS	42
9.0	REFERENCES	44

FIGURES

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Adjoining Properties and Surrounding Land Use Map
Figure 4	Groundwater Elevation Contour Map
Figure 5	AOC and Sample Location Map
Figure 6	Previous Soil Sample Analytical Results Map
Figure 7	Soil Sample Analytical Results Map
Figure 7A	Soil Sample Analytical Results Map – TCLP Metals
Figure 8	Groundwater Sample Analytical Results Map
Figure 9	Soil Vapor Sample Analytical Results Map
Figure 10	Area of Concern and Conceptual Site Model Map
Figure 11	Subsurface Cross Section A-A'

TABLES

Table 1	Sample Collection Summary
Table 2	Groundwater Elevation Summary
Table 3	Soil Sample Analytical Results Summary – VOCs & SVOCs
Table 4	Soil Sample Analytical Results Summary – PCBs, Pesticides, Herbicides, Inorganics
Table 5	Soil Sample Analytical Results Summary – Emerging Contaminants
Table 6	Groundwater Sample Analytical Results Summary – VOCs & SVOCs
Table 7	Groundwater Sample Analytical Results Summary – PCBs, Pesticides, Herbicides, Inorganics
Table 8	Groundwater Sample Analytical Results Summary – Emerging Contaminants
Table 9	Soil Vapor Sample Analytical Results Summary

APPENDICES

Appendix A	Previous Environmental Reports
Appendix B	Photograph Log
Appendix C	Geophysical Survey Report
Appendix D	Soil Boring Logs
Appendix E	Monitoring Well Construction and Groundwater Sampling Logs
Appendix F	Soil Vapor Construction and Sampling Logs
Appendix G	Data Usability Summary Report
Appendix H	Community Air Monitoring Program Summary Data
Appendix I	Laboratory Analytical Reports
Appendix J	Completed Fish and Wildlife Resources Impact Analysis Decision Key

LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AGV	Air Guidance Value
ASP	Analytical Services Protocol
ASTM	ASTM International
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	Below grade surface
CAMP	Community Air Monitoring Program
CHASP	Construction Health and Safety Program
COC	Contaminant of Concern
CSM	Conceptual Site Model
CU	Commercial Use
CVOC	Chlorinated Volatile Organic Compounds
DER	Division of Environmental Remediation
DER-10	Technical Guidance for Site Investigation and Remediation
DO	Dissolved Oxygen
DUSR	Data Usability Summary Report
el.	Elevation (NAVD88)
ELAP	Environmental Laboratory Approval Program
ESA	Environmental Site Assessment
Eurofins	Eurofins Lancaster Laboratories
eV	Electron volt
FWRIA	Fish and Wildlife Resources Impact Analysis
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
IDW	Investigation Derived Waste
Langan	Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C.
mg/kg	Milligram per kilogram
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAVD88	North American Vertical Datum of 1988
ng/kg	Nanograms per kilogram
ng/L	Nanograms per liter
NOVA	NOVA Geophysical Engineering
NYC	New York City
NYSDEC	New York State Department of Environmental Conservation
NYSDEC SGVs	NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA water
NYSDOH	New York State Department of Health

Acronym	Definition
OER	NYC Mayor's Office of Environmental Remediation
ORP	Oxidation-reduction potential
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PFAS	Perfluoroalkyl Substances
PFHxA	Perfluorohexanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic acid
PFPeA	Perfluoropentanoic Acid
PID	Photoionization Detector
PM10	10 micrometers
PPE	Personal Protective Equipment
ppm	Parts per million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RL	Reporting limit
RURR	Restricted Use Restricted-Residential Use
SCO	Soil Cleanup Objective
SMD	Sub-Membrane Depressurization
SMMP	Soil Materials/Management Plan
SMP	Site Management Plan
SVOC	Semivolatile organic compound
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
UN/DOT	United Nations/Department of Transportation
USEPA	United State Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tanks
UU	Unrestricted Use
VOC	Volatile Organic Compound
Volunteers	GPL Development LLC and its affiliate Volunteer Applicants
µg/L	Micrograms per liter
µg/m ³	Micrograms per cubic meter
NYCRR	New York Codes, Rules, and Regulations

1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) prepared this Remedial Investigation Report (RIR) on behalf of GPL Development LLC and its affiliate Volunteer Applicants (collectively, the Volunteers) for the property located at 45 Commercial Street in the Greenpoint neighborhood of Brooklyn, New York (the site). The Volunteer entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) to remediate the site, pursuant to a Brownfield Cleanup Agreement (BCA), dated April 17, 2020, for Site No. C224304.

This RIR presents environmental data and findings from the Remedial Investigation (RI) that was implemented by Langan in May 2020. The objective of the RI was to investigate and characterize the nature and extent of environmental impacts at and emanating from the site and to provide sufficient information to evaluate remedial alternatives.

This RIR is organized as follows:

- Section 2.0 describes the setting and physical characteristics of the site.
- Section 3.0 describes the site background, including results of previous investigations and identified areas of concern (AOCs).
- Section 4.0 presents the investigation field procedures.
- Section 5.0 describes the field observations and analytical results.
- Section 6.0 presents an assessment of the exposure risks of site contaminants to human, fish, and wildlife receptors.
- Section 7.0 presents the nature and extent of contamination in site media as determined through the field investigation and analysis of environmental samples.
- Section 8.0 summarizes the results of the investigation and presents conclusions based on field observations and analytical results.
- Section 9.0 presents the references used in preparation of this report.

2.0 SITE PHYSICAL CHARACTERISTICS

2.1 Site Description

The site is located at 45 Commercial Street in the Greenpoint neighborhood of Brooklyn, New York and is identified as Block 2472, Lot 70 on the Borough of Brooklyn Tax Map. The site encompasses an area of about 44,600 square feet, the western portion of which is currently used as a staging area for construction trailers and equipment for the redevelopment of the adjoining Parcel H3. A site location map is presented as Figure 1. The site plan is presented as Figure 2.

In addition to being a BCP site, the site is currently under the regulatory oversight of the New York City (NYC) Office of Environmental Remediation (OER) pursuant to the Revised Negative Declaration dated November 6, 2013 (CEQR No. 14DCP004K), which placed E-Designations for Hazardous Materials, Noise, and Air Quality (E-317) on the tax lot comprising the site, and the NYSDEC, following execution of the BCA, dated April 17, 2020. The E-Designation (E-317) supersedes the E-Designation (E-138) that was previously assigned to the site in connection with the May 11, 2005 Greenpoint-Williamsburg Rezoning (CEQR No. 04DPC0003K). The E-Designation includes environmental restrictions during development for hazardous materials, air quality (i.e., HVAC fuel and exhaust stack location requirements), and noise (i.e., window wall attenuation and alternate means of ventilation requirements).

The site is bound by an active construction site, 1 Bell Slip (a/k/a, Parcel H3 [Block 2472, Lots 200 and 475]) to the north, an active NYC transit authority parking lot, 65 Commercial Street (Block 2472, Lot 425) to the east, Commercial Street to the south, and Bell Slip followed by a new 37-story mixed used residential and commercial building with associated site improvements, 37 Blue Slip (a/k/a, Parcel G1 [Block 2472, Lots 80, 90, and part of Lot 100]) and 21 Commercial Street (a/k/a, Parcel G2 [Block 2472, Lots 50, 60, part of Lot 100]) to the west.

2.1.1 Description of Surrounding Properties

According to the New York City Department of City Planning (NYCDCP) Zoning Map 12c, dated August 8, 2018, the site is currently located in an R6/R8/C2-4 mixed-use residential and commercial district. The following is a summary of surrounding property usage:

Direction	Adjoining and Adjacent Properties			Surrounding Properties
	Block No.	Lot No.	Description	
North	2472	200 & 475	Active construction site, 1 Bell Slip (Parcel H3)	Newtown Creek

Direction	Adjoining and Adjacent Properties			Surrounding Properties
	Block No.	Lot No.	Description	
East	2472	425	NYC Transit Authority Parking Lot 65 Commercial Street	Vacant lot, mixed-use residential and commercial buildings, residential buildings
South	Commercial Street			Vacant lots, mixed-use residential and commercial buildings, industrial and manufacturing buildings,
West	Bell Slip			Mixed-use residential and commercial buildings 21 Commercial Street and 7 Bell Slip

Public infrastructure (storm drains, sewers, and underground utility lines) exists or is being built within Commercial Street and Bell Slip.

Land use within a half-mile radius includes multi-story residential buildings, some with ground-level retail stores and restaurants; parking lots; office buildings; small-scale industrial and manufacturing facilities; and park land owned and operated by the New York City Department of Parks and Recreation (NYCDPR). The East River and Newtown Creek are the two closest ecological receptors. The property located southwest of the site, across Commercial Street, is the former NuHart Plastics Manufacturing facility located at 280 Franklin Street, Brooklyn, NY (Lots 1, 10, and 78 of Block 2487), which is listed as an NYSDEC inactive hazardous waste disposal site (State Superfund Site No. 224136). No schools or day care facilities are on the site. Sensitive receptors, as defined in DER-10, within a half mile of the site include those listed below:

Number	Name (Approximate distance from site)	Address
1	Newtown Barge Playground (approximately 0.12 miles southwest of the site)	3 Commercial Street, Brooklyn NY 11222
2	Greenpoint Playground (approximately 0.10 miles southwest of the site)	243 Franklin Street, Brooklyn NY 11222
3	Dupont Street Senior Housing (approximately 0.13 miles south of the site)	80 Dupont St, Brooklyn, NY 11222

A map showing the surrounding land uses with descriptions of the adjoining properties is included as Figure 3.

2.1.2 Topography

According to survey data, most of the site is at an elevation (el.) of about el. 11 to 14 feet¹; the high point of the site is el. 13.91 feet proximate to Commercial Street in the southern part of the site.

2.1.3 Stormwater Runoff and Drainage

The site footprint is covered by impervious concrete and/or asphalt. Stormwater runoff from the site is expected to drain to the city sewers via catch basins located along the street curbs to the south of the site along Commercial Street or may temporarily pond on site because elevations of adjoining properties (Parcels G1, H3) were raised as part of construction.

2.1.4 Wetlands

Wetlands on and near the site were evaluated by reviewing the National Wetlands Inventory and NYSDEC regulated wetlands map. There are no wetlands on the site. The nearest wetland is Newtown Creek, which is located about 400 feet north of the site.

According to the Effective National Flood Insurance Rate map for the City of New York published by the Federal Emergency Management Agency (Community Panel No. 3604970202F, dated September 05, 2007), the site falls within Zone AE, which is subject to inundation by the 1% annual chance flood.

2.2 Geology and Hydrogeology

2.2.1 Regional and Site Geology

The surficial geology in the vicinity of the site generally consists of glacial and fluvial soil deposits, as well as manmade fill. The glacial deposits, commonly referred to as ground moraine or till, are a widespread dense layer typically consisting of heterogeneous mixtures of clay, silt, sand, gravel, and boulders.

According to United States Geological Survey (USGS) "Bedrock and Engineering Geology Maps of New York County, and parts of Kings and Queens Counties, New York, and parts of Bergen and Hudson Counties, New Jersey", bedrock stratigraphy in the area consists of Ravenswood Granodiorite of the Middle Ordovician to Middle Cambrian Age and Hartland Formation of the Middle Ordovician to Lower Cambrian Age. Ravenswood Granodiorite typically consists of medium- to dark-gray, sillimanite-garnet-pink microcline-plagioclase-biotite-muscovite-quartz and biotite-hornblende-orthoclase layered gneiss. The Hartland formation typically consists of gray

¹ Datum refers to the North American Vertical Datum of 1988 which is approximately 1.1 feet above mean sea level datum at Sandy Hook, New Jersey as defined by the United States Geologic Survey (USGS NGVD 1929).

sillimanite-garnet-microcline gneiss and fine-grained biotite-muscovite-quartz schist interlayered with quartz-plagioclase-muscovite pegmatite, hornblende amphibolite, and coarse granoblastic-textured amphibolite gneiss. Bedrock was not encountered during the investigation or previous environmental investigations conducted at the site. Bedrock was encountered during a geotechnical investigation at the site at about 50 to 65 feet bgs.

Based on RI observations, the subsurface profile generally consists of historic fill overlying light-to dark-gray clay with varying amounts of silt, peat, sand, and shells. Historic fill thickness was generally measured to vary between 13 and 20 feet. The fill generally consists of gray to black fine-grained sand with varying amounts of gravel, silt, clay, brick, concrete, glass, coal ash, slag, wood, and coal.

2.2.2 Regional and Site Hydrogeology

Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flows toward areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeological network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation, evaporation, extent of vegetation cover, and coverage by impervious surfaces. Other factors influencing groundwater include depth to bedrock, the presence of artificial fill, and variability in local geology and groundwater sources or sinks.

Infiltration of precipitation to the water table is likely minimal due to the presence of impervious surfaces throughout the site. Stormwater runoff from the site and surrounding area is expected to drain to the city sewers via catch basins located along the street curbs along Commercial Street or may temporarily pond on site because elevations of adjoining properties (Parcels G1, H3) were raised as part of construction. Groundwater in New York City is not used as a potable water source. Potable water provided to New York City is derived from surface impoundments in the Croton, Catskill, and Delaware watersheds.

Groundwater was observed at depths between 8.55 and 10.54 feet below grade surface (bgs) with elevations ranging from el. 2.82 to 3.28 feet during synoptic groundwater level measurements collected from six wells during the RI. Groundwater at the site and on adjoining and surrounding properties generally flows to the west towards the confluence of Newtown Creek and the East River. A groundwater elevation contour map is presented as Figure 4.

3.0 SITE BACKGROUND

3.1 Historical Site Use

Coal and lumber storage were the primary uses of the site for more than 100 years from the late 1800s until about 1980, when the lumber yard operations were phased out and the owner (Lumber Exchange Terminal, Inc.) began to lease portions of the site to tenants for heavy construction equipment, materials, and machinery storage.

3.2 Redevelopment Plan

The redevelopment project includes the removal of contaminated soil/fill and construction of one mixed-use residential and commercial building with 374 residential units (100% affordable housing for families earning under 90% of the annual median income) and ground floor retail. The building will comprise a 6-story podium (no cellar) with a 22-story tower set back from Commercial Street. The building footprint is about 32,000 square feet and the remainder of the tax lot (12,600 square feet) will be open space with a mixture of hardscape and landscaped areas.

3.3 Previous Environmental Reports

Environmental reports prepared for the site include the following:

1. *Phase I Environmental Site Assessment Report – Greenpoint Lumber Yard, Brooklyn, New York, prepared by AKRF, Inc. dated July 2001*
2. *Supplemental Subsurface (Phase II) Investigation Report – Greenpoint Lumber Yard, Brooklyn, New York, prepared by AKRF, Inc. dated April 2004*
3. *Remedial Investigation Report – Parcels D1, D2, E3, F, G, and H, prepared by Langan, dated May 19, 2014*
4. *Subsurface Investigation – 45 Commercial Street, performed by Langan, dated September 2019*

Reports are summarized below and available reports are included in Appendix A.

Phase I Environmental Site Assessment Report – Greenpoint Lumber Yard, Brooklyn, New York, prepared by AKRF, Inc. (July 2001)

AKRF, Inc. was retained by Park Tower Realty Corporation to perform an Environmental Site Assessment (ESA) of a 21-acre former lumber yard (including lands underwater) in the Greenpoint neighborhood of Brooklyn, New York. The site is included in the upland acres that comprise the former lumber yard.

The Phase I ESA concluded that releases of petroleum or hazardous substances may be present on the former lumber yard (including the site) as the result of historical uses of the site and surrounding area. Several 55-gallon drums of lube oil and car maintenance activities (minor

auto repairs, truck washing, and tire changes) were observed at the site during the site reconnaissance.

Supplemental Subsurface (Phase II) Investigation Report – Greenpoint Lumber Yard, Brooklyn, New York, prepared by AKRF, Inc. (April 2004)

This investigation included the completion of two soil borings (B15 and MW15A) and one groundwater monitoring well (MW15A), and collection of four soil samples and one groundwater sample within the site boundary. Soil samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and target analyte list (TAL) metals. Groundwater samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and TAL metals.

- Historic fill was identified in both borings completed at the site and was composed of varying amounts of sand, silt, and gravel with brick, coal, concrete, slag, and wood. Historic fill was observed immediately below the asphalt and concrete cap to boring termination depths of about 15 feet bgs in boring B15 and about 10 feet bgs in MW15A.
- No VOCs exceeded the New York State Department of Environmental Conservation (NYSDEC) Part 375-6.8(b) Unrestricted Use (UU) or NYSDCE Part 375-6.8(b) Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCOs).
- Seven semivolatile organic compounds (SVOCs) (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and ideno(1,2-c,d)pyrene) exceeded the UU and/or RURR SCOs in soil samples collected from boring MW15A. Total SVOCs were detected at a maximum concentration of 49.55 milligrams per kilogram (mg/kg). Total PCBs exceeded the UU SCO in a soil sample collected from the 0.5- to 2-foot interval in boring B15. Two pesticides, 4,4'-DDD and 4,4'-DDE, exceeded the UU SCOs in soil samples collected from the 0.5- to 2-foot interval in MW15. Metals (including copper, lead, mercury, nickel, and/or zinc) exceeded the UU and/or RURR SCOs in all soil samples with the exception of one soil sample collected from the 8- to 9-foot interval in boring B15. VOCs, SVOCs, PCBs, and pesticides were not detected in the groundwater sample collected from MW15A.
- Three metals (iron, manganese, and sodium) exceeded the NYSDCE Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 703.5 and the NYSDCE Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA water at total and dissolved concentrations in MW15.

The data collected from the AKRF Phase II investigation is not included in the analysis of this RIR because samples the data was not validated and samples were collected over 15 years ago and, thus, no longer represents site conditions.

Remedial Investigation Report – Parcels D1, D2, E3, F, G, and H, Brooklyn, NY, prepared by Langan (May 19th, 2014)

This investigation was prepared in consultation with the OER to satisfy E-Designation requirements for six parcels of the Greenpoint Landing Development Property and included the completion of one soil boring and groundwater monitoring well (SB20/MW20) and one soil vapor point (SV-9), and collection of three soil samples, one groundwater sample, and one soil vapor sample within the site boundary. Additional data were collected on other parcels that comprise Greenpoint Landing development property. Soil samples were analyzed for VOCs, SVOCs, PCBs, pesticides, and TAL metals. Groundwater samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and TAL metals.

Historic fill identified in the soil boring was composed of varying amounts of sand, silt, gravel, and clay with ash, coal, and concrete and was observed directly below the concrete and asphalt cap to a depth of about 10 feet bgs. Historic fill was underlain by native soil composed of varying amounts of sand, silt, and clay to a boring termination depth of about 15 feet bgs.

- No VOCs were detected above the UU or RURR SCOs. Eight SVOCs (3-methylphenol/4-methylphenol, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and/or ideno(1,2,3-cd)pyrene) exceeded the UU and/or RURR SCOs in one or more soil samples. Total SVOCs were detected at a maximum concentration of 219.16 mg/kg in a sample collected from the 0- to 2-foot interval in boring SB-20. Five metals (arsenic, copper, lead, mercury, and zinc) exceeded the UU SCOs in one or more soil samples; lead also exceeded the RURR SCO in soil collected from the 3- to 5-foot depth interval in boring SB20. Pesticides and herbicides were not detected in soil samples.
- VOCs and SVOCs were not detected above the NYSDEC SGVs. PCBs, pesticides, and herbicides were not detected in groundwater. Four metals (iron, magnesium, manganese, and sodium) exceeded the NYSDEC SGVs at total and dissolved concentrations in MW20.
- Thirteen petroleum, ketone, and/or solvent-related VOCs (including 2,2,4-trimethylpentane, 2-butanone, acetone, benzene, carbon disulfide, chloromethane, cyclohexane, heptane, n-hexane, p- & m-xylene, propylene, toluene, and trichlorofluoromethane) were detected in soil vapor collected from SV-9; however, no NYSDOH standards or guidance values exist for these compounds.
- Soil vapor sample SV-9 was evaluated using the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion. The NYSDOH Guidance document contains Decision Matrices that evaluate eight VOCs – carbon tetrachloride, trichloroethene (TCE), cis-1,2-dichloroethene, 1,1-dichloroethene, tetrachloroethene (PCE), 1,1,1-trichloroethane, methylene chloride, and vinyl chloride. None of the 8 VOCs

were detected in soil vapor sample SV-9. The NYSDOH Guidance also include Air Guideline Values (AGVs) for three VOCs (methylene chloride, PCE, and TCE); none of the compounds with 3 VOCs were detected in soil vapor sample SV-9.

September 2019 Subsurface Investigation – 45 Commercial Street, performed by Langan

This investigation was performed on the site only (no other Greenpoint Landing development parcel) for the purpose of BCP eligibility and included the completion of 15 soil borings (LB01 through LB15) and collection of 32 soil samples (including quality assurance/quality control [QA/QC] samples). Soil samples were analyzed for VOCs, SVOCs, and TAL metals.

- Historic fill identified in the soil borings was composed of varying amounts of sand, silt and gravel, with ash, asphalt, coal, concrete, wood, and slag and was observed directly below the concrete and asphalt cap to a depths ranging from about 6 to 15 feet bgs (deepest soil boring termination depth). Native soil, composed of grayish brown to tan fine sand with trace silt, was encountered at depths between about 6 to 13.5 feet bgs in four of the twelve soil borings. Native material was not encountered in eight soil borings.
- Two VOCs (acetone and total xylenes) exceeded the UU but not the RURR SCOs in one or more soil samples.
- Nine SVOCs (3- and 4-methylphenol, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and naphthalene) exceeded the UU and/or RURR SCOs in one or more soil samples. With the exception of 3- and 4-methylphenol and naphthalene, all SVOCs were detected in at least one boring at concentrations exceeding the RURR SCOs.
- Seven inorganics (including arsenic, trivalent chromium, copper, lead, mercury, nickel, and zinc) exceeded the UU and/or RURR SCOs in one or more soil samples. Of these inorganics, arsenic, copper, lead, and mercury were detected at concentrations exceeding the RURR SCOs in one or more soil samples.
- Based on field observations and analytical data that identified staining, odors and PID readings and the detection of petroleum related compounds (total xylenes and naphthalene) in soil, a spill was reported to NYSDEC (Spill No. 1906491).

3.4 Summary of Areas of Concern

The following areas of concern (AOC) represent portions of the site that required further investigation and were developed based on site observations, the site development history, and the findings of the previous environmental reports. The AOCs that were investigated include the following:

AOC 1: Prior Site Use

Historical operations at the site include coal and lumber storage for more than 100 years from the late 1800s until about 1980; heavy construction equipment, machinery, and materials storage starting in 1980; and truck/vehicle parking and scaffolding materials storage until the 2000s.

AOC 2: Petroleum-Impacted Soil

The 2019 Subsurface Investigation identified petroleum-impacted soil in one soil boring located in the northeastern portion of the site. Spill No. 19-06491 was reported on September 25, 2019 based on field observations and subsequent analytical data review.

AOC 3: Historic Fill

Historical maps from the mid to late 1800s show the original shoreline of Newtown Creek to be present-day Commercial Street, indicating the site lies entirely on reclaimed land as the result of historical filling activities.

AOC 4: Historical Use of Surrounding Properties

The former NuHart Plastic Manufacturing facility, an NYSDEC inactive hazardous waste disposal site (State Superfund Site #224136), is located about 100 feet south of the site. The NuHart Plastic Manufacturing facility operated from 1950 until about 2004, and was primarily used for the production, storage, and shipping of plastic and vinyl products. Previous investigations performed at the former NuHart Plastic Manufacturing facility found phthalates, paraffinic oil/mineral oil, and trichloroethylene (TCE) in soil, groundwater, and soil vapor. Historical use of surrounding properties also includes light commercial and industrial use such as large item storage and transport areas, and cargo truck repair.

4.0 FIELD INVESTIGATION

The RI was conducted between May 6 and 20, 2020 in accordance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated April 24, 2020; Title 6 NYCRR Part 375; the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010); and the NYSDEC Draft BCP Guide (May 2004). A photograph log documenting this investigation is included as Appendix B.

The RI consisted of the following:

- Geophysical survey to identify subsurface anomalies consistent with utilities, substructures, physical obstructions, and underground storage tanks (USTs), and to pre-clear soil boring locations;
- Advancement of 17 soil borings (LB13N, LB13S, LB13W, LB13, and LB16 through LB28) and collection of 36 soil samples plus quality assurance/quality control (QA/QC) samples;
- Installation of six groundwater monitoring wells and collection of six groundwater samples plus QA/QC samples;
- Installation of five soil vapor points and collection of five soil vapor samples plus QA/QC samples;
- Implementation of a Community Air Monitoring Program (CAMP); and
- Survey and synoptic groundwater gauging of newly installed monitoring wells to evaluate the elevation and flow of site groundwater.

A summary of the samples collected for laboratory analysis is provided as Table 1. Sample locations are shown on Figure 5. Each RI component is further described in the following sections.

4.1 Geophysical Investigation and Utility Location

On May 9, 2019, prior to intrusive field activities, NOVA Geophysical Engineering (NOVA) of Douglaston, New York conducted a geophysical survey. The survey used ground-penetrating radar (GPR) to identify potential USTs and locate buried utilities and subsurface structures in the vicinity of each boring location. Borings were relocated as necessary to avoid subsurface utilities and other subsurface impediments. A copy of the geophysical survey report is included in Appendix C.

4.2 Soil Investigation

4.2.1 Soil Boring Investigation

A total of 17 soil borings (LB13N, LB13S, LB13W, LB13, and LB16 through LB28) were advanced by Eastern Environmental Solutions, Inc. (Eastern) between May 6 and 16, 2020.

Boring locations were selected to provide sufficient site coverage and to evaluate the AOCs listed in Section 3.4. Geoprobe® 6610 and Geoprobe®7822 drilling rigs were used to advance borings to 20 feet bgs.

Soil was collected continuously from surface grade to the final depth of each soil boring into 5-foot-long acetate liners using a 2-inch diameter open-point or a closed-point MacroCore® sampler. Recovered soil was screened for visual, olfactory, and instrumental evidence of environmental impacts and was visually classified for soil type, grain size, color, texture, and moisture content. Instrument screening for the presence of VOCs was performed with a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. Soil boring logs are included in Appendix D.

Non-disposable, down-hole drilling equipment and sampling apparatuses were decontaminated between locations with Alconox® and water. After sample collection, soil borings were either backfilled with clean sand or soil cuttings, or converted to groundwater monitoring wells. Excess soil cuttings were placed into sealed and labeled 55-gallon drums for disposal.

4.2.2 Soil Sampling and Analysis

Thirty-six soil samples (plus QA/QC samples) were collected from the soil borings for laboratory analysis in general accordance with the RIWP. Soil samples were collected as follows:

- One to three representative historic fill samples were collected above the groundwater table in borings LB16, LB17, LB18, LB19, LB20, LB21, and LB22. Historic fill samples targeted intervals where metals were detected above RURR SCOs in nearby Phase II borings.
- In borings LB16, LB18, and LB22, one soil sample was collected from native soil.
- One sample was collected from the interval exhibiting the greatest degree of petroleum contamination, where observed (based on the presence of staining, odor, and/or PID readings above background) in borings LB13, LB13N, LB13S, LB16, LB17, LB20, LB21 and LB22.
- In borings LB13, LB13W, LB26 and LB28, one sample was collected from clean soil below the interval exhibiting the greatest degree of contamination in petroleum-impacted soil borings (based on lack of staining, odor, and/or PID readings above background).

Soil borings LB25 and LB27 were installed to visually delineate petroleum impacts based on field observations; soil samples were not collected.

The table below identifies the borings associated with each AOC.

Area of Concern	Associated Soil Borings
AOC 1 – Prior Site Use	LB13N, LB13S, LB13W, LB13, and LB16 through LB28
AOC 2 – Petroleum-Impacted Soil	LB13, LB13N, LB13W, LB13S, LB16, LB17, and LB20 through LB28
AOC 3 – Historic Fill	LB13N, LB13S, LB13W, LB13, and LB16 through LB28
AOC 4 – Historical Use of Surrounding Properties	LB19, LB20, LB24

Grab samples submitted for VOC analysis were collected directly from the acetate sleeves via laboratory-supplied Terra Core[®] soil sample kits. The remaining sample volume was homogenized and placed into laboratory-supplied glassware. The sample containers were labeled, placed in a laboratory-supplied cooler, and packed with ice (to maintain a temperature of $4 \pm 2^{\circ}\text{C}$). The samples were relinquished, under standard chain-of-custody protocol, to a courier for delivery to Eurofins Lancaster Laboratories Environmental, LLC (Eurofins), a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratory (ID No. 10670) in Lancaster, Pennsylvania. Soil samples were analyzed using one or more of the following United States Environmental Protection Agency (USEPA) methods for NYSDEC Part 375 list and USEPA Target Compound List (TCL)/Target Analyte List (TAL) parameters:

- TCL VOCs by USEPA methods 8260C
- TCL SVOCs by USEPA method 8270D
- Pesticides by USEPA method 8081B
- Herbicides by USEPA method 8151A
- PCBs by USEPA method 8082A
- TAL Part 375-list metals by USEPA methods 6010D/7471B
- Toxicity Characteristic Leaching Procedure (TCLP) Arsenic, Lead, and Mercury by USEPA method 1311
- Hexavalent/trivalent chromium by USEPA method 7196A
- Total cyanide by USEPA method 9010C
- NYSDEC per- and poly-fluoroalkyl substances (PFAS) (21-compound list) by USEPA method 537 Rev. 1.15
- 1,4-Dioxane by USEPA method 8270 with SIM isotope dilution

A soil sample collection summary is included in Table 1.

4.3 Groundwater Investigation

Groundwater monitoring wells were installed and sampled to characterize groundwater conditions and to investigate potential impacts to groundwater associated with the identified AOCs.

4.3.1 Monitoring Well Installation and Development

Six soil borings were converted into permanent groundwater monitoring wells (LB13, LB13N, LB16, LB18, LB19, and LB22 were converted to MW13, MW13N, MW16, MW18, MW19, and MW22, respectively). The wells were installed with 2-inch-diameter, threaded, flush-joint, polyvinyl chloride (PVC) casing and 0.01-inch-slot well screens set to straddle the groundwater table. The screens were set between 5 to 17 feet bgs or 5 to 20 feet bgs; solid PVC risers were installed above the screens to extend the well to grade. The annulus of each well was filled with No. 2 sand to about 2 feet above the top of the screen. Hydrated bentonite well seals were installed above the filter sand, and the wells were finished with flush-mount access covers. Monitoring well construction logs are included in Appendix E.

Following installation, each well was developed by surging using a surge block and purging at least 3 well volumes with a peristaltic pump. Development water was containerized into one United Nations/Department of Transportation (UN/DOT)-approved 55-gallon drum, labeled, and staged for off-site disposal. The top of casing for each monitoring well was surveyed by Langan on May 18, 2020.

4.3.2 Groundwater Sampling and Analysis

Groundwater samples were collected from each newly installed well in accordance with NYSDEC DER-10, USEPA's Low Flow Purging and Sampling Procedures for the Collection of Groundwater Samples from Monitoring Wells (EQASOP-GW4 Revised Sep. 2017) and NYSDEC's January 2020 Guidelines for Sampling and Analysis of PFAS. Before the groundwater samples were collected, wells were continuously purged until groundwater quality parameters (pH, conductivity, turbidity, dissolved oxygen, temperature, and oxidation-reduction potential) stabilized, to the extent practical, in accordance with the USEPA low-flow guidance. A multi-parameter water-quality system was used to monitor the groundwater-quality parameters during sampling. Samples were collected with a peristaltic pump and dedicated polyethylene tubing. The pump was decontaminated with Alconox® and water between each sample location. Purge water was containerized into one UN/DOT-approved 55-gallon drum, labeled, and staged for off-site disposal.

Six groundwater samples plus QA/QC samples were collected (one from each of the six newly installed wells [MW13, MW13N, MW16, MW18, MW19, and MW22]). Samples were collected into laboratory-supplied glassware and delivered via courier service to Eurofins for analysis of one or more of the following USEPA methods for NYSDEC Part 375 list and USEPA TCL/TAL:

- TCL VOCs by USEPA method 8260C
- TCL SVOCs (field-filtered) by USEPA method 8270D
- PCBs (lab-filtered in MW13N) by USEPA method 8082A
- Metals (field-filtered and unfiltered) by USEPA method 6010C/7470
- Pesticides by USEPA method 8081B
- Herbicides by USEPA method 8151A
- NYSDEC per- and poly-fluoroalkyl substances (PFAS) (21-compound list) by USEPA method 537 Rev. 1.15
- 1,4-Dioxane by USEPA method 8270 with SIM isotope dilution

A groundwater sample collection summary is included in Table 1. Groundwater elevations are presented in Table 2. A groundwater elevation contour map is presented as Figure 4. Groundwater sampling logs are included in Appendix E.

4.4 Soil Vapor Investigation

4.4.1 Soil Vapor Point Installation

Five soil vapor points (SV01 through SV05) were installed with a Geoprobe® 6610 or Geoprobe® 7822 DT drilling rig to about 6 feet bgs within the footprint of the proposed building (about 2 feet above the groundwater table) in accordance with the NYSDOH's *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The soil vapor points were constructed with a dedicated 1-7/8-inch polyethylene implant threaded into polyethylene tubing that extended to surface grade. A clean sand filter pack was placed around the screen implant and the remaining annular space was sealed with hydrated bentonite.

4.4.2 Soil Vapor Sampling and Analysis

On May 8, 2020, six soil vapor samples (one from each of the five newly installed soil vapor points, including one duplicate) were collected in general accordance with the NYSDOH's *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The vapor samples are summarized in Table 1. Before collecting vapor samples, three soil vapor point volumes were purged from each sample location at a rate of less than 0.2 liters per minute using a RAE Systems MultiRAE® meter set at a low flow setting. The purged soil vapor was monitored for VOCs with the MultiRAE® during purging.

A helium tracer gas was used in accordance with the NYSDOH guidance to serve as a QA/QC technique to document the integrity of each soil vapor point seal before and after sampling. The tracer gas was introduced into a container, which shrouded the soil vapor point and seal. Helium was measured from the sampling tube and inside the container. Direct readings of less than 10% helium in the sampling tube were considered sufficient to verify a tight seal at each sample point.

One ambient air sample (designated AA01_050820) was collected concurrently with the soil vapor samples. Soil vapor and ambient air samples were collected using laboratory-provided, batch-certified clean, 1-liter air canisters equipped with 2-hour sample interval flow controllers. Soil vapor and ambient air samples were sealed, labeled, and transported via courier service to Eurofins to be analyzed. The samples were analyzed for VOCs by USEPA Method TO-15.

A soil vapor sample collection summary is included in Table 1. Soil vapor point construction and sampling logs are included as Appendix F.

4.5 Quality Assurance/Quality Control Sampling

Trip blanks, field blanks, field duplicate samples, and matrix spike/matrix spike duplicate (MS/MSD) samples were collected and submitted for laboratory analysis for QA/QC purposes. A QA/QC sample collection summary is included in Table 1. Matrix-specific QA/QC samples that were collected for the RI are summarized below:

Soil QA/QC Samples

- One field duplicate sample;
- One MS/MSD sample;
- One field blank sample;
- Four field blank samples for PFAS and 1,4-dioxane; and
- Six trip blanks.

Groundwater QA/QC Samples

- One field duplicate sample;
- One MS/MSD sample;
- One field blank sample;
- One field blank sample for PFAS and 1,4-dioxane; and
- Two trip blanks.

Soil Vapor QA/QC Samples

- One ambient air sample; and
- One field duplicate sample.

MS/MSD samples were collected to assess the effect of the sample matrix on the recovery of target compounds or target analytes.

Field duplicate samples were collected to assess the precision of the analytical methods relative to the sample matrix. The soil duplicates were collected from the same material as the

primary sample by splitting the volume of homogenized sample collected in the field into two sample containers.

Trip blank samples were collected to assess the potential for contamination of the sample containers and samples during transport from the laboratory, to the field, and back to the laboratory for analysis. Trip blanks contain about 40 milliliters of acidic water (doped with hydrochloric acid) that is prepared and sealed by the laboratory when the empty sample containers are shipped to the field, and then unsealed and analyzed for VOCs by the laboratory when the sample shipment is received from the field.

Field blanks were collected to determine the effectiveness of the decontamination procedures for the groundwater sampling equipment train and the cleanliness of unused neoprene gloves and acetate liners used to collect soil samples. Field blank samples consisted of deionized, distilled water provided by the laboratory that passed through/over decontaminated sampling equipment. Field blank samples were analyzed for the same list of analytes as the corresponding sampling event and sample matrix.

4.6 Data Validation

Analytical data was validated by a Langan validator in accordance with USEPA and NYSDEC validation protocols. Copies of the data usability summary reports (DUSR) and the data validator's credentials are provided in Appendix G.

4.6.1 Data Usability Summary Report Preparation

A DUSR was prepared for each sampling matrix. The DUSR presents the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

For the soil and groundwater samples, the following items were assessed:

- Hold times
- Sample preservation
- Sample extraction and digestion
- Laboratory blanks
- Laboratory control samples
- System monitoring compounds
- MS/MSD recoveries
- Field duplicate, trip blank, and field blank sample results

For the soil vapor samples, the following items were assessed:

- Holding times

- Canister certification
- Laboratory blanks
- Laboratory control samples
- System monitoring compounds
- Target compound identification and qualification

Based on the results of data validation, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- "U" – The analyte was analyzed for but was not detected at a level greater than or equal to the reporting limit (RL) or the sample concentration or the sample concentration for results impacted by blank contamination.
- "UJ" – The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
- "J" – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- "R" – The sample results are not useable due to quality of the data generated because certain criteria were not met. The analyte may and may not be present in the sample.
- "B" – Analyte was found in the associated analysis batch blank.
- "D" – Result is from an analysis that required dilution.

After data validation activities were complete, validated data was used to prepare the tables and figures included in this report.

4.7 Field Equipment Decontamination

Handheld sampling equipment, including oil/water interface probes and water quality meters were decontaminated using an Alconox[®]-based solution and triple rinsed with distilled water. Down-hole drilling equipment was decontaminated between each boring by rinsing with an Alconox[®]-based solution. Decontamination wastewater was placed into 55-gallon drums for future off-site disposal.

4.8 Investigation-Derived Waste Management

Investigation derived waste (IDW) generated during the RI was properly handled and containerized. Groundwater from monitoring well development and purging, decontamination water, and excess soil cuttings were placed into 55-gallon steel drums with sealed tops. Soil from the soil borings exhibiting no evidence of chemical or petroleum impacts was used to backfill the soil borings. One drum containing groundwater and one drum containing soil were staged in a secured area on-site pending transport by a licensed waste hauler for disposal at an approved facility.

4.9 Community Air Monitoring Program

A CAMP was implemented during each day of environmental drilling on May 6, 7, 8, 11, 13, and 16, 2020. The CAMP was developed to monitor potential exposure to off-site receptors, including residences and businesses, from potential airborne contaminant releases during intrusive field activities. The CAMP consisted of real-time monitoring for VOCs and particulates (i.e., dust) at upwind and downwind locations to the work.

Instruments

Continuous dust and VOC monitoring was conducted using one upwind and one downwind monitoring station at the site perimeter. Each monitoring station included a TSI DustTrak II aerosol monitor for measuring particulates with an aerodynamic diameter less than 10 micrometers (PM10) and a MiniRAE® 3000 PID for measuring total VOCs. The work zone and site perimeter were visually monitored for fugitive dust emissions.

Action Levels

Action levels used to monitor community and visitor exposure were set forth in the CAMP included in the HASP (Appendix B in the RIWP) and are summarized as:

- Particulate Action Level: 100 µg/m³ of air above background for a 15-minute average.
- VOC Action Level: 25 parts per million (ppm) for instantaneous readings above background or 5 ppm above background for a 15-minute average.

Aerosol monitors and PIDs recorded measurements on a continuous basis during remediation and construction activities. Fifteen-minute running averages were calculated from the recorded data, and averages were compared to the action levels specified above. Action levels established in the Health and Safety Plan (HASP) were not exceeded during the RI. CAMP summary data is included as Appendix H.

5.0 FIELD OBSERVATIONS AND ANALYTICAL RESULTS

5.1 Geophysical Investigation Findings

NOVA identified anomalies suspected to be foundation elements from previous site uses. No anomalies consistent with USTs were identified during the geophysical investigation. A copy of the May 2020 geophysical report is included in Appendix C.

5.2 Geology and Hydrogeology

Provided below is a description of the geologic and hydrogeologic observations made during the RI. A groundwater elevation contour map is included as Figure 4 and soil boring logs are provided in Appendix D.

5.2.1 Historic Fill

The site is underlain by a layer of historic fill ranging in depth from about 13 feet (LB26) to 20 feet bgs (LB28). The layer is predominately characterized as gray to black fine-grained sand with varying amounts of gravel, silt, clay, brick, concrete, glass, coal ash, slag, wood, and coal.

5.2.2 Native Soil Layers

The fill layer is underlain by light- to dark-gray clay with varying amounts of silt, peat, sand, and shells. This stratigraphic unit was generally consistent across the site. The 1 to 7 foot-thick clay layer was encountered at the bottom of each boring (about 20 feet bgs) except LB28.

5.2.3 Bedrock

The USGS "Bedrock and Engineering Geologic Maps of New York County and Parts Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey" indicates that the bedrock consists of Ravenswood Garnodiorite and parts of the Hartland Formation overlain by glacial and fluvial soil deposits. Bedrock was not encountered during this RI or during previous environmental site investigations. Bedrock was encountered during a Langan geotechnical investigation at about 50 to 65 feet bgs.

5.2.4 Hydrogeology

Groundwater was observed at depths between 8.55 and 10.54 feet bgs with elevations ranging from el. 2.82 to 3.28 feet during synoptic groundwater level measurements collected from six wells during the RI. Groundwater flow was evaluated and determined to generally flow to the west towards the confluence of Newtown Creek and the East River, consistent with groundwater flow at adjoining and surrounding properties. Groundwater elevations are shown in Table 2. A map showing groundwater elevation contours and flow direction is provided as Figure 4.

5.3 Soil Findings

5.3.1 Field Observations

Residual petroleum impacts, evidenced by odors, staining, and/or PID readings above background levels, were observed in the borings summarized in the table below.

Boring	Depth of Observed Impacts (ft bgs)	Highest Recorded PID Reading
LB13	14 to 17	178 ppm at 16.5 ft bgs
LB13S	13.5 to 14	27.5 ppm at 14 ft bgs
LB16	14 to 16	255 ppm at 14.5 ft bgs
LB17	15 to 16	9.0 ppm at 16 ft bgs
LB20	14.5 to 16	256 ppm at 14.5 ft bgs
LB21	15 to 16	41.0 ppm at 16 ft bgs
LB22	12.5 to 13.5	501 ppm at 13 ft bgs
LB24	14 to 16	145 ppm at 15 ft bgs
LB25	14.5 to 16	39.8 ppm at 15.5 ft bgs
LB27	14.5 to 18	388 ppm at 17 ft bgs

Petroleum or chemical impacts were not observed in the other RI borings. No non-aqueous phase liquid (NAPL) was observed in soil recovered from completed borings. PID readings above background are associated with weathered petroleum from a historical release, as petroleum-related VOCs were not detected above UU SCOs in these borings, with the exception of isolated detections above UU SCOs of total xylenes in LB13 and LB20, and 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene in LB20. The vertical endpoint of the residual petroleum contamination was found in each boring at the top of the clay layer.

5.3.2 Analytical Results

A summary of laboratory detections for RI soil samples, with comparisons to NYSDEC Part 375 UU and RURR SCOs, is provided in Tables 3, 4, and 5. Soil sample results that exceed UU and RURR SCOs for samples collected during the RI are shown on Figures 7 and 7A. Comparison to the NYSDEC Part 375 Protection of Groundwater (PGW) SCOs is not warranted because PGW SCOs are only applicable to analytes that also exceed groundwater regulatory standards in groundwater samples collected from the site. Only 1,2-dichloroethane and manganese were detected above the NYSDEC SGVs and these same compounds were not detected in soil above the PGW SCOs. Laboratory analytical data reports are included in Appendix I.

The following sections present summaries of RI soil sample results that exceeded UU, and/or RURR SCOs and are organized by analytical parameter.

VOCs

Acetone was detected at concentrations above the UU SCOs in 12 soil samples collected from soil borings LB13, LB13N, LB16, LB18, LB19, LB20, LB21, and LB22. One or more of up to three VOCs were detected at concentrations above the UU SCOs in soil samples collected from 14 to 16 feet bgs in soil boring LB20 and from 15.5 to 17.5 feet bgs in soil boring LB13. VOCs present in soil samples were not detected at concentrations above the RURR SCOs. The table below provides concentration ranges of VOCs that were detected above the UU SCOs.

Parameter	Range of Concentrations Detected above UU SCO		UU and RURR SCOs
	Low	High	
1,2,4-Trimethylbenzene	21 mg/kg in LB20_14-16		UU: 3.6 mg/kg RURR: 52 mg/kg
1,3,5-Trimethylbenzene (Mesitylene)	8.9 mg/kg in LB20_14-16		UU: 8.4 mg/kg RURR: 52 mg/kg
Acetone*	0.057 mg/kg in LB18_18-20	0.18 mg/kg in LB22_12-14	UU: 0.05 mg/kg RURR: 100 mg/kg
Total Xylenes	0.4 mg/kg in LB13_15.5-17.5	3.8 mg/kg in LB20_14-16	UU: 0.26 mg/kg RURR: 100 mg/kg

*Acetone was not present in laboratory batch blanks, but is a common laboratory contaminant and therefore, its presence in soil results is not likely representative of site conditions.

SVOCs

One or more of up to fourteen SVOCs were detected at concentrations above UU and RURR SCOs in 13 soil samples collected from depths ranging from 1 to 17.5 feet bgs in soil borings LB13, LB13N, LB13W, LB16, LB17, LB18, LB19, LB20, LB21, LB22, LB23, LB24, and LB28. The table below provides concentration ranges of SVOCs that were detected above the UU SCOs. SVOC concentrations that were also detected above the RURR SCOs are shown in **bold**. All detections of SVOCs above SCOs were identified within the historic fill layer.

Parameter	Range of Concentrations Detected above UU SCO		UU and RURR SCOs
	Low	High	
2-Methylphenol (o-Cresol)	0.5 mg/kg in LB13W_15-17	0.57 mg/kg in LB13N_15-17	UU: 0.33 mg/kg RURR: 100 mg/kg
4-Methylphenol (P-Cresol)	1.2 mg/kg in LB13W_15-17	1.3 mg/kg in LB13N_15-17	UU: 0.33 mg/kg RURR: 100 mg/kg
1,4-Dioxane	0.14 mg/kg in LB20_14-16		UU: 0.1 mg/kg RURR: 13 mg/kg

Parameter	Range of Concentrations Detected above UU SCO		UU and RURR SCOs
	Low	High	
Benzo(a)Anthracene	1.3 mg/kg in LB28_14.5-15.5	45 mg/kg in LB16_3-5	UU: 1 mg/kg RURR: 1 mg/kg
Benzo(a)Pyrene	1.2 mg/kg in LB17_3-5	45 mg/kg in LB16_3-5	UU: 1 mg/kg RURR: 1 mg/kg
Benzo(b)Fluoranthene	1.5 mg/kg in LB28_14.5-15.5	53 mg/kg in LB16_3-5	UU: 1 mg/kg RURR: 1 mg/kg
Benzo(k)Fluoranthene	0.86 mg/kg in LB16_8-10	23 mg/kg in LB16_3-5	UU: 0.8 mg/kg RURR: 3.9 mg/kg
Chrysene	1.1 mg/kg in LB28_14.5-15.5	43 mg/kg in LB16_3-5	UU: 1 mg/kg RURR: 3.9 mg/kg
Dibenz(a,h)Anthracene	0.46 mg/kg in LB24_10-12	7.5 mg/kg in LB16_3-5	UU: 0.33 mg/kg RURR: 0.33 mg/kg
Dibenzofuran	9.5 mg/kg in SODUP01_05062020 (duplicate of LB17_3-5)	14 mg/kg in LB16_3-5	UU: 7 mg/kg RURR: 59 mg/kg
Fluoranthene	140 mg/kg in LB16_3-5		UU: 100 mg/kg RURR: 100 mg/kg
Indeno(1,2,3-c,d)Pyrene	0.67 mg/kg in LB28_14.5-15.5	26 mg/kg in LB16_3-5	UU: 0.5 mg/kg RURR: 0.5 mg/kg
Naphthalene	16 mg/kg in LB13W_15-17		UU: 12 mg/kg RURR: 100 mg/kg
Phenanthrene	160 mg/kg in LB16_3-5		UU: 100 mg/kg RURR: 100 mg/kg
Phenol	0.7 mg/kg in LB13W_15-17	0.76 mg/kg in LB13N_15-17	UU: 0.33 mg/kg RURR: 100 mg/kg

*SODUP01_050620 is a duplicate of the parent sample LB17_3-5.

Pesticides

One pesticide was detected at concentrations above the UU SCOs in a soil sample collected from 8 to 10 feet bgs in soil boring LB16. The table below provides the concentration of the pesticide that was detected above the UU SCOs. Pesticides were not detected above RURR SCOs.

Parameter	Concentration Detected above UU SCO	UU and RURR SCOs
4,4'-DDD	0.028 mg/kg in LB16_8-10	UU: 0.0033 mg/kg RURR: 13 mg/kg

Herbicides and PCBs

Herbicides and PCBs were not detected at concentrations above the UU, or RURR SCOs in RI soil samples.

Metals

One or more of nine metals were detected at concentrations above the UU and/or RURR SCOs in soil samples ranging from 1 to 20 feet bgs in soil borings LB16, LB17, LB18, LB19, LB20, LB21, and LB22. Metals in soil detected at concentrations above the RURR SCOs were identified in soil borings LB16, LB17, LB18, LB20, and LB22. The table below provides concentration ranges of metals that were detected above the UU and RURR SCOs. Metals concentrations that were also detected above the RURR SCOs are shown in **bold**.

Parameter	Range of Concentrations Detected above UU SCO		UU and RURR SCOs
	Low	High	
Arsenic	13.9 mg/kg in LB21_15-17	16.5 mg/kg in LB18_4-6	UU: 13 mg/kg RURR: 16 mg/kg
Barium	484 mg/kg in LB18_4-6		UU: 350 mg/kg RURR: 400 mg/kg
Chromium, Hexavalent	1.1 mg/kg in LB16_3-5	2.4 mg/kg in LB16_8-10 and LB18_18-20	UU: 1 mg/kg RURR: 110 mg/kg
Copper	50.7 mg/kg in LB19_6-8	164 mg/kg in LB17_3-5	UU: 50 mg/kg RURR: 270 mg/kg
Lead	71.5 mg/kg in LB19_6-8	10,900 mg/kg in LB18_2-4	UU: 63 mg/kg RURR: 400 mg/kg
Mercury	0.282 mg/kg in LB16_6-8	4.97 mg/kg in LB17_8-10	UU: 0.18 mg/kg RURR: 0.81 mg/kg
Nickel	32.8 mg/kg in LB21_15-17	43.8 mg/kg in LB16_15-17	UU: 30 mg/kg RURR: 310 mg/kg
Selenium	4.27 mg/kg in LB22_12-14		UU: 3.9 mg/kg RURR: 180 mg/kg
Zinc	115 mg/kg in LB21_15-17	531 mg/kg in LB17_15-16	UU: 109 mg/kg RURR: 10,000 mg/kg

TCLP Metals

Concentrations of TCLP arsenic and mercury were not detected above their maximum concentrations for the toxicity characteristic. Concentrations of TCLP lead above the maximum concentration for the toxicity characteristic of 5 milligrams per liter (mg/L) was detected in LB17 from 1 to 3 feet bgs (8 mg/L), LB18 from 2 to 4 feet bgs (8.17 mg/L), and LB22 from 4 to 6 feet bgs (9.01 mg/L). All three samples were collected from the historic fill interval.

PFAS

Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were detected in 3 of the 18 analyzed soil samples.

Parameter	Range of Concentrations Detected	
	Low	High
PFOS	490 nanograms per kilogram (ng/kg) in LB21_1-3	590 ng/kg in LB16_8-10
PFOA	1,700 ng/kg in LB18_4-6	

5.4 Groundwater Findings

5.4.1 Field Observations

Prior to sampling, monitoring well headspaces were measured with a PID. Monitoring well headspace PID measurements ranged from 0.0 to 23.1 ppm (highest reading in MW13) during sampling. A petroleum-like odor was observed in monitoring well MW13.

5.4.2 Analytical Results

A summary of laboratory detections for RI groundwater samples, with comparisons to NYSDEC SGVs, is presented in Tables 6, 7, and 8. Groundwater sample results that exceeded NYSDEC SGVs for RI samples are shown on Figure 8. Groundwater sampling logs are included in Appendix E. Laboratory analytical data reports are included in Appendix I.

The following sections present summaries of RI groundwater sample results that exceeded NYSDEC SGVs and are organized by analytical parameter.

VOCs

1,2-dichloroethane was detected at a concentration of 1 µg/L above the NYSDEC SGV of 0.6 µg/L in the groundwater sample collected from monitoring well MW16. No other VOCs exceeded the NYSDEC SGVs.

SVOCs and 1,4-Dioxane

SVOCs were not detected at concentrations above NYSDEC SGVs in RI groundwater samples.

There is currently no groundwater standard for 1,4-dioxane in New York State. The 1,4-dioxane results were compared to the screening value (350 ng/L) provided in NYSDEC's Sampling for 1,4-Dioxane and PFAS Under NYSDEC's Part 375 Remedial Programs (June 2019). 1,4-dioxane was detected below the screening value at a concentration of 100 ng/L in groundwater samples from monitoring wells MW13 and MW22.

Total Metals

Total manganese was detected at concentrations above the NYSDEC SGV of 300 µg/L in groundwater samples collected from monitoring wells MW13, MW13N, MW16, MW18, and MW22. The highest concentration of total manganese was 924 micrograms per liter (µg/L) in GWDUP01_052020, which is a duplicate of parent sample MW18_052020. No other total metals exceeded the NYSDEC SGVs.

Dissolved Metals

Dissolved manganese was detected at concentrations above its NYSDEC SGV of 300 µg/L in groundwater samples collected from monitoring wells MW13, MW13N, MW18, and MW22. The highest concentration of dissolved manganese was 934 µg/L in GWDUP01_052020, which is a duplicate of parent sample MW18_052020. No other dissolved metals exceeded the NYSDEC SGVs.

PCBs

Total PCBs were detected at a concentration of 1.5 µg/L in MW13N_051620, exceeding the NYSDEC SGV of 0.09 µg/L. The detection of PCBs in this groundwater sample was suspected to be a result of suspended/entrained sediment in the groundwater sample as turbidity levels were detected above 100 NTU at the time of sampling. The sample was reanalyzed after lab filtration and no PCBs were detected in the sample.

Pesticides and Herbicides

Pesticides and herbicides were not detected at concentrations exceeding the NYSDEC SGVs in RI groundwater samples.

PFAS

There are currently no groundwater standards for PFAS compounds in New York State. PFAS results were compared to screening values provided in the NYSDEC's Guidelines for Sampling and Analysis of PFAS (January 2020). The NYSDEC has a recommended guidance of 10 nanograms per liter (ng/L) for PFOA and PFOS, 100 ng/L for other PFAS, and 500 ng/L for total PFAS. PFOA was detected above the recommended guidance of 10 ng/L in monitoring wells MW13, MW13N, MW16, MW18, MW19, and MW22 with a maximum detected concentration of 170 ng/L in monitoring well MW18. PFOS was detected above the recommended guidance of 10 ng/L in monitoring well MW18 at a concentration of 25 ng/L. Perfluoropentanoic Acid (PFPeA) was detected above the recommended guidance of 100 ng/L in monitoring wells MW18 and MW19 with a maximum detected concentration of 190 ng/L in monitoring well MW19. Perfluorohexanoic Acid (PFHxA) was detected above the recommended guidance of 100 ng/L in monitoring well MW19 at a concentration of 120 ng/L. Total PFAS were detected above the recommended guidance of 500 ng/L in MW19 only; the detected concentration of

total PFAS in this well is 505 ng/L. Groundwater sample analytical results for emerging contaminants are summarized in Table 8.

5.5 Soil Vapor Findings

5.5.1 Field Observations

Post-purge PID readings ranged from 0.1 ppm (SV03) to 1.2 ppm (SV05).

5.5.2 Analytical Results

Soil vapor samples are summarized in Table 9 and shown on Figure 9. No standard currently exists for soil vapor in New York State. The samples were evaluated using the NYSDOH Air Guidance Values (AGVs) and Decision Matrices published in the 2006 NYSDOH Soil Vapor Intrusion Guidance (updated in 2017).

Soil vapor and ambient air findings are summarized below:

- A total of 25 petroleum, chlorinated, or ketone VOCs were detected in soil vapor samples. Total VOC concentrations ranged from 54.2 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in SV01 to 1,450 $\mu\text{g}/\text{m}^3$ in SV05.
- The predominant VOC contributing to the elevated total VOC counts is acetone. Acetone was not present in laboratory batch blanks, but is a common laboratory contaminant and therefore, its presence in soil results is not likely representative of site conditions.
- Total concentrations of petroleum-related VOCs, including benzene, ethylbenzene, toluene, xylenes, 1,2,4-trimethylbenzene, and MTBE, are under 100 $\mu\text{g}/\text{m}^3$ and considered incidental and not indicative of a petroleum release.
- Chlorinated VOCs, including 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, chloroform, dichlorodifluoromethane, PCE, and trichlorofluoromethane, were detected in soil vapor samples and may be related to an off-site source. The highest total concentrations of chlorinated VOCs were located in the southern part of the site.

Soil vapor samples do not have a direct comparison criteria. In the absence of indoor air samples, soil vapor sample results were applied to the lowest concentration for which monitoring or mitigation is recommended in Matrices A, B, and C of the NYSDOH Guidance for Evaluating Soil Vapor in the State of New York. The Matrices provide guidance on eight VOCs: carbon tetrachloride, 1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene (TCE), methylene chloride, tetrachloroethene (PCE), 1,1,1-trichloroethane, and vinyl chloride. Seven of the eight VOCs evaluated under the Matrices were not detected in soil vapor samples. PCE was detected in soil vapor sample SV05 at a concentration (1.8 $\mu\text{g}/\text{m}^3$) below the minimum concentration requiring mitigation. The recommended action based on soil vapor

concentrations at the site is “no further action.” No VOCs, including PCE exceeded the NYSDOH AGVs in SV05.

5.6 QA/QC Sample Results

Duplicate, field blank, emerging contaminant field blank, MS/MSD, and trip blank samples collected during the RI are detailed in Table 1. Duplicate, field blank, and MS/MSD samples were generally collected at a frequency of 1 per 20 primary samples. Trip blank samples were generally collected at a frequency of 1 per day of VOC sampling. Emerging contaminant field blanks were generally collected at a frequency of 1 per day of emerging contaminant sampling. QA/QC sample results were also evaluated as part of data validation.

5.7 Data Usability

New York Analytical Services Protocols (ASP) Category B laboratory reports for the soil, groundwater, and soil vapor samples collected during the September 2019 Subsurface Investigation and RI were provided by Eurofins and were reviewed by a Langan data validator. Completeness, defined as the percentage of analytical results that are judged to be valid, is 100% for each sample set. Copies of the DUSRs are provided in Appendix G.

5.8 Evaluation of Areas of Concern

This section discusses the results of the September 2019 Subsurface Investigation and the RI with respect to the AOCs described in Section 3.4. The RURR SCOs are the applicable soil standards for comparison, based on the anticipated use of the site as a mixed-use residential and commercial building. The results were compared to UU SCOs to evaluate whether unrestricted land use is practical. . TCLP metals results were compared to the United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) Code of Federal Regulations (CFR) Part 261 Maximum Concentration of Contaminants for the Toxicity Characteristic to evaluate the presence of hazardous waste.

5.8.1 AOC 1: Prior Site Use

Historical operations at the site include coal and lumber storage for more than 100 years from the late 1800s until about 1980; heavy construction equipment, machinery, and materials storage starting in 1980; and truck/vehicle parking and scaffolding materials storage until the 2000s.

AOC 1 Findings Summary

Investigation of AOC 1 included the completion of all soil borings and monitoring wells. Contaminants of concern associated with AOC 1 include polyaromatic hydrocarbons (PAHs) and metals, specifically arsenic and copper.

Fourteen SVOCs were detected above UU SCOs in soil samples from across the site. Nine SVOCs, specifically PAHs were detected above RURR SCOs in borings at depths ranging from

1 to 17.5 feet bgs. All detections of SVOCs above UU and/or RURR SCOs were identified within the historic fill layer. Total SVOCs were detected at a maximum concentration of 789 mg/kg in a sample collected from LB16 from 3 to 5 feet bgs. Ten metals (arsenic, barium, hexavalent chromium, copper, lead, mercury, nickel, selenium, and/or zinc) were detected above UU SCOs in soil borings across the site. Five metals (arsenic, copper, barium, lead, and/or mercury) were detected above RURR SCOs in borings LB01, LB02, LB13, LB16, LB17, LB18, LB20, and LB22 from depths ranging from 1 to 17.5 feet bgs.

PAHs, arsenic, copper, barium, lead, or mercury were not detected in groundwater samples above the NYSDEC SGVs.

AOC 1 Conclusions

Based on the analytical results, prior site use-related impacts appear across the site from depths ranging from 1 to 17.5 feet bgs (top of clay layer).

Arsenic and copper were historically used in preservative mixtures to protect lumber from weathering, microbes and insects. Concentrations of these metals detected above RURR SCOs in borings across the site are likely related to long-term site use as a lumber storage yard from the late 1800s to 1980s. The presence of barium, lead, and mercury detected above RURR SCOs are more likely related to historic fill.

PAHs are commonly found in the presence of coal and coal byproducts. Coal, coal ash, and slag were observed in borings across the site. Nine PAHs were detected above RURR SCOs across the site. The presence of PAHs detected above RURR SCOs and coal, coal ash, and slag in borings across the site are likely related to prior site use as a coal storage yard and/or historic fill material from the late 1800s to 1950s. The presence of PAHs and metals in soil is not considered a source of groundwater contamination because PAHs and metals were not detected above NYSDEC SGVs in groundwater (with exception to manganese, which is naturally occurring).

5.8.2 AOC 2: Petroleum-Impacted Soil

The September 2019 Subsurface Investigation identified petroleum-impacted soil in one soil boring (LB13) located in the northeastern portion of the site. Spill No. 19-06491 was reported on September 25, 2019 based on field observations and subsequent analytical data review. Contaminants of concern associated with AOC 2 include petroleum-related VOCs, specifically total xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

AOC 2 Findings Summary

Investigation of AOC 2 included the completion of soil borings LB02, LB03, LB05, LB06, LB08, LB07, LB13, LB13N, LB13W, LB13S, LB16, LB17, and LB20 through LB28, and monitoring wells MW13, MW13N, MW16, and MW22. AOC 2 did not include soil borings LB18, LB19, LB23, LB26, and LB28 because of the lack of petroleum impacts in these borings.

Petroleum-like odors, staining, and/or elevated PID readings were observed in ten soil borings (LB13, LB13S, LB16, LB17, LB20, LB21, LB22, LB24, LB25, and LB27) from 12.5 to 18 feet bgs. The highest PID reading observed was 501 ppm at 13 feet bgs in LB22 located near the center of the site. The vertical extent of petroleum impacts were encountered in each boring at the top of a clay layer. Three VOCs (total xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene) were detected at concentrations above the UU SCOs, but below the RURR SCOs, in soil samples collected from 14 to 16 feet bgs in LB20, and from 4 to 6 feet bgs and 15.5 to 17.5 feet bgs in LB13. One petroleum-related SVOC (naphthalene) was detected above its UU SCO, but below its RURR SCO in LB07 and LB13W from 6 to 8 feet bgs and 15 to 17 feet bgs, respectively. Petroleum-related VOCs were not identified in groundwater above the NYSDEC SGVs, therefore, the residual petroleum impacts have not impaired groundwater quality.

Petroleum-like odors and a PID reading of 23.1 ppm was observed in the monitoring well headspace of MW13. Petroleum-related VOCs and naphthalene were not detected above SGVs in MW13. Monitoring well MW16 exhibited a chemical-like odor during the sampling event.

Total concentrations of petroleum-related VOCs, including benzene, ethylbenzene, toluene, xylenes, 1,2,4-trimethylbenzene, and MTBE, were detected in soil vapor samples. Total VOC petroleum-related VOC concentrations are under $100 \mu\text{g}/\text{m}^3$ and considered incidental and not indicative of a petroleum release.

AOC 2 Conclusions

Based on the analytical results and field observations, subsurface, residual petroleum impacts encompass a 24,000-square foot area and were present from 12.5 to 18 feet bgs (top of clay layer), with exception of two borings LB07 and LB13 where petroleum impacts were identified above the groundwater table from 6 to 8 feet bgs and 4 to 6 feet bgs, respectively. Petroleum impacts, as evidenced by staining, odors, PID readings above background, and/or analytical data were identified in borings LB07, LB13, LB13S, LB16, LB17, LB20, LB21, LB22, LB24, LB25, and LB27. The bottom of petroleum impacts were identified at the top of the clay layer in each soil boring where petroleum impacts were observed. The horizontal extent of petroleum impacts was delineated by the absence of petroleum impacts in soil borings LB18, LB19, LB23, LB26, and LB28.

The source of petroleum impacts at the site is likely related to a historical petroleum release. Odors, staining, and PID readings above background were identified above the groundwater table at LB13. Petroleum-related VOCs were not identified in soil or groundwater above the NYSDEC SGVs, therefore, the residual petroleum impacts have not impaired groundwater quality.

5.8.3 AOC 3: Historic Fill

Historical maps from the mid to late 1800s show the original shoreline of Newtown Creek to be present-day Commercial Street, indicating the site lies entirely on reclaimed land as the result of historical filling activities. Contaminants of concern associated with AOC 3 include SVOCs, metals.

AOC 3 Findings Summary

Investigation of AOC 3 included the completion of all soil borings and monitoring wells. Historic fill was identified from surface grade to depths between 13 to 20 feet bgs (boring termination depth or top of clay layer) and is composed of gray to black fine-grained sand with varying amounts of gravel, silt, clay, brick, concrete, glass, coal ash, slag, wood, and coal.

Fourteen SVOCs were detected above the UU SCOs in soil samples from across the site. Nine SVOCs were detected above the RURR SCOs in borings across the site from depths ranging from 1 to 17.5 feet bgs. Ten metals were detected above the UU SCOs in soil borings across the site. Five metals, arsenic, copper, barium, lead, and/or mercury were detected above the RURR SCOs in borings LB01, LB02, LB13, LB16, LB17, LB18, LB20, and LB22 from depths ranging from 1 to 17.5 feet bgs. SVOCs and metals above the RURR SCOs were confined to the historic fill layer.

Based on selective sampling for TCLP lead, hazardous concentrations of lead are present in the northeastern (LB17 from 1 to 3 feet bgs), central (LB22 from 4 to 6 feet bgs), and southern (LB18 from 2 to 4 feet bgs) parts of the site.

Dissolved lead concentrations did not exceed the NYSDEC SGVs in any groundwater samples, including at MW18 and MW22 (located in borings LB18 and LB22, respectively); therefore, the hazardous concentrations of lead in these localized area do not appear to be impacting groundwater quality.

Total and/or dissolved manganese were detected above the NYSDEC SGVs in five of six monitoring wells.

AOC 3 Conclusions

Based on the analytical results and field observations, historic fill was identified from surface grade to depths between 13 to 20 feet bgs. Field observations of coal, coal ash, concrete, wood, glass, and slag are consistent with historic fill identified at adjoining and surrounding properties. SVOCs and metals above SCOs were identified within the historic fill interval site wide. SVOCs and metals were not identified within the native soil. Hazardous concentrations of lead was identified in historic fill in three borings (LB17, LB18, and LB22) up to 6 feet bgs. Additional delineation sampling at these three areas is anticipated in conjunction with the remedy.

Manganese is characteristic of brackish groundwater conditions, considered naturally-occurring, and related to the proximity of the site to the East River and Newtown Creek.

5.8.4 AOC 4: Historical Use of Surrounding Properties

The former NuHart Plastic Manufacturing facility, an NYSDEC inactive hazardous waste disposal site (State Superfund Site #224136), is located about 100 feet south of the site. The NuHart Plastic Manufacturing facility operated from 1950 until about 2004, and was primarily used for the production, storage, and shipping of plastic and vinyl products. Previous investigations performed at the former NuHart Plastic Manufacturing facility found phthalates, paraffinic oil/mineral oil, and TCE in soil, groundwater, and soil vapor. Historic use of surrounding properties also includes light commercial and industrial use such as large item storage and transport areas, and cargo truck repair. Contaminants of concern associated with AOC 4 include chlorinated VOCs.

AOC 4 Findings Summary

Investigation of AOC 4 included the completion of all soil borings, monitoring wells, and vapor points.

Chlorinated VOCs were not detected in soil samples above SCOs. One chlorinated VOC, 1,2-dichloroethane, was detected in groundwater above SGVs. Chlorinated VOCs including 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, chloroform, dichlorodifluoromethane, PCE, and trichlorofluoromethane, were detected in soil vapor samples with the highest total concentrations in SV03 (29.8 $\mu\text{g}/\text{m}^3$), located in the southern part of the site. PCE was detected in soil vapor sample SV05 at a concentration of 1.8 $\mu\text{g}/\text{m}^3$.

The July 2015 Remedial Investigation Report prepared by Ecosystem Strategies, Inc. for the NuHart site reported the presence of an on-site source area of TCE in soil that has adversely impacted groundwater and soil vapor quality, conditions which have also migrated off-site in the direction of the 45 Commercial Street site. The July 2015 RIR reported TCE concentrations in groundwater and soil vapor at the NuHart site as high as 33,000 $\mu\text{g}/\text{L}$ and 43,000 $\mu\text{g}/\text{m}^3$. The edge of the TCE groundwater plume (with concentrations between 100 and 1,000 $\mu\text{g}/\text{L}$) in groundwater emanating from the NuHart site is located less than 100 feet hydraulically up-gradient of the site, and was not fully delineated at Commercial Street. In fact, TCE was detected in groundwater at two wells above the NYSDEC SGV on the western side of Commercial Street opposite the NuHart site. The TCE source at the NuHart site also affected soil vapor quality on the same block (Block 2484, bound by Commercial and Clay Streets) that adjoins the NuHart site and the 45 Commercial Street site; TCE concentrations in soil vapor on this block were detected as high as 6,130 $\mu\text{g}/\text{m}^3$.

AOC 4 Conclusions

The detection of 1,2-dichloroethane in a groundwater sample from monitoring well MW16 may be related to the NuHart Site, which identified 1,2-dichloroethane above SGVs in groundwater. 1,2-dichloroethane was not identified in site soil and may not be from an on-site source.

While chlorinated VOCs were not detected in soil vapor at the site at concentrations for which mitigation is recommended, subsurface conditions are variable. The edge of the TCE groundwater plume in groundwater emanating from the NuHart site is located less than 100 feet hydraulically up-gradient of the site, and was not delineated at Commercial Street; therefore, the TCE groundwater plume may have the potential to impact soil vapor quality. The extents of the TCE contamination in groundwater and soil vapor related to the NuHart site (including on-site and off-site areas) are shown on Figure 10. Although an NYSDEC Record of Decision was issued for the NuHart site, there is no established schedule for implementation of the remedy. Chlorinated VOCs, including TCE, PCE, cis-1,2-DCE, and 1,1-dichloroethane) were also identified in soil vapor at surrounding Greenpoint Landing development sites (Parcel G1 at 37 Blue Slip, Parcel G2 at 21 Commercial Street, Parcel H3 at 1 Bell Slip) (Figure 10) at which remediation was completed under the New York City Office of Environmental Remediation [NYCOER] E-Designation or Voluntary Cleanup Programs [VCP]); the presence of chlorinated VOCs in soil vapor is an area-wide concern.

6.0 QUALITATIVE HUMAN AND FISH/WILDLIFE EXPOSURE ASSESSMENT

Human health exposure risk was evaluated for current and future site and off-site conditions, in accordance with the May 2010 NYSDEC Final DER-10 Technical Guidance for Site Investigation and Remediation. The assessment includes an evaluation of potential sources and migration pathways of site contamination, potential receptors, exposure media, and receptor intake routes and exposure pathways.

In addition to the human health exposure assessment, NYSDEC DER-10 requires an on-site and off-site Fish and Wildlife Resources Impact Analysis (FWRIA) if certain criteria are met. Based on the requirements stipulated in Section 3.10 and Appendix 3C of DER-10, there was no need to prepare an FWRIA for the site. A completed copy of the DER-10 Appendix 3C decision key is included as Appendix J.

6.1 Current Conditions

The site encompasses an area of about 44,600 square feet, the western portion of which is currently used as a staging area for construction trailers and equipment for the redevelopment of the adjoining Parcel H3. The eastern portion is currently a vacant lot.

6.2 Post Redevelopment Conditions

The planned redevelopment project includes the construction of one mixed-use residential and commercial building with 374 residential units (100% affordable housing for families earning under 90% of the annual median income) and ground floor retail. The building will comprise a 6-story podium (no cellar) with a 22-story tower set back from Commercial Street. The building footprint is about 32,000 square feet in area and the remainder of the tax lot (12,600 square feet) will be open space with a mixture of hardscape and landscaped areas.

6.3 Conceptual Site Model

A conceptual site model (CSM) was developed based on the RI findings and previous investigations to produce a simplified framework for understanding the distribution of impacted materials, potential migration pathways, and potentially complete exposure pathways.

6.3.1 Potential Sources of Contamination

Potential sources of contamination include historic fill, prior site use, a historical release of petroleum and historical off-site uses.

Historic Fill - The site-wide presence of historic fill was established as a source of SVOCs and metals in soil, including detections of hazardous lead concentrations.

Prior Site Usage - Historical site use as a coal and lumber storage yard was established as a source of SVOCs and metals in soil.

Petroleum-Impacted Soil - A historical petroleum release was established as a source of SVOCs and VOCs in soil, groundwater and soil vapor. Physical indicators of petroleum impacts (staining, odors, PID readings) in soil also support this conclusion.

Historical Off-site Uses – The NuHart Plastic Manufacturing facility was established as a source of chlorinated VOCs in soil vapor and groundwater.

6.3.2 Exposure Media

Impacted media include soil, groundwater and soil vapor. Soil contains VOCs, SVOCs and metals at concentrations above regulatory standards. VOCs and emerging contaminants were identified in groundwater. VOCs, including petroleum-related and CVOCs were detected in soil vapor at the site.

6.3.3 Receptor Populations

Site access is currently limited to authorized construction personnel in the staging area and authorized visitors in the vacant part of the site. Under future construction conditions, human receptors may include construction and remediation workers, authorized guests, and the public adjacent to the site. Under future use conditions, human receptors include residents, visitors and customers at the residential/commercial building and the public adjacent to the site.

6.4 Potential Exposure Pathways – On-Site

6.4.1 Current Conditions

The site footprint is covered by an impervious concrete and/or asphalt-paved lot; therefore, exposure to contaminated soil/fill and soil vapor is not anticipated except through cracks or holes in asphalt or concrete via dermal absorption, inhalation, and/or ingestion pathways. Groundwater in this area of New York City is not used as a potable water source.

There is a potential exposure pathway to contaminated soil/fill, groundwater and soil vapor during site investigation through dermal absorption, inhalation, and/or ingestion. Activity is limited to trained investigation personnel and is performed under a site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) with provisions to minimize exposure risk, including vapor and dust suppression techniques.

6.4.2 Construction/Remediation Condition

Construction and remediation may result in potential exposures to contaminated soil, groundwater or soil vapor. The implementation of a HASP and CAMP, as well as vapor and dust suppression techniques, will limit the exposure pathways presented by potential dermal absorption, ingestion, and inhalation.

6.4.3 Proposed Future Conditions

Exposure pathways to residual soil contamination will be incomplete unless the composite cover system is disturbed. The potential for soil vapor exposure risk will be mitigated through

an active sub-membrane depressurization (SMD) system beneath the proposed building foundation.

There is no pathway for ingesting groundwater since the site and surrounding areas obtain their drinking water supply from surface water reservoirs located upstate. The site will have an easement/deed restriction for groundwater use to prevent exposure to any residual contamination remaining after the completion of the remedy.

6.5 Potential Exposure Pathways – Off-Site

6.5.1 Current Conditions

The site is covered with impervious, concrete and/or asphalt surface cover, thus it is unlikely that contaminated site soil will be exposed and disturbed and will migrate off-site in particulate form. Contaminated soil vapor that may migrate through concrete and asphalt cracks would be expected to dissipate readily in ambient air and not present an exposure risk to off-site receptors. The limited groundwater impacts identified on-site could potentially migrate off-site, but since groundwater in the surrounding area is not used as a potable water source, no complete exposure pathway exists.

6.5.2 Construction/Remediation Condition

Contaminated soil has the potential to be transported off-site by wind in the form of dust or by the tires of vehicles or equipment leaving the site during development, and create an exposure risk to the public adjacent to the site during construction. Contaminated soil vapor would be expected to dissipate readily in ambient air and not present an exposure risk to off-site receptors. Nonetheless, air monitoring will be conducted for particulates (i.e., dust) and VOCs during all intrusive activities as part of a CAMP. Dust and/or vapor suppression techniques will be employed to limit the potential for off-site migration of soil and vapors. Vehicle tires and undercarriages will be washed as necessary prior to leaving the site to prevent tracking material off-site. A soil erosion/sediment control plan will be implemented during construction to control off-site migration of soil.

The limited groundwater impacts identified on-site could potentially migrate off-site, but since groundwater in the area is not used as a potable water source, no complete exposure pathway exists.

6.5.3 Proposed Future Conditions

The potential off-site migration of site contaminants in soil, groundwater and soil vapor is not expected to result in a complete exposure pathway for future conditions because the site will be covered with a building and capping system that will prevent exposure to off-site receptors of soil and soil vapor. Further, groundwater in the area is not used as a potable water source, therefore, no complete exposure pathway exists to impacted groundwater.

6.6 Evaluation of Human Health Exposure

Based on the CSM and the review of environmental data, complete on-site and off-site exposure pathways appear to be present, in the absence of institutional and engineering controls, under current, construction and remediation, and future conditions. The complete exposure pathways indicate there is a risk of exposure to humans from site contaminants via exposure to soil, groundwater and potentially to soil vapor if institutional and engineering controls are not implemented.

Complete exposure pathways have the following five elements: 1) a contaminant source; 2) a contaminant release and transport mechanism; 3) a point of exposure; 4) a route of exposure; and 5) a receptor population. A discussion of the five elements comprising a complete pathway as they pertain to the site is provided below.

6.6.1 Current Conditions

Contaminant sources include 1) historic fill with varying levels of VOCs, PAHs and metals ; 2) historical site uses that may have contributed to presence of VOCs, PAHs and metals in historic fill; 3) residual petroleum contamination in soil, groundwater and soil vapor; and 4) historical off-site sources that contributed to emerging contaminants in groundwater and VOCs in soil vapor.

Contaminant release and transport mechanisms include contaminated soil transported as dust (dermal, ingestion, inhalation), contaminated groundwater flow (dermal contact), and volatilization of contaminants from the soil and groundwater matrices to the soil vapor phase (inhalation).

Under current conditions, the likelihood of soil, groundwater or soil vapor exposure to on-site and off-site humans is limited, as the site is capped with impervious surface cover and no buildings are currently present on-site. Exposure to contaminants in soil, groundwater and soil vapor via dermal contact, ingestion or inhalation during site investigation is minimized, as these activities would occur under a HASP with CAMP to limit exposure to site workers and the community. In addition, groundwater is not used as potable water source, precluding any complete exposure pathway to impacted groundwater.

6.6.2 Construction/Remediation Activities

During development and remediation, points of exposure will include disturbed and exposed historic fill during excavation and dust and organic vapors generated during excavation. Groundwater is not expected to be encountered during excavation operations based on foundation designs. Potential routes of exposure will include ingestion and dermal absorption of historic fill, inhalation of organic vapors arising from contaminated soil and groundwater, and inhalation of dust derived from historic fill. The receptor population includes construction and remediation workers and, to a lesser extent, the public adjacent to the site.

The potential for completed exposure pathways is present since all five elements exist; however, the risk will be minimized by the implementation of appropriate health and safety

measures, such as monitoring the air for organic vapors and dust, using vapor and dust suppression measures, cleaning truck undercarriages before they leave the site to prevent off-site soil tracking, maintaining site security, and site workers wearing the appropriate personal protective equipment (PPE).

In accordance with a Remedial Action Work Plan (RAWP), which will include a HASP, a Soil/Materials Management Plan (SMMP), and a CAMP, measures such as conducting an air-monitoring program, donning PPE, covering soil stockpiles, altering work sequencing, maintaining a secure construction entrance, proper housekeeping, and applying vapor and dust suppression measures to prevent off-site migration of contaminants during construction will be implemented to prevent completion of these potential exposure pathways to both on- and off-site receptor populations.

6.6.3 Planned Future Conditions

For the planned future conditions, residual contamination will likely remain on-site in soil, groundwater and soil vapor. Institutional and engineering controls will be included as elements of the site remedy, including an engineered site-wide composite cover system and an active SMD system. These controls will be maintained in perpetuity under a Site Management Plan (SMP) and will preclude exposure to on- and off-site receptor populations.

6.6.4 Human Health Exposure Assessment Conclusions

1. Under current conditions, there is a marginal risk for human exposure to site contaminants. The primary exposure pathways are for dermal contact, ingestion, and inhalation of soil, soil vapor, or groundwater by site investigation workers. The exposure risks would be avoided or minimized by following the appropriate health and safety and vapor and dust suppression measures outlined in the site-specific HASP and CAMP during investigation activities.
2. In the absence of a HASP and CAMP, there is a moderate risk of exposure during construction and remediation activities. The primary exposure pathways are:
 - a. Dermal contact, ingestion, and inhalation of contaminated soil/fill, groundwater and soil vapor by construction workers.
 - b. Dermal contact, ingestion, and inhalation of soil/fill (airborne dust) and organic vapors by the community in the vicinity of the site.

These exposure risks would be avoided or minimized by performing community air monitoring and by following the appropriate health and safety, vapor and dust suppression, and site security measures outlined in a site-specific HASP.

3. The existence of a complete exposure pathway for site contaminants to human receptors during planned future conditions is unlikely, as sources of contamination will be addressed during the construction/remediation phase and residual contamination will

be managed with an engineered composite cover system, an active SMD system and an SMP.

4. Regional groundwater is not used as a potable water in Kings County so there is no complete exposure to regional groundwater contaminants.
5. It is possible that complete exposure pathways exist for the migration of site contaminants to off-site human receptors for current, construction/remediation phase, or future conditions. Monitoring and control measures have been and will continue to be used during investigation and construction to prevent completion of this pathway. Under future conditions, the site will be remediated and engineering and institutional controls will be implemented, if necessary, to prevent completion of this pathway.

7.0 NATURE AND EXTENT OF CONTAMINATION

This section evaluates the nature and extent of soil, groundwater, and soil vapor contamination as derived from a combination of field observations and analytical data that were discussed in Section 5.0.

7.1 Soil Contamination

Soil contamination is divided into the following classifications:

1. Historic fill
2. Petroleum-impacted soil

7.1.1 Historic Fill

Historic fill contains several SVOCs, mainly PAHs (including 2-methylphenol (o-cresol), 4-methylphenol (p-cresol), benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, and phenol), and metals (arsenic, barium, hexavalent chromium, copper, lead, mercury, nickel, selenium, and zinc) at concentrations above the UU and/or RURR SCOs. Hazardous concentrations of lead were in detected in three soil borings up to 6 feet bgs. Additional delineation sampling at these three areas is anticipated in conjunction with the remedy. Historic fill was identified site-wide and ranges in depth from about 13 feet to 20 feet bgs based on visual observations and analytical results. SVOCs and metals above the RURR SCOs were confined to the historic fill layer and SVOCs and metals above standards were not identified in native soil.

7.1.2 Petroleum-impacted soil

Residual petroleum contamination (as evidenced by PID readings above background, odors, staining, and/or analytical data) were observed in soil boring LB07 from 6 to 8 feet bgs, LB13 from 4 to 6 feet bgs, and in 10 soil borings (LB13, LB13S, LB16, LB17, LB20, LB21, LB22, LB24, LB25, and LB27) from 12.5 to 18 feet bgs across the site. The maximum PID reading, 501 ppm, was recorded in LB22 at 13 feet bgs. Analytical results for soil samples collected from 4 to 6 feet and 14 to 16 feet bgs in LB13 and 15.5 to 17.5 in LB20 exhibited petroleum-related VOCs at concentrations above the UU SCOs. Analytical results for the soil samples collected from LB07 from 6 to 8 feet bgs and LB13W from 15 to 17 feet bgs exhibited a petroleum-related SVOC (naphthalene) at a concentration above the UU SCOs. Based on the analytical results and field observations, subsurface, residual petroleum impacts encompass a 24,000 square foot area. A historical petroleum release is the likely source of the residual petroleum contamination in the lower part of the historic fill layer.

Petroleum-related VOCs were not identified above the NYSDEC SGVs and are not affecting groundwater quality.

7.2 Groundwater Contamination

Groundwater contamination is divided into the following classifications:

1. CVOC-impacted groundwater
2. Metals-impacted groundwater
3. Emerging contaminants in groundwater

7.2.1 CVOC-Impacted Groundwater

Petroleum-related VOCs were not identified in soil and not above the NYSDEC SGVs in groundwater. One chlorinated VOC, 1,2-dichloroethane, was detected at a concentration of 1 µg/L above the NYSDEC SGV of 0.6 µg/L in well MW16 and may be attributed to the former NuHart Plastic Manufacturing facility.

7.2.2 Metals-Impacted Groundwater

Dissolved manganese was detected in samples collected from four of six monitoring wells at concentrations above the NYSDEC SGVs. The presence of manganese in groundwater is attributed to naturally occurring, brackish groundwater conditions.

7.2.3 Emerging Contaminants in Groundwater

PFOA was detected above the recommended guidance of 10 ng/L in groundwater samples from monitoring wells MW13, MW13N, MW16, MW18, MW19, and MW22. PFOS was detected above the recommended guidance of 10 ng/L in monitoring well MW18. PFPeA was detected above the recommended guidance of 100 ng/L in monitoring wells MW18 and MW19. PFHxA was detected above the recommended guidance of 100 ng/L in monitoring well MW19. Total PFAS were detected above the recommended guidance of 500 ng/L in MW19.

1,4-dioxane was detected below the screening value of 350 ng/L at a concentration of 100 ng/L in groundwater samples from monitoring wells MW13 and MW22.

No source areas of PFAS and 1,4-dioxane were identified on-site. The source of PFAS and 1,4-dioxane is unknown.

7.3 Soil Vapor Contamination

Petroleum-related and chlorinated VOCs were identified in soil vapor samples across the site. VOCs were not identified above NYSDOH AGVs or minimum concentration requiring mitigation. The source of petroleum-related VOCs may be related to an on-site source. The source of chlorinated VOCs may be related to the former NuHart Plastic Manufacturing facility.

8.0 CONCLUSIONS

The RI was completed in May 2020. The findings summarized herein are based on both qualitative data (field observations and instrumental readings) and soil, groundwater, and vapor laboratory analytical results. Findings and conclusions are as follows:

1. Stratigraphy: A historic fill layer was observed from surface grade to depths ranging from about 13 to 20 feet bgs (deepest sample collected), and consisted of gray to black fine-grained sand with varying amounts of gravel, silt, clay, brick, concrete, glass, coal ash, slag, wood, and coal. The fill layer is underlain by native soils consisting of light- to dark-gray clay with varying amounts of silt, peat, sand, and shells. Bedrock was not encountered during the RI or previous environmental investigation conducted at the site. Bedrock was encountered on the site during a geotechnical investigation at about 50 to 65 feet bgs.
2. Hydrogeology: Groundwater was observed at depths between 8.55 and 10.54 feet bgs with elevations ranging from el. 2.82 to 3.28 feet during synoptic groundwater level measurements collected from six wells during the RI. Groundwater was calculated to flow to the west towards the confluence of Newtown Creek and the East River.
3. Historic Fill Quality: Historic fill contains contaminants including SVOCs and metals above the UU and/or RURR SCOs, including hazardous concentrations of lead. The presence of these compounds in soil may be related to historic fill or to historical site uses as a lumber yard and for storage of treated wood.
4. Petroleum-Impacted Soil and Groundwater:
 - a. Soil - Petroleum impacts, evidenced by odors, staining, PID readings above background levels, and/or analytical data, was identified in soil borings LB07 and LB13 above the groundwater table (6 to 8 feet bgs and 4 to 6 feet bgs, respectively) and in ten soil borings from below the groundwater table to a clay confining layer (about 12.5 and 18 feet bgs) in the northern part of the site.
 - b. Groundwater - No petroleum-related VOCs were identified above SGVs in groundwater.
 - c. The residual petroleum contamination identified in the lower parts of the historic fill layer across about half of the site is attributed to a historic petroleum release and associated with Spill No. 1906491
5. CVOCs in Groundwater - One detection of chlorinated VOC, 1,2-dichloroethane identified above SGVs may be related to the former NuHart Plastic Manufacturing facility.
6. Emerging Contaminants in Groundwater: PFAS in groundwater were detected above the recommended guidance. 1,4-dioxane was detected below its screening value. No

source of PFAS or 1,4-dioxane was identified on site. The source of PFAS and 1,4-dioxane is unknown.

7. Soil Vapor Impacts: Petroleum-related and chlorinated VOCs were identified in soil vapor samples across the site. The source of petroleum-related VOCs may be related to an on-site source. The source of chlorinated VOCs may be related to the former NuHart Plastic Manufacturing facility.
8. Sufficient analytical data were gathered during the RI to establish site-specific soil cleanup levels and to develop a remedy for the site. The final remedy will be described and evaluated in a RAWP to be prepared in accordance with BCP guidelines. The remedy will address historic fill and petroleum-impacted soil, and soil vapor.

9.0 REFERENCES

1. New York State Department of Health, Final Guidance for the Evaluation of Soil Vapor Intrusion in the State of New York, dated October 2006 and applicable revisions (May 2017).
2. New York State Department of Environmental Conservation, Division of Environmental Remediation, Draft Brownfield Cleanup Program Guide, dated May 2004.
3. New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation, issued May 3, 2010; effective June 18, 2010.
4. New York State Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1) dated June 1998.
5. United States Environmental Protection Agency, Low Flow Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, EQASOP-GW 001, September 19, 2017.
6. United States Geological Survey "Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey", dated 1994.
7. New York State Department of Environmental Conservation, Part 375 of Title 6 of the New York Compilation of Codes, Rules, and Regulations, Effective December 14, 2006.
8. Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C, Remedial Investigation Work Plan, dated April 24, 2020.
9. Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C, Remedial Investigation Report – Parcels D1, D2, E3, F, G, and H, prepared by Langan, dated May 19, 2014.
10. Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C Subsurface Investigation – 45 Commercial Street, performed by Langan, dated September 2019.
11. AKRF Inc., Phase I Environmental Site Assessment Report – Greenpoint Lumber Yard, Brooklyn, New York, prepared by AKRF, Inc. dated July 2001.
12. AKRF Inc., *Supplemental Subsurface (Phase II) Investigation Report – Greenpoint Lumber Yard, Brooklyn, New York, prepared by AKRF, Inc. dated April 2004.*

TABLES

**Table 1
Remedial Investigation Report
Sample Collection Summary**

**45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024**

No.	Sample Name	Location	Depth Interval	Date Collected	AOCs Investigated	Rationale	Analysis
SOIL							
1	LB13_15.5-17.5	LB13	15.5-17.5 ft. bgs	5/6/2020	AOC 2	Interval exhibiting greatest degree of contamination	TCL VOCs, TCL SVOCs
2	LB13_18-20		18-20 ft. bgs	5/6/2020		Clean interval below impacts	
3	LB13N_15-17		15-17 ft. bgs	5/7/2020		Interval exhibiting greatest degree of contamination	
4	LB13W_15-17		15-17 ft. bgs	5/7/2020		Clean interval to delineate petroleum impacts at LB13 to the west	
5	LB16_3-5	LB16	3-5 ft. bgs	5/13/2020	AOCs 1 & 3	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
6	LB16_6-8		6-8 ft. bgs	5/13/2020	AOC 3	Metal exceedances near LB05 and LB11	TCLP arsenic, lead, mercury
7	LB16_8-10		8-10 ft. bgs	5/13/2020	AOCs 1 & 3	Historic fill deeper than 8 feet bgs (to delineate PAHs)	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
8	LB16_15-17		15-17 ft. bgs	5/13/2020		Interval exhibiting greatest degree of contamination	
9	LB16_18-20		18-20 ft. bgs	5/13/2020	AOC 3	Native Soil Conditions	
10	LB17_1-3	LB17	1-3 ft. bgs	5/6/2020	AOC 3	Metal exceedances near LB02 and LB13	TCLP arsenic, lead, mercury
11	LB17_3-5		3-5 ft. bgs	5/6/2020	AOCs 1, 2 & 3	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
12	LB17_6-8		6-8 ft. bgs	5/6/2020	AOC 3	Metal exceedances near LB02 and LB13	TCLP arsenic, lead, mercury
13	LB17_8-10		8-10 ft. bgs	5/7/2020			Total arsenic, lead, mercury
14	LB17_15-16		15-16 ft. bgs	5/7/2020	AOCs 1, 2 & 3	Interval exhibiting greatest degree of contamination	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
15	LB18_2-4	LB18	2-4 ft. bgs	5/8/2020	AOC 3	Metal exceedances near LB04 and LB12	TCLP arsenic, lead, mercury
16	LB18_4-6		4-6 ft. bgs	5/8/2020	AOCs 1 & 3	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
17	LB18_6-8		6-8 ft. bgs	5/8/2020	AOC 3	Metal exceedances near LB04 and LB12	TCLP arsenic, lead, mercury
18	LB18_10-12		10-12 ft. bgs	5/8/2020	AOCs 1 & 3	Historic fill deeper than 6 feet bgs (to delineate PAHs)	TCL SVOCs
19	LB18_18-20		18-20 ft. bgs	5/8/2020	AOC 3	Native Soil Conditions	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
20	LB19_0.5-2.5	LB19	0.5-2.5 ft. bgs	5/13/2020	AOC 3	Metal exceedances near LB01 and LB07	TCLP arsenic, lead, mercury
21	LB19_6-8		6-8 ft. bgs	5/13/2020	AOCs 1, 3 & 4	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
22	LB19_14-16		14-16 ft. bgs	5/13/2020		Historic fill deeper than 8 feet bgs (to delineate PAHs and the NuHart Plastic Manufacturing)	
23	LB20_1-3	LB20	1-3 ft. bgs	5/13/2020	AOC 3	Metal exceedances near LB06, LB08, LB09	TCLP arsenic, lead, mercury
24	LB20_3-5		3-5 ft. bgs	5/13/2020	AOCs 1 & 3	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
25	LB20_6-8		6-8 ft. bgs	5/13/2020	AOC 3	Metal exceedances near LB06, LB08, LB09	TCLP arsenic, lead, mercury
26	LB20_14-16		14-16 ft. bgs	5/13/2020	AOCs 1 & 3	Interval exhibiting greatest degree of contamination	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
27	LB21_1-3	LB21	1-3 ft. bgs	5/7/2020	AOCs 1 & 3	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
28	LB21_15-17		15-17 ft. bgs	5/7/2020		Interval exhibiting greatest degree of contamination	
29	LB22_2-4	LB22	2-4 ft. bgs	5/8/2020	AOCs 1 & 3	Historic fill above the groundwater table	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
30	LB22_4-6		4-6 ft. bgs	5/8/2020	AOC 3	Metal exceedances near LB03	TCLP arsenic, lead, mercury
31	LB22_12-14		12-14 ft. bgs	5/8/2020	AOCs 1 & 3	Interval exhibiting greatest degree of contamination	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals (including hexavalent and trivalent chromium), cyanide, PFAS, and 1,4-dioxane.
32	LB22_18-20		18-20 ft. bgs	5/8/2020	AOC 3	Native Soil Conditions	
33	LB23_10-12	LB23	10-12 ft. bgs	5/13/2020	AOCs 1 & 3	Historic fill deeper than 8 feet bgs (to delineate PAHs)	TCL SVOCs
34	LB24_10-12	LB24	10-12 ft. bgs	5/13/2020	AOCs 1 & 3	Historic fill deeper than 8 feet bgs (to delineate PAHs)	TCL SVOCs
35	LB26_12-13	LB26	12-13 ft. bgs	5/11/2020	AOC 2	Clean interval above confining layer	TCL VOCs, TCL SVOCs
36	LB28_14.5-15.5	LB28	14.5-15.5 ft. bgs	5/16/2020	AOC 2	Clean interval above confining layer	TCL VOCs, TCL SVOCs

**Table 1
Remedial Investigation Report
Sample Collection Summary**

**45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024**

No.	Sample Name	Location	Depth Interval	Date Collected	AOCs Investigated	Rationale	Analysis
SOIL QA/QC							
1	SODUP01_050620	LB17	3-5 ft. bgs	5/6/2020	QA/QC	3-5 ft. bgs interval	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals including hexavalent and trivalent chromium, cyanide, PFAS, and 1,4-dioxane.
2	SOMS01/SOMSD01_051320	LB20	3-5 ft. bgs	5/13/2020		3-5 ft. bgs interval	
3	SOFB01_050620	N/A	-	5/6/2020		N/A	PFAS
4	SOFB02_050720	N/A	-	5/7/2020		N/A	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals including hexavalent and trivalent chromium, cyanide, PFAS, and 1,4-dioxane.
5	SOFB03_050820	N/A	-	5/8/2020		N/A	
6	SOFB05_051320	N/A	-	5/13/2020		N/A	PFAS, 1,4-Dioxane
7	SOTB01_050620	N/A	-	5/6/2020		N/A	TCL VOCs
8	SOTB02_050720	N/A	-	5/7/2020		N/A	TCL VOCs
9	SOTB03_050820	N/A	-	5/8/2020		N/A	TCL VOCs
10	SOTB04_051120	N/A	-	5/11/2020		N/A	TCL VOCs
11	SOTB05_051320	N/A	-	5/13/2020		N/A	TCL VOCs
12	SOTB06_051620	N/A	-	5/16/2020		N/A	TCL VOCs
GROUNDWATER							
1	MW13_051620	AOCs 1, 2, 3 & 4	-	5/16/2020	AOCs 1, 2, 3 & 4	N/A	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals including hexavalent and trivalent chromium, cyanide, PFAS, and 1,4-dioxane.
2	MW13N_051620		-	5/16/2020		N/A	
3	MW16_052020		-	5/20/2020		N/A	
4	MW18_052020		-	5/20/2020		N/A	
5	MW19_052020		-	5/20/2020		N/A	
6	MW22_051620		-	5/16/2020		N/A	
GROUNDWATER QA/QC							
1	GWDUP01_052020	QA/QC	-	5/20/2020	QA/QC	N/A	TCL VOCs, TCL SVOCs, pesticides, herbicides, PCBs, TAL metals including hexavalent and trivalent chromium, cyanide, PFAS, and 1,4-dioxane.
2	GWMS01/GWMSD01_051620		-	5/16/2020		N/A	
3	GWFB01_051620		-	5/16/2020		N/A	
4	GWTB01_051620		-	5/16/2020		N/A	TCL VOCs
5	GWTB02_052020		-	5/20/2020		N/A	TCL VOCs
SOIL VAPOR							
1	SV01_050820	AOCs 1, 2, 3 & 4	6 ft. bgs	5/8/2020	AOCs 1, 2, 3 & 4	About 2 feet above the groundwater table	TO-15 VOCs
2	SV02_050820		6 ft. bgs	5/8/2020			
3	SV03_050820		6 ft. bgs	5/8/2020			
4	SV04_050820		6 ft. bgs	5/8/2020			
5	SV05_050820		6 ft. bgs	5/8/2020			
SOIL VAPOR							
1	SVDUP01_050820	QA/QC	-	5/8/2020	QA/QC	N/A	TO-15 VOCs
2	AA01_050820		-	5/8/2020		N/A	

Notes:

1. Area of Concern (AOC) 1 = Prior Site Use
2. AOC 2 = Petroleum Impacts
3. AOC 3 = Historic Fill
4. AOC 4 = Historical Use of Surrounding Properties
5. TBD = To be determined
6. VOC = Volatile organic compounds
7. SVOC = Semivolatile organic compounds
8. PCBs = Polychlorinated biphenyls
9. TCL = Target compound list
10. TAL = Target analyte list
11. PFAS = per- and poly-fluoroalkyl substances
12. QA/QC = Quality assurance/quality control
13. N/A = Not applicable
14. MS/MSD = matrix spike/matrix spike duplicate
15. PAHs = Polyaromatic hydrocarbons
16. bgs = below grade surface

Table 2
Remedial Investigation Report
Groundwater Elevation Summary

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Date Gauged	Well Location	Well Diameter (in.)	Screened Interval (feet bTOC)	Approximate Elevation of TOC (NAVD88)	Depth to Groundwater (feet bTOC)	Groundwater Elevation (NAVD88)	Bottom of Well Depth (ft bTOC)	Bottom of Well Elevation (NAVD88)
5/20/2020	MW13	2	5 to 17	11.91	8.92	2.99	17	-5.09
5/20/2020	MW13N	2	5 to 17	11.81	8.79	3.02	17	-5.19
5/20/2020	MW16	2	5 to 17	11.39	8.55	2.84	17	-5.61
5/20/2020	MW18	2	5 to 20	13.55	10.54	3.01	20	-6.45
5/20/2020	MW19	2	5 to 17	11.97	9.15	2.82	17	-5.03
5/20/2020	MW22	2	5 to 20	12.97	9.69	3.28	20	-7.03

Notes:

1. NAVD88 - North American Vertical Datum of 1988
2. bTOC = below top of casing
3. Grade surface elevations are referenced to the North American Vertical Datum of 1988, and were surveyed by Langan on 5/18/20.
4. Depth to groundwater was measured in feet below the top of well casing.

Table 3
Remedial Investigation Report
Soil Sample Analytical Results Summary - VOCs and SVOCs

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	LB13 LB13_15.5-17.5 1310324 5/6/2020 15.5-17.5	LB13 LB13_18-20 1310325 5/6/2020 18-20	LB13N LB13N_15-17 1310912 5/7/2020 15-17	LB13W LB13W_15-17 1310913 5/7/2020 15-17	LB16 LB16_3-5 1314144 5/13/2020 3-5	LB16 LB16_8-10 1314143 5/13/2020 8-10	LB16 LB16_15-17 1314145 5/13/2020 15-17	LB16 LB16_18-20 1314146 5/13/2020 18-20	LB17 LB17_3-5 1310328 5/6/2020 3-5	LB17 SODUP01_050620 1310329 5/6/2020 3-5
Volatile Organic Compounds (mg/kg)												
1,2,4-Trimethylbenzene	3.6	52	0.12 J	0.0006 U	0.0005 U	0.003 J	0.0005 U	0.0005 U	0.0006 U	0.0005 U	0.0005 U	0.0005 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.056 J	0.0006 U	0.0005 U	0.001 J	0.0005 U	0.0005 U	0.0006 U	0.0005 U	0.0005 U	0.0005 U
Acetone	0.05	100	0.39 U	0.064	0.11	0.045	0.046	0.077	0.084	0.072	0.041	0.066
Benzene	0.06	4.8	0.043 J	0.0006 U	0.0008 J	0.0006 U	0.0005 U	0.0005 U	0.0006 U	0.0005 U	0.0005 U	0.0005 U
Carbon Disulfide	~	~	0.05 J	0.0007 U	0.0006 U	0.001 J	0.001 J	0.0006 U	0.004 J	0.002 J	0.0006 U	0.0006 U
Ethylbenzene	1	41	0.05 J	0.0005 U	0.0004 U	0.0007 J	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.0004 U	0.0004 U
Methyl Acetate	~	~	0.17 J	0.001 U	0.001 J	0.001 U	0.0009 U	0.001 U	0.001 U	0.001 U	0.0009 U	0.001 J
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.13 U	0.012 U	0.005 J	0.005 J	0.002 U	0.002 U	0.006 J	0.007 J	0.009 U	0.01 U
n-Butylbenzene	12	100	0.2 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.004 U	0.003 U	0.003 U	0.003 U
n-Propylbenzene	3.9	100	0.037 J	0.0005 U	0.0004 U	0.002 J	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.0004 U	0.0004 U
Sec-Butylbenzene	11	100	0.21 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
T-Butylbenzene	5.9	100	0.13 J	0.0009 U	0.0007 U	0.0009 U	0.0007 U	0.0008 U	0.0009 U	0.0008 U	0.0008 U	0.0008 U
Tert-Butyl Alcohol	~	~	0.98 U	0.034 J	0.03 J	0.017 U	0.015 J	0.03 J	0.018 U	0.044 J	0.014 U	0.015 J
Tert-Butyl Methyl Ether	0.93	100	0.033 U	0.0007 J	0.0005 U	0.0006 U	0.0005 U	0.0005 U	0.0006 U	0.0005 U	0.0005 U	0.0005 U
Toluene	0.7	100	0.33 U	0.0007 U	0.0006 U	0.0009 J	0.0005 U	0.0006 U	0.0007 U	0.0006 U	0.0006 U	0.0006 U
Total Xylenes	0.26	100	0.4	0.002 U	0.001 U	0.005 J	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U
Total VOCs	~	~	1.27	0.0987	0.147	0.0636	0.067	0.107	0.094	0.125	0.041	0.082
Semivolatile Organic Compounds (mg/kg)												
1,4-Dichlorobenzene	1.8	13	0.021 U	0.022 U	0.041 U	0.041 U	0.37 U	0.034 J	0.02 UJ	0.022 U	0.018 U	0.018 U
1,4-Dioxane (P-Dioxane)	0.1	13	NA	NA	NA	NA	0.007 U	0.007 UJ	0.011 J	0.009 U	0.007 U	0.007 U
2,4-Dimethylphenol	~	~	0.038 U	0.04 U	0.55	0.77	0.67 U	0.034 U	0.035 U	0.039 U	0.032 U	0.032 U
2-Chloronaphthalene	~	~	0.008 U	0.009 U	0.016 U	0.016 U	0.15 U	0.007 U	0.008 UJ	0.009 U	0.007 U	0.007 U
2-Methylnaphthalene	~	~	1.1	0.004 U	4.3	5.6	5.3 U	0.43	0.007 J	0.004 U	0.18 J	5.3 J
2-Methylphenol (o-Cresol)	0.33	100	0.021 U	0.022 U	0.57	0.5	0.37 U	0.019 U	0.02 U	0.022 U	0.018 U	0.018 U
4-Methylphenol (p-Cresol)	0.33	100	0.19	0.022 U	1.3	1.2	0.37 U	0.019 U	0.02 U	0.022 U	0.018 U	0.033 J
Acenaphthene	20	100	1	0.004 U	4.5	12	15 U	0.46	0.017 J	0.004 U	0.34 J	17 J
Acenaphthylene	100	100	0.27	0.004 U	0.36	0.97	0.56 U	0.14	0.005 J	0.004 U	0.11 J	2.8 J
Acetophenone	~	~	0.021 U	0.022 U	0.041 U	0.041 U	0.37 U	0.019 U	0.082 J	0.022 U	0.018 U	0.018 U
Anthracene	100	100	1.1	0.004 U	7.2	15	29 U	0.97	0.03 J	0.006 J	0.55 J	24 J
Benzaldehyde	~	~	0.083 U	0.088 U	0.16 U	0.16 U	1.5 U	0.075 U	0.68 J	0.087 U	0.072 U	0.071 U
Benzo(a)Anthracene	1	1	3.9	0.009 U	12	19	45	1.9	0.062 J	0.009 U	1.4	25
Benzo(a)Pyrene	1	1	3.1	0.004 U	9.9	16	45	1.7	0.059 J	0.006 J	1.2	14
Benzo(b)Fluoranthene	1	1	2.2	0.004 U	12	19	53	2.5	0.066 J	0.009 J	1.6	20
Benzo(g,h,i)Perylene	100	100	3.3	0.004 U	4.7	8.2	28 U	1.2	0.047 J	0.007 J	0.77 J	5.5 J
Benzo(k)Fluoranthene	0.8	3.9	0.6	0.004 U	4.5	6.2	23	0.86	0.034 J	0.005 J	0.54 J	8.3
Biphenyl (Diphenyl)	~	~	0.15	0.022 U	0.76	0.67	1.6 U	0.1	0.02 UJ	0.022 U	0.058 J	0.48 J
Bis(2-Ethylhexyl) Phthalate	~	~	0.083 U	0.088 U	0.16 U	0.16 U	1.5 U	0.55	0.078 UJ	0.087 U	0.072 U	0.071 U
Carbazole	~	~	0.45	0.022 U	3.7	11	22 U	0.45	0.02 UJ	0.022 U	0.25 J	3.9 J
Chrysene	1	3.9	3.6	0.004 U	11	17	43	1.8	0.065 J	0.008 J	1.4	22
Dibenz(a,h)Anthracene	0.33	0.33	0.78	0.009 U	1.7	2.5	7.5	0.33	0.011 J	0.009 U	0.23 J	2.1
Dibenzofuran	7	59	0.4	0.022 U	3.6	11	14	0.46	0.02 J	0.022 U	0.32 J	9.5
Di-N-Butyl Phthalate	~	~	0.083 U	0.088 U	0.16 U	0.16 U	1.5 U	0.078 J	0.078 UJ	0.087 U	0.072 U	0.071 U
Fluoranthene	100	100	2.5	0.008 J	25	47	140	4.3	0.12 J	0.017 J	3.1 J	71 J
Fluorene	30	100	0.86	0.004 U	5.4	14	20 U	0.59	0.02 J	0.004 U	0.48 J	26 J
Hexachlorobenzene	0.33	1.2	0.008 U	0.009 U	0.016 U	0.016 U	0.15 U	0.007 U	0.008 UJ	0.009 U	0.007 U	0.007 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	1.4	0.004 U	4.4	7.7	26	1.1	0.04 J	0.007 J	0.68	5.5
Naphthalene	12	100	2.8	0.009 U	12	16	11	0.63	0.018 J	0.009 U	0.2 J	0.68 J
n-Nitrosodiphenylamine	~	~	0.021 U	0.022 U	0.041 U	0.041 U	0.37 U	0.075	0.02 UJ	0.022 U	0.018 U	0.018 U
Phenanthrene	100	100	3.4	0.008 J	29	73	160	4.2	0.12 J	0.013 J	2.7 J	92 J
Phenol	0.33	100	0.021 U	0.022 U	0.76	0.7	0.37 U	0.019 U	0.02 U	0.022 U	0.018 U	0.018 U
Pyrene	100	100	4.2	0.008 J	22	39	100 U	3.3	0.1 J	0.017 J	2.6 J	50 J
Total SVOCs	~	~	37.3	0.024	181	344	789	28.2	1.61	0.095	18.7	405

Notes provided on Page 4.
Concentrations above Unrestricted Use SCOs are bolded.
Concentrations above Restricted Use Residential SCOs are shaded.

Table 3
Remedial Investigation Report
Soil Sample Analytical Results Summary - VOCs and SVOCs

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location Sample ID Laboratory ID Sample Date Sample Depth (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential- SCOs	LB17 LB17_15-16 1310911 5/7/2020 15-16	LB18 LB18_4-6 1311688 5/8/2020 4-6	LB18 LB18_10-12 1311689 5/8/2020 10-12	LB18 LB18_18-20 1311690 5/8/2020 18-20	LB19 LB19_6-8 1314149 5/13/2020 6-8	LB19 LB19_14-16 1314150 5/13/2020 14-16	LB20 LB20_3-5 1314155 5/13/2020 3-5	LB20 LB20_14-16 1314162 5/13/2020 14-16	LB21 LB21_1-3 1310914 5/7/2020 1-3	LB21 LB21_15-17 1310915 5/7/2020 15-17
Volatile Organic Compounds (mg/kg)												
1,2,4-Trimethylbenzene	3.6	52	0.0006 J	0.0007 U	NA	0.0005 U	0.0009 U	0.0007 U	0.0005 U	21	0.0005 U	0.0008 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0006 U	0.0007 U	NA	0.0005 U	0.0009 U	0.0007 U	0.0005 U	8.9	0.0005 U	0.0008 U
Acetone	0.05	100	0.044	0.086	NA	0.057	0.011 U	0.079	0.043	0.29 UJ	0.014 J	0.071
Benzene	0.06	4.8	0.0006 U	0.0007 U	NA	0.0005 U	0.0009 U	0.0007 U	0.0005 U	0.024 U	0.0005 U	0.0008 U
Carbon Disulfide	~	~	0.0008 J	0.0009 U	NA	0.0006 U	0.001 U	0.0008 U	0.0006 U	0.029 UJ	0.0005 U	0.004 J
Ethylbenzene	1	41	0.0005 U	0.0006 U	NA	0.0004 U	0.0007 U	0.0005 U	0.0004 U	0.019 U	0.0004 U	0.0007 U
Methyl Acetate	~	~	0.001 U	0.001 U	NA	0.0009 U	0.002 U	0.001 U	0.0009 U	0.048 UJ	0.0009 U	0.002 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.01 J	0.003 U	NA	0.004 J	0.004 U	0.009 J	0.002 U	0.095 U	0.002 U	0.013 J
n-Butylbenzene	12	100	0.003 U	0.004 U	NA	0.003 U	0.005 U	0.004 U	0.003 U	0.35 J	0.003 U	0.005 U
n-Propylbenzene	3.9	100	0.0005 U	0.0006 U	NA	0.0004 U	0.0007 U	0.0005 U	0.0004 U	1.1	0.0004 U	0.0007 U
Sec-Butylbenzene	11	100	0.002 U	0.003 U	NA	0.002 U	0.004 U	0.003 U	0.002 U	0.54	0.002 U	0.003 U
T-Butylbenzene	5.9	100	0.0009 U	0.001 U	NA	0.0008 U	0.001 U	0.001 U	0.0007 U	0.038 U	0.0007 U	0.001 U
Tert-Butyl Alcohol	~	~	0.017 U	0.021 J	NA	0.014 U	0.026 U	0.02 U	0.014 U	0.71 U	0.014 U	0.025 U
Tert-Butyl Methyl Ether	0.93	100	0.0006 U	0.0007 U	NA	0.0007 J	0.0009 U	0.0007 U	0.0005 U	0.024 U	0.0005 U	0.0008 U
Toluene	0.7	100	0.0007 U	0.0009 U	NA	0.0006 U	0.001 U	0.0008 U	0.0006 U	0.029 U	0.0005 U	0.001 U
Total Xylenes	0.26	100	0.002 U	0.002 U	NA	0.001 U	0.002 U	0.002 U	0.001 U	3.8	0.001 U	0.002 U
Total VOCs	~	~	0.0554	0.107	NA	0.0617	ND	0.088	0.043	35.7	0.014	0.088
Semivolatile Organic Compounds (mg/kg)												
1,4-Dichlorobenzene	1.8	13	0.04 U	0.019 U	0.02 U	0.021 U	0.018 U	0.02 U	0.018 U	0.06 U	0.019 U	0.029 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.008 U	0.008 U	NA	0.008 U	0.007 U	0.008 UJ	0.007 UJ	0.14	0.007 U	0.011 U
2,4-Dimethylphenol	~	~	0.073 U	0.035 J	0.035 U	0.037 U	0.032 U	0.036 U	0.032 U	0.11 U	0.039 J	0.052 U
2-Chloronaphthalene	~	~	0.016 U	0.008 U	0.008 U	0.008 U	0.019 J	0.008 U	0.007 U	0.024 U	0.008 U	0.011 U
2-Methylnaphthalene	~	~	1.2	1.5	0.023 J	0.004 U	0.25	0.047	0.35	0.59	2.2	0.062
2-Methylphenol (o-Cresol)	0.33	100	0.057 J	0.021 J	0.02 U	0.021 U	0.025 J	0.02 U	0.018 U	0.06 U	0.021 J	0.029 U
4-Methylphenol (p-Cresol)	0.33	100	0.18	0.062	0.02 U	0.021 U	0.069	0.02 U	0.037 J	0.06 U	0.074	0.15
Acenaphthene	20	100	3.5	3.9	0.065	0.004 U	0.67	0.051	1.1	1.4	9.9	0.072
Acenaphthylene	100	100	0.35	0.27	0.038	0.005 J	1.4	0.023	0.22	0.63	0.23	0.026 J
Acetophenone	~	~	0.04 U	0.046 J	0.02 U	0.021 U	0.018 U	0.02 U	0.018 U	0.06 U	0.019 U	0.029 U
Anthracene	100	100	6.5	7.4	0.2	0.01 J	6.3	0.13	2.6	3.4	19	0.17
Benzaldehyde	~	~	0.16 U	0.078 U	0.079 U	0.082 U	0.07 U	0.08 U	0.071 U	0.24 U	0.076 U	0.11 U
Benzo(a)Anthracene	1	1	11	18	0.47	0.026	14	0.18	7.6	6.3	30	0.34
Benzo(a)Pyrene	1	1	9.1	15	0.41	0.015 J	9.6	0.14	6.3	5	27	0.3
Benzo(b)Fluoranthene	1	1	9.4	20	0.52	0.017 J	12	0.19	7.7	6.1	33	0.39
Benzo(g,h,i)Perylene	100	100	4.5	10	0.26	0.007 J	2.8	0.084	2.9	2.7	16	0.2
Benzo(k)Fluoranthene	0.8	3.9	3.9	4.5	0.19	0.009 J	2.8	0.067	2.2	2.4	0.004 U	0.12
Biphenyl (Diphenyl)	~	~	0.31	0.45	0.02 U	0.021 U	0.14	0.02 U	0.12	0.13 J	0.72	0.029 U
Bis(2-Ethylhexyl) Phthalate	~	~	0.16 U	0.078 U	0.079 U	0.082 U	0.07 U	0.08 U	0.071 U	0.24 U	0.076 U	0.11 U
Carbazole	~	~	2.9	5.6	0.08	0.021 U	0.38	0.044	1.2	0.95	5.6	0.061 J
Chrysene	1	3.9	9.7	18	0.47	0.025	12	0.16	6.4	5	27	0.3
Dibenz(a,h)Anthracene	0.33	0.33	1.5	3.1	0.075	0.008 U	0.99	0.022	0.77	0.78	3.2	0.061
Dibenzofuran	7	59	2.3	3.3	0.045	0.021 U	0.6	0.046	0.76	1.2	5.2	0.077
Di-N-Butyl Phthalate	~	~	0.16 U	0.078 U	0.079 U	0.082 U	0.07 U	0.08 U	0.071 U	0.24 U	0.076 U	0.11 U
Fluoranthene	100	100	25	49	0.98	0.053	30	0.45	17	14	75	0.73
Fluorene	30	100	3.9	4	0.073	0.006 J	1	0.06	0.94	1.9	9.5	0.093
Hexachlorobenzene	0.33	1.2	0.016 U	0.008 U	0.008 U	0.008 U	0.007 U	0.008 U	0.007 U	0.024 U	0.008 U	0.011 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	4.4	9.2	0.23	0.008 J	3.1	0.075	2.7	2.5	15	0.17
Naphthalene	12	100	3.4	3	0.049	0.008 U	0.62	0.096	0.72	0.64	2.7	0.14
n-Nitrosodiphenylamine	~	~	0.04 U	0.019 U	0.02 U	0.021 U	0.018 U	0.02 U	0.018 U	0.06 U	0.019 U	0.029 U
Phenanthrene	100	100	27	54	0.99	0.034	21	0.38	14	18	80	0.49
Phenol	0.33	100	0.12	0.019 U	0.02 U	0.021 U	0.018 U	0.02 U	0.018 U	0.06 U	0.04 J	0.035 J
Pyrene	100	100	21	40	1	0.056	24	0.37	14	11	63	0.54
Total SVOCs	~	~	151	270	6.17	0.271	144	2.62	89.6	84.8	424	4.53

Notes provided on Page 4.

Concentrations above Unrestricted Use SCOs are bolded.

Concentrations above Restricted Use Residential SCOs are shaded.

Table 3
Remedial Investigation Report
Soil Sample Analytical Results Summary - VOCs and SVOCs

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	LB22 LB22_2-4 1311691 5/8/2020 2-4	LB22 LB22_12-14 1311693 5/8/2020 12-14	LB22 LB22_18-20 1311694 5/8/2020 18-20	LB23 LB23_10-12 1314163 5/13/2020 10-12	LB24 LB24_10-12 1314164 5/13/2020 10-12	LB26 LB26_12-13 1312796 5/11/2020 12-13	LB28 LB28_14.5-15.5 1316563 5/16/2020 14.5-15.5
Volatile Organic Compounds (mg/kg)									
1,2,4-Trimethylbenzene	3.6	52	0.0006 U	0.0007 U	0.0005 U	NA	NA	0.0009 U	0.0005 U
1,3,5-Trimethylbenzene (Mesitylene)	8.4	52	0.0006 U	0.0007 U	0.0005 U	NA	NA	0.0009 U	0.0005 U
Acetone	0.05	100	0.09	0.18	0.039	NA	NA	0.035 J	0.042
Benzene	0.06	4.8	0.0006 U	0.0007 U	0.0005 U	NA	NA	0.0009 U	0.0005 U
Carbon Disulfide	~	~	0.0008 U	0.0008 U	0.0007 U	NA	NA	0.001 U	0.0006 U
Ethylbenzene	1	41	0.0005 U	0.0006 U	0.0004 U	NA	NA	0.0007 U	0.0004 U
Methyl Acetate	~	~	0.001 U	0.001 U	0.001 U	NA	NA	0.002 U	0.001 U
Methyl Ethyl Ketone (2-Butanone)	0.12	100	0.005 J	0.003 U	0.004 J	NA	NA	0.004 U	0.004 J
n-Butylbenzene	12	100	0.004 U	0.004 U	0.003 U	NA	NA	0.006 U	0.003 U
n-Propylbenzene	3.9	100	0.0005 U	0.0006 U	0.0004 U	NA	NA	0.0007 U	0.0004 U
Sec-Butylbenzene	11	100	0.003 U	0.003 U	0.002 U	NA	NA	0.004 U	0.002 U
T-Butylbenzene	5.9	100	0.001 U	0.001 U	0.0009 U	NA	NA	0.001 U	0.0008 U
Tert-Butyl Alcohol	~	~	0.019 U	0.051 J	0.016 U	NA	NA	0.028 U	0.015 U
Tert-Butyl Methyl Ether	0.93	100	0.0006 U	0.0007 U	0.0005 U	NA	NA	0.0009 U	0.0005 U
Toluene	0.7	100	0.0008 U	0.0008 U	0.0007 U	NA	NA	0.001 U	0.0006 U
Total Xylenes	0.26	100	0.002 U	0.002 U	0.002 U	NA	NA	0.003 U	0.001 U
Total VOCs	~	~	0.095	0.231	0.043	NA	NA	0.035	0.046
Semivolatile Organic Compounds (mg/kg)									
1,4-Dichlorobenzene	1.8	13	0.019 U	0.02 U	0.022 U	0.023 U	0.019 U	0.026 U	0.021 U
1,4-Dioxane (P-Dioxane)	0.1	13	0.007 U	0.008 U	0.009 U	NA	NA	NA	NA
2,4-Dimethylphenol	~	~	0.033 U	0.037 U	0.04 U	0.042 U	0.034 U	0.047 U	0.037 U
2-Chloronaphthalene	~	~	0.007 U	0.008 U	0.009 U	0.009 U	0.008 U	0.01 U	0.008 U
2-Methylnaphthalene	~	~	0.099	0.012 J	0.004 U	0.016 J	0.24	0.007 J	0.096
2-Methylphenol (o-Cresol)	0.33	100	0.019 U	0.02 U	0.022 U	0.023 U	0.019 U	0.026 U	0.021 U
4-Methylphenol (P-Cresol)	0.33	100	0.019 U	0.02 U	0.022 U	0.023 U	0.045 J	0.026 U	0.028 J
Acenaphthene	20	100	0.36	0.005 J	0.004 U	0.03	0.77	0.005 U	0.31
Acenaphthylene	100	100	0.1	0.005 J	0.004 U	0.062	0.36	0.005 U	0.086
Acetophenone	~	~	0.019 U	0.02 U	0.022 U	0.032 J	0.019 U	0.026 U	0.021 U
Anthracene	100	100	0.82	0.006 J	0.004 U	0.33	1.4	0.012 J	0.55
Benzaldehyde	~	~	0.074 U	0.082 U	0.088 U	0.093 U	0.077 U	0.1 U	0.082 U
Benzo(a)Anthracene	1	1	2.5	0.012 J	0.015 J	1.6	2.9	0.035	1.3
Benzo(a)Pyrene	1	1	2.8	0.009 J	0.012 J	7.1	2.6	0.034	1.3
Benzo(b)Fluoranthene	1	1	3.1	0.012 J	0.016 J	8.1	3.1	0.052	1.5
Benzo(g,h,i)Perylene	100	100	2	0.005 J	0.008 J	27	1.8	0.027	0.79
Benzo(k)Fluoranthene	0.8	3.9	1.3	0.006 J	0.008 J	3.2	1.3	0.02 J	0.65
Biphenyl (Diphenyl)	~	~	0.047	0.02 U	0.022 U	0.023 U	0.086	0.026 U	0.036 J
Bis(2-Ethylhexyl) Phthalate	~	~	0.074 U	0.082 U	0.088 U	0.093 U	0.077 U	0.1 U	0.082 U
Carbazole	~	~	0.36	0.02 U	0.022 U	0.037 J	0.61	0.026 U	0.22
Chrysene	1	3.9	2.4	0.013 J	0.016 J	1.6	2.6	0.048	1.1
Dibenz(a,h)Anthracene	0.33	0.33	0.56	0.008 U	0.009 U	3	0.46	0.01 U	0.22
Dibenzofuran	7	59	0.24	0.02 U	0.022 U	0.05 J	0.46	0.026 U	0.21
Di-N-Butyl Phthalate	~	~	0.074 U	0.082 U	0.088 U	0.093 U	0.077 U	0.1 U	0.082 U
Fluoranthene	100	100	5.5	0.022 J	0.02 J	1.7	8.3	0.066	2.6
Fluorene	30	100	0.3	0.006 J	0.004 U	0.044	0.64	0.007 J	0.27
Hexachlorobenzene	0.33	1.2	0.007 U	0.008 U	0.009 U	0.018 J	0.008 U	0.01 U	0.008 U
Indeno(1,2,3-c,d)Pyrene	0.5	0.5	1.8	0.004 J	0.008 J	19	1.6	0.025 J	0.67
Naphthalene	12	100	0.21	0.016 J	0.009 U	0.091	0.49	0.016 J	0.19
n-Nitrosodiphenylamine	~	~	0.019 U	0.02 U	0.022 U	0.023 U	0.019 U	0.026 U	0.021 U
Phenanthrene	100	100	3.1	0.017 J	0.009 J	0.88	7.6	0.04	2.5
Phenol	0.33	100	0.019 U	0.02 U	0.022 U	0.023 U	0.019 U	0.026 U	0.023 J
Pyrene	100	100	4.4	0.022	0.021 J	2	6.7	0.054	2.2
Total SVOCs	~	~	32	0.172	0.133	75.9	44.1	0.443	16.9

Notes provided on Page 4.

Concentrations above Unrestricted Use SCOs are bolded.

Concentrations above Restricted Use Residential SCOs are shaded.

Table 3
Remedial Investigation Report
Soil Sample Analytical Results Summary - VOCs and SVOCs

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Notes:

1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential.
2. Only detected analytes are shown in the table.
3. Detected analytical results above Unrestricted Use SCOs are bolded.
4. Detected analytical results above Restricted Use Restricted-Residential SCOs are shaded.
5. Analytical results with reporting limits (RL) above the lowest applicable criteria are italicized.
6. Sample SODUP01_05062020 is a duplicate sample of LB17_3-5.
7. ~ = Regulatory limit for this analyte does not exist
8. bgs = below grade surface
9. mg/kg = milligrams per kilogram
10. NA = Not analyzed
11. ND = Not detected

Qualifiers:

- J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- UJ = The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.

Table 4
Remedial Investigation Report
Soil Sample Analytical Results Summary – PCBs, Pesticides, Herbicides, Inorganics

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location Sample ID Laboratory ID Sample Date Sample Depth (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	USEPA RCRA CFR Part 261 Maximum Concentration of Contaminants for the Toxicity Characteristic	LB16 LB16_3-5 1314144 5/13/2020 3-5	LB16 LB16_6-8 1314141 5/13/2020 6-8	LB16 LB16_8-10 1314143 5/13/2020 8-10	LB16 LB16_15-17 1314145 5/13/2020 15-17	LB16 LB16_18-20 1314146 5/13/2020 18-20	LB17 LB17_1-3 1310326 5/6/2020 1-3	LB17 LB17_3-5 1310328 5/6/2020 3-5	LB17 SODUP01_050620 1310329 5/6/2020 3-5	LB17 LB17_6-8 1310327 5/6/2020 6-8
Pesticides (mg/kg)												
4,4'-DDD	0.0033	13	~	0.0073 U	NA	0.028 J	0.0019 UJ	0.0022 U	NA	0.00036 U	0.00036 U	NA
4,4'-DDE	0.0033	8.9	~	0.0073 U	NA	0.018 U	0.0019 U	0.0022 U	NA	0.00067 J	0.00044 J	NA
4,4'-DDT	0.0033	7.9	~	0.018 U	NA	0.044 U	0.0047 UJ	0.0052 U	NA	0.0019 J	0.0013 J	NA
Aldrin	0.005	0.097	~	0.0038 U	NA	0.0095 U	0.001 UJ	0.0011 U	NA	0.002 U	0.00025 J	NA
Alpha BHC (Alpha Hexachlorocyclohexane)	0.02	0.48	~	0.0038 U	NA	0.0095 U	0.001 U	0.0011 U	NA	0.00027 J	0.00018 U	NA
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	~	0.0098 U	NA	0.025 U	0.0026 U	0.0029 U	NA	0.00057 J	0.00047 U	NA
Beta Endosulfan	2.4	24	~	0.024 U	NA	0.061 U	0.0065 UJ	0.0072 U	NA	0.0012 U	0.0012 U	NA
Delta Bhc (Delta Hexachlorocyclohexane)	0.04	100	~	0.01 U	NA	0.025 U	0.0027 U	0.003 U	NA	0.00049 U	0.00049 U	NA
Dieldrin	0.005	0.2	~	0.0073 U	NA	0.018 U	0.0019 UJ	0.0022 U	NA	0.00036 U	0.00036 U	NA
Endosulfan Sulfate	2.4	24	~	0.0073 U	NA	0.018 U	0.0019 UJ	0.0022 U	NA	0.00036 U	0.00036 U	NA
Endrin	0.014	11	~	0.015 UJ	NA	0.038 UJ	0.004 UJ	0.0045 UJ	NA	0.00073 U	0.00073 U	NA
Gamma Bhc (Lindane)	0.1	1.3	~	0.0047 U	NA	0.012 U	0.0012 U	0.0014 U	NA	0.00023 U	0.0078 J	NA
Heptachlor	0.042	2.1	~	0.0069 U	NA	0.017 U	0.0018 UJ	0.0038 U	NA	0.00033 U	0.00033 U	NA
Herbicides (mg/kg)												
2,4,5-T (Trichlorophenoxyacetic Acid)	~	~	~	0.00091 U	NA	0.00092 U	0.00097 U	0.0011 U	NA	0.00088 U	0.00089 U	NA
2,4-D (Dichlorophenoxyacetic Acid)	~	~	~	0.013 U	NA	0.013 U	0.014 U	0.016 U	NA	0.013 U	0.013 U	NA
Silvex (2,4,5-Tp)	3.8	100	~	0.00083 U	NA	0.00084 U	0.00088 U	0.00098 U	NA	0.00081 U	0.00081 U	NA
Polychlorinated Biphenyls (mg/kg)												
PCB-1016 (Aroclor 1016)	~	~	~	0.004 U	NA	0.004 U	0.0042 UJ	0.0047 U	NA	0.0039 UJ	0.0039 U	NA
PCB-1221 (Aroclor 1221)	~	~	~	0.0051 U	NA	0.0052 U	0.0054 UJ	0.006 U	NA	0.005 UJ	0.005 U	NA
PCB-1232 (Aroclor 1232)	~	~	~	0.0089 U	NA	0.009 U	0.0094 UJ	0.01 U	NA	0.0086 UJ	0.0086 U	NA
PCB-1242 (Aroclor 1242)	~	~	~	0.0037 U	NA	0.0037 U	0.0039 UJ	0.0043 U	NA	0.0036 UJ	0.0036 U	NA
PCB-1248 (Aroclor 1248)	~	~	~	0.0037 U	NA	0.0037 U	0.0039 UJ	0.0043 U	NA	0.0036 UJ	0.0036 U	NA
PCB-1254 (Aroclor 1254)	~	~	~	0.0037 U	NA	0.0037 U	0.0039 UJ	0.0043 U	NA	0.0036 UJ	0.0036 U	NA
PCB-1260 (Aroclor 1260)	~	~	~	0.02 P	NA	0.017 J	0.0058 UJ	0.0064 U	NA	0.0053 UJ	0.0053 U	NA
Total PCBs	0.1	1	~	0.02	NA	0.017 J	0.0039 UJ	0.0043 U	NA	0.0036 UJ	0.0036 U	NA
Inorganics (mg/kg)												
Arsenic	13	16	~	6.28	NA	8.26	8.23	7.59	NA	15.7 J	7.18 J	NA
Barium	350	400	~	44.6	NA	180	34.8	37.5	NA	86.2 J	156 J	NA
Beryllium	7.2	72	~	0.824	NA	0.564	0.408	0.793	NA	0.824 J	0.339 J	NA
Cadmium	2.5	4.3	~	0.475	NA	0.332	0.118	0.0812	NA	0.792 J	0.379 J	NA
Chromium, Hexavalent	1	110	~	1.1	NA	2.4	0.17 U	0.18 U	NA	0.15 U	0.15 U	NA
Chromium, Total	~	~	~	11.5	NA	28.9	6.31	28.8	NA	10.4	14.8	NA
Chromium, Trivalent	30	180	~	10.4	NA	26.5	6.3	28.8	NA	10.4	14.8	NA
Copper	50	270	~	25.9	NA	136	24.2	10.4	NA	164	124 J	NA
Cyanide	27	27	~	0.2 U	NA	0.2 U	0.21 U	0.23 U	NA	0.22 J	0.2 U	NA
Lead	63	400	~	41.5	269	232	51.3	9.81	8,960	278	211	174
Manganese	1,600	2,000	~	116	NA	340	83.7	387	NA	229	152 J	NA
Mercury	0.18	0.81	~	0.0701 U	0.282	0.171 U	1.99	0.0187 U	0.672	1.2	1.57	1.52
Nickel	30	310	~	15	NA	16.3	43.8	25	NA	23.5	16.4	NA
Selenium	3.9	180	~	0.311 J	NA	0.456	0.649	0.436	NA	1.25	0.496 J	NA
Silver	2	180	~	0.0411 U	NA	0.115	0.0557 J	0.331	NA	0.165 J	0.447 J	NA
Zinc	109	10,000	~	65.1	NA	502	173	62.6	NA	312	230 J	NA
TCLP - Inorganics (mg/L)												
Arsenic	~	~	5	NA	0.016 U	NA	NA	NA	0.016 U	NA	NA	0.016 U
Lead	~	~	5	NA	1.15	NA	NA	NA	8	NA	NA	0.0673
Mercury	~	~	0.2	NA	0.000079 U	NA	NA	NA	0.00005 U	NA	NA	0.000079 U

Notes provided on Page 4

Concentrations above Unrestricted Use SCOs are bolded.

Concentrations above Restricted Use Residential SCOs are shaded.

Table 4
Remedial Investigation Report
Soil Sample Analytical Results Summary – PCBs, Pesticides, Herbicides, Inorganics

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location Sample ID Laboratory ID Sample Date Sample Depth (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted- Residential SCOs	USEPA RCRA CFR Part 261 Maximum Concentration of Contaminants for the Toxicity Characteristic	LB17 LB17 8-10 1310910 5/7/2020 8-10	LB17 LB17 15-16 1310911 5/7/2020 15-16	LB18 LB18 2-4 1311686 5/8/2020 2-4	LB18 LB18 4-6 1311688 5/8/2020 4-6	LB18 LB18 6-8 1311687 5/8/2020 6-8	LB18 LB18 18-20 1311690 5/8/2020 18-20	LB19 LB19 0.5-2.5 1314147 5/13/2020 0.5-2.5	LB19 LB19 6-8 1314149 5/13/2020 6-8	LB19 LB19 14-16 1314150 5/13/2020 14-16	LB20 LB20 1-3 1314151 5/13/2020 1-3	LB20 LB20 3-5 1314155 5/13/2020 3-5
Pesticides (mg/kg)														
4,4'-DDD	0.0033	13	~	NA	0.0078 U	NA	0.077 U	NA	0.00041 U	NA	0.0035 U	0.0039 U	NA	0.0035 U
4,4'-DDE	0.0033	8.9	~	NA	0.0078 U	NA	0.077 U	NA	0.00041 U	NA	0.0035 U	0.0039 U	NA	0.0035 U
4,4'-DDT	0.0033	7.9	~	NA	0.019 U	NA	0.19 U	NA	0.00098 U	NA	0.0084 U	0.0094 U	NA	0.0085 U
Aldrin	0.005	0.097	~	NA	0.004 U	NA	0.04 U	NA	0.00021 U	NA	0.0018 U	0.002 U	NA	0.0018 U
Alpha BHC (Alpha Hexachlorocyclohexane)	0.02	0.48	~	NA	0.0092 J	NA	0.04 U	NA	0.0011 P	NA	0.0018 U	0.002 U	NA	0.0018 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	~	NA	0.01 U	NA	0.1 U	NA	0.00054 U	NA	0.0047 U	0.0053 U	NA	0.0047 U
Beta Endosulfan	2.4	24	~	NA	0.026 U	NA	0.26 U	NA	0.0014 U	NA	0.012 U	0.013 U	NA	0.012 U
Delta Bhc (Delta Hexachlorocyclohexane)	0.04	100	~	NA	0.011 U	NA	0.11 U	NA	0.00056 U	NA	0.0048 U	0.0054 U	NA	0.0048 U
Dieldrin	0.005	0.2	~	NA	0.0078 U	NA	0.077 U	NA	0.00041 U	NA	0.0035 U	0.0039 U	NA	0.0035 U
Endosulfan Sulfate	2.4	24	~	NA	0.0078 U	NA	0.077 U	NA	0.00041 U	NA	0.0035 U	0.0039 U	NA	0.0035 U
Endrin	0.014	11	~	NA	0.016 U	NA	0.16 UJ	NA	0.00084 UJ	NA	0.0072 UJ	0.0081 UJ	NA	0.0073 UJ
Gamma Bhc (Lindane)	0.1	1.3	~	NA	0.005 U	NA	0.049 U	NA	0.00026 U	NA	0.0022 U	0.0025 U	NA	0.0022 U
Heptachlor	0.042	2.1	~	NA	0.0074 U	NA	0.073 U	NA	0.00038 U	NA	0.0033 U	0.0037 U	NA	0.0033 U
Herbicides (mg/kg)														
2,4,5-T (Trichlorophenoxyacetic Acid)	~	~	~	NA	0.00099 U	NA	0.00096 U	NA	0.001 U	NA	0.00087 U	0.00098 U	NA	0.00087 U
2,4-D (Dichlorophenoxyacetic Acid)	~	~	~	NA	0.014 U	NA	0.014 U	NA	0.015 U	NA	0.013 U	0.014 U	NA	0.013 U
Silvex (2,4,5-Tp)	3.8	100	~	NA	0.0012 U	NA	0.00088 U	NA	0.00093 U	NA	0.0008 U	0.0009 U	NA	0.0008 U
Polychlorinated Biphenyls (mg/kg)														
PCB-1016 (Aroclor 1016)	~	~	~	NA	0.0085 U	NA	0.0042 U	NA	0.0044 UJ	NA	0.0038 U	0.0043 U	NA	0.0039 U
PCB-1221 (Aroclor 1221)	~	~	~	NA	0.011 U	NA	0.0054 U	NA	0.0057 UJ	NA	0.0049 U	0.0055 U	NA	0.0049 U
PCB-1232 (Aroclor 1232)	~	~	~	NA	0.019 U	NA	0.0094 U	NA	0.0099 UJ	NA	0.0085 U	0.0095 U	NA	0.0086 U
PCB-1242 (Aroclor 1242)	~	~	~	NA	0.0078 U	NA	0.0039 U	NA	0.0041 UJ	NA	0.0035 U	0.0039 U	NA	0.0035 U
PCB-1248 (Aroclor 1248)	~	~	~	NA	0.0078 U	NA	0.0039 U	NA	0.0041 UJ	NA	0.0035 U	0.0039 U	NA	0.0035 U
PCB-1254 (Aroclor 1254)	~	~	~	NA	0.0078 U	NA	0.0039 U	NA	0.0041 UJ	NA	0.0035 U	0.0039 U	NA	0.0035 U
PCB-1260 (Aroclor 1260)	~	~	~	NA	0.012 U	NA	0.0058 U	NA	0.0061 UJ	NA	0.0052 U	0.0058 U	NA	0.0052 U
Total PCBs	0.1	1	~	NA	0.0078 U	NA	0.0039 U	NA	0.0041 UJ	NA	0.0035 U	0.0039 U	NA	0.0035 U
Inorganics (mg/kg)														
Arsenic	13	16	~	16	10.4	NA	16.5	NA	5.37	NA	4.64	4.54	NA	10.4
Barium	350	400	~	NA	61.9	NA	484	NA	30.3	NA	37.6	21.8	NA	117
Beryllium	7.2	72	~	NA	0.474	NA	0.325	NA	0.426	NA	0.545	0.387	NA	0.523 J
Cadmium	2.5	4.3	~	NA	0.28	NA	0.185	NA	0.361	NA	0.263	0.0587 U	NA	0.677 J
Chromium, Hexavalent	1	110	~	NA	0.17 U	NA	0.85	NA	2.4	NA	0.28 J	0.17 U	NA	0.15 U
Chromium, Total	~	~	~	NA	16.9	NA	25	NA	14	NA	7.83	10.3	NA	18.6 J
Chromium, Trivalent	30	180	~	NA	16.9	NA	24.1	NA	11.5	NA	7.5	10.3	NA	18.6
Copper	50	270	~	NA	68.1	NA	54.9	NA	14.7	NA	50.7	8.84	NA	59.3
Cyanide	27	27	~	NA	0.42 J	NA	0.43 J	NA	0.23 U	NA	0.19 U	0.21 U	NA	0.19 U
Lead	63	400	~	766	1,490	10,900	591	75.2	10.9	21	71.5	8.93	98.2	580 J
Manganese	1,600	2,000	~	NA	239	NA	206	NA	207	NA	65.2	103	NA	311
Mercury	0.18	0.81	~	4.97	0.458	0.373	1.15	0.0217 J	0.077 U	0.0752 U	0.141 U	0.0807 U	0.116 U	0.292 J
Nickel	30	310	~	NA	34	NA	20	NA	16.1	NA	10.3	10.1	NA	23.7 J
Selenium	3.9	180	~	NA	0.479	NA	1.39	NA	0.156 J	NA	1.36	0.191 J	NA	0.688 J
Silver	2	180	~	NA	0.244	NA	0.13	NA	0.0466 U	NA	0.0519 J	0.0473 U	NA	0.133
Zinc	109	10,000	~	NA	531	NA	152	NA	167	NA	45.5	29.5	NA	249 J
TCLP - Inorganics (mg/L)														
Arsenic	~	~	5	NA	NA	0.016 U	NA	0.016 U	NA	0.016 U	NA	NA	0.016 U	NA
Lead	~	~	5	NA	NA	8.17	NA	0.0083 J	NA	0.473	NA	NA	0.247	NA
Mercury	~	~	0.2	NA	NA	0.000079 U	NA	0.000079 U	NA	0.000079 U	NA	NA	0.000079 U	NA

Notes provided on Page 4

Concentrations above Unrestricted Use SCOs are bolded.

Concentrations above Restricted Use Restricted-Residential SCOs are shaded.

Table 4
Remedial Investigation Report
Soil Sample Analytical Results Summary – PCBs, Pesticides, Herbicides, Inorganics

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location Sample ID Laboratory ID Sample Date Sample Depth (feet bgs)	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	USEPA RCRA CFR Part 261 Maximum Concentration of Contaminants for the Toxicity Characteristic	LB20 LB20_6-8 1314153 5/13/2020 6-8	LB20 LB20_14-16 1314162 5/13/2020 14-16	LB21 LB21_1-3 1310914 5/7/2020 1-3	LB21 LB21_15-17 1310915 5/7/2020 15-17	LB22 LB22_2-4 1311691 5/8/2020 2-4	LB22 LB22_4-6 1311692 5/8/2020 4-6	LB22 LB22_12-14 1311693 5/8/2020 12-14	LB22 LB22_18-20 1311694 5/8/2020 18-20
Pesticides (mg/kg)											
4,4'-DDD	0.0033	13	~	NA	0.008 U	0.00038 U	0.057 U	0.0005 U	NA	0.002 U	0.0022 U
4,4'-DDE	0.0033	8.9	~	NA	0.008 U	0.00038 U	0.057 U	0.00036 U	NA	0.002 U	0.0022 U
4,4'-DDT	0.0033	7.9	~	NA	0.019 U	0.0009 U	0.14 U	0.00087 U	NA	0.0048 U	0.0052 U
Aldrin	0.005	0.097	~	NA	0.0041 U	0.00021 U	0.029 U	0.0014 J	NA	0.001 U	0.0011 U
Alpha BHC (Alpha Hexachlorocyclohexane)	0.02	0.48	~	NA	0.0041 U	0.00019 U	0.029 U	0.013 U	NA	0.0016 U	0.0011 U
Beta Bhc (Beta Hexachlorocyclohexane)	0.036	0.36	~	NA	0.011 U	0.0005 U	0.076 U	0.00049 U	NA	0.0027 U	0.0029 U
Beta Endosulfan	2.4	24	~	NA	0.027 U	0.0013 U	0.19 U	0.0012 U	NA	0.0067 U	0.0072 U
Delta Bhc (Delta Hexachlorocyclohexane)	0.04	100	~	NA	0.015 U	0.00051 U	0.077 U	0.0005 U	NA	0.0028 U	0.003 U
Dieldrin	0.005	0.2	~	NA	0.008 U	0.00038 U	0.057 U	0.00036 U	NA	0.002 U	0.0022 U
Endosulfan Sulfate	2.4	24	~	NA	0.019 U	0.00038 U	0.057 U	0.00036 U	NA	0.002 U	0.0022 U
Endrin	0.014	11	~	NA	0.016 UJ	0.00077 U	0.12 U	0.00075 UJ	NA	0.0042 UJ	0.0045 UJ
Gamma Bhc (Lindane)	0.1	1.3	~	NA	0.0051 U	0.00024 U	0.036 U	0.00023 U	NA	0.0013 U	0.0014 U
Heptachlor	0.042	2.1	~	NA	0.0075 U	0.00035 U	0.053 U	0.00034 U	NA	0.0019 U	0.002 U
Herbicides (mg/kg)											
2,4,5-T (Trichlorophenoxyacetic Acid)	~	~	~	NA	0.001 U	0.00093 U	0.0014 U	0.00091 U	NA	0.001 U	0.0011 U
2,4-D (Dichlorophenoxyacetic Acid)	~	~	~	NA	0.015 U	0.014 U	0.02 U	0.013 U	NA	0.015 U	0.016 U
Silvex (2,4,5-Tp)	3.8	100	~	NA	0.00091 U	0.00085 U	0.0019 U	0.00083 U	NA	0.00093 U	0.00099 U
Polychlorinated Biphenyls (mg/kg)											
PCB-1016 (Aroclor 1016)	~	~	~	NA	0.022 U	0.0041 U	0.0062 U	0.004 U	NA	0.0044 U	0.0047 U
PCB-1221 (Aroclor 1221)	~	~	~	NA	0.028 U	0.0052 U	0.0079 U	0.0051 U	NA	0.0056 U	0.006 U
PCB-1232 (Aroclor 1232)	~	~	~	NA	0.048 U	0.0091 U	0.014 U	0.0088 U	NA	0.0098 U	0.011 U
PCB-1242 (Aroclor 1242)	~	~	~	NA	0.02 U	0.0038 U	0.0057 U	0.0036 U	NA	0.004 U	0.0043 U
PCB-1248 (Aroclor 1248)	~	~	~	NA	0.02 U	0.0038 U	0.0057 U	0.0036 U	NA	0.004 U	0.0043 U
PCB-1254 (Aroclor 1254)	~	~	~	NA	0.02 U	0.0038 U	0.0057 U	0.0036 U	NA	0.004 U	0.0043 U
PCB-1260 (Aroclor 1260)	~	~	~	NA	0.03 U	0.0056 U	0.0084 U	0.0054 U	NA	0.006 U	0.0064 U
Total PCBs	0.1	1	~	NA	0.02 U	0.0038 U	0.0057 U	0.0036 U	NA	0.004 U	0.0043 U
Inorganics (mg/kg)											
Arsenic	13	16	~	NA	3.73	7.05	13.9	14.3	NA	9.55	7.27
Barium	350	400	~	NA	29.4	76.9	82.8	136	NA	28.3	32.7
Beryllium	7.2	72	~	NA	0.14	0.416	0.738	0.507	NA	0.253	0.574
Cadmium	2.5	4.3	~	NA	0.254	0.334	0.187	0.739	NA	0.223	0.0748 J
Chromium, Hexavalent	1	110	~	NA	0.17 U	1.5	0.24 U	0.16 U	NA	0.17 U	0.19 U
Chromium, Total	~	~	~	NA	5.01	17.1	27	25.7	NA	7.52	22.4
Chromium, Trivalent	30	180	~	NA	5	15.6	27	25.7	NA	7.5	22.4
Copper	50	270	~	NA	34.6	114	50	108	NA	35.9	10
Cyanide	27	27	~	NA	0.21 U	0.39 J	0.31 U	0.24 J	NA	0.24 U	0.24 U
Lead	63	400	~	4.57	118	141	154	325	409	155	7.91
Manganese	1,600	2,000	~	NA	52.6	379	250	305	NA	60.4	307
Mercury	0.18	0.81	~	0.0855 U	0.291	0.733	0.398	0.588	1.91 J	0.147 U	0.0889 U
Nickel	30	310	~	NA	5.12	19.2	32.8	21.3	NA	29.4	20.5
Selenium	3.9	180	~	NA	0.489	0.441	0.491 J	0.672	NA	4.27	0.239 J
Silver	2	180	~	NA	0.122	0.109	0.193	0.249	NA	0.0882 J	0.042 U
Zinc	109	10,000	~	NA	163	194	115	275	NA	180	61.1
TCLP - Inorganics (mg/L)											
Arsenic	~	~	5	0.016 U	NA	NA	NA	NA	0.016 U	NA	NA
Lead	~	~	5	0.0071 U	NA	NA	NA	NA	9.01	NA	NA
Mercury	~	~	0.2	0.000079 U	NA	NA	NA	NA	0.000079 U	NA	NA

Notes provided on Page 4

Concentrations above Unrestricted Use SCOs are bolded.

Concentrations above Restricted Use Residential SCOs are shaded.

Table 4
Remedial Investigation Report
Soil Sample Analytical Results Summary – PCBs, Pesticides, Herbicides, Inorganics

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Notes:

1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use, Restricted Use Restricted-Residential, and the Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) Code of Federal Regulations (CFR) part 261 Maximum Concentration of Contaminants for the Toxicity Characteristic.
2. Only detected analytes are shown in the table.
3. Detected analytical results above Unrestricted Use SCOs are bolded.
4. Detected analytical results above Restricted Use Restricted-Residential SCOs are shaded.
5. Detected analytical results above USEPA RCRA CFR part 261 Maximum Concentration of Contaminants for the Toxicity Characteristic are bolded and italicized.
6. Analytical results with reporting limits (RL) above the lowest applicable criteria are italicized.
7. Sample SODUP01_05062020 is a duplicate sample of LB17_3-5.
8. ~ = Regulatory limit for this analyte does not exist
9. bgs = below grade surface
10. mg/kg = milligrams per kilogram
11. mg/l = milligrams per liter
12. NA = Not analyzed
13. ND = Not detected
14. TCLP = Toxicity Characteristic Leaching Procedure

Qualifiers:

- P = The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
- J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
- U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Table 5
Remedial Investigation Report
Soil Sample Analytical Results Summary - Emerging Contaminants

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location	LB16	LB16	LB16	LB16	LB17	LB17	LB17	LB18	LB18	LB19	LB19
Sample ID	LB16_3-5	LB16_8-10	LB16_15-17	LB16_18-20	LB17_3-5	SODUP01_05062020	LB17_15-16	LB18_4-6	LB18_18-20	LB19_6-8	LB19_14-16
Laboratory ID	1314144	1314143	1314145	1314146	1310328	1310329	1310911	1311688	1311690	1314149	1314150
Sample Date	5/13/2020	5/13/2020	5/13/2020	5/13/2020	5/6/2020	5/6/2020	5/7/2020	5/8/2020	5/8/2020	5/13/2020	5/13/2020
Sample Depth (feet bgs)	3 - 5	8 - 10	15 - 17	18 - 20	3 - 5	3 - 5	15 - 16	4 - 6	18 - 20	6 - 8	14 - 16
Per and Polyfluoroalkyl Substances (ng/kg)											
Perfluorooctanesulfonic acid (PFOS)	210 U	590 J	230 U	250 U	210 U	210 U	230 U	220 U	230 U	210 U	220 U
Perfluorooctanoic Acid (PFOA)	210 U	210 U	230 U	250 U	210 U	210 U	230 U	1,700	230 U	210 U	220 U

Table 5
Remedial Investigation Report
Soil Sample Analytical Results Summary - Emerging Contaminants

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location	LB20	LB20	LB21	LB21	LB22	LB22	LB22
Sample ID	LB20_3-5	LB20_14-16	LB21_1-3	LB21_15-17	LB22_2-4	LB22_12-14	LB22_18-20
Laboratory ID	1314155	1314162	1310914	1310915	1311691	1311693	1311694
Sample Date	5/13/2020	5/13/2020	5/7/2020	5/7/2020	5/8/2020	5/8/2020	5/8/2020
Sample Depth (feet bgs)	3 - 5	14 - 16	1 - 3	15 - 17	2 - 4	12 - 14	18 - 20
Per and Polyfluoroalkyl Substances (ng/kg)							
Perfluorooctanesulfonic acid (PFOS)	200 U	230 U	490 J	340 U	220 U	240 U	260 U
Perfluorooctanoic Acid (PFOA)	200 U	230 U	210 U	340 U	220 U	240 U	260 U

Table 5
Remedial Investigation Report
Soil Sample Analytical Results Summary - Emerging Contaminants

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Notes:

1. Only detected analytes are shown in the table.
2. Sample SODUP01_05062020 is a duplicate sample of LB17_3-5.
3. ng/kg = nanograms per kilogram

Qualifiers:

J = The analyte was detected above the Method Detection Limit (MDL), but below the RL; therefore, the result is an estimated concentration.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.

Table 6
Remedial Investigation Report
Groundwater Sample Analytical Results Summary - VOCs and SVOCs

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location		MW13		MW13N		MW16		MW18		MW18		MW19		MW22	
Sample ID	NYSDEC	MW13_051620		MW13N_051620		MW16_052020		MW18_052020		GWDUP01_052020		MW19_052020		MW22_051620	
Laboratory ID	SGVs	1316581		1316589		1317993		1317995		1317999		1317997		1316591	
Sample Date		5/16/2020		5/16/2020		5/20/2020		5/20/2020		5/20/2020		5/20/2020		5/16/2020	
Volatile Organic Compounds (µg/L)															
1,2-Dichloroethane	0.6	0.3	U	0.3	U	1	J	0.3	U	0.3	U	0.3	U	0.3	U
Acetone	50	8	J	0.7	U	20	U	0.7	U	0.7	U	0.7	U	0.7	U
Chloromethane	5	0.2	U	0.2	U	0.2	U	0.2	U	0.2	J	0.2	U	0.2	U
Tert-Butyl Methyl Ether	10	3		0.2	U	0.4	J	0.5	J	0.5	J	0.2	U	0.9	J
Semivolatile Organic Compounds (µg/L)															
1,4-Dioxane (P-Dioxane)	~	0.1	J	0.1	U	0.1	U	0.09	U	0.09	U	0.09	U	0.1	J
Acenaphthene	20	0.6		0.1	U	0.1	U	0.09	U	0.09	U	0.09	U	0.1	U
Naphthalene	10	0.7		0.1	U	0.1	U	0.09	U	0.09	U	0.2	J	0.1	J
Phenol	1	0.5	U	0.5	U	0.6	U	0.7	J	0.5	U	0.5	U	0.5	U

Notes:

- Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").
- Only detected analytes are shown in the table.
- Detected analytical results above NYSDEC SGVs are bolded and shaded.
- Analytical results with reporting limits (RL) above NYSDEC SGVs are italicized.
- Sample GWDUP01_052020 is a duplicate sample of MW18_052020.
- ~ = Regulatory limit for this analyte does not exist
- ug/l = micrograms per liter

Qualifiers:

- J = The analyte was detected above the Method Detection Limit (MDL), but below the RL; therefore, the result is an estimated concentration.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Table 7
Remedial Investigation Report
Groundwater Sample Analytical Results Summary - PCBs, Pesticides, Herbicides, Inorganics

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location		MW13	MW13N	MW13N	MW16	MW18	MW18	MW19	MW22
Sample ID	NYSDEC	MW13_051620	MW13N_051620	MW13N_051620	MW16_052020	MW18_052020	GWDUP01_052020	MW19_052020	MW22_051620
Laboratory ID	SGVs	1316581/1316585	1316589/1316590	1321423	1317993/1317994	1317995/1317996	1317999/1318000	1317997/1317998	1316591/1316592
Sample Date		5/16/2020	5/16/2020	5/16/2020	5/20/2020	5/20/2020	5/20/2020	5/20/2020	5/16/2020
Pesticides (µg/L)	~	ND	ND	NA	ND	ND	ND	ND	ND
Herbicides (µg/L)	~	ND	ND	NA	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (µg/L)									
PCB-1260 (Aroclor 1260)	~	0.16 U	1.5	0.16 U	0.26 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.15 U
Total PCBs	0.09	0.1 U	1.5	0.11 U	0.17 U	0.14 U	0.14 U	0.14 U	0.1 U
Inorganics (µg/L)									
Arsenic	25	3	2.7	NA	22.3	4.3	4.2	2.6	3.7
Arsenic (Dissolved)	25	1.8 J	2.1	NA	8.3	4.3	4.2	2.3	3.2
Barium	1,000	325	105	NA	76.7	130	131	63.6	121
Barium (Dissolved)	1,000	283	98.4	NA	30.4	134	132	61.5	126
Cadmium	5	0.15 U	0.15 U	NA	0.15 U	1.5	1.2	0.15 U	0.15 U
Cadmium (Dissolved)	5	0.15 U	0.15 U	NA	0.15 U	1.3	1.3	0.15 U	0.15 U
Chromium, Total	50	2.1 U	2 U	NA	0.78 J	0.5 J	0.52 J	0.72 J	2 U
Chromium, Total (Dissolved)	50	0.66 J	2 U	NA	0.33 U	0.44 J	0.34 J	0.53 J	2 U
Copper	200	5.7	1.9	NA	0.36 U	2.5	2.7	0.96 J	0.36 U
Copper (Dissolved)	200	0.36 U	0.36 U	NA	0.36 U	1.2	1.3	0.52 J	0.36 U
Lead	25	21.5	8.3	NA	0.92	2.1	2	1.4	4.6
Lead (Dissolved)	25	0.15 J	0.071 U	NA	0.071 U	0.4 J	0.3 J	0.12 J	0.071 U
Manganese	300	352	829	NA	644	912	924	203	620
Manganese (Dissolved)	300	310	802	NA	262	926	934	195	620
Nickel	100	1.8	1.6	NA	3.4	10.2	9.6	30.9	1.8
Nickel (Dissolved)	100	1.2	0.6 U	NA	1.2	10.1	10.7	31.3	1.8
Selenium	10	0.33 J	0.28 U	NA	0.28 U	2	1.9	3.5	0.28 U
Selenium (Dissolved)	10	0.28 U	0.28 U	NA	0.28 U	2	2	3.8	0.28 U
Zinc	2,000	44.4	6.2 U	NA	6.3 J	405	415	252	8.1 J
Zinc (Dissolved)	2,000	11.5	6.2 U	NA	6.2 U	414	413	256	6.2 U

Notes:

- Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").
- Only detected analytes are shown in the table.
- Detected analytical results above NYSDEC SGVs are bolded and shaded.
- Analytical results with reporting limits (RL) above NYSDEC SGVs are italicized.
- Sample GWDUP01_052020 is a duplicate sample of MW18_052020.
- Sample MW13N_051620 (Laboratory ID: 1321423) was lab filtered. Sample MW13N_051620 (Laboratory ID: 1316589/1316590) was not lab filtered.
- ~ = Regulatory limit for this analyte does not exist
- ug/l = micrograms per liter
- ND = Not detected

Qualifiers:

- J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Table 8
Remedial Investigation Report
Groundwater Sample Analytical Results Summary - Emerging Contaminants

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location		MW13		MW13N		MW16		MW18		MW18		MW19		MW22	
Sample ID	NYSDEC Jan 2020	MW13_051620		MW13N_051620		MW16_052020		MW18_052020		GWDUP01_052020		MW19_052020		MW22_051620	
Laboratory ID	PFAS Guidelines	1316581		1316589		1317993		1317995		1317999		1317997		1316591	
Sample Date		5/16/2020		5/16/2020		5/20/2020		5/20/2020		5/20/2020		5/20/2020		5/16/2020	
Per and Polyfluoroalkyl Substances (ng/L)															
Perfluorobutanesulfonic Acid (PFBS)	100	4.9	U	3.7		5		8		8		7.4		4.9	U
Perfluorobutanoic acid (PFBA)	100	20	U	11		13		33		33		47		20	U
Perfluoroheptanesulfonic acid (PFHpS)	100	4.9	U	0.44	U	0.44	U	0.87	J	0.84	J	0.42	U	4.9	U
Perfluoroheptanoic acid (PFHpA)	100	8.8	J	5.4		4.1		29		30		32		8.1	J
Perfluorohexanesulfonic Acid (PFHxS)	100	4.9	U	1.7	J	0.9	J	5		5.1		2.6		4.9	U
Perfluorohexanoic Acid (PFHxA)	100	11	J	12		12		77		80		120		13	J
Perfluorononanoic Acid (PFNA)	100	4.9	U	1.1	J	0.51	J	12		12		4.4		4.9	U
Perfluorooctanesulfonamide (FOSA)	100	4.9	U	0.44	U	0.44	U	0.58	J	0.58	J	0.42	U	4.9	U
Perfluorooctanesulfonic acid (PFOS)	10	4.9	U	5.3		2		25		24		2		6.6	J
Perfluorooctanoic Acid (PFOA)	10	52		43		16		170		170		100		66	
Perfluoropentanoic Acid (PFPeA)	100	12	J	15		18		110		120		190		16	J
Total PFAS	500	83.8		98.2		71.5		471		484		505		110	

Notes:

1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) January 2020 Guidelines for Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs.
2. Only detected analytes are shown in the table.
3. Detected analytical results above the NYSDEC Jan 2020 PFAS Guidelines are bolded and shaded.
4. Analytical results with reporting limits (RL) above the regulatory criteria are italicized.
5. Sample GWDUP01_052020 is a duplicate sample of MW18_052020.
6. ~ = Regulatory limit for this analyte does not exist
7. ng/l = nanograms per liter

Qualifiers:

J = The analyte was detected above the Method Detection Limit (MDL), but below the RL; therefore, the result is an estimated concentration.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.

Table 9
Remedial Investigation Report
Soil Vapor Analytical Results Summary - VOCs

45 Commercial Street
Brooklyn, New York
Langan Project No.: 170229024

Location	NYSDOH		AA01		SV-1		SV-2		SV-2		SV-3		SV-4		SV-5	
Sample ID	Decision Matrices		AA01_050820		SV01_050820		SV02_050820		SVDUP01_050820		SV03_050820		SV04_050820		SV05_050820	
Laboratory ID	Minimum		1311681		1311683		1311679		1311680		1311682		1311678		1311677	
Sample Date	Concentrations		5/8/2020		5/8/2020		5/8/2020		5/8/2020		5/8/2020		5/8/2020		5/8/2020	
Sample Type	AGVs		AA		SV		SV		SV		SV		SV		SV	
Volatile Organic Compounds (µg/m³)																
1,2,4-Trimethylbenzene	~	~	1.6	J	1.4	U	3	J	1.8	J	2.5	J	4.4	J	1.7	J
1,2-Dichlorobenzene	~	~	1.2	U	1.3	J	1.2	U	1.2	U	12		1.2	U	1.2	U
1,3-Dichlorobenzene	~	~	7.3		1.1	U	6.2		9.8		6.8		4.3	J	5.9	J
1,4-Dichlorobenzene	~	~	1	U	1	U	1	U	1	U	2.5	J	1	U	1	U
2,2,4-Trimethylpentane	~	~	3.9	J	0.86	J	1.8	J	22	J	2.4	J	2.1	J	8.2	
4-Ethyltoluene	~	~	0.88	U	0.88	U	0.92	J	0.88	U	0.9	J	1.8	J	0.88	U
Acetone	~	~	750		26		360		570		550		860		610	
Benzene	~	~	4		1.3	J	3.3		5.8		7.4		6.9		3.4	
Carbon Disulfide	~	~	16		0.4	U	1.4	J	32	J	64		37		13	
Chlorobenzene	~	~	0.6	U	2.5	J	0.6	U	0.6	U	3.5	J	0.6	U	0.6	U
Chloroform	~	~	0.45	U	0.45	U	0.95	J	0.45	U	0.45	U	0.45	U	0.45	U
Dichlorodifluoromethane	~	~	2.5	J	2.7	J	2.9	J	1.7	J	3	J	2.6	J	1.9	J
Ethylbenzene	~	~	3.5	J	0.95	J	3.4	J	2	J	5.1		8.6		5.5	
M,P-Xylene	~	~	11		2	J	11		6	J	20		32		14	
Methyl Ethyl Ketone (2-Butanone)	~	~	69		6		30	J	64	J	40		81		59	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	~	2.1	J	0.61	U	1.8	J	0.61	U	2.1	J	1.8	J	2.3	J
n-Heptane	~	~	9.1		1.2	J	4.4	J	13	J	6.9		11		31	
n-Hexane	~	~	0.46	U	2.5	J	0.46	UJ	82	J	0.46	U	0.46	U	180	
N-Octane	~	~	11		1.9	U	12		12		9.3	J	11		20	
n-Pentane	~	~	120		1.7	J	4.9	J	260	J	13		14		470	
o-Xylene (1,2-Dimethylbenzene)	~	~	3.1	J	0.86	J	3.4	J	2	J	6.8		9.1		6.9	
Tert-Butyl Methyl Ether	~	~	4.8		0.54	U	0.54	UJ	24	J	0.54	U	0.54	U	2	J
Tetrachloroethene (PCE)	100	30	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.8	J
Toluene	~	~	19		2.3	J	16		14		20		31		11	
Trichlorofluoromethane	~	~	0.84	U	2	J	2.2	J	0.84	U	2	J	1.9	J	0.84	U
Total VOCs	~	~	1,040		54.2		470		1,120		780		1,120		1,450	

Notes:

- Soil vapor sample analytical results are compared to the minimum soil vapor concentrations recommending mitigation as set forth in the New York State Department of Health (NYSDOH) October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York Decision Matrices for Sub-Slab Vapor and Indoor Air and subsequent updates (2017).
- The NYSDOH Air Guideline Values (AGVs) as set forth in the NYSDOH October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York and subsequent updates (2013, 2015) are shown for reference only.
- Ambient air sample analytical results are shown for reference only.
- Only detected analytes are shown in the table.
- Detected analytical results above the minimum soil vapor concentrations recommending mitigation are bolded and shaded.
- Analytical results with reporting limits (RL) above the minimum soil vapor concentrations recommending mitigation are italicized.
- Sample SVDUP01_050820 is a duplicate of parent sample SV02_050820.
- ~ = Regulatory limit for this analyte does not exist
- ug/m³ = micrograms per cubic meter
- AA = Ambient Air
- SV = Soil Vapor

Qualifiers:

- J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.
UJ = The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.

FIGURES



NOTES

1. BASE MAP SOURCE: USGS (2016) 7.5-MINUTE BROOKLYN, N.Y., TOPOGRAPHIC QUADRANGLES
2. NORTH ARROW SHOWS TRUE NORTH.

LEGEND

— — — — — APPROXIMATE SITE BOUNDARY

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

<p>Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001</p> <p>T: 212.479.5400 F: 212.479.5444 www.langan.com</p>	Project	Figure Title	Project No.	1
	45 COMMERCIAL STREET	SITE LOCATION MAP	170229024	
	BLOCK No. 2472, LOT No. 70 BROOKLYN		Date 03/26/2020	
	KINGS COUNTY NEW YORK		Drawn By DC Checked By WK	



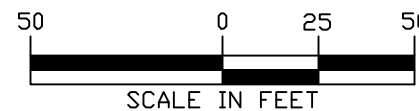
LEGEND:

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE TAX LOT BOUNDARY

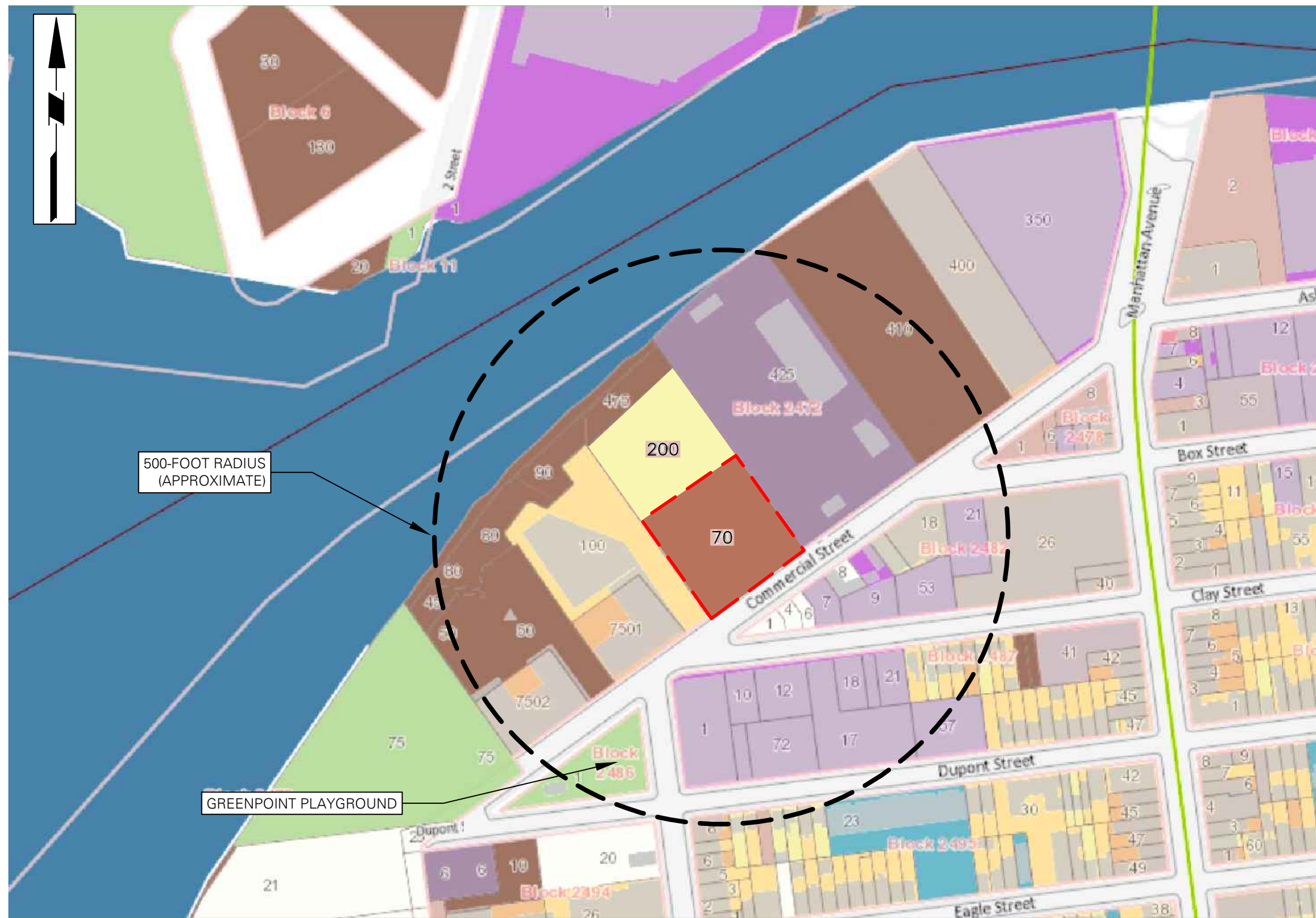
NOTES:

1. BASE MAP SOURCES: TOPOGRAPHIC BOUNDARY & UTILITY SURVEY DRAWING, DATED MAY 25, 2018, PREPARED BY LANGAN.
2. NORTH ARROW SHOWS TRUE NORTH.
3. ELEVATIONS SHOWN IN THE FIGURE ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS APPROXIMATELY 1.1 FEET ABOVE MEAN SEA LEVEL DATUM AT SANDY HOOK, NEW JERSEY AS DEFINED BY THE UNITED STATES GEOLOGIC SURVEY (USGS NGVD 1929).

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	KINGS COUNTY NEW YORK		Date 04/01/2020	
			Drawn By DC	
			Checked By WK	



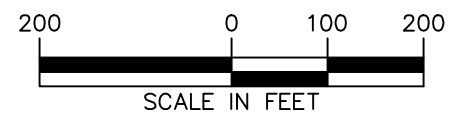
LEGEND

- APPROXIMATE SITE BOUNDARY
- TEXT SENSITIVE RECEPTORS
- 1 & 2 FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MIXED USE
- OPEN SPACE & OUTDOOR RECREATION
- COMMERCIAL
- INSTITUTIONS
- INDUSTRIAL
- PARKING
- TRANSPORTATION/UTILITIES
- VACANT LOTS
- BUILDING FOOTPRINTS

NOTE

1. BASE MAP ACCESSED FROM (<http://oasisnyc.net/map.aspx>) ON MAY 26, 2020.

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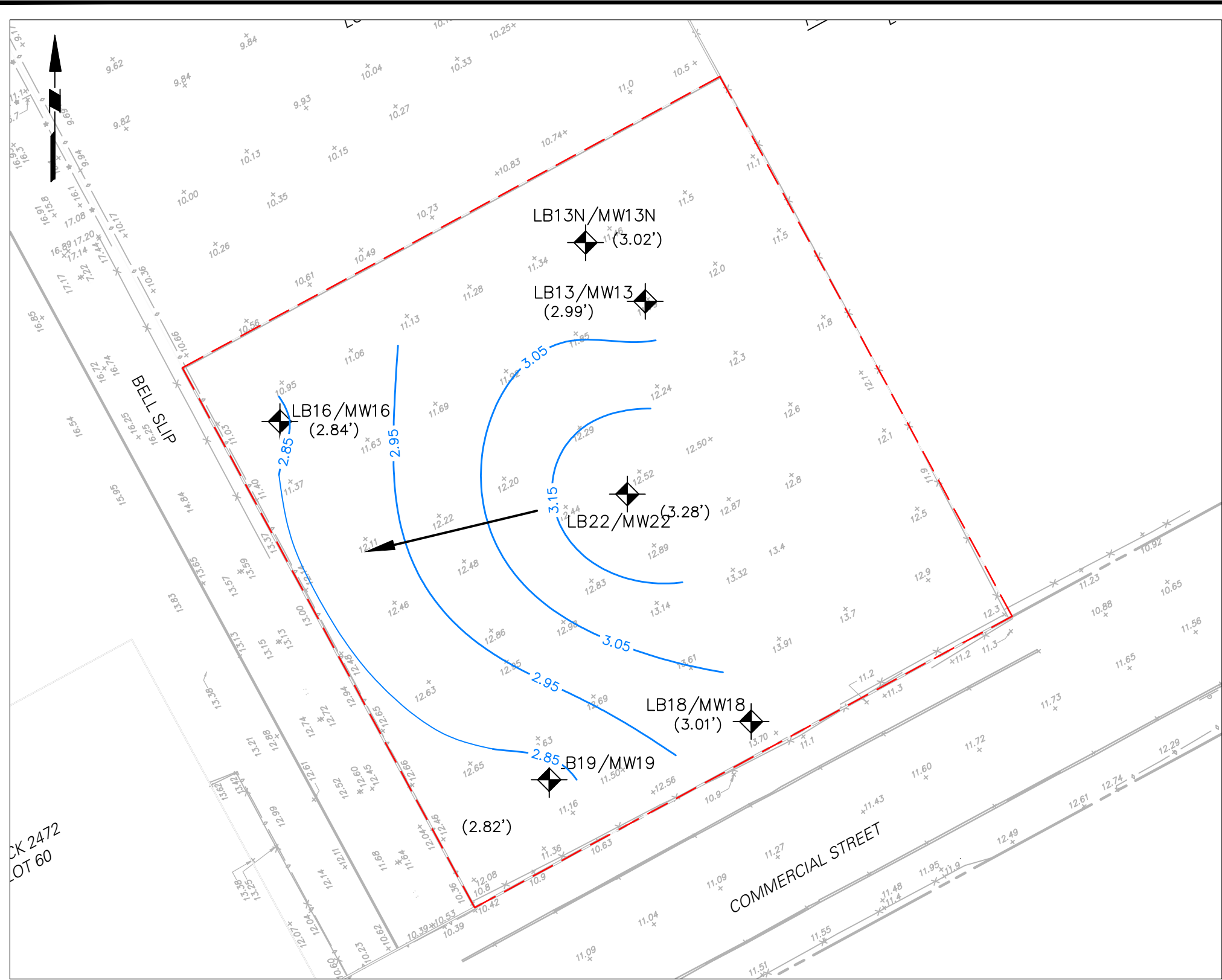
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Project
45 COMMERCIAL STREET
 BLOCK No. 2472, LOT No. 70
 BROOKLYN
 KINGS COUNTY NEW YORK

Figure Title
ADJOINING PROPERTIES AND SURROUNDING LAND USE MAP

Project No. 170229024	3
Date 5/26/2020	
Drawn By RB	
Checked By WK	

Figure No.
3

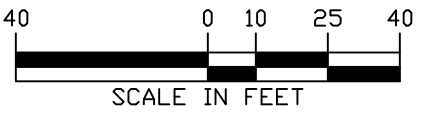


- LEGEND:**
- APPROXIMATE SITE BOUNDARY
 -
 -
 - LB13/MW13 (2.99') SOIL BORING AND MONITORING WELL LOCATION AND ID (GROUNDWATER ELEVATION)
 - 2.95 GROUNDWATER CONTOUR ELEVATION
 - INFERRED GROUNDWATER FLOW DIRECTION

- NOTES:**
1. BASE MAP SOURCES: TOPOGRAPHIC BOUNDARY & UTILITY SURVEY DRAWING, DATED MAY 25, 2018, PREPARED BY LANGAN.
 2. NORTH ARROW SHOWS TRUE NORTH.
 3. ELEVATIONS SHOWN IN THE FIGURE ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS APPROXIMATELY 1.1 FEET ABOVE MEAN SEA LEVEL DATUM AT SANDY HOOK, NEW JERSEY AS DEFINED BY THE UNITED STATES GEOLOGIC SURVEY (USGS NGVD 1929).
 4. MONITORING WELL TOP OF CASING ELEVATIONS WERE SURVEYED BY LANGAN ON MAY 18, 2020.
 5. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
 6. GROUNDWATER ELEVATIONS ARE BASED ON A SYNOPTIC GROUNDWATER GAUGING ON MAY 20, 2020
 7. GROUNDWATER CONTOUR INTERVAL IS 0.1 FOOT

CK 2472
LOT 60

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



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	© 2018 Langan			



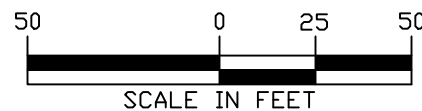
LEGEND:

- APPROXIMATE SITE BOUNDARY
-
-
-
- LB13/MW13**
 SOIL BORING AND MONITORING WELL LOCATION AND ID
- LB14**
 SOIL BORING LOCATION AND ID
- SV05**
 SOIL VAPOR SAMPLING LOCATION AND ID
- AA01**
 AMBIENT AIR SAMPLING LOCATION AND ID
- LB01**
 PREVIOUS SOIL BORING LOCATION AND ID (LANGAN 2019)
- B15**
 PREVIOUS SOIL BORING AND MONITORING WELL LOCATION AND ID (AKRF PHASE II, 2004)
- SV-9**
 PREVIOUS SOIL VAPOR SAMPLING LOCATION AND ID (LANGAN REMEDIAL INVESTIGATION, 2014)
- AOC 1: PRIOR SITE USE
- AOC 2: NYSDEC SPILL No. 19-06491
- AOC 3: HISTORIC FILL
- AOC 4: HISTORICAL USE OF SURROUNDING PROPERTIES

NOTES:

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4. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
5. AOC = AREA OF CONCERN

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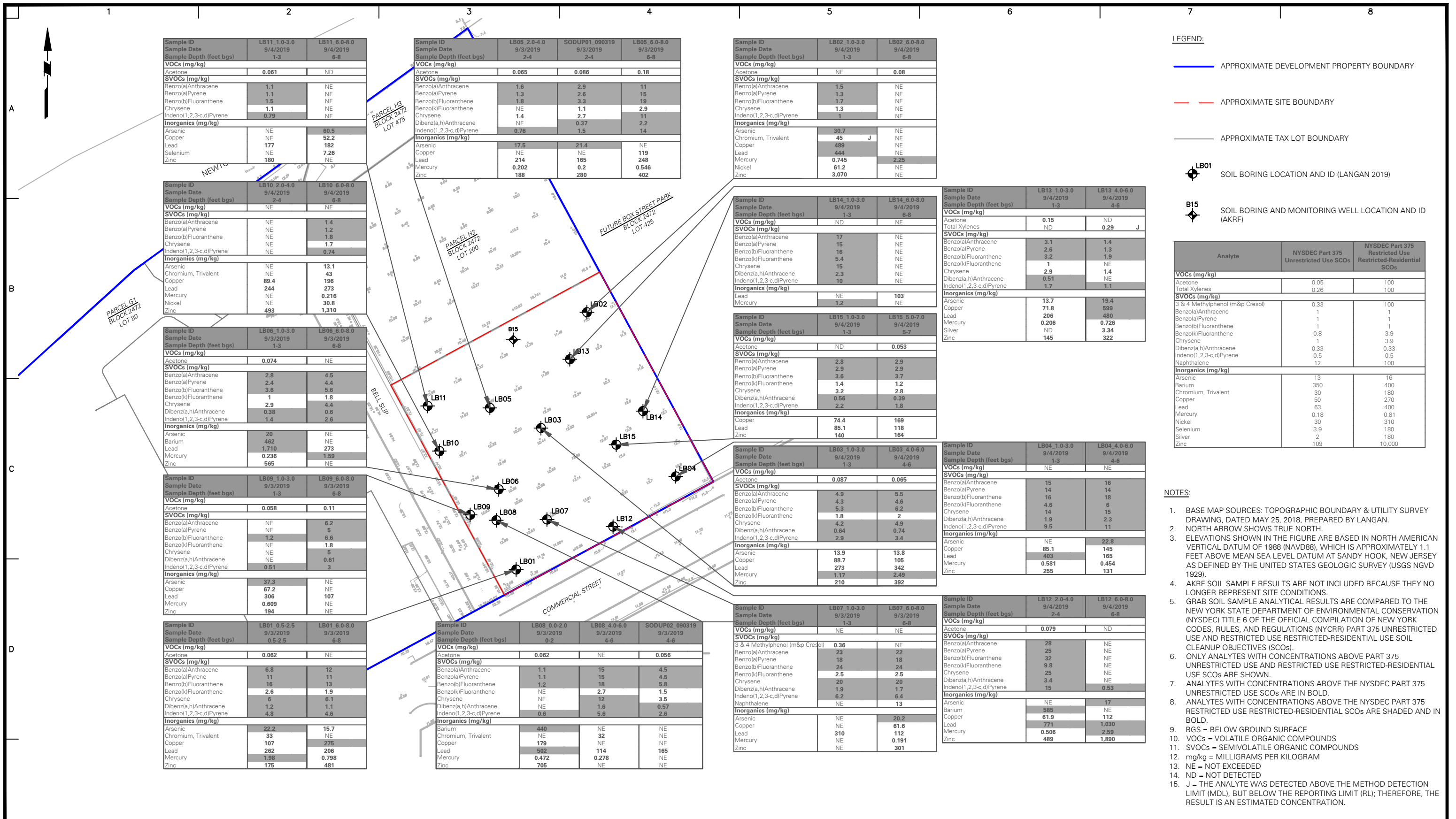
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Project
45 COMMERCIAL STREET
 BLOCK No. 2472, LOT No. 70
 BROOKLYN
 KINGS COUNTY NEW YORK

Figure Title
AOC AND SAMPLE LOCATION MAP
 PRE-RIR

Project No.
 170229024
 Date
 05/22/2020
 Drawn By
 RB
 Checked By
 WK

Figure No.
5



LEGEND:

- APPROXIMATE DEVELOPMENT PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY
- APPROXIMATE TAX LOT BOUNDARY
- SOIL BORING LOCATION AND ID (LANGAN 2019)
- SOIL BORING AND MONITORING WELL LOCATION AND ID (AKRF)

Analyte	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted-Residential Use SCOs
VOCs (mg/kg)		
Acetone	0.05	100
Total Xylenes	0.26	100
SVOCs (mg/kg)		
3 & 4 Methylphenol (m&p Cresol)	0.33	100
Benzo(a)Anthracene	1	1
Benzo(a)Pyrene	1	1
Benzo(b)Fluoranthene	1	1
Benzo(k)Fluoranthene	0.8	3.9
Chrysene	1	3.9
Dibenz(a,h)Anthracene	0.33	0.33
Indeno(1,2,3-c,d)Pyrene	0.5	0.5
Naphthalene	12	100
Inorganics (mg/kg)		
Arsenic	13	16
Barium	350	400
Chromium, Trivalent	30	180
Copper	50	270
Lead	63	400
Mercury	0.18	0.81
Nickel	30	310
Selenium	3.9	180
Silver	2	180
Zinc	109	10,000

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 - AKRF SOIL SAMPLE RESULTS ARE NOT INCLUDED BECAUSE THEY NO LONGER REPRESENT SITE CONDITIONS.
 - GRAB SOIL SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE OFFICIAL COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE AND RESTRICTED USE RESTRICTED-RESIDENTIAL USE SOIL CLEANUP OBJECTIVES (SCOs).
 - ONLY ANALYTES WITH CONCENTRATIONS ABOVE PART 375 UNRESTRICTED USE AND RESTRICTED USE RESTRICTED-RESIDENTIAL USE SCOs ARE SHOWN.
 - ANALYTES WITH CONCENTRATIONS ABOVE THE NYSDEC PART 375 UNRESTRICTED USE SCOs ARE IN BOLD.
 - ANALYTES WITH CONCENTRATIONS ABOVE THE NYSDEC PART 375 RESTRICTED USE RESTRICTED-RESIDENTIAL SCOs ARE SHADED AND IN BOLD.
 - BGS = BELOW GROUND SURFACE
 - VOCs = VOLATILE ORGANIC COMPOUNDS
 - SVOCs = SEMI-VOLATILE ORGANIC COMPOUNDS
 - mg/kg = MILLIGRAMS PER KILOGRAM
 - NE = NOT EXCEEDED
 - ND = NOT DETECTED
 - J = THE ANALYTE WAS DETECTED ABOVE THE METHOD DETECTION LIMIT (MDL), BUT BELOW THE REPORTING LIMIT (RL); THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION.

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	<p>Date 09/17/2019</p> <p>Drawn By DC</p> <p>Checked By JL</p>			



Sample ID	LB16_3-5	LB16_6-8	LB16_8-10	LB16_15-17	LB16_18-20
Sample Date	5/13/2020	5/13/2020	5/13/2020	5/13/2020	5/13/2020
Sample Depth (feet bgs)	3-5	6-8	8-10	15-17	18-20
Inorganics (mg/kg)					
Arsenic	6.28	NA	8.26	8.23	7.59
Lead	41.5	289	232	51.3	9.81
Mercury	ND	0.282	ND	1.99	ND
TCLP - Inorganics (mg/L)					
Arsenic	NA	ND	NA	NA	NA
Lead	NA	1.15	NA	NA	NA
Mercury	NA	ND	NA	NA	NA

Sample ID	LB17_1-3	LB17_3-5	SODUP01_05062020	LB17_6-8	LB17_8-10	LB17_15-16
Sample Date	5/6/2020	5/6/2020	5/6/2020	5/6/2020	5/7/2020	5/7/2020
Sample Depth (feet bgs)	1-3	3-5	3-5	6-8	8-10	15-16
Inorganics (mg/kg)						
Arsenic	NA	15.7 J	7.18 J	NA	16	10.4
Lead	8,960	278	211	174	766	1,490
Mercury	0.672	1.2	1.57	1.52	4.97	0.458
TCLP - Inorganics (mg/L)						
Arsenic	ND	NA	NA	ND	NA	NA
Lead	8	NA	NA	0.0673	NA	NA
Mercury	ND	NA	NA	ND	NA	NA

Sample ID	LB22_2-4	LB22_4-6	LB22_12-14	LB22_18-20
Sample Date	5/8/2020	5/8/2020	5/8/2020	5/8/2020
Sample Depth (feet bgs)	2-4	4-6	12-14	18-20
Inorganics (mg/kg)				
Arsenic	14.3	NA	9.55	7.27
Lead	325	409	155	7.91
Mercury	0.588	1.91 J	ND	ND
TCLP - Inorganics (mg/L)				
Arsenic	NA	ND	NA	NA
Lead	NA	9.01	NA	NA
Mercury	NA	ND	NA	NA

Sample ID	LB19_0.5-2.5	LB19_6-8	LB19_14-16
Sample Date	5/13/2020	5/13/2020	5/13/2020
Sample Depth (feet bgs)	0.5-2.5	6-8	14-16
Inorganics (mg/kg)			
Arsenic	NA	4.64	4.54
Lead	21	71.5	8.93
Mercury	ND	ND	ND
TCLP - Inorganics (mg/L)			
Arsenic	ND	NA	NA
Lead	0.473	NA	NA
Mercury	ND	NA	NA

Sample ID	LB20_1-3	LB20_3-5	LB20_6-8	LB20_14-16
Sample Date	5/13/2020	5/13/2020	5/13/2020	5/13/2020
Sample Depth (feet bgs)	1-3	3-5	6-8	14-16
Inorganics (mg/kg)				
Arsenic	NA	10.4	NA	3.73
Lead	98.2	580 J	4.57	118
Mercury	ND	0.292 J	ND	0.291
TCLP - Inorganics (mg/L)				
Arsenic	ND	NA	ND	NA
Lead	0.247	NA	ND	NA
Mercury	ND	NA	ND	NA

Sample ID	LB18_2-4	LB18_4-6	LB18_6-8	LB18_18-20
Sample Date	5/8/2020	5/8/2020	5/8/2020	5/8/2020
Sample Depth (feet bgs)	2-4	4-6	6-8	18-20
Inorganics (mg/kg)				
Arsenic	NA	16.5	NA	5.37
Lead	10,900	591	75.2	10.9
Mercury	0.373	1.15	0.0217 J	ND
TCLP - Inorganics (mg/L)				
Arsenic	ND	NA	ND	NA
Lead	8.17	NA	0.0083 J	NA
Mercury	ND	NA	ND	NA

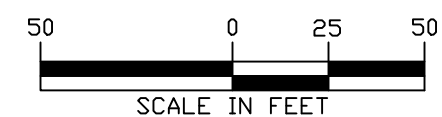
LEGEND:

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE TAX LOT BOUNDARY
- LB13/MW13 SOIL BORING AND MONITORING WELL LOCATION AND ID
- LB14 SOIL BORING LOCATION AND ID

Analyte	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	RCRA Characteristics for Hazardous Waste
Inorganics (mg/kg)			
Arsenic	13	16	~
Lead	63	400	~
Mercury	0.18	0.81	~
TCLP - Inorganics (mg/L)			
Arsenic	~	~	5
Lead	~	~	5
Mercury	~	~	0.2

- NOTES:**
- BASE MAP SOURCES: TOPOGRAPHIC BOUNDARY & UTILITY SURVEY DRAWING, DATED MAY 25, 2018, PREPARED BY LANGAN.
 - NORTH ARROW SHOWS TRUE NORTH.
 - ELEVATIONS SHOWN IN THE FIGURE ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 - ALL SAMPLE LOCATIONS ARE APPROXIMATE.
 - SOIL SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE OFFICIAL COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE (UU), RESTRICTED USE RESTRICTED-RESIDENTIAL (RURR) SOIL CLEANUP OBJECTIVES (SCO), AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CODE OF FEDERAL REGULATIONS (CFR) PART 261 MAXIMUM CONCENTRATION OF CONTAMINANTS FOR TOXICITY CHARACTERISTIC.
 - DETECTED ANALYTICAL RESULTS ABOVE UU SCOS ARE BOLDED.
 - DETECTED ANALYTICAL RESULTS ABOVE RURR SCOS ARE SHADED.
 - DETECTED ANALYTICAL RESULTS ABOVE USEPA RCRA CFR PART 261 MAXIMUM CONCENTRATIONS OF CONTAMINANTS FOR TOXICITY CHARACTERISTIC ARE BOLDED AND ITALICIZED.
 - ANALYTICAL RESULTS WITH REPORTING LIMITS (RL) ABOVE THE LOWEST APPLICABLE CRITERIA ARE ITALICIZED.
 - SAMPLE SODUP01_05062020 IS A DUPLICATE SAMPLE OF LB17_3-5.
 - SOIL BORINGS LB25, LB26, AND LB27 WERE ADVANCED TO VISUALLY DELINEATE PETROLEUM IMPACTS. SAMPLES WERE NOT COLLECTED FROM THESE BORINGS.
 - ONLY ANALYTICAL RESULTS FOR BORINGS WITH SAMPLES THAT WERE ANALYZED FOR TCLP ARSENIC, LEAD, AND MERCURY ARE SHOWN.
 - mg/kg = MILLIGRAMS PER KILOGRAM
 - mg/L = MILLIGRAMS PER LITER
 - ~ = REGULATORY LIMIT FOR THIS ANALYTE DOES NOT EXIST
 - bgs = BELOW GRADE SURFACE
 - NA = NOT ANALYZED
 - ND = NOT DETECTED
 - NE = NOT EXCEEDED
 - TCLP = TOXICITY CHARACTERISTICS LEACHATE PROCEDURE

QUALIFIERS:
 J = THE ANALYTE WAS DETECTED ABOVE THE METHOD DETECTION LIMIT (MDL), BUT BELOW THE RL; THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION.



LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com	Project 45 COMMERCIAL STREET BLOCK No. 2472, LOT No. 70 BROOKLYN NEW YORK	Figure Title SOIL SAMPLE ANALYTICAL RESULTS MAP TCLP METALS	Project No. 170229024 Date 10/29/2020 Drawn By RB Checked By JL	Figure No. 7A
	Project 45 COMMERCIAL STREET BLOCK No. 2472, LOT No. 70 BROOKLYN NEW YORK			



Sample ID	MW13N_051620
Sample Date	5/16/2020
VOCs (µg/L)	ND
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Herbicides (µg/L)	ND
PCBs (µg/L)	ND
Inorganics (µg/L)	
Manganese	829
Manganese (Dissolved)	802
PFAS (ng/L)	
Perfluorobutanesulfonic Acid	3.7
Perfluorobutanoic acid	11
Perfluoroheptanoic acid	5.4
Perfluorohexanesulfonic Acid	1.7
Perfluorohexanoic Acid	12
Perfluorononanoic Acid	1.1
Perfluorooctanesulfonic acid	5.3
Perfluorooctanoic Acid	43
Perfluoropentanoic Acid	15
Total PFAS	98.2

Sample ID	MW13_051620
Sample Date	5/16/2020
VOCs (µg/L)	NE
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
Herbicides (µg/L)	ND
PCBs (µg/L)	ND
Inorganics (µg/L)	
Manganese	352
Manganese (Dissolved)	310
PFAS (ng/L)	
Perfluoroheptanoic acid	8.8
Perfluorohexanoic Acid	11
Perfluorooctanoic Acid	52
Perfluoropentanoic Acid	12
Total PFAS	83.8

LEGEND:

--- APPROXIMATE SITE BOUNDARY

--- APPROXIMATE TAX LOT BOUNDARY

LB13/MW13



SOIL BORING AND MONITORING WELL LOCATION AND ID

Analyte	NYSDEC SGVs	NYSDEC January 2020 Guidance for Sampling and Analysis of PFAS
VOCs (µg/L)		
1,2-Dichloroethane	0.6	~
Inorganics (µg/L)		
Manganese	300	~
PFAS (ng/L)		
Perfluorohexanoic Acid	~	100
Perfluorooctanesulfonic Acid	~	10
Perfluorooctanoic Acid	~	10
Perfluoropentanoic Acid	~	100
Total PFAS	~	500

Sample ID	MW16_052020
Sample Date	5/20/2020
VOCs (µg/L)	
1,2-Dichloroethane	1
SVOCs (µg/L)	ND
Pesticides (µg/L)	ND
Herbicides (µg/L)	ND
PCBs (µg/L)	ND
Inorganics (µg/L)	
Manganese	644
PFAS (ng/L)	
Perfluorobutanesulfonic Acid	5
Perfluorobutanoic acid	13
Perfluoroheptanoic acid	4.1
Perfluorohexanesulfonic Acid	0.9
Perfluorohexanoic Acid	12
Perfluorononanoic Acid	0.51
Perfluorooctanesulfonic acid	2
Perfluorooctanoic Acid	16
Perfluoropentanoic Acid	18
Total PFAS	71.5

Sample ID	MW18_052020	GWDUP01_052020
Sample Date	5/20/2020	5/20/2020
VOCs (µg/L)	NE	NE
SVOCs (µg/L)	NE	ND
Pesticides (µg/L)	ND	ND
Herbicides (µg/L)	ND	ND
PCBs (µg/L)	ND	ND
Inorganics (µg/L)		
Manganese	912	924
Manganese (Dissolved)	926	934
PFAS (ng/L)		
Perfluorobutanesulfonic Acid	8	8
Perfluorobutanoic acid	33	33
Perfluoroheptanesulfonic acid	0.87	0.84
Perfluoroheptanoic acid	29	30
Perfluorohexanesulfonic Acid	5	5.1
Perfluorohexanoic Acid	77	80
Perfluorononanoic Acid	12	12
Perfluorooctanesulfonamide	0.58	0.58
Perfluorooctanesulfonic acid	25	24
Perfluorooctanoic Acid	170	170
Perfluoropentanoic Acid	110	120
Total PFAS	471	484

NOTES:

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- ALL SAMPLE LOCATIONS ARE APPROXIMATE.
- GROUNDWATER SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TITLE 6 OF THE OFFICIAL COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 703.5 AND THE NYSDEC TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES FOR CLASS GA WATER AND THE NYSDEC JANUARY 2020 GUIDANCE FOR SAMPLING AND ANALYSIS OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS).
- DETECTED ANALYTES ABOVE NYSDEC SGVs AND THE NYSDEC JANUARY 2020 GUIDANCE FOR SAMPLING AND ANALYSIS OF PFAS ARE BOLDED AND SHADED.
- SAMPLE GWDUP01_052020 IS A DUPLICATE SAMPLE OF MW18_052020.
- SAMPLE MW13N_051620 WAS REANALYZED FOR PCBs AFTER LAB FILTRATION.
- µg/L = MICROGRAMS PER LITER
- ng/L = NANOGRAMS PER LITER
- NE = NO EXCEEDANCES
- ND = NO DETECTIONS

QUALIFIERS:

J = THE ANALYTE WAS DETECTED ABOVE THE METHOD DETECTION LIMIT (MDL), BUT BELOW THE RL; THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION.

Sample ID	MW22_051620
Sample Date	5/16/2020
VOCs (µg/L)	NE
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
Herbicides (µg/L)	ND
PCBs (µg/L)	ND
Inorganics (µg/L)	
Manganese	620
Manganese (Dissolved)	620
PFAS (ng/L)	
Perfluoroheptanoic acid	8.1
Perfluorohexanoic Acid	13
Perfluorooctanesulfonic acid	6.6
Perfluorooctanoic Acid	66
Perfluoropentanoic Acid	16
Total PFAS	110

Sample ID	MW19_052020
Sample Date	5/20/2020
VOCs (µg/L)	ND
SVOCs (µg/L)	NE
Pesticides (µg/L)	ND
Herbicides (µg/L)	ND
PCBs (µg/L)	ND
Inorganics (µg/L)	NE
PFAS (ng/L)	
Perfluorobutanesulfonic Acid	7.4
Perfluorobutanoic acid	47
Perfluoroheptanoic acid	32
Perfluorohexanesulfonic Acid	2.6
Perfluorohexanoic Acid	120
Perfluorononanoic Acid	4.4
Perfluorooctanesulfonic acid	2
Perfluorooctanoic Acid	100
Perfluoropentanoic Acid	190
Total PFAS	505

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Project

45 COMMERCIAL STREET
BLOCK No. 2472, LOT No. 70
BROOKLYN

KINGS COUNTY

NEW YORK

Figure Title

GROUNDWATER SAMPLE ANALYTICAL RESULTS MAP

Project No. 170229024

Date 05/26/2020

Drawn By RB

Checked By WK

Figure No.

8

Sample ID	AA01_050820
Sample Date	5/8/2020
Sample Type	AA
VOCs (µg/m³)	
1,2,4-Trimethylbenzene	1.6
1,3-Dichlorobenzene	7.3
2,2,4-Trimethylpentane	3.9
Acetone	750
Benzene	4
Carbon Disulfide	16
Dichlorodifluoromethane	2.5
Ethylbenzene	3.5
M,P-Xylene	11
Methyl Ethyl Ketone (2-Butanone)	69
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	2.1
n-Heptane	9.1
N-Octane	11
n-Pentane	120
o-Xylene (1,2-Dimethylbenzene)	3.1
Tert-Butyl Methyl Ether	4.8
Toluene	19
Total VOCs	1,040

Sample ID	SV04_050820
Sample Date	5/8/2020
Sample Type	SV
VOCs (µg/m³)	
1,2,4-Trimethylbenzene	4.4
1,3-Dichlorobenzene	4.3
2,2,4-Trimethylpentane	2.1
4-Ethyltoluene	1.8
Acetone	860
Benzene	6.9
Carbon Disulfide	37
Dichlorodifluoromethane	2.6
Ethylbenzene	8.6
M,P-Xylene	32
Methyl Ethyl Ketone (2-Butanone)	81
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	1.8
n-Heptane	11
N-Octane	11
n-Pentane	14
o-Xylene (1,2-Dimethylbenzene)	9.1
Toluene	31
Trichlorofluoromethane	1.9
Total VOCs	1,120

LEGEND:

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE TAX LOT BOUNDARY
- SOIL VAPOR SAMPLE LOCATION AND ID
- AMBIENT AIR SAMPLE LOCATION AND ID

Sample ID	SV01_050820
Sample Date	5/8/2020
Sample Type	SV
VOCs (µg/m³)	
1,2-Dichlorobenzene	1.3
2,2,4-Trimethylpentane	0.86
Acetone	26
Benzene	1.3
Chlorobenzene	2.5
Dichlorodifluoromethane	2.7
Ethylbenzene	0.95
M,P-Xylene	2
Methyl Ethyl Ketone (2-Butanone)	6
n-Heptane	1.2
n-Hexane	2.5
n-Pentane	1.7
o-Xylene (1,2-Dimethylbenzene)	0.86
Toluene	2.3
Trichlorofluoromethane	2
Total VOCs	54.2

Sample ID	SV05_050820
Sample Date	5/8/2020
Sample Type	SV
VOCs (µg/m³)	
1,2,4-Trimethylbenzene	1.7
1,3-Dichlorobenzene	5.9
2,2,4-Trimethylpentane	8.2
Acetone	610
Benzene	3.4
Carbon Disulfide	13
Dichlorodifluoromethane	1.9
Ethylbenzene	5.5
M,P-Xylene	14
Methyl Ethyl Ketone (2-Butanone)	59
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	2.3
n-Heptane	31
n-Hexane	180
N-Octane	20
n-Pentane	470
o-Xylene (1,2-Dimethylbenzene)	6.9
Tert-Butyl Methyl Ether	2
Tetrachloroethene (PCE)	1.8
Toluene	11
Total VOCs	1,450

Analyte	NYSDOH Decision Matrices Minimum Concentrations	NYSDOH AGVs
VOCs (µg/m³)		
1,2,4-Trimethylbenzene	~	~
1,2-Dichlorobenzene	~	~
1,3-Dichlorobenzene	~	~
1,4-Dichlorobenzene	~	~
2,2,4-Trimethylpentane	~	~
4-Ethyltoluene	~	~
Acetone	~	~
Benzene	~	~
Carbon Disulfide	~	~
Chlorobenzene	~	~
Chloroform	~	~
Dichlorodifluoromethane	~	~
Ethylbenzene	~	~
M,P-Xylene	~	~
Methyl Ethyl Ketone (2-Butanone)	~	~
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	~	~
n-Heptane	~	~
n-Hexane	~	~
N-Octane	~	~
n-Pentane	~	~
o-Xylene (1,2-Dimethylbenzene)	~	~
Tert-Butyl Methyl Ether	~	~
Tetrachloroethene (PCE)	100	30
Toluene	~	~
Trichlorofluoromethane	~	~

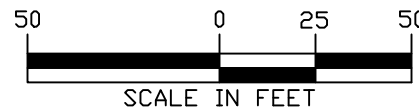
Sample ID	SV02_050820	SVDUP01_050820
Sample Date	5/8/2020	5/8/2020
Sample Type	SV	SV
VOCs (µg/m³)		
1,2,4-Trimethylbenzene	3	1.8
1,3-Dichlorobenzene	6.2	9.8
2,2,4-Trimethylpentane	1.8	22
4-Ethyltoluene	0.92	ND
Acetone	360	570
Benzene	3.3	5.8
Carbon Disulfide	1.4	32
Chloroform	0.95	ND
Dichlorodifluoromethane	2.9	1.7
Ethylbenzene	3.4	2
M,P-Xylene	11	6
Methyl Ethyl Ketone (2-Butanone)	30	64
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	1.8	ND
n-Heptane	4.4	13
n-Hexane	ND	82
N-Octane	12	12
n-Pentane	4.9	260
o-Xylene (1,2-Dimethylbenzene)	3.4	2
Tert-Butyl Methyl Ether	ND	24
Toluene	16	14
Trichlorofluoromethane	2.2	ND
Total VOCs	470	1,120

Sample ID	SV03_050820
Sample Date	5/8/2020
Sample Type	SV
VOCs (µg/m³)	
1,2,4-Trimethylbenzene	2.5
1,2-Dichlorobenzene	12
1,3-Dichlorobenzene	6.8
1,4-Dichlorobenzene	2.5
2,2,4-Trimethylpentane	2.4
4-Ethyltoluene	0.9
Acetone	550
Benzene	7.4
Carbon Disulfide	64
Chlorobenzene	3.5
Dichlorodifluoromethane	3
Ethylbenzene	5.1
M,P-Xylene	20
Methyl Ethyl Ketone (2-Butanone)	40
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	2.1
n-Heptane	6.9
N-Octane	9.3
n-Pentane	13
o-Xylene (1,2-Dimethylbenzene)	6.8
Toluene	20
Trichlorofluoromethane	2
Total VOCs	780

NOTES:

- BASE MAP SOURCES: TOPOGRAPHIC BOUNDARY & UTILITY SURVEY DRAWING, DATED MAY 25, 2018. PREPARED BY LANGAN.
- NORTH ARROW SHOWS TRUE NORTH.
- ELEVATIONS SHOWN IN THE FIGURE ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- ALL SAMPLE LOCATIONS ARE APPROXIMATE.
- SOIL VAPOR SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE MINIMUM SOIL VAPOR CONCENTRATIONS RECOMMENDING MITIGATION AS SET FORTH IN THE NEW YORK STATE DEPARTMENT OF HEALTH (NYSDOH) OCTOBER 2006 GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK DECISION MATRICES FOR SUB-SLAB VAPOR AND INDOOR AIR AND SUBSEQUENT UPDATES (2017).
- THE NYSDOH AIR GUIDELINE VALUES (AGVS) AS SET FORTH IN THE NYSDOH OCTOBER 2006 GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK AND SUBSEQUENT UPDATES (2013, 2015) ARE SHOWN FOR REFERENCE ONLY.
- AMBIENT AIR SAMPLE ANALYTICAL RESULTS ARE SHOWN FOR REFERENCE ONLY.
- ONLY DETECTED ANALYTES ARE SHOWN IN THE TABLES.
- SAMPLE SVDUP01_050820 IS A DUPLICATE OF PARENT SAMPLE SV02_050820.
- ALL CONCENTRATIONS ARE REPORTED IN MICROGRAMS PER CUBIC METER
- VOCs = VOLATILE ORGANIC COMPOUNDS
- µg/m³ = MICROGRAMS PER CUBIC METER
- NE = NOT EXCEEDED
- ND = NOT DETECTED
- J = THE ANALYTE WAS DETECTED ABOVE THE METHOD DETECTION LIMIT (MDL), BUT BELOW THE REPORTING LIMIT (RL); THEREFORE, THE RESULT IS AN ESTIMATED CONCENTRATION.

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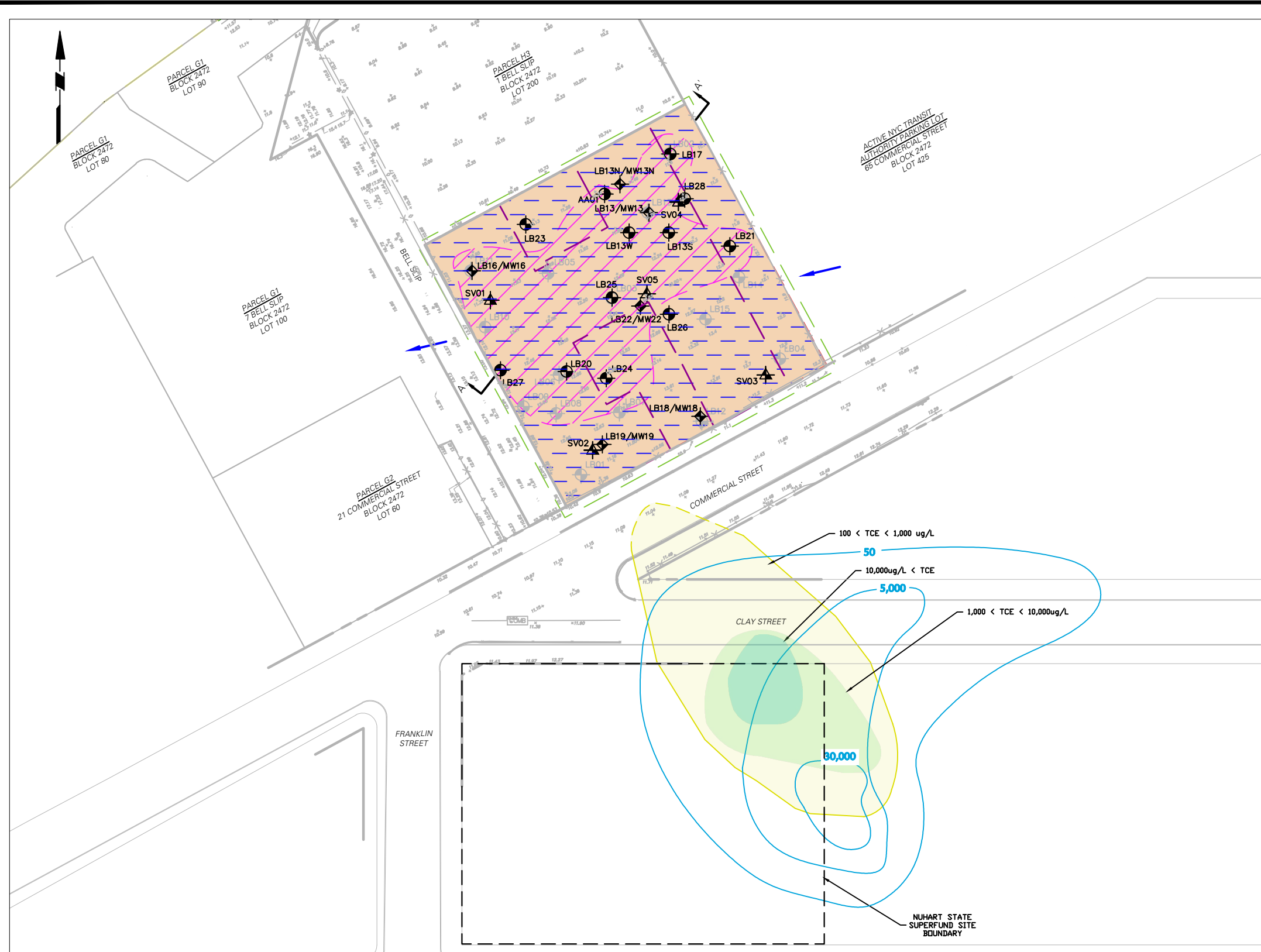
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Project
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 BLOCK No. 2472, LOT No. 70
 BROOKLYN
 KINGS COUNTY NEW YORK

Figure Title
SOIL VAPOR SAMPLE ANALYTICAL RESULTS MAP

Project No.
 170229024
 Date
 05/26/2020
 Drawn By
 RB
 Checked By
 JL

Figure No.
9



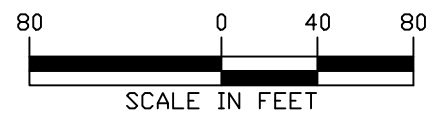
LEGEND:

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE TAX LOT BOUNDARY
- APPROXIMATE PROPOSED BUILDING BOUNDARY
- AOC 1: PRIOR SITE USE
- AOC 2: PETROLEUM-IMPACTED FILL
- AOC 3: HISTORIC FILL
- AOC 4: HISTORICAL USE OF SURROUNDING PROPERTIES
- ◆ LB13/MW13 SOIL BORING AND MONITORING WELL LOCATION AND ID
- LB14 RI SOIL BORING LOCATION AND ID
- ▲ SV05 RI SOIL VAPOR SAMPLING POINT LOCATION AND ID
- AA01 RI AMBIENT AIR SAMPLING POINT LOCATION AND ID
- LB01 PREVIOUS SOIL BORING LOCATION AND ID (LANGAN 2019)
- ← INFERRED GROUNDWATER FLOW DIRECTION
- APPROXIMATE AREA AND EXTENT OF NUHART TCE PLUME IN GROUNDWATER (AS OF JULY 2015)
- 50 APPROXIMATE AREA AND EXTENT OF NUHART TCE PLUME IN SOIL VAPOR (ug/m³) (AS OF JULY 2015)

NOTES:

1. BASE MAP SOURCES: TOPOGRAPHIC BOUNDARY & UTILITY SURVEY DRAWING, DATED MAY 25, 2018, PREPARED BY LANGAN.
2. NORTH ARROW SHOWS TRUE NORTH.
3. ELEVATIONS SHOWN IN THE FIGURE ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS APPROXIMATELY 1.1 FEET ABOVE MEAN SEA LEVEL DATUM AT SANDY HOOK, NEW JERSEY AS DEFINED BY THE UNITED STATES GEOLOGIC SURVEY (USGS NGVD 1929).
4. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
5. TCE = TRICHLOROETHYLENE
6. LOCATIONS AND EXTENTS OF TCE PLUME ARE REFERENCED FROM THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION RECORD OF DECISION FOR THE FORMER NUHART PLASTIC MANUFACTURING SITE, DATED MARCH 2019.

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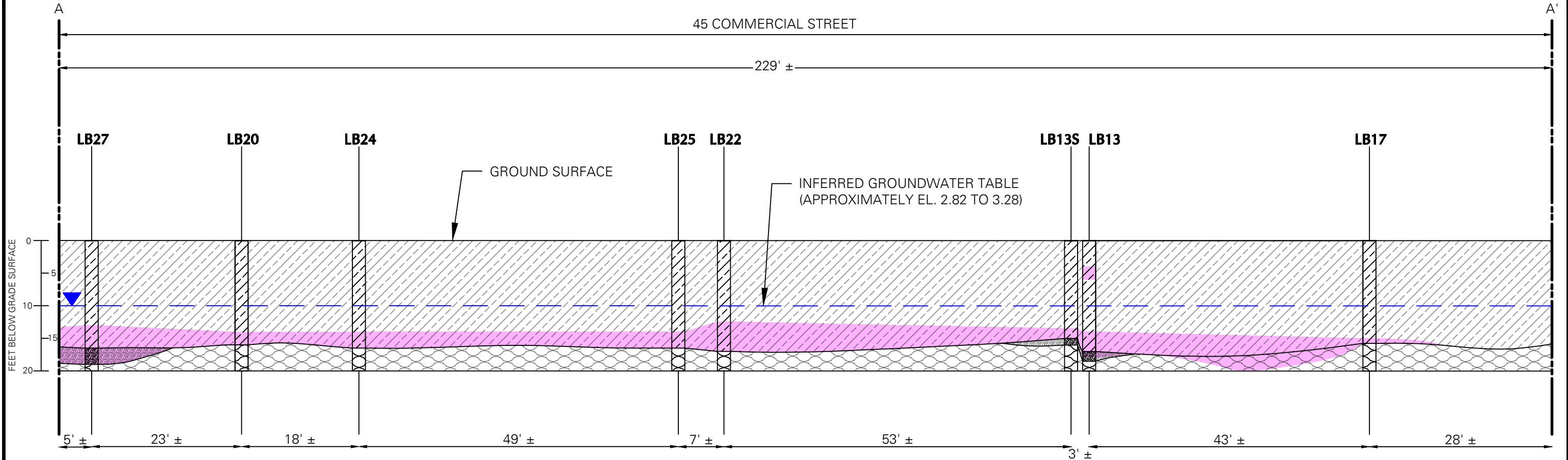
Figure Title
AREA OF CONCERN AND CONCEPTUAL SITE MODEL MAP
POST-RIR

Project No.
 170229024
 Date
 05/29/2020
 Drawn By
 RB
 Checked By
 JL

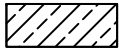




Figure No.
10

SOUTHWEST

NORTHEAST



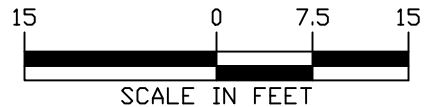
LEGEND:

-  HISTORIC FILL LAYER
-  SAND OR CLAYEY PEAT LAYER
-  CLAY LAYER
-  APPROXIMATE ZONE OF RESIDUAL PETROLEUM-IMPACTS (I.E., ELEVATED PHOTOIONIZATION DETECTOR READINGS, STAINING, ODOR)
-  INFERRED GROUNDWATER TABLE (APPROXIMATE)

NOTES:

1. THE REMEDIAL INVESTIGATION WAS CONDUCTED BETWEEN MAY 6 AND 20, 2020.
2. BORING LOCATIONS, INFERRED GROUNDWATER TABLE, AND STRATIGRAPHY DEPTHS ARE APPROXIMATE.
3. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS APPROXIMATELY 1.1 FEET ABOVE MEAN SEA LEVEL DATUM AT SANDY HOOK, NEW JERSEY AS DEFINED BY THE UNITED STATES GEOLOGIC SURVEY (USGS NGVD 1929).
4. EL. = ELEVATION

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<p>LANGAN Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com</p>	<p>Project 45 COMMERCIAL STREET BLOCK No. 2472, LOT No. 70 BROOKLYN</p>	<p>Figure Title SUBSURFACE CROSS SECTION A - A'</p>	<p>Project No. 170229024 Date 06/04/2020 Drawn By WK Checked By GCW</p>	<p>Figure No. 11</p>
	<p>KINGS COUNTY NEW YORK</p>			

APPENDIX A

Previous Environmental Reports

APPENDIX B

Photograph Log



Photo 1, 5/06/2020: View of NOVA performing a ground-penetrating radar survey in the northeastern part of the site, facing north.



Photo 2, 5/06/2020: View of Eastern performing soil boring activities in the northern part of the site, facing north.



Photo 3, 5/07/2020: View of the macrocore samples recovered from soil boring LB13N.



Photo 4, 5/08/2020: View of Eastern installing soil vapor point SV02, facing northwest.



Photo 5, 5/08/2020: View of Eastern installing soil vapor point SV02, facing east.



Photo 6, 5/08/2020: View of a soil vapor and soil vapor duplicate samples being collected at SV02, facing west.



Photo 7, 5/11/2020: View of the southern CAMP station, facing southwest.



Photo 8, 5/08/2020: View of site conditions in the eastern and central parts of the site, facing north.



Photo 9, 5/11/2020: View of Eastern drilling soil boring LB26, facing northeast.



Photo 10, 5/11/2020: View of the macrocore samples recovered from soil boring LB25.



Photo 11, 5/13/2020: View of Eastern drilling soil boring LB16, facing west.



Photo 12, 5/13/2020: View of the flush-mount cover installed over monitoring well MW16.

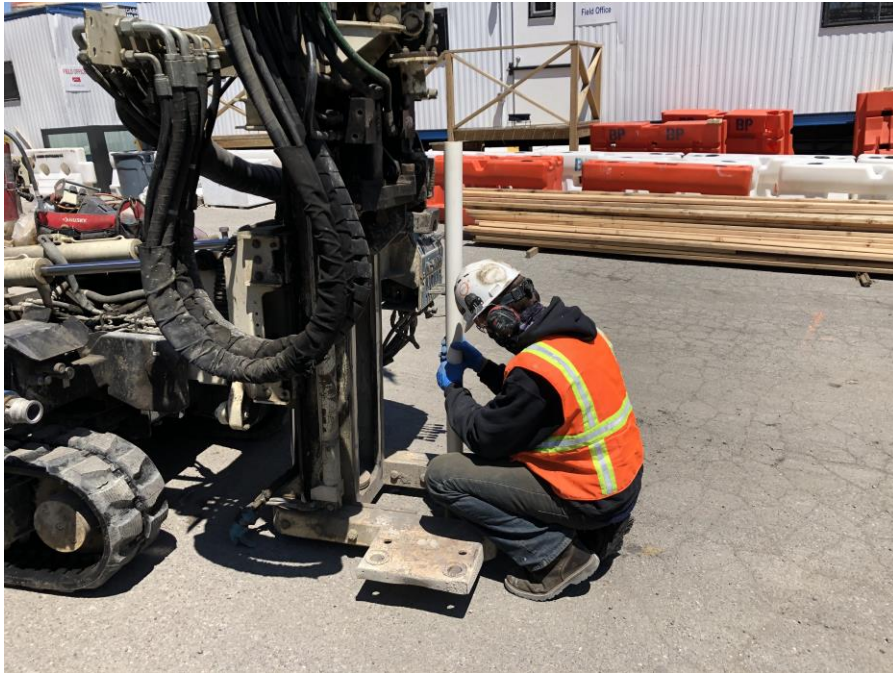


Photo 13, 5/13/2020: View of Eastern installing monitoring well MW19, facing east.

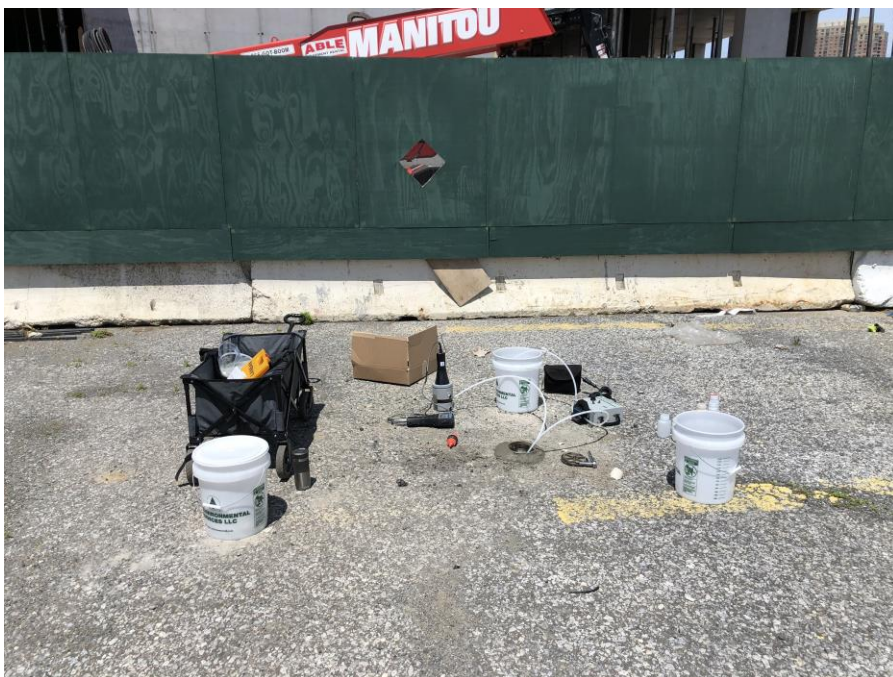


Photo 14, 5/16/2020: View of groundwater sampling at monitoring well MW13N using a peristaltic pump, facing north.



Photo 15, 5/20/2020: View of depth-to-water being gauged at monitoring well MW18 post-groundwater sampling.



Photo 16, 5/20/2020: View of the properly labeled 55-gallon drum filled with purge water from groundwater sampling. The drum is staged on-site in preparation for off-site disposal (facing north).

APPENDIX C

Geophysical Survey Report

GEOPHYSICAL ENGINEERING SURVEY REPORT

Commercial Site
35 Commercial Street,
Brooklyn, New York 11222

NOVA PROJECT NUMBER:

20-1742

DATED:

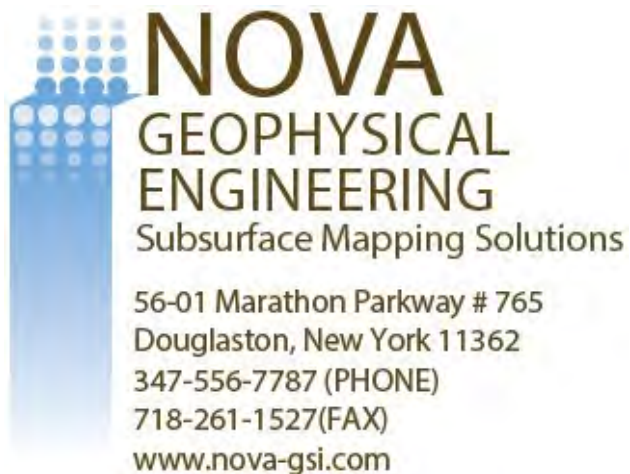
May 15, 2020

PREPARED FOR:

LANGAN

21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001-2727

PREPARED BY:



NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS

56-01 Marathon Parkway #765, Douglaston, New York 11362
Ph. 347-556-7787 Fax. 718-261-1527
www.novagsi.com

May 15, 2020

Woo Kim
Senior Staff Geologist

LANGAN

21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001-2727
P: 212.479.5400 x5733 | E: wkim@langan.com

Re: Geophysical Engineering Survey (GES) Report
Commercial Site
35 Commercial Street,
Brooklyn, New York 11222

Dear Mr. Kim,

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 35 Commercial Street, Brooklyn, New York 11222 (the "Site").

INTRODUCTION TO GEOPHYSICAL ENGINEERING SURVEY (GES)

NOVA performed a geophysical engineering survey (GES) consisting of a Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey at the site. The purpose of this survey is to locate and identify utilities, underground storage tanks and other substructures on May 6th, 2020.

The equipment selected for this investigation was a Sensors and Software Noggin 250 MHz ground penetrating radar (GPR) with a shielded antenna and a Radio Detection RD7100 Electromagnetic utility locator.

A GPR system consists of a radar control unit, control cable, and transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulse into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

A typical electromagnetic (EM) utility locating system consists of a transmitter unit and a receiver unit. The receiver unit can be used independently of the transmitter unit in order to detect utility lines with an inherent EM signature (electric utility lines, water lines, etc.). If needed a current at a specific frequency can also be placed on a utility that is being located. This can be done via the transmitter unit by either direct connection or induction via an EM field varying at specific frequency. The receiver unit is then set to the selected frequency and the electromagnetic field created by the current running through the utility can be located allowing the utility to be marked.

GEOPHYSICAL METHODS

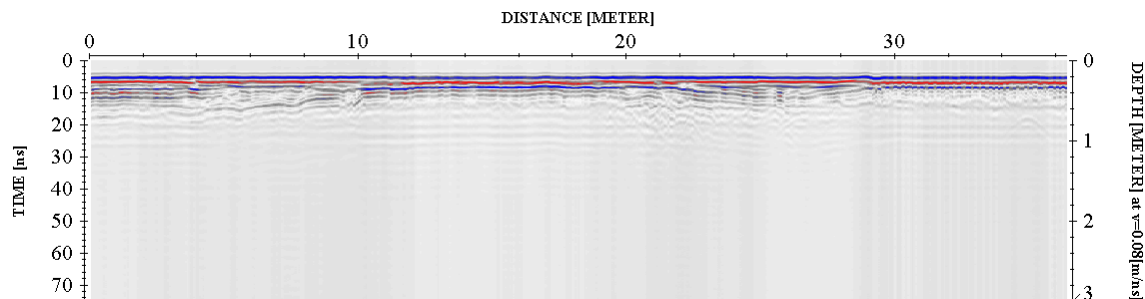
The project site was screened using GPR to search the specified area and inspected for reflections, which could be indicative of substructures and utilities within the subsurface. An EM utility locator was used to help determine the locations of utilities within the survey area.

EM data was collected and interpreted on site and suspected utilities marked as needed. GPR data profiles were collected for the areas of the Site specified by the client and processed as specified below.

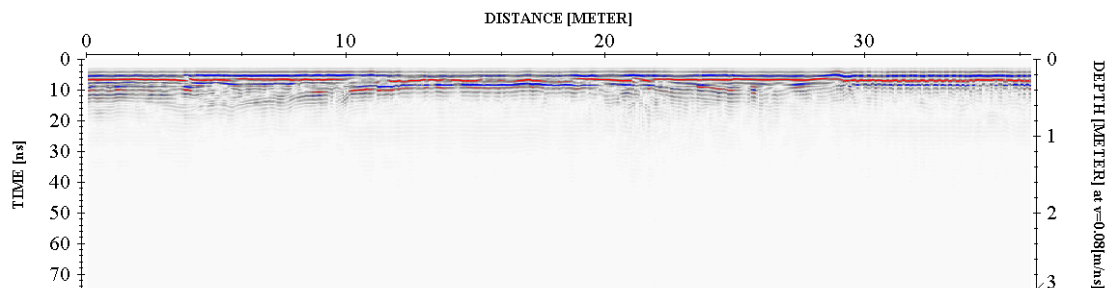
DATA PROCESSING

In order to improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing work flow is briefly described in this section.

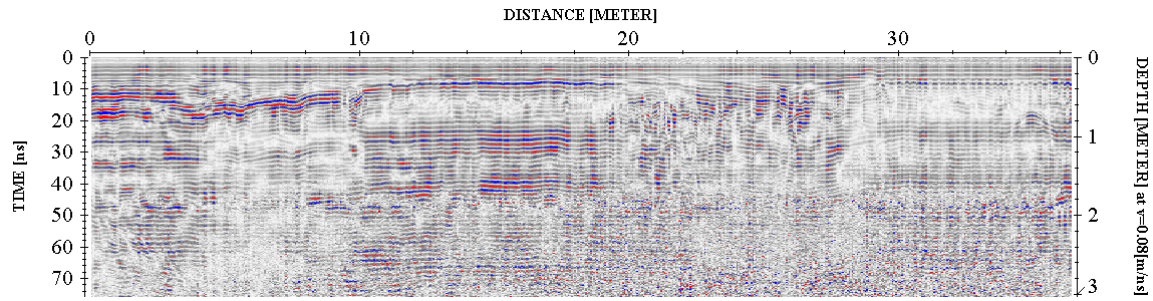
Step 1. Import Raw RAMAC data to standard processing format



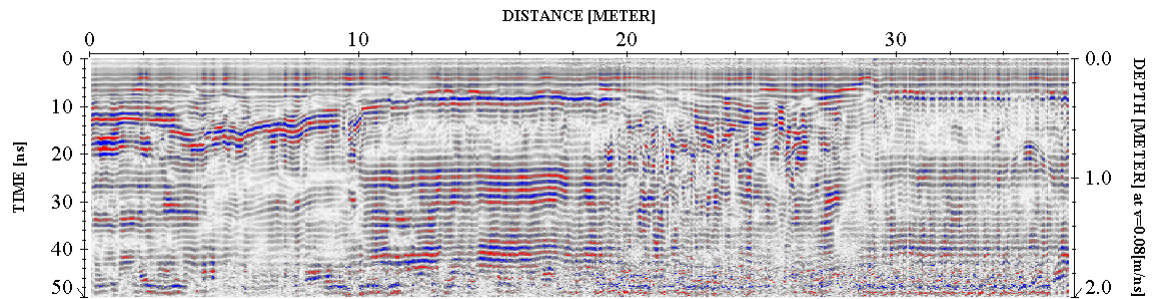
Step 2. Remove instrument noise (dewow)



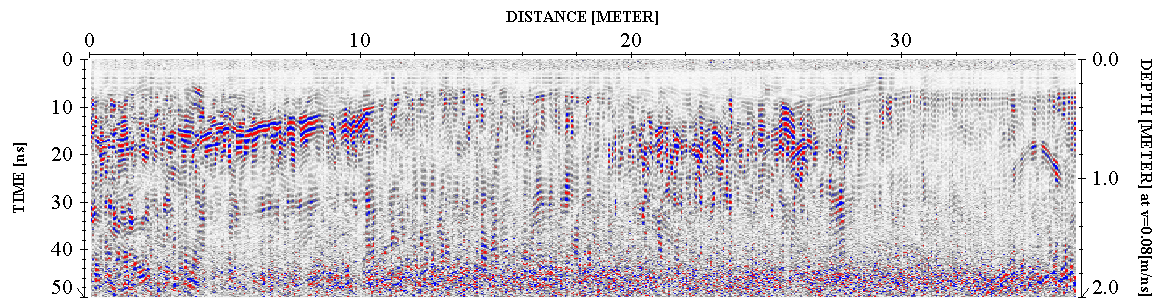
Step 3. Correct for attenuation losses (*energy decay function*)



Step 4. Remove static from bottom of profile (*time cut*)



Step 5. Mute horizontal ringing/noise (*subtracting average*)



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and represents the subsurface anomalies much more accurately.

PHYSICAL SETTINGS

NOVA observed the following physical conditions at the time of the survey.

Weather: Clear

Temperature: 55° F

Surface: Concrete, Asphalt, Gravel

Geophysical Noise Level (GNL): The GNL was high at the site. The noise was a result of the site being located in an urban environment and heavily reinforced concrete on portions of the site. Portions of the site were covered with large immobile objects and could not be effectively surveyed.

RESULTS

The results of the geophysical engineering survey (GES) identified the following at the project site:

- Anomalies resembling potential subsurface utilities (such as electric and telecom) were identified during the GES. The approximate locations are shown in the survey plan.
- Anomalies resembling potential foundation slab from a historic building were detected during the GES. Approximate locations of the foundation slab boundaries are shown in the Survey Plan.
- No large geophysical anomalies resembling an underground storage tank (UST) were identified during the GES.
- All detected subsurface anomalies were marked in the onsite mark out.
- All cleared boring locations were marked in the onsite mark out.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.

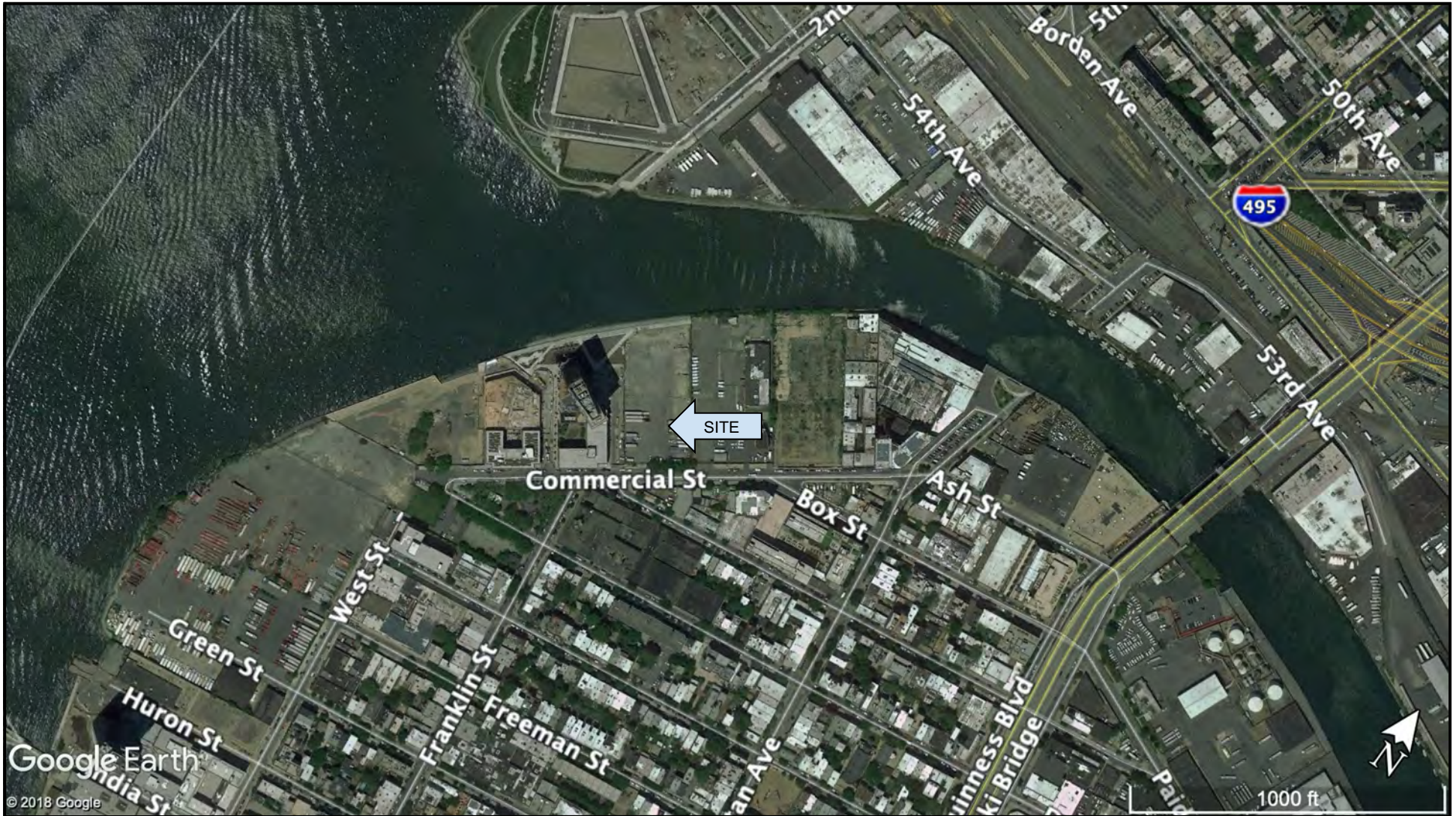
Project Engineer

Attachments:

Location Map

Survey Plan

Geophysical Images



Google Earth

© 2018 Google

LOCATION MAP

LEGEND

NOVA Geophysical Services

Subsurface Mapping Solutions

56-01 Marathon Parkway, # 765

Douglaston, New York 11362

Phone (347) 556-7787 * Fax (718) 261-1527

www.novagsi.com





SITE: **Commercial Site**
35 Commercial Street,
Brooklyn, New York 11222

CLIENT: Langan

DATE: May 6th, 2020

AUTH: Chris Steinley



	SURVEY PLAN	LEGEND
<p align="center"> NOVA Geophysical Services <small>Subsurface Mapping Solutions</small> 56-01 Marathon Parkway, # 765 Douglaston, New York 11362 Phone (347) 556-7787 * Fax (718) 261-1527 www.novagsi.com </p>	<p> SITE: Commercial Site 35 Commercial Street, Brooklyn, New York 11222 CLIENT: Langan DATE: May 6th, 2020 AUTH: Peter Hurst </p>	<p>  Survey Area  Electric  Telecom  Buried Foundation </p>

GEOPHYSICAL IMAGES

Commercial Site
35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



GEOPHYSICAL IMAGES

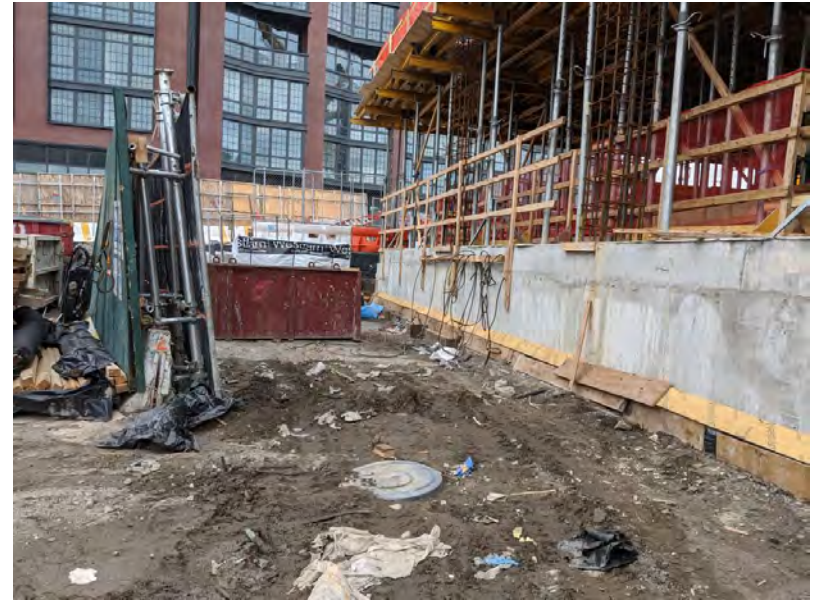
Commercial Site
35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



GEOPHYSICAL IMAGES

Commercial Site

35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



GEOPHYSICAL IMAGES

Commercial Site
35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



GEOPHYSICAL IMAGES

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GEOPHYSICAL IMAGES

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May 6th, 2020



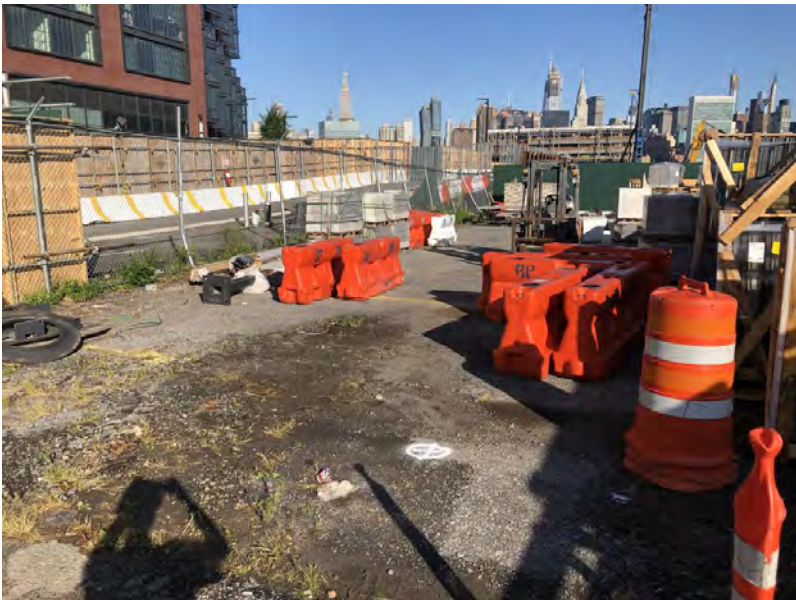
GEOPHYSICAL IMAGES

Commercial Site
35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



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May 6th, 2020



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35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



GEOPHYSICAL IMAGES

Commercial Site

35 Commercial Street,
Brooklyn, New York 11222
May 6th, 2020



APPENDIX D

Soil Boring Logs

PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 11.89 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/6/20		DATE FINISHED 5/6/20
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4		DIST. 0
CASING DIAMETER (in) 2in			CASING DEPTH(ft) NA		COMPLETION DEPTH 20 ft.
SAMPLER 5-Foot Macrocore			WATER LEVEL (ft.) FIRST 9		UNDIST. 0
SAMPLER HAMMER NA			WEIGHT(lbs) NA		DROP(in) NA
			DRILLING FOREMAN Jay Slavin		
			INSPECTING ENGINEER Luke McCartney		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT		
+11.9	(0-56") Black to olive brown fine SAND, some silt, trace fine gravel, coal ash, coal, brick (moist)[FILL]	[Cross-hatched]	0							0.1	Started Drilling at 5/6/2020 9:56 AM.
			1							0.1	
			2	R1	MACROCORE	56				0	
			3							0.1	
			4							0	
			5							0.1	
	(0-30") Black to tan fine SAND, trace silt, trace fine gravel, coal ash, brick (moist)[FILL]	[Cross-hatched]	6							0.1	
			7	R2A	MACROCORE					0	
			8							0.1	
	(30-57") Olive brown to grayish olive silty fine SAND, trace fine gravel, slag, coal ash (wet)[FILL]	[Cross-hatched]	9			57				3.6	
			10							1.8	
			11	R2B	MACROCORE					1	
			12							0	
	(0-54") Greenish black to olive brown silty fine SAND, trace clay, trace fine gravel, coal ash, brick, wood (wet)[FILL]	[Cross-hatched]	13							0	
			14	R3	MACROCORE	54				0	
										1.2	Petroleum-Like odor and staining detected from 14.75ft to 15ft
										3.8	
										3.9	
										7.3	
										4.7	
										2.3	
										12.7	
										5	
										37.1	

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PROJECT		PROJECT NO.									
45 Commercial Street		170229024									
LOCATION		ELEVATION AND DATUM									
Brooklyn, NY		Approx. 11.89 ft NAVD88									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
	(0-24") Dark gray medium SAND, trace coarse sand, trace fine gravel, brick, wood, slag (wet)[FILL]		16	R4A						25.5	2:20 PM - Collect grab sample. LB13_15.5-17.5 14:25 PM - Collect grab sample. LB13_18-20 Bottom of boring at 20ft. Permanent monitoring well MW13 installed to 17ft and backfilled to grade.
-5.1	(24-30") Black clayey PEAT (wet)[NATIVE]		17	R4B						120	
-5.6	(30-36") Black CLAY, trace fine sand (wet)[NATIVE]		18	R4C		54				178	
-6.1	(36-42") Dark gray fine SAND (wet)[NATIVE]		18	R4D						33	
-6.6	(42-54") Olive gray CLAY, trace fine sand (moist)[NATIVE]		19	R4E						12.8	
-8.1			20							4.7	
			21							1.2	
			22							0.6	
			23							0.6	
			24								
			25								
			26								
			27								
			28								
			29								
			30								
			31								
			32								

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 11.71 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/6/20	DATE FINISHED 5/6/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 8.5	FIRST 8.5	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Luke McCartney		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT		
+11.7	(0-56") Black to dark gray fine SAND, trace clay, trace silt, trace fine gravel, coal ash, coal, brick, slag, wood (moist)[FILL]		1	R1	MACROCORE	56				0	Started Drilling at 5/6/2020 1:19 PM.
2			2								
3			3								
4			4								
5	(0-30") Black to olive brown fine SAND, trace silt, trace fine gravel, coal ash, brick, slag (moist)[FILL]		5	R2A	MACROCORE	56				0	
6			6								
7	(30-58") Olive brown to olive gray fine SAND, some silt, coal ash, slag (wet)[FILL]		7	R2B	MACROCORE	56				0	
8			8								
9	(0-43") Dark gray to black silty fine SAND, trace coal ash, brick (wet)[FILL]		9	R3A	MACROCORE	56				0	
10			10								
11			11								
12			12								
13	(43-58") Dark grayish brown clayey fine SAND, trace wood (moist)[FILL]		13	R3B	MACROCORE	56				1.9	
14			14								
										2.8	
										3.7	
										3.1	
										2.6	

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PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 11.71 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		PID Reading (ppm)
	(0-23") Dark gray silty fine SAND, trace brick, trace clay, trace gravel (wet)[FILL]		16	R4A					0.0	10:30 AM - Collect grab sample. LB13N_15-17
-5.2	(23-29") Black clayey PEAT (moist)[NATIVE]		17	R4B					0.2	
-5.7	(29-58") Dark gray CLAY, trace organics (moist)[NATIVE]		18	R4C	MACROCORE	58			0.3	
			19						0.6	Organic-like odor detected from 17ft to 17.5ft
			20						3.1	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
-8.3			21							Bottom of boring at 20ft. Permanent monitoring well MW13N installed to 17ft and backfilled to grade.
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							
			31							
			32							

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/7/20	DATE FINISHED 5/7/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9.5	FIRST 9.5	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		
+12.0	(0-8") Light gray fine SAND (dry)[CONCRETE]			R1A					0.0	Started Drilling at 5/7/2020 12:05 PM.
+11.3	(8-40") Black to dark brown fine SAND, trace fine gravel, coal (dry)[FILL]		1	R1B	MACROCORE	58			0.0	
			2	R1B	MACROCORE				0.0	
			3						0.0	
	(40-58") Brownish gray to light brown fine SAND, trace coal ash, coal, brick (dry)[FILL]		4	R1C					0.0	
			5						0.0	
	(0-18") Tannish brown to light gray fine SAND, trace slag, trace coal ash, brick (dry)[FILL]		6	R2A					0	
			7	R2A	MACROCORE	48			0	
	(18-48") Light brown to brownish gray silty fine SAND, trace fine gravel, brick, wood (moist)[FILL]		8	R2B	MACROCORE				0	
			9						0	
			10						0	
	(0-36") Black to dark gray silty fine to coarse SAND, trace slag, glass(wet)[FILL]		11						0.0	
			12	R3	MACROCORE	36			0.0	
			13						0.0	
			14						0.0	
									27.5	Petroleum-Like Odor and staining detected from 13.5ft to 14ft
									16.0	
									0.0	

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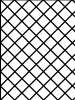

PROJECT		PROJECT NO.									
45 Commercial Street		170229024									
LOCATION		ELEVATION AND DATUM									
Brooklyn, NY		Approx. 12 ft NAVD88									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
-3.7	(0-8") Black to dark gray sandy fine GRAVEL (wet)[FILL]			R4A						0	Bottom of boring at 20ft. Backfilled to grade with No 2 sand and patched with concrete.
	(8-58") Dark gray organic silty CLAY (moist)[NATIVE]		16							0	
			17							0	
			18	R4B	MACROCORE	58				0	
			19							0	
			20							0	
			21							0	
			22							0	
			23							0	
			24							0	
			25							0	
			26							0	
			27							0	
			28							0	
			29							0	
			30							0	
			31							0	
			32							0	

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT		DATE STARTED 5/7/20		DATE FINISHED 5/7/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9	FIRST 9	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT			
+12.0	(0-8") Light gray fine SAND (dry)[CONCRETE]			R1A						0	Started Drilling at 5/7/2020 11:15 AM.
+11.3	(8-22") Grayish black fine to medium SAND, trace coal ash, brick (dry)[FILL]		1	R1B						0	
	(22-54") Dark gray to brownish black fine SAND, trace coal ash, glass, coal (dry)[FILL]		2		MACROCORE	54				1.3	
			3	R1C						0.4	
			4							0	
			5							0	
	(0-20") Dark gray to grayish brown fine to coarse SAND, trace coal ash, trace fine gravel, coal, brick (dry)[FILL]		6	R2A						0.2	
	(20-30") Light brown silty fine SAND, trace fine gravel (moist)[FILL]		7	R2B						0.4	
	(30-34") Grayish black fine to medium SAND, trace coal ash, coal (moist)[FILL]		8	R2C		47				0.3	
	(34-47") Brownish gray silty fine SAND, trace fine gravel, brick (moist)[FILL]		9	R2D						0.1	
			10							0.1	
	(0-15") Dark gray to black fine to coarse SAND, trace slag, coal (wet)[FILL]		11	R3A						0	
	(15-47") Grayish brown silty CLAY, trace fine gravel, coal (wet)[FILL]		12		MACROCORE	47				0	
			13	R3B						0	
			14							0	

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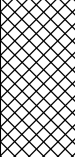

PROJECT		PROJECT NO.									
45 Commercial Street		170229024									
LOCATION		ELEVATION AND DATUM									
Brooklyn, NY		Approx. 12 ft NAVD88									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
-4.2	(0-14") Dark gray to black fine to coarse SAND, trace wood, trace fine gravel (wet)[FILL]		16	R4A						0	11:45 AM - Collect grab sample. LB13W_15-17
	(14-58") Dark gray organic CLAY (moist)[NATIVE]		17			58				0	
			18	R4B	MACROCORE					0	
			19							0	
			20							0	
			21							0	
			22							0	
			23							0	
			24							0	
			25							0	
			26							0	
			27							0	
			28							0	
			29							0	
			30							0	
			31							0	
			32							0	
											Bottom of boring at 20ft. Backfilled to grade with No 2 sand and patched with concrete.

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 11.31 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/13/20	DATE FINISHED 5/13/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9	FIRST 9	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT		
+11.3	(0-10") Gray fine to coarse SAND (dry)[CONCRETE]			R1A						0	Started Drilling at 5/13/2020 10:50 AM.
+10.5	(10-34") Black fine to coarse SAND, trace concrete, coal, brick (moist)[FILL]		1	R1B	MACROCORE	56				0	
	(34-56") Light brown fine SAND, brick (moist)[FILL]		2	R1B	MACROCORE					0	8:55 AM - Collect grab sample. LB16_3-5
			3	R1C	MACROCORE					0	
	(0-21") Light brown fine SAND, brick (moist)[FILL]		4	R1C	MACROCORE					0	8:45 AM - Collect grab sample. LB16_6-8
			5	R2A	MACROCORE					0	
	(21-40") Black to grayish brown fine to coarse SAND, coal, slag (wet)[FILL]		6	R2A	MACROCORE	40				0	8:50 AM - Collect grab sample. LB16_8-10
			7	R2B	MACROCORE					0	
	(0-29") Black to grayish brown fine to coarse SAND, coal, slag, wood (wet)[FILL]		8	R2B	MACROCORE					0	Petroleum-like odor and staining detected from 14.5ft to 16ft
			9	R3A	MACROCORE					0	
	(29-52") Dark gray sandy CLAY, trace brick (wet)[FILL]		10	R3A	MACROCORE	52				0	
			11	R3B	MACROCORE					0	
			12	R3B	MACROCORE					0	
			13	R3B	MACROCORE					0	
			14	R3B	MACROCORE					0	
										23.1	
										255.2	

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

PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 11.31 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)	
-5.4	(0-20") Dark gray fine to coarse SAND, brick (wet)[FILL]		16	R4A					40.6	9:00 AM - Collect grab sample. LB16_15-17
	(20-42") Black to dark gray organic CLAY (moist)[NATIVE]		17	R4B	MACROCORE	42			0	
		18	0							
		19	0							
		20	0							
-8.7			20						9:05 AM - Collect grab sample. LB16_18-20	
			21						Bottom of boring at 20ft. Permanent monitoring well MW16 installed to 17ft and backfilled with No 2 sand to grade.	
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							
			31							
			32							

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 11.5 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/7/20	DATE FINISHED 5/7/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 8.5	FIRST 8.5	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT			
+11.5	(0-10") Light gray fine SAND (moist)[CONCRETE]			R1A						0.0	Started Drilling at 5/6/2020 7:40 AM. Started Redrilling 5/7/2020 8:00 AM.
+10.7	(10-21") Dark gray fine SAND, trace coal ash, brick (moist)[FILL]		1	R1B						0.0	Refusal encountered at 11.0ft. Step out and redrill.
	(21-44") Dark brown fine SAND, trace slag, trace fine gravel (moist)[FILL]		2		MACROCORE	44				0.0	5/6/2020 12:45 PM - Collect grab sample. LB17_1-3
			3	R1C						0.0	5/6/2020 1:15 PM - Collect grab sample. LB17_3-5
			4							0.0	
	(0-13") Dark brown fine SAND, trace coal ash, brick (moist)[FILL]		5	R2A						0.0	
	(13-22") Light brown fine SAND, trace concrete (moist)[FILL]		6	R2B						0.0	5/6/2020 1:15 PM - Collect grab sample. LB17_6-8
	(22-41") Dark gray fine to coarse SAND, trace brick, trace glass (wet)[FILL]		7		MACROCORE	41				0.0	
			8	R2C						0.0	5/7/2020 8:45 AM - Collect grab sample. LB17_8-10
			9							0.0	
	(0-26") Dark gray fine to coarse SAND, trace glass, trace brick (wet)[FILL]		10	R3A						0.0	
			11							0.3	
			12							0.4	
	(26-36") Grayish black fine SAND, trace wood (wet)[FILL]		13	R3B		36				0.4	
			14							0.4	

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PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 11.5 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		
-4.3	(0-10") Black fine to coarse SAND, trace brick, trace fine gravel (wet)[FILL]		16	R4A					0.6	Petroleum-like dor detected from 15ft to 16ft. 5/7/2020 9:15 AM - Collect grab sample. LB17_15-16
	(10-58") Dark gray organic CLAY, Shells (moist)[NATIVE]		17	R4B	MACROCORE	58			1.4	
			18						6.8	
			19						9.0	
			20						0.3	
			21						0.0	
-8.5			22	0.0				0.0	Bottom of boring at 20ft. Backfilled to grade with No 2 sand and patched with concrete.	
			23	0.0						
			24	0.0						
			25	0.0						
			26	0.0						
			27	0.0						
			28	0.0						
			29	0.0						
			30	0.0						
			31	0.0						
			32	0.0						

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 13.54 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/8/20	DATE FINISHED 5/8/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 10	FIRST 10	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT			
+13.5	(0-11") Dark brown to tannish brown fine to coarse SAND, trace fine gravel (moist)[FILL]			R1A						0	Started Drilling at 5/8/2020 12:00 PM.
	(11-52") Orangish brown fine SAND, trace brick, trace fine gravel, slag (moist)[FILL]		1							0	
			2		MACROCORE	52				0	1:55 PM - Collect grab sample. LB18_2-4
			3		R1B					0	
			4							0	2:05 PM - Collect grab sample. LB18_4-6
	(0-40") Brown to tan fine to coarse SAND, trace slag, trace coal ash, trace glass, coal, brick (moist)[FILL]		5							0	
			6							0	2:00 PM - Collect grab sample. LB18_6-8
			7		R2		40			0	
			8							0	
			9							0	
	(0-18") Black fine to coarse SAND, trace brick, coal (wet)[FILL]		10							0	2:10 PM - Collect grab sample. LB18_10-12
			11		R3A					0.1	
	(18-52") Tannish brown silty fine SAND (wet)[FILL]		12							0.1	
			13		R3B		52			0.2	
		14							0		

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PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 13.54 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		PID Reading (ppm)
-2.1	(0-8") Black fine to coarse SAND, trace coal, trace slag (wet)[FILL]			R4A					0	
	(8-58") Dark gray to medium gray CLAY (moist)[NATIVE]		16						0	
			17						0	
			18	R4B	MACROCORE	58			0	2:15 PM - Collect grab sample. LB18_18-20
			19						0	
-6.5			20						0	Bottom of boring at 20ft. Permanent monitoring well MW18 installed to 17ft. Backfilled with No 2 sand to grade.
			21							
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							
			31							
			32							

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12.01 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/13/20	DATE FINISHED 5/13/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9.5	FIRST 9.5	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. Bl/6in	N-VALUE	BLOWS PER FT			
+12.0	(0-38") Grayish brown silty fine SAND, trace coal, concrete, brick (moist)[FILL]		0							0	Started Drilling at 5/13/2020 11:30 AM.	
			1	R1A	MACROCORE	51					0	3:20 PM - Collect grab sample. LB19_0.5-2.5
			2								0	
	(38-51") Dark brown fine to coarse SAND, trace brick (moist)[FILL]		3								0	
			4	R1B							0	
	(0-50") Black fine-coarse SAND, trace coal, trace slag, trace brick, trace coal ash (moist)[FILL]		5								0	
			6								0	
			7	R2A	MACROCORE	58					0	3:25 PM - Collect grab sample. LB19_6-8
			8								0	
	(50-58") Dark gray fine SAND, trace fine gravel, concrete (wet)[FILL]		9								0	
			10	R2B							0	
	(0-43") Black to dark gray fine to coarse SAND, trace brick, trace coal, trace coal ash (wet)[FILL]		11								0	
			12	R3A	MACROCORE	52					0	
			13								0	
	(43-52") Grayish brown fine SAND, trace wood (wet)[FILL]	14								0		
			R3B							0	3:30 PM - Collect grab sample. LB19_14-16	

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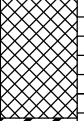
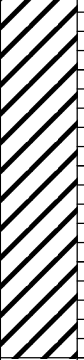
PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 12.01 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)	
	(0-33") Dark gray coarse SAND, trace brick, trace fine gravel, wood (wet)[FILL]		16	R4A					0	Bottom of boring at 20ft. Permanent monitoring well MW19 installed to 17ft and backfilled to grade.
			17						0	
			18			58			0	
-5.7	(33-58") Dark gray organic silty CLAY (moist)[NATIVE]		18						0	
			19	R4B					0	
			20						0	
-8.0			21						0	
			22						0	
			23						0	
			24						0	
			25						0	
			26						0	
			27						0	
			28						0	
			29						0	
			30						0	
			31						0	
			32						0	

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 13 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/13/20	DATE FINISHED 5/13/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9.5	FIRST 9.5	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT			
+13.0	(0-15.5") Gray coarse SAND, some fine gravel, trace fine sand, brick (moist)[FILL]		1	R1A1B MACROCORE	36				0.0	Started Drilling at 5/13/2020 12:20 PM.	
	(15.5-36") Black coarse SAND, some silt, coal (moist)[FILL]		2						0.0	11:50 AM - Collect grab sample. LB20_1-3	
			3						0.0		
			4	0.4	12:00 PM - Collect grab sample. LB21_3-5						
			5	0.5							
	(0-58") Gray to light gray fine to coarse SAND, trace coal ash, coal, brick (moist)[FILL]		6	0.4							
			7	0.0							
			8	0.0							
			9	0.0							
			10	0.0	11:55 AM - Collect grab sample. LB20_6-8						
			11	0.0							
	(0-20") Reddish brown fine to coarse SAND, trace brick, coal (moist)[FILL]		12	0.0							
			13	0.0							
	(20-48") Dark brown to dark gray silty fine SAND, trace slag, concrete (moist)[FILL]		14	0.0							
			5.2	12:05 PM - Collect grab sample. LB20_14-16							
			255.6	Petroleum-like odor and staining							

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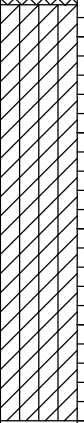
PROJECT		PROJECT NO.									
45 Commercial Street		170229024									
LOCATION		ELEVATION AND DATUM									
Brooklyn, NY		Approx. 13 ft NAVD88									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA							REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
-3.3	(0-15") Dark brown to grayish black fine SAND, trace slag, coal, coal ash (moist)[FILL]		16	R4B						78.2	observed from 14.5ft to 16ft.
	(15-52") Light gray to dark gray organic CLAY (moist)[NATIVE]		17	R4A	MACROCORE	52				70.2	
			18							12.1	
			19							0.0	
			20							0.0	
			21							0.0	
			22							0.0	
			23							0.0	
			24							0.0	
			25							0.0	
			26							0.0	
			27							0.0	
			28							0.0	
			29							0.0	
			30							0.0	
			31							0.0	
			32							0.0	
-7.0											Bottom of boring at 20 ft. Boring backfilled with No 2 sand to grade and patched with concrete.

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/7/20	DATE FINISHED 5/7/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA	WATER LEVEL (ft.) NA	FIRST 9	COMPL. NA	CORE 0
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. Bl/6in	N-VALUE BLOWS PER FT			
+12.0	(0-8") Light gray fine to coarse SAND (dry)[CONCRETE]			R1A						0.0	Started Drilling at 5/7/2020 1:20 PM. 1:45 PM - Collect grab sample. LB21_1-3
+11.3	(8-48") Light brown to orangish brown fine to medium SAND, trace coal ash, trace slag, coal (dry)[FILL]		1							0.0	
			2							0.0	
			3	R1B	Macrocore	48				0.0	
			4							0.0	
			5							0.0	
	(0-15") Light gray to dark gray fine to coarse SAND, trace slag, trace concrete (moist)[FILL]		6	R2A						0.0	
			7							0.0	
	(15-48") Orangish brown to brownish gray fine SAND, trace fine gravel (moist)[FILL]		8	R2B	Macrocore	56				0.0	
			9							0.0	
	(48-56") Grayish black fine to coarse SAND, trace glass, trace slag (wet)[FILL]		10	R2C						0.0	
			11							0.0	
	(0-46") Dark gray fine to coarse SAND, trace slag, trace coal, trace coal ash (wet)[FILL]		12							4.3	
			13	R3	Macrocore	46				9.6	
			14							2.2	

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PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 12 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		PID Reading (ppm)
-3.7	(0-8") Grayish black fine to coarse SAND, trace glass (wet)[FILL]			R4A					15.2	Petroleum--Like Odor detected from 15ft to 16ft. 2:15 PM - Collect grab sample. LB21_15-17
	(8-58") Gray organic silty CLAY (moist)[NATIVE]		16						41.0	
-8.0			17						12.3	Bottom of boring at 20 ft. Boring backfilled with No 2 sand to grade and patched with concrete.
			18	R4B	Macrocore	58			2.3	
			19						0.0	
			20						0.0	
			21						0.0	
			22						0.0	
			23						0.0	
			24						0.0	
			25						0.0	
			26						0.0	
			27						0.0	
			28						0.0	
		29						0.0		
		30						0.0		
		31						0.0		
		32						0.0		

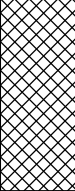

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/8/20	DATE FINISHED 5/8/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 10	FIRST 10	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)	
+12.0	(0-15") Light gray coarse SAND (dry)[CONCRETE]		1	R1A						Started Drilling at 5/8/2020 9:30 AM
+10.7	(15-45") Dark brown fine SAND, trace coal ash, brick (moist)[FILL]		2	R1B	MACROCORE	56				1:10 PM - Collect grab sample LB22_2-4.
	(45-56") Orangish brown to tannish brown SAND, trace fine gravel (moist)[FILL]		3	R1C						
	(0-12") Black fine SAND, trace coal ash (moist)[FILL]		4	R1C						11:50 AM - Collect grab sample LB22_4-6.
	(12-30") Dark gray fine to coarse SAND, trace slag, coal (moist)[FILL]		5	R2A						
	(30-52") Light tan fine SAND, trace fine gravel (moist)[FILL]		6	R2B	MACROCORE	52				
	(0-56") Black to dark brown fine SAND, trace coal, trace coal ash, trace glass, trace slag (wet)[FILL]		7	R2B						
			8	R2B						
			9	R2C						
			10	R2C					0.0	
			11	R3	MACROCORE	56			0.0	
			12	R3					0.0	1:15 PM - Collect grab sample LB22_12-14.
			13	R3					27.6	
			14	R3					501.2	Petroleum-like odor and staining detected from 12.5ft to 13.5ft
									68.0	
									0.0	
									0.0	

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PROJECT 45 Commercial Street	PROJECT NO. 170229024
LOCATION Brooklyn, NY	ELEVATION AND DATUM Approx. 12 ft NAVD88

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
-5.0	(0-24") Black to dark brown fine SAND, trace coal, trace slag, trace brick (wet)[FILL]		16	R4A						0.4	<p>1:25 PM - Collect grab sample LB22_18-20.</p> <p>Bottom of boring at 20 ft. Boring backfilled with No 2 sand to grade and patched with concrete.</p>
	(24-58") Black to dark brown organic CLAY (moist)[NATIVE]		17	MACROCORE	58					0.6	
			18	R4B						1.0	
			19							0.7	
			20							0.0	
			21							0.0	
			22							0.0	
			23							0.0	
			24							0.0	
			25							0.0	
			26							0.0	
			27							0.0	
			28							0.0	
			29							0.0	
			30							0.0	
			31							0.0	
			32							0.0	



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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 11 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT		DATE STARTED 5/13/20		DATE FINISHED 5/13/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 4	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9.5	FIRST 9.5	CORE 0
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

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ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. Bl/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
+11.0	(0-9") Gray fine to coarse SAND (dry)[CONCRETE]										Started Drilling at 5/13/2020 9:30 AM. 10:45 AM - Collect sample LB23_10-12
+10.3	(9-33") Dark gray fine SAND, trace coal ash, concrete, brick (dry)[FILL]		1	R1A						0	
			2	R1B	Macrocore	55				0	
	(33-55") Black fine to coarse SAND, trace coal (moist)[FILL]		3							0	
			4	R1C						0	
	(0-12") Black fine to coarse SAND, trace coal (moist)[FILL]		5							0	
			6	R2A						0	
	(12-52") Light brown to orangish brown fine SAND, trace concrete, brick, coarse gravel, coal (wet)[FILL]		7							0	
			8	R2B	Macrocore	52				0	
			9							0	
	(0-20") Light brown to orangish brown fine SAND, trace concrete, brick, coarse gravel, coal (wet)[FILL]		10							0	
			11	R3A						0	
	(20-58") Black coarse SAND, trace slag, brick, coal (wet)[FILL]		12							0	
			13	R3B	Macrocore	58				0	
			14							0	

PROJECT 45 Commercial Street	PROJECT NO. 170229024
LOCATION Brooklyn, NY	ELEVATION AND DATUM Approx. 11 ft NAVD88

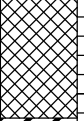
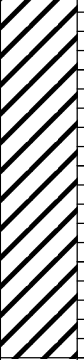
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)	
	(0-29") Black coarse SAND, trace slag, brick, coal, wood(wet)[FILL]		16	R4A					0	
			17						0	
-6.4	(29-33") Dark gray organic CLAY (moist)[NATIVE]		18	Macrocore		33			0	
			19	R4B					0	
-9.0			20							Bottom of boring at 20 ft. Boring backfilled with clean soil cuttings to grade and patched with concrete.
			21							
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							
			31							
			32							

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 13 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/13/20	DATE FINISHED 5/13/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9.5	FIRST 9.5	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. Bl/6in	N-VALUE	BLOWS PER FT		
+13.0	(0-8") Gray fine to coarse SAND (dry)[CONCRETE]			R1A	MC					0	Started Drilling at 5/13/2020 12:30 PM.
+12.3	(8-56") Dark brown fine SAND, trace brick, coal, concrete (moist)[FILL]		1							0	
			2							0	
			3	R1B	MC	56				0	
			4							0	
			5							0	
	(0-43") Gray to light gray fine to coarse SAND, trace coal ash, coal, brick (moist)[FILL]		6							0	
			7							0	
			8	R2	MC	43				0	
			9							0	
			10							0	
	(0-20") Reddish brown fine to coarse SAND, trace brick, coal (moist)[FILL]		11	R3A						0	
			12		MC	56				0	
	(20-56") Dark brown to gray fine SAND, trace slag (moist)[FILL]		13	R3B						0	
			14							0.7	
										24.0	
										145.2	

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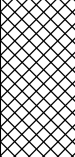

PROJECT		PROJECT NO.								
45 Commercial Street		170229024								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. 13 ft NAVD88								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)	
-3.3	(0-15") Dark brown to gray fine SAND, trace slag (moist)[FILL]		16	R4A					7.6	Petroleum-like odor detected from 14 ft to 16 ft.
	(15-56") Light gray to dark gray organic CLAY (moist)[NATIVE]		17	MC					0	
-7.0			18	MC	56				0	Bottom of boring at 20 ft. Boring backfilled with No 2 sand to grade and patched with concrete.
			19	R4B					0	
			20						0	
			21						0	
			22						0	
			23						0	
			24						0	
			25						0	
			26						0	
			27						0	
		28						0		
		29						0		
		30						0		
		31						0		
		32						0		

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/11/20	DATE FINISHED 5/11/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 10	FIRST 10	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT		
+12.0	(0-14") Gray fine to coarse SAND (dry)[CONCRETE]		1	R1A						0	Started Drilling at 5/11/2020 7:34 AM.
+10.8	(14-48") Gray to dark brown fine SAND, trace brick, coal, coal ash (dry)[FILL]		2	R1B	Macrocore	58				0	
			3	R1B	Macrocore					0	
	(48-58") Black fine to coarse SAND, trace coal (dry)[FILL]		4	R1C						0	
	(0-18") Dark brown fine SAND, trace coal ash (moist)[FILL]		5	R2A						0	
	(18-53") Dark gray to tannish brown fine to coarse SAND, trace ash, glass, slag, brick (moist)[FILL]		6	R2A						0	
			7	R2B	Macrocore	53				0	
			8	R2B	Macrocore					0	
			9	R2B	Macrocore					0	
			10	R2B	Macrocore					0	
	(0-29") Black fine to coarse SAND, trace slag, coal, trace fine gravel (wet)[FILL]		11	R3A						0	
			12	R3A						0	
	(29-58") Grayish brown CLAY, trace wood, brick, coal (wet)[FILL]		13	R3B	Macrocore	58				0.1	
			14	R3B	Macrocore					0.2	
										0.2	
										0.2	
										0.3	
										16.2	

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PROJECT		PROJECT NO.									
45 Commercial Street		170229024									
LOCATION		ELEVATION AND DATUM									
Brooklyn, NY		Approx. 12 ft NAVD88									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
-4.7	(0-20") Black fine to coarse SAND, trace brick, wood, coal (wet)[FILL]		16	R4A						24.4	Bottom of boring at 20 ft. Boring backfilled with No 2 sand to grade and patched with concrete.
	(20-58") Dark gray organic CLAY (wet)[NATIVE]		17		Macrocore	58				39.8	
			18	R4B					7.0		
			19						0.2		
			20						3.6		
			21						0		
			22						0		
			23						0		
			24						0		
			25						0		
			26						0		
			27						0		
			28						0		
			29						0		
			30						0		
			31						0		
			32						0		

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PROJECT 45 Commercial Street			PROJECT NO. 170229024			
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88			
DRILLING EQUIPMENT Geoprobe 6610 DT			DATE STARTED 5/11/20		DATE FINISHED 5/11/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 4	UNDIST. 0	CORE 0
CASING DIAMETER (in) 2in		CASING DEPTH(ft) NA	WATER LEVEL (ft.) 10	FIRST 10	COMPL. ▼	24 HR. ▼
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin			
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Reid Balkind			

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)		
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT				
+12.0	(0-12") Dark gray to brown fine SAND, trace fine gravel, brick (dry)[FILL]			R1A							0	Started Drilling at 5/11/2020 9:20 AM.	
	(12-58") Red fine to coarse SAND, trace brick, trace fine orange sand (dry)[FILL]		1								0		
			2								0		
			3		R1B	Macrocore	58						0
			4										0
	(0-40") Red fine to coarse SAND, trace brick, trace fine orange sand (dry)[FILL]		5										0
			6										0
			7		R2A	Macrocore	56						0
			8										0
	(40-56") Black fine to coarse SAND, trace coal, slag, coal ash (moist)[FILL]		9										0
			10		R2B								0
	(0-33") Black fine to coarse SAND, trace coal, slag, coal ash (moist)[FILL]		11										0
			12		R3A	Macrocore	54						0.6
			13										0.2
		14		R3B							0.3		
-0.8	(33-54") Dark gray silty CLAY, trace organics (wet)[NATIVE]										0.4	10:10 AM - Collect grab sample from foot above confining layer. LB26_12-13	
											0		

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PROJECT		PROJECT NO.									
45 Commercial Street		170229024									
LOCATION		ELEVATION AND DATUM									
Brooklyn, NY		Approx. 12 ft NAVD88									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
-8.0	(0-58") Dark gray silty CLAY, trace organics (wet)[NATIVE]		16	R4	Macrocore	58				0	Bottom of boring at 20 ft. Boring backfilled with clean soil cuttings to grade and patched with concrete.
			17							0	
			18							0	
			19							0	
			20							0	
			21							0	
			22							0	
			23							0	
			24							0	
			25							0	
			26							0	
			27							0	
28	0										
29	0										
30	0										
31	0										
32	0										

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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 13 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/16/20	DATE FINISHED 5/16/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	UNDIST. 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9.5	FIRST ▼	COMPL. ▼
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Luke McCartney		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						PID Reading (ppm)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT		
+13.0	(0-36") Black fine SAND, trace silt, trace fine gravel, coal ash, brick, slag, concrete (moist)[FILL]		1	R1B R1A	MACROCORE	55				0.0	Started Drilling at 5/16/2020 9:30 AM. Take at 0ft
			2							0.2	
			3							0.5	
	(36-55") Brown fine SAND, some silt, trace clay, fine gravel, brick, concrete (dry)[FILL]		4	0.8							
			5	1.4							
			6	0.5							
			7	0.4							
	(0-47") Brown to black fine SAND, trace silt, fine gravel, brick, coal ash, slag (moist to wet)[FILL]		8	0.1							
			9	0.2							
			10	1.7							
			11	1.2							
			12	2.3							
			13	3.3							
			14	0.1							
	(0-26") Olive brown fine SAND, some fine gravel, trace silt, brick, coal ash (wet)[FILL]		1.7								
			3.7								
			3.9								
			5.0								
			3.6								
	(26-48") Dark gray to black fine SAND, trace fine gravel, coal ash (wet)[FILL]		5.0								
			6.0								
			21.3								
			90.4								
			14.1								
	(48-60") Olive brown fine SAND, coal (wet)[FILL]		6.7	Petroleum-like staining and odor observed from 14.5ft to 18ft.							

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PROJECT 45 Commercial Street	PROJECT NO. 170229024
LOCATION Brooklyn, NY	ELEVATION AND DATUM Approx. 13 ft NAVD88

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	PID Reading (ppm)		
	(0-18") Dark gray to black medium SAND, some coarse sand, some fine gravel, coal ash (wet)[FILL]		16							57.1	
-3.5	(18-31") Olive brown silty fine SAND, some clay (wet)[NATIVE]		17	R4B						60.5	
-4.6	(31-35") Brown PEAT (moist)[NATIVE]		18	R4DR46		58				66.6	
-4.9	(35-51") Dark gray fine SAND, some silt, shells (wet)[NATIVE]		18	R4E	MACROCORE					54.8	
-6.3	(51-60") Dark gray CLAY, trace fine sand (moist)[NATIVE]		19							388.1	
-7.0			20							268.1	
			21							130.1	Bottom of boring at 20 ft. Boring backfilled with No 2 sand and patched with concrete.
			22							17.4	
			23							21.2	
			24							17.4	
			25								
			26								
			27								
			28								
			29								
			30								
			31								
			32								

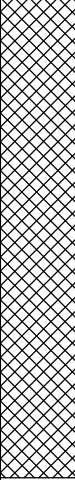
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PROJECT 45 Commercial Street			PROJECT NO. 170229024		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. 12 ft NAVD88		
DRILLING EQUIPMENT Geoprobe 7822 DT			DATE STARTED 5/16/20	DATE FINISHED 5/16/20	COMPLETION DEPTH 20 ft.
SIZE AND TYPE OF BIT 2in Direct Push			NUMBER OF SAMPLES 4	DIST. 0	CORE 0
CASING DIAMETER (in) 2in	CASING DEPTH(ft) NA		WATER LEVEL (ft.) 9	FIRST 9	COMPL. 24 HR.
SAMPLER 5-Foot Macrocore			DRILLING FOREMAN Jay Slavin		
SAMPLER HAMMER NA	WEIGHT(lbs) NA	DROP(in) NA	INSPECTING ENGINEER Luke McCartney		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE	BLOWS PER FT	
+12.0	(0-40") Brown to black fine SAND, trace silt, trace fine gravel, coal ash, brick, concrete, slag (moist)[FILL]		1	R1	MACROCORE	40				Started Drilling at 5/16/2020 10:30 AM. Take at 0ft
			2							
			3							
			4							
	(0-34") Brown to black fine SAND, some silt, trace clay, trace fine gravel, coal ash, brick, concrete (moist to wet)[FILL]		5	R2	MACROCORE	34				
			6							
			7							
			8							
	(0-18") Dark gray to dark black medium SAND, trace fine sand, trace fine gravel, coal ash, slag, brick (wet)[FILL]		9	R3	MACROCORE	18				
			10							
			11							
			12							
		13								
		14								

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15:00 - Collect LB28_14.5-15.5

PROJECT		PROJECT NO.							
45 Commercial Street		170229024							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. 12 ft NAVD88							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT	
-8.0	(0-18") Dark gray to brown to black medium SAND, some fine gravel, trace fine gravel, coal ash, slag, brick (wet)[FILL]		16	R4	MACROCORE	18			
			17						
			18						
			19						
			20						Bottom of boring at 20 ft. Boring backfilled with No 2 sand and patched with concrete.
			21						
			22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						

I:\LANGAN.COM\DATA\170229024\PROJECT DATA\DISCIPLINE\ENVIRONMENTAL\GINTLOGS\170229024_RL.GPJ ... 5/22/2020 1:24:01 PM ... Report: Log - BORING

APPENDIX E

Monitoring Well Construction and Groundwater Sampling Logs

WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No.

MW13

PROJECT		PROJECT NO.	
45 Commercial Street		170229024	
LOCATION		ELEVATION AND DATUM	
Brooklyn, NY		el. 11.91 NAVD88	
DRILLING AGENCY		DATE STARTED	DATE FINISHED
Eastern Environmental Solutions, Inc.		5/6/2020	5/6/2020
DRILLING EQUIPMENT		DRILLER	
Geoprobe® 7822 DT		Jay Slavin	
SIZE AND TYPE OF BIT		INSPECTOR	
2-inch Direct Push		Luke McCartney	
BOREHOLE DIAMETER		TYPE OF WELL (OVERBURDEN / BEDROCK)	
2-Inches		Overburden	
RISER MATERIAL	DIAMETER	TYPE OF BACKFILL MATERIAL	
PVC	2-Inch	No. 2 Sand	
TYPE OF SCREEN	DIAMETER	TYPE OF WELL PACK	TYPE OF SEAL MATERIAL
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite
METHOD OF INSTALLATION			
Geoprobe 7822 DT was used to advance the boring to approximately 17 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 12' of 10 slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 17 to 5 feet bgs with riser from 5 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.			
WELL DEVELOPMENT DATA			
SURGE BLOCK DIAMETER	N/A	TYPE PUMP	Peristaltic
DRILLER OR LANGAN	Driller	MAX PUMP RATE	1 LPM
NUMBER OF SURGE CYCLES	N/A	TOTAL VOLUME	~4 Gallons
DEVELOPMENT CONFIRMATION			
Well development began on 5/6/20 until pump broke. Development continued on 5/7/20 until purged groundwater was no longer turbid. Purged groundwater exhibited a petroleum-like odor and sheen.			
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS
	11.91	0	
TOP OF SEAL	ELEVATION	DEPTH (ft)	Cover →
	8.91	3	
TOP OF FILTER	ELEVATION	DEPTH (ft)	Riser →
	6.91	5	
TOP OF SCREEN	ELEVATION	DEPTH (ft)	Grout ←
	6.91	5.0	
BOTTOM OF BORING	ELEVATION	DEPTH (ft)	Seal ←
	-5.09	17	
SCREEN LENGTH		12	PVC Screen
SLOT SIZE	No. 10 Slot; 0.010 Inches		
GROUNDWATER ELEVATIONS			
ELEVATION	DATE	DEPTH TO WATER	17
2.99	5/20/2020	8.92 ft	
ELEVATION	DATE	DEPTH TO WATER	17
ELEVATION	DATE	DEPTH TO WATER	17
ELEVATION	DATE	DEPTH TO WATER	17
ELEVATION	DATE	DEPTH TO WATER	17
LANGAN Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.			
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York			

WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No.

MW13N

PROJECT		PROJECT NO.	
45 Commercial Street		170229024	
LOCATION		ELEVATION AND DATUM	
Brooklyn, NY		el. 11.81 NAVD88	
DRILLING AGENCY		DATE STARTED	DATE FINISHED
Eastern Environmental Solutions, Inc.		5/7/2020	5/8/2020
DRILLING EQUIPMENT		DRILLER	
Geoprobe® 6610 DT		Jay Slavin	
SIZE AND TYPE OF BIT		INSPECTOR	
2-inch Direct Push		Luke McCartney	
BOREHOLE DIAMETER		TYPE OF WELL (OVERBURDEN / BEDROCK)	
2-Inches		Overburden	
RISER MATERIAL	DIAMETER	TYPE OF BACKFILL MATERIAL	
PVC	2-Inch	No. 2 Sand	
TYPE OF SCREEN	DIAMETER	TYPE OF WELL PACK	TYPE OF SEAL MATERIAL
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite
METHOD OF INSTALLATION			
Geoprobe 6610 DT was used to advance the boring to approximately 20 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 12' of 10 slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 17 to 5 feet bgs with riser from 5 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.			
WELL DEVELOPMENT DATA			
SURGE BLOCK DIAMETER	N/A	TYPE PUMP	Peristaltic
DRILLER OR LANGAN	Driller	MAX PUMP RATE	1 LPM
NUMBER OF SURGE CYCLES	N/A	TOTAL VOLUME	~4 Gallons
Well development was completed on 5/8/20 until purged ground water was no longer turbid.			
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS
	11.81	0	
TOP OF SEAL	ELEVATION	DEPTH (ft)	Cover →
	8.81	3	
TOP OF FILTER	ELEVATION	DEPTH (ft)	Riser →
	6.81	5	
TOP OF SCREEN	ELEVATION	DEPTH (ft)	Grout →
	6.81	5.0	
BOTTOM OF BORING	ELEVATION	DEPTH (ft)	Seal →
	-5.19	17	
SCREEN LENGTH		12	PVC Screen
SLOT SIZE	No. 10 Slot; 0.010 Inches		
GROUNDWATER ELEVATIONS			
ELEVATION	DATE	DEPTH TO WATER	17
3.02	5/20/2020	8.79 ft	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No.

MW16

PROJECT		PROJECT NO.	
45 Commercial Street		170229024	
LOCATION		ELEVATION AND DATUM	
Brooklyn, NY		el. 11.39 NAVD88	
DRILLING AGENCY		DATE STARTED	DATE FINISHED
Eastern Environmental Solutions, Inc.		5/13/2020	5/13/2020
DRILLING EQUIPMENT		DRILLER	
Geoprobe® 7822 DT		Jay Slavin	
SIZE AND TYPE OF BIT		INSPECTOR	
2-inch Direct Push		Reid Balkind	
BOREHOLE DIAMETER		TYPE OF WELL (OVERBURDEN / BEDROCK)	
2-Inches		Overburden	
RISER MATERIAL	DIAMETER	TYPE OF BACKFILL MATERIAL	
PVC	2-Inch	No. 2 Sand	
TYPE OF SCREEN	DIAMETER	TYPE OF WELL PACK	TYPE OF SEAL MATERIAL
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite
METHOD OF INSTALLATION			
<p>Geoprobe 7822 DT was used to advance the boring to approximately 17 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 12' of 10 slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 17 to 5 feet bgs with riser from 5 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.</p>			
WELL DEVELOPMENT DATA			
SURGE BLOCK DIAMETER	N/A	TYPE PUMP	Peristaltic
DRILLER OR LANGAN	Driller	MAX PUMP RATE	1 LPM
NUMBER OF SURGE CYCLES	N/A	TOTAL VOLUME	~4 Gallons
Well development began on 5/16/20 until purged groundwater was no longer turbid.			
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS
	11.39	0	
TOP OF SEAL	ELEVATION	DEPTH (ft)	
	8.39	3	
TOP OF FILTER	ELEVATION	DEPTH (ft)	
	6.39	5	
TOP OF SCREEN	ELEVATION	DEPTH (ft)	
	6.39	5.0	
BOTTOM OF BORING	ELEVATION	DEPTH (ft)	
	-5.61	17	
SCREEN LENGTH		12	
SLOT SIZE	No. 10 Slot; 0.010 Inches		
GROUNDWATER ELEVATIONS			
ELEVATION	DATE	DEPTH TO WATER	SUMMARY SOIL CLASSIFICATION
2.84	5/20/2020	8.55 ft	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
			0
			3
			5
			5
			17
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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No.

MW18

PROJECT		PROJECT NO.	
45 Commercial Street		170229024	
LOCATION		ELEVATION AND DATUM	
Brooklyn, NY		el. 13.55 NAVD88	
DRILLING AGENCY		DATE STARTED	DATE FINISHED
Eastern Environmental Solutions, Inc.		5/8/2020	5/8/2020
DRILLING EQUIPMENT		DRILLER	
Geoprobe® 6610 DT		Jay Slavin	
SIZE AND TYPE OF BIT		INSPECTOR	
2-inch Direct Push		Reid Balkind	
BOREHOLE DIAMETER		TYPE OF WELL (OVERBURDEN / BEDROCK)	
2-Inches		Overburden	
RISER MATERIAL	DIAMETER	TYPE OF BACKFILL MATERIAL	
PVC	2-Inch	No. 2 Sand	
TYPE OF SCREEN	DIAMETER	TYPE OF WELL PACK	TYPE OF SEAL MATERIAL
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite
METHOD OF INSTALLATION			
Geoprobe 6610 DT was used to advance the boring to approximately 20 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 12' of 10 slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 17 to 5 feet bgs with riser from 5 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.			
WELL DEVELOPMENT DATA			
SURGE BLOCK DIAMETER	N/A	TYPE PUMP	Peristaltic
DRILLER OR LANGAN	Driller	MAX PUMP RATE	1 LPM
NUMBER OF SURGE CYCLES	N/A	TOTAL VOLUME	~4 Gallons
Well development was completed on 5/8/20 until purged ground water was no longer turbid.			
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS
	13.55	0	
TOP OF SEAL	ELEVATION	DEPTH (ft)	
	10.55	3	
TOP OF FILTER	ELEVATION	DEPTH (ft)	
	8.55	5	
TOP OF SCREEN	ELEVATION	DEPTH (ft)	
	8.55	5.0	
BOTTOM OF BORING	ELEVATION	DEPTH (ft)	
	-6.45	20	
SCREEN LENGTH		15	
SLOT SIZE	No. 10 Slot; 0.010 Inches		
GROUNDWATER ELEVATIONS			
ELEVATION	DATE	DEPTH TO WATER	SUMMARY SOIL CLASSIFICATION
3.01	5/20/2020	10.54 ft	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
			0
			3
			5
			5
			20
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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No.

MW19

PROJECT		PROJECT NO.	
45 Commercial Street		170229024	
LOCATION		ELEVATION AND DATUM	
Brooklyn, NY		el. 11.97 NAVD88	
DRILLING AGENCY		DATE STARTED	DATE FINISHED
Eastern Environmental Solutions, Inc.		5/13/2020	5/13/2020
DRILLING EQUIPMENT		DRILLER	
Geoprobe® 7822 DT		Jay Slavin	
SIZE AND TYPE OF BIT		INSPECTOR	
2-inch Direct Push		Reid Balkind	
BOREHOLE DIAMETER		TYPE OF WELL (OVERBURDEN / BEDROCK)	
2-Inches		Overburden	
RISER MATERIAL	DIAMETER	TYPE OF BACKFILL MATERIAL	
PVC	2-Inch	No. 2 Sand	
TYPE OF SCREEN	DIAMETER	TYPE OF WELL PACK	TYPE OF SEAL MATERIAL
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite
METHOD OF INSTALLATION			
<p>Geoprobe 7822 DT was used to advance the boring to approximately 17 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 12' of 10 slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 17 to 5 feet bgs with riser from 5 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.</p>			
WELL DEVELOPMENT DATA			
SURGE BLOCK DIAMETER	N/A	TYPE PUMP	Peristaltic
DRILLER OR LANGAN	Driller	MAX PUMP RATE	1 LPM
NUMBER OF SURGE CYCLES	N/A	TOTAL VOLUME	~4 Gallons
Well development began on 5/16/20 until purged groundwater was no longer turbid.			
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS
	11.97	0	
TOP OF SEAL	ELEVATION	DEPTH (ft)	
	8.97	3	
TOP OF FILTER	ELEVATION	DEPTH (ft)	
	6.97	5	
TOP OF SCREEN	ELEVATION	DEPTH (ft)	
	6.97	5.0	
BOTTOM OF BORING	ELEVATION	DEPTH (ft)	
	-5.03	17	
SCREEN LENGTH		12	
SLOT SIZE	No. 10 Slot; 0.010 Inches		
GROUNDWATER ELEVATIONS			
ELEVATION	DATE	DEPTH TO WATER	SUMMARY SOIL CLASSIFICATION
2.82	5/20/2020	9.15 ft	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
			0
			3
			5
			5
			17
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WELL CONSTRUCTION AND DEVELOPMENT SUMMARY

Well No.

MW22

PROJECT		PROJECT NO.	
45 Commercial Street		170229024	
LOCATION		ELEVATION AND DATUM	
Brooklyn, NY		el. 12.97 NAVD88	
DRILLING AGENCY		DATE STARTED	DATE FINISHED
Eastern Environmental Solutions, Inc.		5/8/2020	5/8/2020
DRILLING EQUIPMENT		DRILLER	
Geoprobe® 6610 DT		Jay Slavin	
SIZE AND TYPE OF BIT		INSPECTOR	
2-inch Direct Push		Reid Balkind	
BOREHOLE DIAMETER		TYPE OF WELL (OVERBURDEN / BEDROCK)	
2-Inches		Overburden	
RISER MATERIAL	DIAMETER	TYPE OF BACKFILL MATERIAL	
PVC	2-Inch	No. 2 Sand	
TYPE OF SCREEN	DIAMETER	TYPE OF WELL PACK	TYPE OF SEAL MATERIAL
PVC No. 10 Slot	2-Inch	No. 2 Sand	Bentonite
METHOD OF INSTALLATION			
<p>Geoprobe 6610 DT was used to advance the boring to approximately 20 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 12' of 10 slot (0.010-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 17 to 5 feet bgs with riser from 5 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.</p>			
WELL DEVELOPMENT DATA			
SURGE BLOCK DIAMETER	N/A	TYPE PUMP	Peristaltic
DRILLER OR LANGAN	Driller	MAX PUMP RATE	1 LPM
NUMBER OF SURGE CYCLES	N/A	TOTAL VOLUME	~4 Gallons
Well development was completed on 5/8/20 until purged ground water was no longer turbid.			
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS
	12.97	0	
TOP OF SEAL	ELEVATION	DEPTH (ft)	
	9.97	3	
TOP OF FILTER	ELEVATION	DEPTH (ft)	
	7.97	5	
TOP OF SCREEN	ELEVATION	DEPTH (ft)	
	7.97	5.0	
BOTTOM OF BORING	ELEVATION	DEPTH (ft)	
	-7.03	20	
SCREEN LENGTH		15	
SLOT SIZE	No. 10 Slot; 0.010 Inches		
GROUNDWATER ELEVATIONS			
ELEVATION	DATE	DEPTH TO WATER	SUMMARY SOIL CLASSIFICATION
3.28	5/20/2020	9.69 ft	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
ELEVATION	DATE	DEPTH TO WATER	
			0
			3
			5
			5
			20
LANGAN Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.			
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York			

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	45 Commercial Street	Well No:	MW13	Water Quality Device Model:	Horiba U-52	Weather:	Clear 70s	Sample(s):	MW13_051620
Project Number:	170229024	Well Depth:	17	Pine Number:	21975	Background PID (ppm):	0.0		GWMS01_051620
Site Location:	Brooklyn, NY	Well Diameter:	2-Inch	Pump Make and Model:	Peri Pump	PID Beneath Inner Cap (ppm):	23.1		GWMSD01_051620
Sampling Personnel:	Reid Balkind	Well Screen:	5	Pine Number:	043748	Pump Intake Depth:	13.00	Sample Date:	5/16/2020
		Interval:	17	Tubing Diameter:	1/4 ID x 3/8 OD HDPE	Depth to Water Before Purge:		Sample Time:	9:50

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
8:35	15.48	6.65	-4	0.782	119.0	0.00			0.75	Petroleum-Like Odor	N/A
8:40	14.91	6.86	-61	0.801	110.0	0.00		0.03	0.9		N/A
8:45	14.84	6.93	-79	0.891	67.5	0.00		0.04	1.1		N
8:50	14.95	6.94	-83	0.955	56.1	0.00		0.02	1.2		N
8:55	14.88	6.98	-90	0.989	33.7	0.00		0.04	1.4		N
9:00	14.87	6.98	-93	1.020	29.2	0.00		0.04	1.6		N
9:05	14.86	7.00	-97	1.060	19.8	0.00			1.8		N
9:10	14.91	7.05	-102	1.400	20.4	0.00			2.2		N
9:15	14.90	7.05	-103	1.390	30.6	0.00			2.3		N
9:20											N
9:25	14.91	7.06	-106	1.490	32.8	0.00		0.56	2.8		N
9:30	14.97	7.06	-107	1.560	35.7	0.00		0.04	3		N
9:35	15.03	7.07	-108	1.570	38.1	0.00		0.06	3.3		N
9:40	15.07	7.08	-109	1.570	35.7	0.00		0.04	3.5		Y
								0.7			N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N

- Notes:**
1. Well depths and groundwater depths were measured in feet below the top of well casing.
 2. Well and tubing diameters are measured in inches.
 3. PID = Photoionization Detector
 4. PPM = Parts per million
 5. pH = Hydrogen ion concentration
 6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
 7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
 8. DTW = Depth to water
 9. mS/cm = milli-Siemans per centimeter
 10. NTU = Nephelometric Turbidity Unit

Project Information		Well Information		Equipment Information		Sampling Conditions			Sampling Information	
Project Name:	45 Commercial Street	Well No:	MW13N	Water Quality Device Model:	Horiba U-52	Weather:	Clear 70s	Sample(s):	MW13N_051620	
Project Number:	170229024	Well Depth:	17	Pine Number:	21975	Background PID (ppm):	0.0			
Site Location:	Brooklyn, NY	Well Diameter:	2-Inch	Pump Make and Model:	Peri Pump	PID Beneath Inner Cap (ppm):	0.7	Sample Date:	5/16/2020	
Sampling Personnel:	Reid Balkind	Well Screen:	5	Pine Number:	043748	Pump Intake Depth:	13.00			
		Interval:	17	Tubing Diameter:	1/4 ID x 3/8 OD HDPE	Depth to Water Before Purge:		Sample Time:	13:40	

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
12:35	16.25	7.48	-120	0.703	1000	3.01			0.75	Silty black water	N/A
12:40	15.93	7.44	-120	0.64	1000	2.91		0.05	1		N/A
12:45	16.4	7.43	-119	0.646	763	3.2		0.08	1.4		N
12:50	16.13	7.43	-121	0.648	992	2.71		0.08	1.8		N
12:55	16.47	7.43	-122	0.651	971	2.74		0.02	1.9		N
13:00	16.65	7.43	-122	0.641	538	2.72		0.06	2.2		N
13:05	16.42	7.44	-121	0.637	928	2.66		0.06	2.5		N
13:10	16.41	7.43	-120	0.63	811	2.69		0.05	2.75		N
13:15	16.35	7.43	-120	0.626	407	3.03		0.05	3		N
13:20	16.23	7.43	-119	0.611	466	2.45		0.05	3.25		N
13:25	16.23	7.43	-119	0.609	397	2.44		0.05	3.5		N
13:30	15.94	7.42	-118	0.603	230	2.25		0.05	3.75		N
13:35	15.95	7.43	-117	0.6	151	2.2		0.05	4		N
13:40	15.9	7.43	-118	0.6	113	2.23		0.06	4.3		N
								-0.86			N
								0			N
								0			N
								0			N
								0			N
								0			N
											N
											N
											N
											N
											N
											N
											N
											N

- Notes:**
- Well depths and groundwater depths were measured in feet below the top of well casing.
 - Well and tubing diameters are measured in inches.
 - PID = Photoionization Detector
 - PPM = Parts per million
 - pH = Hydrogen ion concentration
 - ORP = Oxidation-reduction potential, measured in millivolts (mV)
 - DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
 - DTW = Depth to water
 - mS/cm = milli-Siemans per centimeter
 - NTU = Nephelometric Turbidity Unit

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	45 Commercial Street	Well No:	MW16	Water Quality Device Model:	Horiba U-52	Weather:	Clear 60s	Sample(s):	MW16_052020
Project Number:	170229024	Well Depth:	17	Pine Number:	21975	Background PID (ppm):	0.0		
Site Location:	Brooklyn, NY	Well Diameter:	2-Inch	Pump Make and Model:	Peri Pump	PID Beneath Inner Cap (ppm):	0.0		
Sampling Personnel:	Reid Balkind	Well Screen Interval:	5 17	Pine Number:	043748	Pump Intake Depth:	13.00	Sample Date:	5/20/2020
				Tubing Diameter:	1/4 ID x 3/8 OD HDPE	Depth to Water Before Purge:		Sample Time:	7:55

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
7:25	12.96	6.59	-47	2.720	3.0	0.00			1	Yellow, Chemical-Like Odor	N/A
7:30	12.99	6.74	-74	2.710	1.4	0.00		0.1	1.5		N/A
7:35	13.08	6.80	-83	2.700	0.8	0.00		0.05	1.75		N
7:40	13.14	6.85	-90	2.700	0.2	0.00		0.05	2		N
7:45	13.26	6.89	-95	2.710	0.1	0.00		0.16	2.8		N
7:50	13.30	6.90	-97	2.720	0.1	0.00		0.06	3.1		Y
											N
											N
											N
											N
											N
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											N
											N
											N

- Notes:**
1. Well depths and groundwater depths were measured in feet below the top of well casing.
 2. Well and tubing diameters are measured in inches.
 3. PID = Photoionization Detector
 4. PPM = Parts per million
 5. pH = Hydrogen ion concentration
 6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
 7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
 8. DTW = Depth to water
 9. mS/cm = milli-Siemans per centimeter
 10. NTU = Nephelometric Turbidity Unit

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	45 Commercial Street	Well No:	MW18	Water Quality Device Model:	Horiba U-52	Weather:	Clear 60s	Sample(s):	MW18_052020
Project Number:	170229024	Well Depth:	17	Pine Number:	21975	Background PID (ppm):	0.0		GWDUP01_052020
Site Location:	Brooklyn, NY	Well Diameter:	2-Inch	Pump Make and Model:	Peri Pump	PID Beneath Inner Cap (ppm):	0.1	Sample Date:	5/20/2020
Sampling Personnel:	Reid Balkind	Well Screen Interval:	5 17	Pine Number:	043748	Pump Intake Depth:	13.00		Sample Time:
				Tubing Diameter:		1/4 ID x 3/8 OD HDPE	Depth to Water Before Purge:		

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
12:00	14.91	7.18	89	2.570	109.0	8.05			0.5		N/A
12:05	14.42	7.05	90	2.580	88.7	1.06		0.06	0.8		N/A
12:10	14.40	7.03	83	2.590	66.0	0.18		0.08	1.2		N
12:15	14.35	7.01	76	2.640	68.6	0.00		0.08	1.6		N
12:20	14.25	6.99	64	2.850	46.7	0.00		0.08	2		N
12:25	14.25	6.99	53	2.970	31.2	0.00		0.06	2.3		N
12:30	14.22	6.98	37	3.100	15.6	0.00		0.08	2.7		N
12:35								0.54			N
12:40	14.24	6.97	3	3.290	4.7	0.00		0.68	3.4		N
12:45	14.19	6.96	-7	3.350	5.7	0.00		0.07	3.75		N
12:50	14.25	6.97	-14	3.390	4.1	0.00		0.09	4.2		N
12:55	14.25	6.96	-21	3.440	3.1	0.00		0.08	4.6		N
13:00	14.20	6.96	-24	3.450	3.0	0.00		0.08	5		Y
								1			N
											N
											N
											N
											N
											N
											N
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											N
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											N

- Notes:**
1. Well depths and groundwater depths were measured in feet below the top of well casing.
 2. Well and tubing diameters are measured in inches.
 3. PID = Photoionization Detector
 4. PPM = Parts per million
 5. pH = Hydrogen ion concentration
 6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
 7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
 8. DTW = Depth to water
 9. mS/cm = milli-Siemans per centimeter
 10. NTU = Nephelometric Turbidity Unit

Project Information		Well Information		Equipment Information		Sampling Conditions			Sampling Information	
Project Name:	45 Commercial Street	Well No:	MW19	Water Quality Device Model:	Horiba U-52	Weather:	Clear 70s		Sample(s):	MW19_052020
Project Number:	170229024	Well Depth:	17	Pine Number:	21975	Background PID (ppm):	0.0			
Site Location:	Brooklyn, NY	Well Diameter:	2-Inch	Pump Make and Model:	Peri Pump	PID Beneath Inner Cap (ppm):	0.4		Sample Date:	5/20/2020
Sampling Personnel:	Reid Balkind	Well Screen Interval:	5 17	Pine Number:	043748	Pump Intake Depth:	13.00			
				Tubing Diameter:	1/4 ID x 3/8 OD HDPE	Depth to Water Before Purge:			Sample Time:	10:10

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
9:10	15.33	6.83	44	3.210	14.7	0.52			0.5		N/A
9:15	15.33	6.80	42	3.270	6.5	0.00		0.05	0.75		N/A
9:20	15.34	6.76	40	3.290	7.2	2.40		0.05	1		N
9:25	15.24	6.75	37	3.300	6.0	2.68		0.08	1.4		N
9:30	15.43	6.74	31	3.330	0.3	2.24		0.07	1.75		N
9:35	15.45	6.73	25	3.330	0.0	2.05		0.05	2		N
9:40	15.37	6.77	15	3.310	5.2	0.00		0.1	2.5		N
9:45	15.52	6.71	11	3.350	6.8	0.00		0.06	2.8		N
9:50	15.53	6.71	7	3.350	6.6	0.00		0.08	3.2		N
9:55	15.56	6.71	5	3.360	4.4	0.00		0.06	3.5		N
10:00	15.64	6.71	7	3.370	3.5	0.00		0.05	3.75		N
10:05	15.62	6.71	-2	3.380	0.5	0.00		0.05	4		Y
								0.8			N
											N
											N
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- Notes:**
- Well depths and groundwater depths were measured in feet below the top of well casing.
 - Well and tubing diameters are measured in inches.
 - PID = Photoionization Detector
 - PPM = Parts per million
 - pH = Hydrogen ion concentration
 - ORP = Oxidation-reduction potential, measured in millivolts (mV)
 - DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
 - DTW = Depth to water
 - mS/cm = milli-Siemans per centimeter
 - NTU = Nephelometric Turbidity Unit

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	45 Commercial Street	Well No:	MW22	Water Quality Device Model:	Horiba U-52	Weather:	Clear 70s	Sample(s):	MW22_051620
Project Number:	170229024	Well Depth:	17	Pine Number:	21975	Background PID (ppm):	0.0		
Site Location:	Brooklyn, NY	Well Diameter:	2-Inch	Pump Make and Model:	Peri Pump	PID Beneath Inner Cap (ppm):	3.5	Sample Date:	5/16/2020
Sampling Personnel:	Reid Balkind	Well Screen Interval:	5 20	Pine Number:	043748	Pump Intake Depth:	13.00		Sample Time:

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
14:35	18.20	7.55	-80	1.400	64.7	3.37			0.5		N/A
14:40	17.24	7.56	-105	1.390	27.0	0.76		0.02	0.6		N/A
14:45	16.52	7.53	-120	1.380	6.2	0.00		0.08	1		N
14:50	16.46	7.52	-123	1.380	5.6	0.00		0.05	1.25		N
14:55	16.34	7.51	-123	1.380	5.8	0.00		0.07	1.6		Y
								0.32			N
											N
											N
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Notes:

- 1. Well depths and groundwater depths were measured in feet below the top of well casing.
- 2. Well and tubing diameters are measured in inches.
- 3. PID = Photoionization Detector
- 4. PPM = Parts per million
- 5. pH = Hydrogen ion concentration
- 6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
- 7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
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APPENDIX F

Soil Vapor Construction and Sampling Logs

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV-01

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024																								
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 11.5 ft NAVD88																								
DRILLING FIRM OR LANGAN INSTALLER: Eastern Environmental Solutions, Inc.		INSTALLATION DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																							
INSTALLATION FOREMAN: Jay Slavin		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																							
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister																								
INSPECTOR: Reid Balkind		SAMPLER: Reid Balkind																								
POTENTIAL SAMPLE INTERFERENCES: None		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): Temp: 49-54 F Wind: 0-6 mph S Precipitation: 0 in Pressure: 29.85 in Hg																								
METHOD OF INSTALLATION AND PURGING: Advance Geoprobe 7822 DT to 6 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand to 1 feet bgs and seal to surface with hydrated bentonite.																										
TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing		TYPE OF MATERIAL ABOVE SEAL: N/A																								
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite																								
BOREHOLE DIAMETER: 2-Inches		FILTER PACK MATERIAL (Sand or Glass Beads): No. 2 Sand																								
PURGE VOLUME (L): 0.03		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">IMPLANT/PROBE DETAILS</th> <th style="text-align: center;">DEPTH</th> <th rowspan="2" style="text-align: center;">NOTES</th> </tr> <tr> <th colspan="2" style="text-align: center;">(SEAL, FILTER, ETC.)</th> <th style="text-align: center;">(FEET FROM SURFACE)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">SURFACE</td> <td style="text-align: center;">SURFACE</td> <td style="text-align: center;">SURFACE</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> <td style="text-align: center;">0.00</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> <td style="text-align: center;">1.00</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> <td style="text-align: center;">6.00</td> <td></td> </tr> </tbody> </table>		IMPLANT/PROBE DETAILS		DEPTH	NOTES	(SEAL, FILTER, ETC.)		(FEET FROM SURFACE)	SURFACE	SURFACE	SURFACE				0.00				1.00				6.00	
IMPLANT/PROBE DETAILS				DEPTH	NOTES																					
(SEAL, FILTER, ETC.)				(FEET FROM SURFACE)																						
SURFACE	SURFACE			SURFACE																						
				0.00																						
				1.00																						
				6.00																						
PURGE FLOW RATE (ML/MIN): 200																										
PID AFTER PURGE (PPM): 0.5																										
HELIUM TESTS																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Pre-sampling</th> <th style="width: 50%;">Post-sampling</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">15.0%</td> <td style="text-align: center;">10.6%</td> </tr> <tr> <td style="text-align: center;">0.0%</td> <td style="text-align: center;">0.0%</td> </tr> </tbody> </table>				Pre-sampling	Post-sampling	15.0%	10.6%	0.0%	0.0%																	
Pre-sampling	Post-sampling																									
15.0%	10.6%																									
0.0%	0.0%																									
HELIUM TEST IN BUCKET(%):																										
HELIUM TEST IN TUBE (PPM):																										
SAMPLE START TIME: 9:35																										
SAMPLE STOP TIME: 11:35																										
TOTAL SAMPLE TIME (MIN): 120																										
REGULATOR FLOW RATE (L/MIN): 7																										
VOLUME OF SAMPLE (LITERS): 1																										
PID AFTER SAMPLE (PPM): 0.2																										
SAMPLE MOISTURE CONTENT: NA																										
CAN SERIAL NUMBER: 1325																										
REGULATOR SERIAL NUMBER: 824855																										
CAN START VACUUM PRESS. (" HG): 29.5																										
CAN STOP VACUUM PRESS. (" HG): 16																										
SAMPLE LOCATION SKETCH																										
See Sample Location Plan																										
NOTES																										
Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727																										

SOIL VAPOR SAMPLING LOG SHEET
Sample Number: SV-02

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024																						
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 11 ft NAVD88																						
DRILLING FIRM OR LANGAN INSTALLER: Eastern Environmental Solutions, Inc.		INSTALLATION DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																					
INSTALLATION FOREMAN: Jay Slavin		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																					
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister																						
INSPECTOR: Reid Balkind		SAMPLER: Reid Balkind																						
POTENTIAL SAMPLE INTERFERENCES: None		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): Temp: 49-54 F Wind: 0-6 mph S Precipitation: 0 in Pressure: 29.85 in Hg																						
METHOD OF INSTALLATION AND PURGING: Advance Geoprobe 7822 DT to 6 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand to 1 feet bgs and seal to surface with hydrated bentonite.																								
TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing		TYPE OF MATERIAL ABOVE SEAL: N/A																						
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite																						
BOREHOLE DIAMETER: 2 Inches		FILTER PACK MATERIAL (Sand or Glass Beads): No. 2 Sand																						
PURGE VOLUME (L): 0.03		<table border="1"> <thead> <tr> <th colspan="2">IMPLANT/PROBE DETAILS</th> <th rowspan="2">DEPTH (FEET FROM SURFACE)</th> <th rowspan="2">NOTES</th> </tr> <tr> <th colspan="2">(SEAL, FILTER, ETC.)</th> </tr> </thead> <tbody> <tr> <td>SURFACE</td> <td>SURFACE</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Top of Seal</td> <td>0.00</td> </tr> <tr> <td></td> <td></td> <td>Top of Pack</td> <td>1.00</td> </tr> <tr> <td></td> <td></td> <td>Probe Depth</td> <td>6.00</td> </tr> </tbody> </table>	IMPLANT/PROBE DETAILS		DEPTH (FEET FROM SURFACE)	NOTES	(SEAL, FILTER, ETC.)		SURFACE	SURFACE					Top of Seal	0.00			Top of Pack	1.00			Probe Depth	6.00
IMPLANT/PROBE DETAILS			DEPTH (FEET FROM SURFACE)	NOTES																				
(SEAL, FILTER, ETC.)																								
SURFACE	SURFACE																							
			Top of Seal	0.00																				
			Top of Pack	1.00																				
			Probe Depth	6.00																				
PURGE FLOW RATE (ML/MIN): 200																								
PID AFTER PURGE (PPM): 0.6																								
HELIUM TESTS																								
	Pre-sampling Post-sampling																							
HELIUM TEST IN BUCKET(%): 11.2% 10.8%																								
HELIUM TEST IN TUBE (PPM): 0.0% 0.0%																								
SAMPLE START TIME: 9:52																								
SAMPLE STOP TIME: 11:52																								
TOTAL SAMPLE TIME (MIN): 120																								
REGULATOR FLOW RATE (L/MIN): 7.1																								
VOLUME OF SAMPLE (LITERS): 1																								
PID AFTER SAMPLE (PPM): 0.3																								
SAMPLE MOISTURE CONTENT: NA																								
CAN SERIAL NUMBER: Z038																								
REGULATOR SERIAL NUMBER: 507749																								
CAN START VACUUM PRESS. (" HG): 30																								
CAN STOP VACUUM PRESS. (" HG): 7																								
SAMPLE LOCATION SKETCH		NOTES																						
See Sample Location Plan																								
<p align="center">Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727</p>																								

SOIL VAPOR SAMPLING LOG SHEET
Sample Number: SV-03

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024																							
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 12.5 ft NAVD88																							
DRILLING FIRM OR LANGAN INSTALLER: Eastern Environmental Solutions, Inc.		INSTALLATION DATE STARTED: 5/7/2020	DATE FINISHED: 5/7/2020																						
INSTALLATION FOREMAN: Jay Slavin		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																						
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister																							
INSPECTOR: Reid Balkind		SAMPLER: Reid Balkind																							
POTENTIAL SAMPLE INTERFERENCES: None		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): Temp: 49-54 F Wind: 0-6 mph S Precipitation: 0 in Pressure: 29.85 in Hg																							
METHOD OF INSTALLATION AND PURGING: Advance Geoprobe 7822 DT to 6 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand to 1 feet bgs and seal to surface with hydrated bentonite.																									
TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing		TYPE OF MATERIAL ABOVE SEAL: N/A																							
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite																							
BOREHOLE DIAMETER: 2 Inches		FILTER PACK MATERIAL (Sand or Glass Beads): No. 2 Sand																							
PURGE VOLUME (L): 0.03		<table border="1"> <thead> <tr> <th colspan="2">IMPLANT/PROBE DETAILS</th> <th rowspan="2">DEPTH (FEET FROM SURFACE)</th> <th rowspan="2">NOTES</th> </tr> <tr> <th colspan="2">(SEAL, FILTER, ETC.)</th> </tr> </thead> <tbody> <tr> <td>SURFACE</td> <td>SURFACE</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Top of Seal</td> <td>0.00</td> </tr> <tr> <td></td> <td></td> <td>Top of Pack</td> <td>1.00</td> </tr> <tr> <td></td> <td></td> <td>Probe Depth</td> <td>6.00</td> </tr> </tbody> </table>		IMPLANT/PROBE DETAILS		DEPTH (FEET FROM SURFACE)	NOTES	(SEAL, FILTER, ETC.)		SURFACE	SURFACE					Top of Seal	0.00			Top of Pack	1.00			Probe Depth	6.00
IMPLANT/PROBE DETAILS				DEPTH (FEET FROM SURFACE)	NOTES																				
(SEAL, FILTER, ETC.)																									
SURFACE	SURFACE																								
				Top of Seal	0.00																				
				Top of Pack	1.00																				
				Probe Depth	6.00																				
PURGE FLOW RATE (ML/MIN): 200																									
PID AFTER PURGE (PPM): 0.1																									
HELIUM TESTS																									
	Pre-sampling Post-sampling																								
HELIUM TEST IN BUCKET(%): 10.7% 11.4%																									
	0.0% 0.0%																								
HELIUM TEST IN TUBE (PPM):																									
SAMPLE START TIME: 10:10																									
SAMPLE STOP TIME: 11:50																									
TOTAL SAMPLE TIME (MIN): 100																									
REGULATOR FLOW RATE (L/MIN): 6.9																									
VOLUME OF SAMPLE (LITERS): 1																									
PID AFTER SAMPLE (PPM): 0																									
SAMPLE MOISTURE CONTENT: NA																									
CAN SERIAL NUMBER: 962																									
REGULATOR SERIAL NUMBER: 710623																									
CAN START VACUUM PRESS. (" HG): 30																									
CAN STOP VACUUM PRESS. (" HG): 2.2																									
SAMPLE LOCATION SKETCH		NOTES																							
See Sample Location Plan																									

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV-04

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024																								
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 12.5 ft NAVD88																								
DRILLING FIRM OR LANGAN INSTALLER: Eastern Environmental Solutions, Inc.		INSTALLATION DATE STARTED: 5/7/2020	DATE FINISHED: 5/7/2020																							
INSTALLATION FOREMAN: Jay Slavin		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																							
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister																								
INSPECTOR: Reid Balkind		SAMPLER: Reid Balkind																								
POTENTIAL SAMPLE INTERFERENCES: None		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): Temp: 49-54 F Wind: 0-6 mph S Precipitation: 0 in Pressure: 29.85 in Hg																								
METHOD OF INSTALLATION AND PURGING: Advance Geoprobe 7822 DT to 6 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand to 1 feet bgs and seal to surface with hydrated bentonite.																										
TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing		TYPE OF MATERIAL ABOVE SEAL: N/A																								
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite																								
BOREHOLE DIAMETER: 2 Inches		FILTER PACK MATERIAL (Sand or Glass Beads): No. 2 Sand																								
PURGE VOLUME (L): 0.03		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">IMPLANT/PROBE DETAILS</th> <th style="text-align: center;">DEPTH</th> <th rowspan="2" style="text-align: center;">NOTES</th> </tr> <tr> <th colspan="2" style="text-align: center;">(SEAL, FILTER, ETC.)</th> <th style="text-align: center;">(FEET FROM SURFACE)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">SURFACE</td> <td style="text-align: center;">SURFACE</td> <td style="text-align: center;">SURFACE</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> <td style="text-align: center;">0.00</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> <td style="text-align: center;">1.00</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> <td style="text-align: center;">6.00</td> <td></td> </tr> </tbody> </table>		IMPLANT/PROBE DETAILS		DEPTH	NOTES	(SEAL, FILTER, ETC.)		(FEET FROM SURFACE)	SURFACE	SURFACE	SURFACE				0.00				1.00				6.00	
IMPLANT/PROBE DETAILS				DEPTH	NOTES																					
(SEAL, FILTER, ETC.)				(FEET FROM SURFACE)																						
SURFACE	SURFACE			SURFACE																						
				0.00																						
				1.00																						
				6.00																						
PURGE FLOW RATE (ML/MIN): 200																										
PID AFTER PURGE (PPM): 0.9																										
HELIUM TESTS																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Pre-sampling</th> <th style="width: 50%;">Post-sampling</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">10.9%</td> <td style="text-align: center;">10.2%</td> </tr> <tr> <td style="text-align: center;">0.0%</td> <td style="text-align: center;">0.0%</td> </tr> </tbody> </table>				Pre-sampling	Post-sampling	10.9%	10.2%	0.0%	0.0%																	
Pre-sampling	Post-sampling																									
10.9%	10.2%																									
0.0%	0.0%																									
HELIUM TEST IN BUCKET(%):																										
HELIUM TEST IN TUBE (PPM):																										
SAMPLE START TIME: 10:37																										
SAMPLE STOP TIME: 11:55																										
TOTAL SAMPLE TIME (MIN): 78																										
REGULATOR FLOW RATE (L/MIN): 7.2																										
VOLUME OF SAMPLE (LITERS): 1																										
PID AFTER SAMPLE (PPM): 0.2																										
SAMPLE MOISTURE CONTENT: NA																										
CAN SERIAL NUMBER: Z024																										
REGULATOR SERIAL NUMBER: 301068																										
CAN START VACUUM PRESS. (" HG): 30																										
CAN STOP VACUUM PRESS. (" HG): 0																										
SAMPLE LOCATION SKETCH																										
See Sample Location Plan																										
NOTES																										
Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727																										

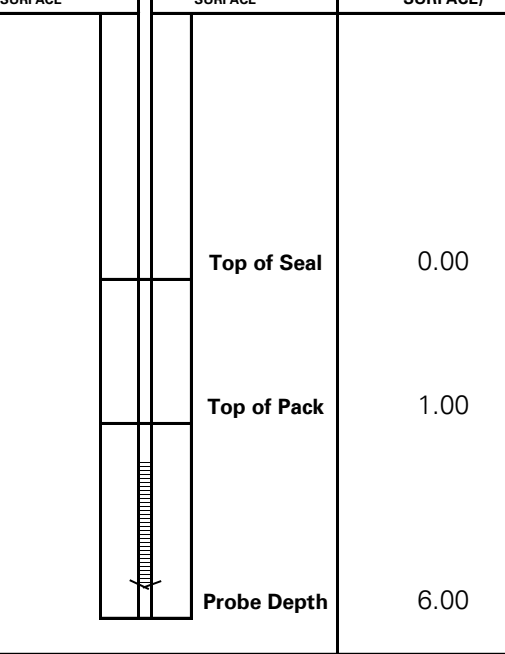
SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV-05

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024																									
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 12.5 ft NAVD88																									
DRILLING FIRM OR LANGAN INSTALLER: Eastern Environmental Solutions, Inc.		INSTALLATION DATE STARTED: 5/7/2020	DATE FINISHED: 5/7/2020																								
INSTALLATION FOREMAN: Jay Slavin		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020																								
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister																									
INSPECTOR: Reid Balkind		SAMPLER: Reid Balkind																									
POTENTIAL SAMPLE INTERFERENCES: None		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): Temp: 49-54 F Wind: 0-6 mph S Precipitation: 0 in Pressure: 29.85 in Hg																									
METHOD OF INSTALLATION AND PURGING: Advance Geoprobe 7822 DT to 6 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand to 1 feet bgs and seal to surface with hydrated bentonite.																											
TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing		TYPE OF MATERIAL ABOVE SEAL: N/A																									
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite																									
BOREHOLE DIAMETER: 2 Inches		FILTER PACK MATERIAL (Sand or Glass Beads): No. 2 Sand																									
PURGE VOLUME (L): 0.03		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">IMPLANT/PROBE DETAILS</th> <th style="text-align: center;">DEPTH</th> <th style="text-align: center;">NOTES</th> </tr> <tr> <th colspan="2" style="text-align: center;">(SEAL, FILTER, ETC.)</th> <th style="text-align: center;">(FEET FROM SURFACE)</th> <th></th> </tr> <tr> <td style="text-align: center;">SURFACE</td> <td style="text-align: center;">SURFACE</td> <td style="text-align: center;">SURFACE</td> <td></td> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Top of Seal</td> <td></td> <td style="text-align: center;">0.00</td> <td></td> </tr> <tr> <td style="text-align: center;">Top of Pack</td> <td></td> <td style="text-align: center;">1.00</td> <td></td> </tr> <tr> <td style="text-align: center;">Probe Depth</td> <td></td> <td style="text-align: center;">6.00</td> <td></td> </tr> </tbody> </table>		IMPLANT/PROBE DETAILS		DEPTH	NOTES	(SEAL, FILTER, ETC.)		(FEET FROM SURFACE)		SURFACE	SURFACE	SURFACE		Top of Seal		0.00		Top of Pack		1.00		Probe Depth		6.00	
IMPLANT/PROBE DETAILS				DEPTH	NOTES																						
(SEAL, FILTER, ETC.)				(FEET FROM SURFACE)																							
SURFACE	SURFACE			SURFACE																							
Top of Seal				0.00																							
Top of Pack				1.00																							
Probe Depth				6.00																							
PURGE FLOW RATE (ML/MIN): 200																											
PID AFTER PURGE (PPM): 1.2																											
HELIUM TESTS																											
Pre-sampling Post-sampling																											
HELIUM TEST IN BUCKET(%): 11.0% 10.6%																											
0.0% 0.0%																											
HELIUM TEST IN TUBE (PPM):																											
SAMPLE START TIME: 10:26																											
SAMPLE STOP TIME: 12:15																											
TOTAL SAMPLE TIME (MIN): 109																											
REGULATOR FLOW RATE (L/MIN): 7																											
VOLUME OF SAMPLE (LITERS): 1																											
PID AFTER SAMPLE (PPM): 0.3																											
SAMPLE MOISTURE CONTENT: NA																											
CAN SERIAL NUMBER: 970																											
REGULATOR SERIAL NUMBER: 507743																											
CAN START VACUUM PRESS. (" HG): 30																											
CAN STOP VACUUM PRESS. (" HG): 5																											
SAMPLE LOCATION SKETCH		NOTES																									
See Sample Location Plan																											

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SOIL VAPOR SAMPLING LOG SHEET
Sample Number: SVDUP01

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024	
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 11 ft NAVD88	
DRILLING FIRM OR LANGAN INSTALLER: Eastern Environmental Solutions, Inc.		INSTALLATION DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020
INSTALLATION FOREMAN: Jay Slavin		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister	
INSPECTOR: Reid Balkind		SAMPLER: Reid Balkind	
POTENTIAL SAMPLE INTERFERENCES: None		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): Temp: 49-54 F Wind: 0-6 mph S Precipitation: 0 in Pressure: 29.85 in Hg	
METHOD OF INSTALLATION AND PURGING: Advance Geoprobe 7822 DT to 6 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand to 1 feet bgs and seal to surface with hydrated bentonite. The duplicate soil vapor point was installed adjacent to SV02.			
TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing		TYPE OF MATERIAL ABOVE SEAL: N/A	
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe		SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite	
BOREHOLE DIAMETER: 2 Inches		FILTER PACK MATERIAL (Sand or Glass Beads): No. 2 Sand	
PURGE VOLUME (L): 0.03		IMPLANT/PROBE DETAILS	
PURGE FLOW RATE (ML/MIN): 200		(SEAL, FILTER, ETC.)	
PID AFTER PURGE (PPM): 0.4		DEPTH	
HELIUM TESTS		(FEET FROM SURFACE)	
Pre-sampling Post-sampling		SURFACE SURFACE	
HELIUM TEST IN BUCKET(%): 10.9% 11.9%			
0.0% 0.0%			
HELIUM TEST IN TUBE (PPM):			
SAMPLE START TIME: 9:52			
SAMPLE STOP TIME: 11:52			
TOTAL SAMPLE TIME (MIN): 120			
REGULATOR FLOW RATE (L/MIN): 7			
VOLUME OF SAMPLE (LITERS): 1			
PID AFTER SAMPLE (PPM): 0.1			
SAMPLE MOISTURE CONTENT: NA			
CAN SERIAL NUMBER: Z060			
REGULATOR SERIAL NUMBER: 415305			
CAN START VACUUM PRESS. (" HG): 29			
CAN STOP VACUUM PRESS. (" HG): 8			
SAMPLE LOCATION SKETCH		NOTES	
See Sample Location Plan			
Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727			

AIR SAMPLING LOG SHEET

Sample Number: AA01

PROJECT: 45 Commercial Street		PROJECT NO.: 170229024	
LOCATION: Brooklyn, NY		SURFACE ELEVATION AND DATUM: Approx. 15 ft NAVD88	
SAMPLER: Reid Balkind		SAMPLE DATE STARTED: 5/8/2020	DATE FINISHED: 5/8/2020
INSPECTOR: Reid Balkind		TYPE OF SAMPLING DEVICE: 1-Liter Summa Canister	
POTENTIAL SAMPLE INTERFERENCES: The Geoprobe exhaust was within 5 feet of the summa canister during collection for approximately 5 minutes		WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):	
		Temp:	49-54 F
		Wind:	0-6 mph S
		Precipitation:	0 in
		Pressure:	29.85 in Hg
METHOD OF INSTALLATION AND SAMPLING: Langan field screened the sample location with a MiniRAE 3000 photoionization detector prior to sampling. Sample consisted of 2.7 L Summa canister fitted with a 2-hour flow control valve. The flow controller was zeroed and valve opened to initiate the 2-hour sample collection. The sample and flow controller were checked each hour during sampling to ensure proper operation.			
SAMPLE DETAILS		SAMPLE LOCATION SKETCH	
HEIGHT ABOVE GROUND (FT):	3	See Sample Location Plan	
PID BEFORE SAMPLE (PPM):	0.0		
SAMPLE START TIME:	10:13		
SAMPLE STOP TIME:	12:13		
TOTAL SAMPLE TIME (MIN):	120		
REGULATOR FLOW RATE (L/MIN):	7.3		
VOLUME OF SAMPLE (LITERS):	2.7		
PID AFTER SAMPLE (PPM):	0.0		
SAMPLE MOISTURE CONTENT:	NA		
CAN SERIAL NUMBER:	961		
REGULATOR SERIAL NUMBER:	710568		
CAN START VACUUM PRESS. (" HG):	30		
CAN STOP VACUUM PRESS. (" HG):	7		
NOTES			
<p>Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727</p>			

APPENDIX G

Data Usability Summary Report

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Woo Kim, Langan Senior Staff Engineer

From: Emily Strake, Langan Senior Project Chemist

Date: June 5, 2020

Re: Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of soil samples collected in May 2020 by Langan Engineering and Environmental Services ("Langan") at the 45 Commercial Street site ("the site"). The samples were analyzed by Eurofins Lancaster Laboratories (NYSDOH NELAP registration # 10670) for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), per- and polyfluoroalkyl substances (PFAS), herbicides, polychlorinated biphenyls (PCBs), pesticides, metals including mercury (Hg), cyanide (CN), hexavalent chromium (CrVI), trivalent chromium (CrIII), and total solids (%S) by the methods specified below.

- VOCs by SW-846 Method 8260C
- SVOCs by SW-846 Method 8270D and 8270D SIM
- PFAS by USEPA Method 537M
- Herbicides by SW-846 Method 8151A
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- Metals by SW-846 Method 6020B
- Mercury by SW-846 Method 7471B
- Cyanide by SW-846 Method 9012B
- Hexavalent Chromium by SW-846 Method 7196A
- Trivalent Chromium (calculated)
- Total Solids by Standard Method 2540G

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 2 of 30

TABLE 1: SAMPLE SUMMARY

SDG	Lab Sample ID	Client Sample ID	Sample Date	Analytical Parameters
CMS01	1310329	SODUP01_050620	5/6/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS01	1310330	SOFB01_050620	5/6/2020	PFAS
CMS01	1310328	LB17_3-5	5/6/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS01	1310331	SOTB01_050620	5/6/2020	VOCs
CMS01	1310325	LB13_18-20	5/6/2020	VOCs, SVOCs, %S
CMS01	1310324	LB13_15.5-17.5	5/6/2020	VOCs, SVOCs, %S
CMS01	1310326	LB17_1-3	5/6/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS01	1312681	LB17_6-8	5/6/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS04	1311689	LB18_10-12	5/8/2020	SVOCs
CMS04	1311684	SOFB03_050820	5/8/2020	PFAS and 1,4-Dioxane
CMS04	1311691	LB22_2-4	5/8/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS04	1311690	LB18_18-20	5/8/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS04	1311687	LB18_6-8	5/8/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS04	1312694	LB18_2-4	5/8/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS04	1311694	LB22_18-20	5/8/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS04	1311685	SOTB03_050820	5/8/2020	VOCs
CMS04	1311693	LB22_12-14	5/8/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS04	1312696	LB22_4-6	5/8/2020	TCLP Arsenic, Total Lead and Mercury, %S

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 3 of 30

SDG	Lab Sample ID	Client Sample ID	Sample Date	Analytical Parameters
CMS04	1311688	LB18_4-6	5/8/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS05	1312796	LB26_12-13	5/11/2020	VOCs, SVOCs, %S
CMS05	1312797	SOTB04_051120	5/11/2020	VOCs
CMS08	1314144	LB16_3-5	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314145	LB16_15-17	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314146	LB16_18-20	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314150	LB19_14-16	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314164	LB24_10-12	5/13/2020	SVOCs, %S
CMS08	1314155	LB20_3-5	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314143	LB16_8-10	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314163	LB23_10-12	5/13/2020	SVOCs, %S
CMS08	1314166	SOFB05_051320	5/13/2020	CrVI, CrIII, CN, PFAS, 1,4-Dioxane
CMS08	1314162	LB20_14-16	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314165	SOTB05_051320	5/13/2020	VOCs
CMS08	1314148	LB19_0.5-2.5	5/13/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS08	1314149	LB19_6-8	5/13/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S
CMS08	1314151	LB20_1-3	5/13/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS08	1314142	LB16_6-8	5/13/2020	TCLP Arsenic, Total Lead and Mercury, %S

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 4 of 30

<i>SDG</i>	<i>Lab Sample ID</i>	<i>Client Sample ID</i>	<i>Sample Date</i>	<i>Analytical Parameters</i>
CMS08	1314153	LB20_6-8	5/13/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS09	1316563	LB28_14.5-15.5	5/16/2020	VOCs, SVOCs, %S
CMS09	1316564	TB06_051620	5/16/2020	VOCs
CMS04	1311687	LB18_6-8	5/8/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS04	1312694	LB18_2-4	5/8/2020	TCLP Arsenic, Total Lead and Mercury, %S
CMS04	1311694	LB22_18-20	5/8/2020	VOCs, SVOCs, Pesticides, Herbicides, Metals, CrVI/CrIII, CN, PFAS, %S

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34A, "Trace Volatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-33A, "Low/Medium Volatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-35A, "Semivolatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-17, "Validating Chlorinated Herbicides" (December 2010, Revision 3.1), USEPA Region II SOP #HW-37A, "Polychlorinated Biphenyl (PCB) Aroclor Data Validation" (June 2015, Revision 0), USEPA Region II SOP #HW-36A, "Pesticide Data Validation" (October 2016, Revision 1), USEPA Region II SOP #HW-3a, "ICP-MS Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-3c, "Mercury and Cyanide Data Validation" (September 2016, Revision 1), the USEPA Contract Laboratory Program "National Functional Guidelines for Organic Superfund Methods Data Review" (EPA-540-R-2017-002, January 2017), the USEPA Contract Laboratory Program "National Functional Guidelines for Inorganic Superfund Methods Data Review" (EPA-540-R-2017-001, January 2017) and the specifics of the methods employed.

EPA Method 537 was developed and validated for the analysis of finished drinking water from surface water and groundwater sources. Laboratories have modified Method 537 to enable the analysis of groundwater and soil, and to incorporate PFAS analytes not currently addressed by the promulgated method. NYSDOH offers certification for PFOA and PFOS in the drinking water category. Non-potable water and soil certification is not available; however, the method describes

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 5 of 30

acceptable modifications. EPA recommends that modified methods be assessed relative to project goals and data quality objectives.

Validation includes review of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction and digestion, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, isotope dilution recoveries, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, field duplicate, trip blank sample results, and field blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- R** – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- J** – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ** – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- U** – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- NJ** – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 6 of 30

TABLE 2: VALIDATOR-APPLIED QUALIFICATION

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB18_18-20	SW8082A	1336-36-3	Total PCBs	UJ
LB16_15-17	SW8270D	95-50-1	1,2-Dichlorobenzene	UJ
LB16_3-5	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_3-5	SW8081B	72-20-8	Endrin	UJ
LB16_15-17	SW8270D	121-14-2	2,4-Dinitrotoluene	UJ
LB22_2-4	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB28_14.5-15.5	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB22_18-20	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB17_3-5	SW8081B	319-84-6	Alpha BHC (Alpha Hexachlorocyclohexane)	J
LB20_14-16	SW8260C	107-13-1	Acrylonitrile	UJ
LB17_3-5	SW8260C	78-93-3	Methyl Ethyl Ketone (2-Butanone)	U (0.009)
LB20_1-3	SW7471B	7439-97-6	Mercury	U (0.116)
LB16_8-10	SW7471B	7439-97-6	Mercury	U (0.171)
LB16_15-17	SW8270D	621-64-7	n-Nitrosodi-N-Propylamine	UJ
LB16_8-10	SW8081B	72-20-8	Endrin	UJ
LB16_15-17	SW8270D	83-32-9	Acenaphthene	J
LB16_15-17	SW8081B	76-44-8	Heptachlor	UJ
LB16_15-17	SW8081B	72-54-8	4,4'-DDD	UJ
LB19_6-8	SW7471B	7439-97-6	Mercury	U (0.141)
LB28_14.5-15.5	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB20_3-5	SW6020B	7440-47-3	Chromium, Total	J
LB16_15-17	SW8270D	39638-32-9	2,2-Oxybis(2-Chloropropane)	UJ
LB18_18-20	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
LB16_15-17	SW8270D	85-01-8	Phenanthrene	J
LB22_12-14	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB16_15-17	SW8270D	191-24-2	Benzo(g,h,i)Perylene	J
LB16_15-17	SW8270D	98-95-3	Nitrobenzene	UJ
LB16_15-17	SW8270D	91-58-7	2-Chloronaphthalene	UJ
LB18_6-8	SW7471B	7439-97-6	Mercury	J

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 7 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB13_15.5-17.5	SW8260C	75-00-3	Chloroethane	UJ
LB18_18-20	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
LB20_3-5	SW8270DSIM	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB19_6-8	SW8270D	87-86-5	Pentachlorophenol	UJ
LB18_4-6	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB17_3-5	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ
LB17_3-5	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
LB24_10-12	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB22_4-6	SW7471B	7439-97-6	Mercury	J
LB20_14-16	SW8260C	79-20-9	Methyl Acetate	UJ
SODUP01_05062020	SW8081B	50-29-3	4,4'-DDT	J
LB22_18-20	SW7471B	7439-97-6	Mercury	U (0.0889)
LB16_15-17	SW8270D	541-73-1	1,3-Dichlorobenzene	UJ
LB16_15-17	SW8270D	120-82-1	1,2,4-Trichlorobenzene	UJ
LB18_18-20	SW8260C	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB18_4-6	SW9012B	57-12-5	Cyanide	J
LB19_14-16	SW8081B	72-20-8	Endrin	UJ
LB16_15-17	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
LB17_3-5	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
SODUP01_05062020	SW8260C	78-93-3	Methyl Ethyl Ketone (2-Butanone)	U (0.01)
LB16_15-17	SW8270D	193-39-5	Indeno(1,2,3-c,d)Pyrene	J
LB16_15-17	SW8270D	62-75-9	n-Nitrosodimethylamine	UJ
LB17_3-5	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
LB26_12-13	SW8260C	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB22_18-20	SW8081B	72-20-8	Endrin	UJ
LB19_6-8	SW8081B	72-20-8	Endrin	UJ
LB16_15-17	SW8081B	60-57-1	Dieldrin	UJ
LB20_14-16	SW8260C	107-02-8	Acrolein	UJ
SODUP01_05062020	SW6020B	7440-50-8	Copper	J
LB16_15-17	SW8270D	117-81-7	Bis(2-Ethylhexyl) Phthalate	UJ
LB16_15-17	SW8270D	78-59-1	Isophorone	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 8 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB16_15-17	SW8270D	100-52-7	Benzaldehyde	J
LB16_15-17	SW8081B	33213-65-9	Beta Endosulfan	UJ
LB23_10-12	SW8270D	87-86-5	Pentachlorophenol	UJ
LB17_3-5	SW8081B	72-55-9	4,4'-DDE	J
LB20_14-16	SW8270D	87-86-5	Pentachlorophenol	UJ
LB16_15-17	SW8270D	1912-24-9	Atrazine	UJ
LB16_15-17	SW8270D	87-68-3	Hexachlorobutadiene	UJ
LB18_18-20	SW7471B	7439-97-6	Mercury	U (0.077)
LB18_18-20	SW8260C	124-48-1	Dibromochloromethane	UJ
LB28_14.5-15.5	SW8260C	107-02-8	Acrolein	UJ
LB16_15-17	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
LB19_6-8	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB16_15-17	SW8270D	110-86-1	Pyridine	UJ
SODUP01_05062020	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB20_3-5	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
SODUP01_05062020	SW8081B	58-89-9	Gamma BHC (Lindane)	J
LB20_3-5	SW7471B	7439-97-6	Mercury	J
LB13_18-20	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB22_12-14	SW8260C	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB16_15-17	SW8270D	117-84-0	Di-N-Octylphthalate	UJ
LB16_18-20	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB16_15-17	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_15-17	SW8270D	84-66-2	Diethyl Phthalate	UJ
LB16_15-17	SW8270D	92-52-4	Biphenyl (Diphenyl)	UJ
LB19_14-16	SW7471B	7439-97-6	Mercury	U (0.0807)
SODUP01_05062020	SW6020B	7440-66-6	Zinc	J
LB22_2-4	SW8081B	309-00-2	Aldrin	J
LB16_15-17	SW8270D	DNT	Dinitrotoluenes	UJ
LB20_3-5	SW6020B	7782-49-2	Selenium	J
LB20_3-5	SW8081B	72-20-8	Endrin	UJ
LB16_3-5	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 9 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB16_15-17	SW8270D	131-11-3	Dimethyl Phthalate	UJ
LB16_18-20	SW8270D	39638-32-9	2,2-Oxybis(2-Chloropropane)	UJ
LB17_3-5	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
LB16_18-20	SW8081B	72-20-8	Endrin	UJ
LB16_3-5	SW8270D	87-86-5	Pentachlorophenol	UJ
LB13_18-20	SW8260C	78-93-3	Methyl Ethyl Ketone (2-Butanone)	U (0.012)
LB23_10-12	SW8270D	39638-32-9	2,2-Oxybis(2-Chloropropane)	UJ
LB19_6-8	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB13_15.5-17.5	SW8260C	108-88-3	Toluene	U (0.33)
LB16_15-17	SW8270D	50-32-8	Benzo(a)Pyrene	J
SODUP01_05062020	SW6020B	7782-49-2	Selenium	J
LB22_2-4	SW8260C	124-48-1	Dibromochloromethane	UJ
LB24_10-12	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_15-17	SW8270D	132-64-9	Dibenzofuran	J
LB20_14-16	SW8260C	74-83-9	Bromomethane	UJ
LB24_10-12	SW8270D	87-86-5	Pentachlorophenol	UJ
LB20_14-16	SW8081B	72-20-8	Endrin	UJ
LB18_18-20	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
LB16_18-20	SW8270D	87-86-5	Pentachlorophenol	UJ
LB16_3-5	SW7471B	7439-97-6	Mercury	U (0.0701)
LB16_15-17	SW8081B	1031-07-8	Endosulfan Sulfate	UJ
LB16_15-17	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB20_14-16	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_15-17	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
LB19_6-8	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_15-17	SW8270D	120-12-7	Anthracene	J
LB16_15-17	SW8081B	50-29-3	4,4'-DDT	UJ
LB20_3-5	SW6020B	7440-02-0	Nickel	J
LB16_15-17	SW8270D	88-74-4	2-Nitroaniline	UJ
LB16_15-17	SW8270D	98-86-2	Acetophenone	J
LB18_18-20	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 10 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB18_18-20	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
LB18_4-6	SW8260C	124-48-1	Dibromochloromethane	UJ
LB16_15-17	SW8270D	606-20-2	2,6-Dinitrotoluene	UJ
LB20_3-5	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB16_15-17	SW8270D	205-99-2	Benzo(b)Fluoranthene	J
LB16_15-17	SW8270D	106-46-7	1,4-Dichlorobenzene	UJ
LB13_15.5-17.5	SW8260C	74-83-9	Bromomethane	UJ
LB17_3-5	SW8081B	50-29-3	4,4'-DDT	J
LB20_14-16	SW8260C	75-00-3	Chloroethane	UJ
LB20_14-16	SW8260C	75-15-0	Carbon Disulfide	UJ
LB22_2-4	SW9012B	57-12-5	Cyanide	J
LB16_15-17	SW8270D	67-72-1	Hexachloroethane	UJ
SODUP01_05062020	SW6020B	7439-96-5	Manganese	J
LB16_15-17	SW8270D	118-74-1	Hexachlorobenzene	UJ
LB17_3-5	SW8081B	319-85-7	Beta BHC (Beta Hexachlorocyclohexane)	J
LB16_18-20	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB22_12-14	SW8260C	124-48-1	Dibromochloromethane	UJ
LB16_15-17	SW8270D	111-44-4	Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	UJ
LB19_6-8	SW8270D	39638-32-9	2,2-Oxybis(2-Chloropropane)	UJ
LB16_15-17	SW8081B	959-98-8	Alpha Endosulfan	UJ
LB16_8-10	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_8-10	SW8260C	67-64-1	Acetone	J
LB16_15-17	SW8270D	85-68-7	Benzyl Butyl Phthalate	UJ
LB22_12-14	SW8081B	72-20-8	Endrin	UJ
LB22_2-4	SW8260C	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB16_8-10	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	J
LB18_18-20	SW8081B	72-20-8	Endrin	UJ
LB19_0.5-2.5	SW7471B	7439-97-6	Mercury	U (0.0752)
LB16_15-17	SW8270D	129-00-0	Pyrene	J
LB16_18-20	SW8270D	51-28-5	2,4-Dinitrophenol	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 11 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB26_12-13	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB22_18-20	SW8260C	124-48-1	Dibromochloromethane	UJ
LB16_8-10	SW8270DSIM	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB16_15-17	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
LB16_15-17	SW8270D	218-01-9	Chrysene	J
LB16_15-17	SW8270D	91-20-3	Naphthalene	J
LB16_15-17	SW8270D	105-60-2	Caprolactam	UJ
LB17_3-5	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
LB20_3-5	SW6020B	7440-41-7	Beryllium	J
SODUP01_05062020	SW6020B	7440-41-7	Beryllium	J
LB20_14-16	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB16_15-17	SW8081B	72-20-8	Endrin	UJ
LB20_3-5	SW6020B	7440-66-6	Zinc	J
LB16_15-17	SW8270D	86-74-8	Carbazole	UJ
LB16_15-17	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
LB22_18-20	SW8260C	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB16_15-17	SW8270D	77-47-4	Hexachlorocyclopentadiene	UJ
LB17_3-5	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
LB18_18-20	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB16_15-17	SW8270D	206-44-0	Fluoranthene	J
SODUP01_05062020	SW6020B	7440-22-4	Silver	J
LB20_3-5	SW6020B	7439-92-1	Lead	J
LB16_15-17	SW8270D	84-74-2	Di-N-Butyl Phthalate	UJ
LB17_3-5	SW8082A	1336-36-3	Total PCBs	UJ
LB16_15-17	SW8081B	309-00-2	Aldrin	UJ
SODUP01_05062020	SW6020B	7440-39-3	Barium	J
LB23_10-12	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB18_4-6	SW8260C	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB20_14-16	SW8260C	10061-02-6	Trans-1,3-Dichloropropene	UJ
LB16_15-17	SW8270D	53-70-3	Dibenz(a,h)Anthracene	J
LB20_14-16	SW8270D	87-68-3	Hexachlorobutadiene	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 12 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB20_14-16	SW8260C	67-64-1	Acetone	UJ
LB16_15-17	SW8270D	87-86-5	Pentachlorophenol	UJ
LB20_14-16	SW8270D	39638-32-9	2,2-Oxybis(2-Chloropropane)	UJ
LB16_8-10	SW8270D	87-86-5	Pentachlorophenol	UJ
LB18_18-20	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
LB19_14-16	SW8270DSIM	123-91-1	1,4-Dioxane (P-Dioxane)	UJ
LB16_15-17	SW8270D	86-30-6	n-Nitrosodiphenylamine	UJ
LB16_15-17	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
LB22_12-14	SW7471B	7439-97-6	Mercury	U (0.147)
LB16_15-17	SW8270D	122-66-7	1,2-Diphenylhydrazine	UJ
LB17_3-5	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB16_8-10	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ
LB16_15-17	SW8270D	91-94-1	3,3'-Dichlorobenzidine	UJ
LB16_15-17	SW8270D	91-57-6	2-Methylnaphthalene	J
LB16_15-17	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ
LB20_14-16	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
LB18_18-20	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
LB16_8-10	SW8260C	75-65-0	Tert-Butyl Alcohol	J
LB16_15-17	SW8270D	92-87-5	Benzidine	UJ
LB16_15-17	SW8270D	56-55-3	Benzo(a)Anthracene	J
LB16_15-17	SW8270D	86-73-7	Fluorene	J
LB16_8-10	SW8081B	72-54-8	4,4'-DDD	J
LB16_15-17	SW8270D	208-96-8	Acenaphthylene	J
LB16_15-17	SW8082A	1336-36-3	Total PCBs	UJ
LB20_3-5	SW6020B	7440-43-9	Cadmium	J
LB16_15-17	SW8270D	207-08-9	Benzo(k)Fluoranthene	J
LB23_10-12	SW8270D	51-28-5	2,4-Dinitrophenol	UJ
LB16_3-5	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
LB20_6-8	SW7471B	7439-97-6	Mercury	U (0.0855)
LB18_4-6	SW8081B	72-20-8	Endrin	UJ
LB16_15-17	SW8270D	534-52-1	4,6-Dinitro-2-Methylphenol	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 13 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB22_2-4	SW8081B	72-20-8	Endrin	UJ
SODUP01_05062020	SW6020B	7440-38-2	Arsenic	J
LB20_3-5	SW8270D	87-86-5	Pentachlorophenol	UJ
LB17_3-5	SW8270D	91-57-6	2-Methylnaphthalene	J
SODUP01_05062020	SW8270D	91-57-6	2-Methylnaphthalene	J
LB17_3-5	SW8270D	83-32-9	Acenaphthene	J
LB17_3-5	SW8270D	208-96-8	Acenaphthylene	J
SODUP01_05062020	SW8270D	83-32-9	Acenaphthene	J
SODUP01_05062020	SW8270D	208-96-8	Acenaphthylene	J
LB17_3-5	SW8270D	120-12-7	Anthracene	J
LB17_3-5	SW6020B	7440-38-2	Arsenic	J
SODUP01_05062020	SW8270D	120-12-7	Anthracene	J
LB17_3-5	SW6020B	7440-39-3	Barium	J
LB17_3-5	SW8270D	56-55-3	Benzo(a)Anthracene	J
SODUP01_05062020	SW8270D	56-55-3	Benzo(a)Anthracene	J
LB17_3-5	SW8270D	50-32-8	Benzo(a)Pyrene	J
LB17_3-5	SW8270D	205-99-2	Benzo(b)Fluoranthene	J
LB17_3-5	SW8270D	191-24-2	Benzo(g,h,i)Perylene	J
LB17_3-5	SW8270D	207-08-9	Benzo(k)Fluoranthene	J
SODUP01_05062020	SW8270D	50-32-8	Benzo(a)Pyrene	J
LB17_3-5	SW6020B	7440-41-7	Beryllium	J
SODUP01_05062020	SW8270D	205-99-2	Benzo(b)Fluoranthene	J
SODUP01_05062020	SW8270D	191-24-2	Benzo(g,h,i)Perylene	J
SODUP01_05062020	SW8270D	207-08-9	Benzo(k)Fluoranthene	J
LB17_3-5	SW8270D	92-52-4	Biphenyl (Diphenyl)	J
SODUP01_05062020	SW8270D	92-52-4	Biphenyl (Diphenyl)	J
LB17_3-5	SW6020B	7440-43-9	Cadmium	J
LB17_3-5	SW8270D	86-74-8	Carbazole	J
SODUP01_05062020	SW6020B	7440-43-9	Cadmium	J
SODUP01_05062020	SW8270D	86-74-8	Carbazole	J
SODUP01_05062020	SW8270D	218-01-9	Chrysene	J

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Soil Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 14 of 30

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
LB17_3-5	SW8270D	218-01-9	Chrysene	J
LB17_3-5	SW8270D	53-70-3	Dibenz(a,h)Anthracene	J
SODUP01_05062020	SW8270D	53-70-3	Dibenz(a,h)Anthracene	J
LB17_3-5	SW8270D	132-64-9	Dibenzofuran	J
SODUP01_05062020	SW8270D	132-64-9	Dibenzofuran	J
LB17_3-5	SW8270D	206-44-0	Fluoranthene	J
LB17_3-5	SW8270D	86-73-7	Fluorene	J
SODUP01_05062020	SW8270D	206-44-0	Fluoranthene	J
SODUP01_05062020	SW8270D	86-73-7	Fluorene	J
LB17_3-5	SW8270D	193-39-5	Indeno(1,2,3-c,d)Pyrene	J
SODUP01_05062020	SW8270D	193-39-5	Indeno(1,2,3-c,d)Pyrene	J
LB17_3-5	SW8270D	91-20-3	Naphthalene	J
SODUP01_05062020	SW8270D	91-20-3	Naphthalene	J
LB17_3-5	SW8270D	85-01-8	Phenanthrene	J
LB17_3-5	SW8270D	129-00-0	Pyrene	J
SODUP01_05062020	SW8270D	85-01-8	Phenanthrene	J
LB17_3-5	SW6020B	7440-22-4	Silver	J
SODUP01_05062020	SW8270D	129-00-0	Pyrene	J

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C

CMS01

The trip blank (TB) (SOTB01_05062020) exhibited detections of toluene (0.3 ug/L) and methyl ethyl ketone (2-butanone) (0.3 ug/L). The associated results in sample LB13_15.5-17.5, LB17_3-

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 15 of 30

5, LB13_18-20, and SODUP01_05062020 are qualified as "U" at the reporting limit based on potential blank contamination.

The continuing calibration verification (CCV) analyzed on 5/7/2020 at 18:17 exhibited a percent difference (%D) above the control limit for dichlorodifluoromethane (30%). The associated results in sample LB13_18-20, LB17_3-5, and SODUP01_05062020 are qualified as "UJ" based on potential indeterminate bias.

The CCV analyzed on 5/10/2020 at 17:45 exhibited %Ds above the control limit for bromomethane (81%) and chloroethane (43%). The associated results in sample LB13_15.5-17.5 are qualified as "UJ" based on potential indeterminate bias.

CMS04

The CCV analyzed on 5/11/2020 at 17:58 exhibited %Ds above the control limit for dichlorodifluoromethane (33%), 1,4-dioxane (36%), and dibromochloromethane (21%). The associated results in sample LB22_2-4, LB22_18-20, LB22_12-14, LB18_4-6, and LB18_18-20 are qualified as "UJ" based on potential indeterminate bias.

CMS05

The CCV analyzed on 5/12/2020 at 19:57 exhibited %Ds above the control limit for dichlorodifluoromethane (37%) and 1,4-dioxane (25%). The associated results in sample LB26_12-13 are qualified as "UJ" based on potential indeterminate bias.

CMS08

The CCV analyzed on 5/15/2020 at 09:01 exhibited a %D above the control limit for dichlorodifluoromethane (42%). The associated results in sample LB16_18-20, LB19_6-8, LB16_15-17, and LB16_3-5 are qualified as "UJ" based on potential indeterminate bias.

The CCV analyzed on 5/17/2020 at 18:24 exhibited a %D above the control limit for 1,4-dioxane (43%). The associated results in sample LB20_3-5, LB16_8-10, and LB19_14-16 are qualified as "UJ" based on potential indeterminate bias.

The CCV analyzed on 5/15/2020 at 10:29 exhibited %Ds above the control limit for acrylonitrile (28%), methyl acetate (21%), acrolein (26%), bromomethane (73%), chloroethane (41%), carbon disulfide (23%), trans-1,3-dichloropropene (22%), hexachlorobutadiene (-21%), acetone (27%), and 1,2-dibromo-3-chloropropane (23%). The associated results in sample LB20_14-16 are qualified as "UJ" based on potential indeterminate bias.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 16 of 30

CMS09

The CCV analyzed on 5/19/2020 at 17:46 exhibited %Ds above the control limit for dichlorodifluoromethane (54%) and acrolein (25%). The associated results in sample LB28_14.5-15.5 are qualified as "UJ" based on potential indeterminate bias.

SVOCs by SW-846 Method 8270D and 8270D SIM

CMS08

The sample LB16_15-17 exhibited percent recoveries below the LCL for the surrogates nitrobenzene-d5 (19%) and 2-fluorobiphenyl (22%). The associated results are qualified as "J" or "UJ" based on potential low bias.

The CCV analyzed on 5/18/2020 at 09:39 exhibited %Ds above the control limit for 2,4-dinitrophenol (68%), 4,6-dinitro-2-methylphenol (41%), and pentachlorophenol (23%). The associated results in sample LB16_3-5, LB20_3-5, LB24_10-12, and LB16_8-10 are qualified as "UJ" based on potential indeterminate bias.

The CCV analyzed on 5/19/2020 at 09:34 exhibited %Ds above the control limit for 2,2-oxybis(2-chloropropane) (-21%), 2,4-dinitrophenol (78%), 4,6-dinitro-2-methylphenol (46%), and pentachlorophenol (22%). The associated results in sample LB16_15-17, LB16_18-20, LB23_10-12, LB19_6-8, and LB20_14-16 are qualified as "UJ" based on potential indeterminate bias.

CMS09

The CCV analyzed on 5/19/2020 at 09:34 exhibited a %D above the control limit for 4,6-dinitro-2-methylphenol (46%). The associated results in sample LB28_14.5-15.5 are qualified as "UJ" based on potential indeterminate bias.

PCBs by SW-846 Method 8082A

CMS01

The sample LB17_3-5 exhibited percent recoveries below the lower control limit (LCL) for the surrogates tetrachloro-m-xylene - 1c (51%) and tetrachloro-m-xylene - 2c (47%) on the primary and secondary chromatography columns, respectively. The associated results are qualified as "J" or "UJ" based on potential low bias.

CMS04

The sample LB18_18-20 exhibited a percent recovery below the LCL for the surrogates decachlorobiphenyl (PCB 209) – 1c (38%) and decachlorobiphenyl (PCB 209) – 2c (38%) on the

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 17 of 30

primary and secondary chromatography columns, respectively.. The associated results are qualified as "UJ" based on potential low bias.

CMS08

The sample LB16_8-10 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene-d2 (48%). The associated results are qualified as "J" based on potential low bias.

The sample LB16_15-17 exhibited percent recoveries below the LCL for the surrogates tetrachloro-m-xylene-d1 (16%) on the primary column, decachlorobiphenyl-d1 (19%) on the primary column, tetrachloro-m-xylene-d2 (15%) on the secondary column, and decachlorobiphenyl-d2 (18%) on the secondary column. The associated results are qualified as "UJ" based on potential low bias.

Pesticides by SW-846 Method 8081B

CMS01

The sample LB17_3-5 exhibited percent recoveries above the upper control limit (UCL) for the surrogates decachlorobiphenyl - 1c (178%) and decachlorobiphenyl - 2c (174%) on the primary and secondary chromatography columns, respectively. The associated results are qualified as "J" based on potential high bias.

The sample SODUP01_05062020 exhibited a percent recovery above the UCL for the surrogate decachlorobiphenyl - 2c (155%) on the secondary column. The associated results are qualified as "J" based on potential high bias.

CMS04

The sample LB22_2-4 exhibited a percent recovery above the UCL for the surrogate tetrachloro-m-xylene - 2c (617%) on the secondary column. The associated results are qualified as "J" based on potential high bias.

CMS08

The sample LB16_8-10 exhibited percent recoveries above the UCL for the surrogates tetrachloro-m-xylene-d1 (244%) on the primary column, decachlorobiphenyl-d1 (344%) on the primary column, tetrachloro-m-xylene-d2 (182%) on the secondary column, and decachlorobiphenyl-d2 (378%) on the secondary column. The associated results are qualified as "J" based on potential high bias.

Technical Memorandum

The sample LB16_15-17 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene-d2 (11%) on the secondary column. The associated results are qualified as "UJ" based on potential low bias.

The laboratory control sample (LCS) for batch 201350016A exhibited a percent recovery below the LCL for endrin (76%). The associated results in sample LB20_14-16, LB16_8-10, LB16_3-5, LB16_15-17, LB20_3-5, LB19_14-16, LB19_6-8, and LB16_18-20 are qualified as "UJ" based on potential low bias.

Metals by SW-846 Method 6020B

CMS01

The matrix spike/matrix spike duplicate (MS/MSD) performed on sample SODUP01_05062020 exhibited a percent recovery above the UCL for arsenic (342%, 162%). The associated results in sample SODUP01_05062020 are qualified as "J" based on potential high bias.

The MS/MSD performed on sample SODUP01_05062020 exhibited a percent recovery below the LCL for zinc (60%, 60%). The associated results in sample SODUP01_05062020 are qualified as "J" based on potential low bias.

The MS/MSD performed on sample SODUP01_05062020 exhibited relative percent differences (RPDs) above the control limit for silver (29%) and beryllium (27%). The associated results in sample SODUP01_05062020 are qualified as "J" based on potential indeterminate bias.

The laboratory duplicate and parent sample (SODUP01_05062020) exhibited RPDs above the control limit for barium (57%), copper (44%), manganese (44%), and selenium (83%). The associated results are qualified as "J" based on potential indeterminate bias.

CMS08

The MSD for batch LB20_3-5 exhibited percent recoveries above the UCL for beryllium (141%), nickel (165%), and selenium (145%). The associated results in sample LB20_3-5 are qualified as "J" based on potential high bias.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries above the UCL for chromium (156%, 177%) and zinc (140%, 200%). The associated results in sample LB20_3-5 are qualified as "J" based on potential high bias.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 19 of 30

The laboratory duplicate performed on sample LB20_3-5 exhibited RPDs above the control limit for beryllium (34%), cadmium (52%), and lead (111%). The associated results are qualified as "J" based on potential indeterminate bias.

Mercury by SW-846 Method 7471B

CMS04

The method blank (MB) for batch BLK201311063801 exhibited a detection of mercury (0.0266 mg/kg). The associated results in sample LB18_18-20, LB18_4-6, LB22_12-14, LB22_18-20, and LB22_2-4 are qualified as "U" at the higher of the sample concentration and the reporting limit based on potential blank contamination.

The laboratory duplicate and parent sample (LB18_6-8) exhibited a RPD above the control limit for mercury (24%). The associated results are qualified as "J" based on potential indeterminate bias.

The laboratory duplicate and parent sample (LB22_4-6) exhibited a RPD above the control limit for mercury (92%). The associated results are qualified as "J" based on potential indeterminate bias.

CMS08

The MB for batch BLK201351063801 exhibited a detection of mercury (0.01740 mg/kg). The associated results in sample LB16_3-5, LB16_8-10, LB19_0.5-2.5, LB19_14-16, LB19_6-8, LB20_1-3, and LB20_6-8 are qualified as "U" at the higher of the sample concentration and the reporting limit based on potential blank contamination.

The MS/MSD for batch LB20_3-5 exhibited a percent recovery above the UCL for mercury (170%, 275%). The associated results in sample LB20_3-5 are qualified as "J" based on potential high bias.

Cyanide by SW-846 Method 9012B

CMS04

The laboratory duplicate and parent sample (LB22_2-4) exhibited a RPD above the control limit for cyanide (200%). The associated results are qualified as "J" based on potential indeterminate bias.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 20 of 30

The laboratory duplicate and parent sample (LB18_4-6) exhibited a RPD above the control limit for cyanide (87%). The associated results are qualified as "J" based on potential indeterminate bias.

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C

CMS01

The TB (SOTB01_05062020) exhibited a detection of acetone (3 ug/L). The associated results are >10X the contamination. No qualification is necessary.

The LCS for batch LB13_15.5-17.5 exhibited a percent recovery above the UCL for bromomethane (141%). The associated results are non-detections. No qualification is necessary.

CMS04

The MS/MSD performed on sample LB18_18-20 exhibited percent recoveries below the LCL for hexachlorocyclopentadiene (0%), 2,4-dinitrophenol (0%), 4,6-dinitro-2-methylphenol (0%), benzo(a)anthracene (59%, 64%), benzo(a)pyrene (57%, 65%), benzo(k)fluoranthene (50%, 58%), chrysene (52%, 57%), fluoranthene (58%, 63%), pyrene (59%, 62%), and benzo(g,h,i)perylene (59%, 67%). Organic results are not qualified on the basis of MS/MSDs alone. No qualification is necessary.

The MS performed on sample LB18_18-20 exhibited percent recoveries below the LCL for 2,4-dinitrotoluene (60%), anthracene (66%), atrazine (64%), benzidine (16%), benzo(b)fluoranthene (62%), butylbenzylphthalate (65%), di-n-butylphthalate (65%), phenanthrene (66%), dibenz(a,h)anthracene (61%), and indeno(1,2,3-cd)pyrene (59%). Organic results are not qualified on the basis of MSs alone. No qualification is necessary.

The MS/MSD performed on sample LB18_18-20 exhibited a RPD above the control limit for benzidine (43%). Organic results are not qualified on the basis of MS/MSDs alone. No qualification is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 21 of 30

CMS04

The LCS for batch B201361AA exhibited a percent recovery above the UCL for dichlorodifluoromethane (128%). The associated results are non-detections. No qualification is necessary.

The laboratory control sample duplicate (LCSD) for batch R201362AA exhibited a percent recovery above the UCL for bromomethane (142%). The associated results are non-detections. No qualification is necessary.

The MS/MSD for batch LB20_3-5_05132020 exhibited percent recoveries above the UCL for acetone (261%, 224%), 2-butanone (150%, 135%), and dichlorodifluoromethane (145%, 141%). The associated results in sample LB20_3-5, LB16_8-10, and LB19_14-16 are qualified as "J" based on potential high bias.

The MS for batch LB20_3-5_05132020 exhibited a percent recovery above the UCL for t-butyl alcohol (128%). The associated results in sample LB20_3-5, LB16_8-10, and LB19_14-16 are qualified as "J" based on potential high bias.

The MSD for batch LB20_3-5_05132020 exhibited a percent recovery above the UCL for 1,1,2,2-tetrachloroethane (127%). The associated results are non-detections. No qualification is necessary.

SVOCs by SW-846 Method 8270D and 8270D SIM

CMS01

The sample SODUP01_05062020 exhibited percent recoveries above the UCL for the surrogates fluoranthene-d10 (295%) and benzo(a)pyrene-d12 (146%). The associated results are non-detections. No qualification is necessary.

The MS/MSD performed on sample SODUP01_05062020 exhibited percent recoveries below the LCL for 2-methylnaphthalene (-197%, -203%), hexachlorocyclopentadiene (0%), 2,4-dinitrophenol (31%, 32%), 4,6-dinitro-2-methylphenol (52%, 51%), acenaphthene (-803%, -813%), acenaphthylene (-64%, -69%), anthracene (-1195%, -1201%), benzidine (16%, 13%), benzo(a)anthracene (-1136%, -1138%), benzo(a)pyrene (-541%, -539%), benzo(b)fluoranthene (-814%, -796%), benzo(k)fluoranthene (-322%, -313%), carbazole (-102%, -104%), chrysene (-954%, -958%), dibenzofuran (-414%, -426%), fluoranthene (-3517%, -3527%), fluorene (-1294%, -1314%), phenanthrene (-4732%, -4736%), pyrene (-2417%, -2401%), benzo(g,h,i)perylene (-

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 22 of 30

125%, -122%), dibenz(a,h)anthracene (25%, 16%), and indeno(1,2,3-cd)pyrene (-126%, -127%). Organic results are not qualified on the basis of MS/MSDs alone. No qualification is necessary.

The MSD performed on sample SODUP01_05062020 exhibited a percent recovery below the LCL for naphthalene (48%). Organic results are not qualified on the basis of MSD recoveries alone. No qualification is necessary.

The MS/MSD performed on sample SODUP01_05062020 exhibited a RPD above the control limit for 2-chloronaphthalene (37%). Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

CMS04

The sample LB18_4-6 exhibited a percent recovery above the UCL for the surrogate fluoranthene-d10 (229%). The sample was diluted >10X. No qualification is necessary.

CMS08

The MB for batch BLK20135SLC026 exhibited detections of 1,4-dioxane (p-dioxane) (1.0 ug/kg) and 1,4-dioxane (p-dioxane) (2.0 ug/kg). The associated results are non-detections. No qualification is necessary.

The sample LB16_3-5 exhibited a percent recovery above the UCL for the surrogate terphenyl-d14 (136%). The other LB16_3-5 surrogates were recovered within the control limits. No qualification is necessary.

The sample LB16_3-5 exhibited percent recoveries above the UCL for the surrogates fluoranthene-d10 (399%) and benzo(a)pyrene-d12 (134%). The associated results are non-detections. No qualification is necessary.

The sample LB19_6-8 exhibited a percent recovery above the UCL for the surrogate fluoranthene-d10 (138%). The associated results are non-detections. No qualification is necessary.

The LCS for batch 20139SLA026 exhibited percent recoveries above the UCL for 4,6-dinitro-2-methylphenol (137%) and 2,4-dinitrophenol (167%). The associated results are non-detections. No qualification is necessary.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries below the LCL for acenaphthene (58%, 48%), anthracene (29%, 4%), benzo(a)anthracene (-106%, -172%), benzo(a)pyrene (-47%, -107%), benzo(b)fluoranthene (-90%, -137%), benzo(g,h,i)perylene (63%, 22%), chrysene (-46%, -116%), fluoranthene-d10 (-490%, -548%), hexachlorocyclopentadiene (0%), phenanthrene (-

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 23 of 30

372%, -420%), and pyrene (-368%, -415%). Organic results are not qualified on the basis of MS/MSDs alone. No qualification is necessary.

The MS for batch LB20_3-5 exhibited a percent recovery below the LCL for benzidine (8%). Organic results are not qualified on the basis of MS recoveries alone. No qualification is necessary.

The MSD for batch LB20_3-5 exhibited percent recoveries below the LCL for benzo(k)fluoranthene (26%), carbazole (55%), dibenz(a,h)anthracene (66%), fluorene (60%), and indeno(1,2,3-cd)pyrene (27%). Organic results are not qualified on the basis of MSD recoveries alone. No qualification is necessary.

CMS09

The LCS for batch 20139SLA026 exhibited percent recoveries above the UCL for 2,4-dinitrophenol (167%) and 4,6-dinitro-2-methylphenol (137%). The associated results are non-detections. No qualification is necessary.

PFAS by USEPA Method 537M

CMS08

The sample LB16_3-5 exhibited a percent recovery above the UCL for the surrogate 13C8-PFOA (116%). The associated results are non-detections. No qualification is necessary.

The sample LB19_14-16 exhibited a percent recovery above the UCL for the surrogate 13C8-PFOA (119%). The associated results are non-detections. No qualification is necessary.

The sample LB16_3-5 exhibited percent recoveries above the UCL for the surrogates 13C7-PFUnDA (129%) and 13c2-PFTeDA (128). The associated results are non-detections. No qualification is necessary.

Herbicides by SW-846 Method 8151A

CMS01

The MSD performed on sample SODUP01_05062020 exhibited a percent recovery above the UCL for 2,4-D (145%). The associated results are non-detections. No qualification is necessary.

The MS/MSD performed on sample SODUP01_05062020 exhibited percent recoveries above the UCL for 2,4,5-TP (154%, 160%) and 2,4,5-T (170%, 170%). The associated results are non-detections. No qualification is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 24 of 30

The LCS for batch 201280015A exhibited percent recoveries above the UCL for 2,4-D (153%), 2,4,5-TP (153%), and 2,4,5-T (161%). The associated results are non-detections. No qualification is necessary.

CMS04

The LCS for batch 201320018A exhibited percent recoveries above the UCL for 2,4,5-TP (135%) and 2,4,5-T (150%). The associated results are non-detections. No qualification is necessary.

CMS08

The sample LB16_8-10 exhibited a percent recovery above the UCL for the surrogate 2,4-Dichlorophenylacetic Acid-d2 (151%) on the secondary column. The associated results are non-detections. No qualification is necessary.

The LCS for batch 201350020A exhibited a percent recovery above the UCL for 2,4,5-TP (141%). The associated results are non-detections. No qualification is necessary.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries above the UCL for 2,4-D (157%, 153%), 2,4,5-T (190%, 177%), and 2,4,5-TP (154%, 151%). The associated results are non-detections. No qualification is necessary.

PCBs by SW-846 Method 8082A

CMS01

The sample SODUP01_05062020 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene - 2c (50%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

The MS/MSD for batch SODUP01_05062020 exhibited percent recoveries below the LCL for pcb-1016 (66%, 65%) and pcb-1260 (72%, 71%). Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

CMS04

The sample LB22_12-14 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene (40%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

The sample LB18_18-20 exhibited a percent recovery below the LCL for the surrogate decachlorobiphenyl (38%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 25 of 30

The sample LB22_2-4 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene (39%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

The sample LB18_4-6 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene (43%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

CMS08

The MB for batch BLK201350022A exhibited detections of total PCBs (33.0 ug/kg) and Aroclor 1260 (33.0 ug/kg). The associated results are non-detections. No qualification is necessary.

The sample LB20_3-5 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene-d2 (50%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

The sample LB16_3-5 exhibited percent recoveries below the LCL for the surrogates tetrachloro-m-xylene-d2 (28%) and decachlorobiphenyl-d2 (44%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

The sample LB20_14-16 exhibited a percent recovery below the LCL for the surrogate tetrachloro-m-xylene-d2 (45%) on the secondary column. The associated results were reported from the primary column. No further action is necessary.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries below the LCL for Aroclor 1016 (68%, 66%) and Aroclor 1260 (70%, 69%). Organic results are not qualified on the basis of MS/MSDs alone. No qualification is necessary.

Pesticides by SW-846 Method 8081B

CMS04

The sample LB18_4-6 exhibited percent recoveries above the UCL for the surrogates decachlorobiphenyl (232%) and tetrachloro-m-xylene (169%). The sample was diluted >10X. No qualification is necessary.

The sample LB22_18-20 exhibited a percent recovery above the UCL for the surrogate tetrachloro-m-xylene (176%). The associated results are non-detections. No qualification is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 26 of 30

CMS08

The MB for batch BLK201350016A exhibited a detection of 4,4'-DDT (0.00250 mg/kg). The associated results are non-detections. No qualification is necessary.

The sample LB16_3-5 exhibited percent recoveries above the UCL for the surrogates decachlorobiphenyl-d1 (173%) and decachlorobiphenyl-d2 (175%). The associated results are non-detections. No qualification is necessary.

The sample LB19_6-8 exhibited percent recoveries above the UCL for the surrogates tetrachloro-m-xylene-d1 (148%), decachlorobiphenyl-d1 (183%), tetrachloro-m-xylene-d2 (144%), and decachlorobiphenyl-d2 (197%). The associated results are non-detections. No qualification is necessary.

The sample LB19_14-16 exhibited percent recoveries above the UCL for the surrogates decachlorobiphenyl-d1 (163%) and decachlorobiphenyl-d2 (172%). The associated results are non-detections. No qualification is necessary.

The sample LB20_3-5 exhibited percent recoveries above the UCL for the surrogates tetrachloro-m-xylene-d1 (167%), decachlorobiphenyl-d1 (210%), tetrachloro-m-xylene-d2 (168%), and decachlorobiphenyl-d2 (256%). The associated results are non-detections. No qualification is necessary.

The sample LB20_14-16 exhibited a percent recovery above the UCL for the surrogate decachlorobiphenyl-d2 (181%). The associated results are non-detections. No qualification is necessary.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries above the UCL for aldrin (173%, 211%), alpha BHC (133%, 158%), beta BHC (177%, 198%), alpha chlordane (186%, 179%), 4,4'-DDD (172%, 191%), 4,4'-DDE (187%, 223%), 4,4'-DDT (168%, 198%), dieldrin (154%, 182%), endosulfan I (126%, 167%), endosulfan sulfate (137%, 191%), endrin (188%, 191%), and heptachlor (139%, 173%). Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

The MS/MSD for batch LB20_3-5 did not recover (i.e., 0%) for gamma BHC, delta BHC, and endosulfan II. Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 27 of 30

Metals by SW-846 Method 6020B

CMS01

The MB for batch BLK201281404901A exhibited a detection of zinc (0.683 mg/kg). The associated results are >10X the contamination. No qualification is necessary.

The MS/MSD for batch SODUP01_05062020 exhibited percent recoveries outside of control limits for barium (-375%, 872%), copper (-283%, -402%), lead (7522%, -2412%), manganese (-370%, -216%), and mercury (2800%, 345%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

The MS/MSD for batch SODUP01_05062020 exhibited a RPD above the control limit for arsenic (38%). The associated results were previously qualified. No further action is necessary.

The MS/MSD for batch SODUP01_05062020 exhibited RPDs above the control limit for barium (63%), lead (40%), and mercury (97%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

The laboratory duplicate and parent sample (SODUP01_05062020) exhibited RPDs above the control limit for beryllium (28%), arsenic (73%), silver (57%), and zinc (37%). The associated results were previously qualified. No further action is necessary.

CMS04

The MB for batch BLK201311404902A exhibited a detection of barium (0.193 mg/kg). The associated results are >10X the contamination. No qualification is necessary.

CMS08

The MB for batch BLK201351404902A exhibited a detection of zinc (0.7440 mg/kg). The associated results are >10X the contamination. No qualification is necessary.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries above the UCL for arsenic (297%, 524%), barium (1176%, 1836%), and copper (771%, 1198%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

The MS/MSD for batch LB20_3-5 exhibited percent recoveries below the LCL for lead (-26591%, -27129%) and manganese (-590%, -488%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 28 of 30

Mercury by SW-846 Method 7471B

CMS08

The MB for batch BLK201351063802 exhibited a detection of mercury (0.02090 mg/kg). The associated results are >10X the contamination. No qualification is necessary.

The MS/MSD for batch LB20_3-5 exhibited a RPD above the control limit for mercury (28%). The associated results were previously qualified. No further action is necessary.

The laboratory duplicate and parent sample (LB20_3-5) exhibited a RPD above the control limit for mercury (126%). The associated results were previously qualified. No further action is necessary.

Cyanide by SW-846 Method 9012B

CMS04

The LCS for batch 20134102201A exhibited a percent recovery above the UCL for cyanide (114%). The associated results were previously qualified. No further action is necessary.

COMMENTS:

One field duplicate and parent sample pair was collected and analyzed for all parameters. For results less than the RL, analytes meet the precision criteria if the absolute difference is less than $\pm 2X$ the RL. For results greater than the RL, analytes meet the precision criteria if the RPD is less than or equal to 50% for soil. The following field duplicate and parent sample pairs were compared to the precision criteria:

- LB17_3-5 and SODUP01_05062020

The field duplicate and parent sample (LB17_3-5 and SODUP01_05062020) exhibited RPDs above the control limit for 2-methylnaphthalene (186.9%), acenaphthene (192.2%), acenaphthylene (184.9%), anthracene (191%), arsenic (74.5%), barium (57.6%), benzo(a)anthracene (178.8%), benzo(a)pyrene (168.4%), benzo(b)fluoranthene (170.4%), benzo(g,h,i)perylene (150.9%), benzo(k)fluoranthene (175.6%), beryllium (83.4%), biphenyl (diphenyl) (156.9%), cadmium (70.5%), carbazole (175.9%), chrysene (176.1%), dibenz(a,h)anthracene (160.5%), dibenzofuran (187%), fluoranthene (183.3%), fluorene (192.7%), indeno(1,2,3-c,d)pyrene (156%), naphthalene (109.1%), phenanthrene (188.6%), pyrene (180.2%), and silver (92.2%). The associated results are qualified as "J" based on potential indeterminate bias.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 29 of 30

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All of the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Soil Samples
Langan Project No.: 170229024
June 5, 2020 Page 30 of 30

Signed:



Emily Strake, CEP
Senior Project Chemist

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To: Woo Kim, Langan Senior Staff Engineer

From: Emily Strake, Langan Senior Project Chemist

Date: June 5, 2020

Re: Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Groundwater Samples
Langan Project No.: 170229024

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of groundwater samples collected in May 2020 by Langan Engineering and Environmental Services ("Langan") at the 45 Commercial Street site ("the site"). The samples were analyzed by Eurofins Lancaster Laboratories (NYSDOH NELAP registration # 10670) for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), per- and polyfluoroalkyl substances (PFAS), herbicides, polychlorinated biphenyls (PCBs), pesticides, metals including mercury (Hg), cyanide (CN), hexavalent chromium (CrVI), and trivalent chromium (CrIII) by the methods specified below.

- VOCs by SW-846 Method 8260C
- SVOCs by SW-846 Method 8270D and 8270D SIM
- PFAS by USEPA Method 537M
- Herbicides by SW-846 Method 8151A
- PCBs by SW-846 Method 8082A
- Pesticides by SW-846 Method 8081B
- Metals by SW-846 Method 6010D and 6020B
- Mercury by SW-846 Method 7470A
- Cyanide by SW-846 Method 9012B
- Hexavalent Chromium by SW-846 Method 7196A
- Trivalent Chromium by Calculation

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Groundwater Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 2 of 11

TABLE 1: SAMPLE SUMMARY

<i>SDG</i>	<i>Lab Sample ID</i>	<i>Client Sample ID</i>	<i>Sample Date</i>	<i>Analytical Parameters</i>
CMS11	1316581	MW13_051620	5/16/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS11	1316589	MW13N_051620	5/16/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS11	1316591	MW22_051620	5/16/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS11	1316595	GWTB01_051620	5/16/2020	VOCs
CMS11	1316593	GWFB01_051620	5/16/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS12	1318000	GWDUP01_052020	5/20/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS12	1317993	MW16_052020	5/20/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS12	1317995	MW18_052020	5/20/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS12	1318001	GWFB02_052020	5/20/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII
CMS12	1318002	GWTB02_052020	5/20/2020	VOCs
CMS12	1317997	MW19_052020	5/20/2020	VOCs, SVOCs, PFAS, Herbicides, PCBs, Pesticides, Metals, Hg, CN, CrVI, CrIII

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-34A, "Trace Volatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-33A, "Low/Medium Volatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-35A, "Semivolatile Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-17, "Validating Chlorinated Herbicides" (December

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Groundwater Samples
Langan Project No.: 170229024
June 5, 2020 Page 3 of 11

2010, Revision 3.1), USEPA Region II SOP #HW-37A, "Polychlorinated Biphenyl (PCB) Aroclor Data Validation" (June 2015, Revision 0), USEPA Region II SOP #HW-36A, "Pesticide Data Validation" (October 2016, Revision 1), USEPA Region II SOP #HW-3a, "ICP-AES Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-3b, "ICP-MS Data Validation" (September 2016, Revision 1), USEPA Region II SOP #HW-3c, "Mercury and Cyanide Data Validation" (September 2016, Revision 1), the USEPA Contract Laboratory Program "National Functional Guidelines for Organic Superfund Methods Data Review" (EPA-540-R-2017-002, January 2017), the USEPA Contract Laboratory Program "National Functional Guidelines for Inorganic Superfund Methods Data Review" (EPA-540-R-2017-001, January 2017) and the specifics of the methods employed.

EPA Method 537 was developed and validated for the analysis of finished drinking water from surface water and groundwater sources. Laboratories have modified Method 537 to enable the analysis of groundwater and soil, and to incorporate PFAS analytes not currently addressed by the promulgated method. NYSDOH offers certification for PFOA and PFOS in the drinking water category. Non-potable water and soil certification is not available; however, the method describes acceptable modifications. EPA recommends that modified methods be assessed relative to project goals and data quality objectives.

Validation includes review of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, isotope dilution recoveries, matrix spike/spike duplicate recoveries, target compound identification and quantification, chromatograms, overall system performance, serial dilutions, dual column performance, field duplicate, trip blank sample results, and field blank sample results.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- R** – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- J** – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

Technical Memorandum

- UJ** – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- U** – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- NJ** – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

TABLE 2: VALIDATOR-APPLIED QUALIFICATION

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
MW13_051620	SW6020B	7440-47-3	Chromium, Total	U (0.0021)
MW13_051620	SW7196A	18540-29-9	Chromium, Hexavalent	UJ
MW13_051620	SW8081B	50-29-3	4,4'-DDT	UJ
MW13_051620	SW8081B	309-00-2	Aldrin	UJ
MW13_051620	SW8081B	5103-71-9	Alpha Chlordane	UJ
MW13_051620	SW8081B	319-85-7	Beta BHC (Beta Hexachlorocyclohexane)	UJ
MW13_051620	SW8081B	1031-07-8	Endosulfan Sulfate	UJ
MW13_051620	SW8260C	74-83-9	Bromomethane	UJ
MW13_051620	SW8260C	75-00-3	Chloroethane	UJ
MW13_051620	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
MW13_051620	SW8260C	98-06-6	T-Butylbenzene	UJ
MW13_051620	SW8260C	75-69-4	Trichlorofluoromethane	UJ
MW13_051620	SW8260C	75-01-4	Vinyl Chloride	UJ
MW13N_051620	SW6020B	7440-47-3	Chromium, Total	U (0.002)
MW13N_051620	SW7196A	18540-29-9	Chromium, Hexavalent	UJ
MW13N_051620	SW8260C	74-83-9	Bromomethane	UJ
MW13N_051620	SW8260C	75-00-3	Chloroethane	UJ

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Groundwater Samples
Langan Project No.: 170229024
June 5, 2020 Page 5 of 11

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
MW13N_051620	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
MW13N_051620	SW8260C	98-06-6	T-Butylbenzene	UJ
MW13N_051620	SW8260C	75-69-4	Trichlorofluoromethane	UJ
MW13N_051620	SW8260C	75-01-4	Vinyl Chloride	UJ
MW13N_051620	SW6020B	7440-47-3	Chromium, Total	U (0.002)
MW22_051620	SW6020B	7440-47-3	Chromium, Total	U (0.002)
MW22_051620	SW7196A	18540-29-9	Chromium, Hexavalent	UJ
MW22_051620	SW8260C	74-83-9	Bromomethane	UJ
MW22_051620	SW8260C	75-00-3	Chloroethane	UJ
MW22_051620	SW8260C	75-71-8	Dichlorodifluoromethane	UJ
MW22_051620	SW8260C	98-06-6	T-Butylbenzene	UJ
MW22_051620	SW8260C	75-69-4	Trichlorofluoromethane	UJ
MW22_051620	SW8260C	75-01-4	Vinyl Chloride	UJ
MW22_051620	SW6020B	7440-47-3	Chromium, Total	U (0.002)
GWFB01_051620	SW7196A	18540-29-9	Chromium, Hexavalent	UJ
GWFB01_051620	SW8260C	107-02-8	Acrolein	UJ
GWFB01_051620	SW8260C	75-65-0	Tert-Butyl Alcohol	UJ
GWFB01_051620	SW8260C	75-69-4	Trichlorofluoromethane	UJ
GWTB01_051620	SW8260C	107-02-8	Acrolein	UJ
GWTB01_051620	SW8260C	75-65-0	Tert-Butyl Alcohol	UJ
GWTB01_051620	SW8260C	75-69-4	Trichlorofluoromethane	UJ
MW16_052020	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
MW16_052020	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
MW16_052020	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
MW16_052020	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
MW16_052020	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
MW16_052020	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
MW16_052020	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ
MW16_052020	SW8260C	67-64-1	Acetone	U (0.02)
MW16_052020	SW8260C	75-65-0	Tert-Butyl Alcohol	UJ
MW16_052020	SW8270D	88-06-2	2,4,6-Trichlorophenol	UJ

Technical Memorandum

Data Usability Summary Report
 For 45 Commercial Street
 Brooklyn, New York, NY
 May 2020 Groundwater Samples
 Langan Project No.: 170229024
 June 5, 2020 Page 6 of 11

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
MW16_052020	SW8270D	105-67-9	2,4-Dimethylphenol	UJ
MW16_052020	SW8270D	606-20-2	2,6-Dinitrotoluene	UJ
MW16_052020	SW8270D	88-74-4	2-Nitroaniline	UJ
MW16_052020	SW8270D	92-87-5	Benzidine	UJ
MW16_052020	SW8270D	78-59-1	Isophorone	UJ
MW18_052020	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
MW18_052020	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
MW18_052020	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
MW18_052020	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
MW18_052020	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
MW18_052020	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
MW18_052020	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ
MW18_052020	SW8260C	75-65-0	Tert-Butyl Alcohol	UJ
MW18_052020	SW8270D	88-06-2	2,4,6-Trichlorophenol	UJ
MW18_052020	SW8270D	105-67-9	2,4-Dimethylphenol	UJ
MW18_052020	SW8270D	606-20-2	2,6-Dinitrotoluene	UJ
MW18_052020	SW8270D	88-74-4	2-Nitroaniline	UJ
MW18_052020	SW8270D	92-87-5	Benzidine	UJ
MW18_052020	SW8270D	78-59-1	Isophorone	UJ
MW19_052020	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
MW19_052020	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
MW19_052020	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
MW19_052020	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
MW19_052020	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
MW19_052020	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
MW19_052020	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ
MW19_052020	SW8260C	75-65-0	Tert-Butyl Alcohol	UJ
MW19_052020	SW8270D	88-06-2	2,4,6-Trichlorophenol	UJ
MW19_052020	SW8270D	105-67-9	2,4-Dimethylphenol	UJ
MW19_052020	SW8270D	606-20-2	2,6-Dinitrotoluene	UJ
MW19_052020	SW8270D	88-74-4	2-Nitroaniline	UJ

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Groundwater Samples
Langan Project No.: 170229024
June 5, 2020 Page 7 of 11

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
MW19_052020	SW8270D	92-87-5	Benzidine	UJ
MW19_052020	SW8270D	78-59-1	Isophorone	UJ
GWDUP01_052020	SW8082A	12674-11-2	PCB-1016 (Aroclor 1016)	UJ
GWDUP01_052020	SW8082A	11104-28-2	PCB-1221 (Aroclor 1221)	UJ
GWDUP01_052020	SW8082A	11141-16-5	PCB-1232 (Aroclor 1232)	UJ
GWDUP01_052020	SW8082A	53469-21-9	PCB-1242 (Aroclor 1242)	UJ
GWDUP01_052020	SW8082A	12672-29-6	PCB-1248 (Aroclor 1248)	UJ
GWDUP01_052020	SW8082A	11097-69-1	PCB-1254 (Aroclor 1254)	UJ
GWDUP01_052020	SW8082A	11096-82-5	PCB-1260 (Aroclor 1260)	UJ
GWDUP01_052020	SW8270D	88-06-2	2,4,6-Trichlorophenol	UJ
GWDUP01_052020	SW8270D	105-67-9	2,4-Dimethylphenol	UJ
GWDUP01_052020	SW8270D	606-20-2	2,6-Dinitrotoluene	UJ
GWDUP01_052020	SW8270D	88-74-4	2-Nitroaniline	UJ
GWDUP01_052020	SW8270D	92-87-5	Benzidine	UJ
GWDUP01_052020	SW8270D	78-59-1	Isophorone	UJ

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260C:

CMS11:

The continuing calibration verification (CCV) analyzed on 5/20/2020 at 20:13 exhibited percent drifts (%Ds) above the control limit for trichlorofluoromethane (-22%), acrolein (23%), and tert-butyl alcohol (23%). The associated results in sample GWFB01_051620 and GWTB01_051620 are qualified as "UJ" based on potential indeterminate bias.

Technical Memorandum

The CCV analyzed on 5/21/2020 at 19:04 exhibited %Ds above the control limit for dichlorodifluoromethane (28%), vinyl chloride (23%), bromomethane (29%), chloroethane (25%), trichlorofluoromethane (24%), and tert-butylbenzene (22%). The associated results in sample MW22_051620, MW13N_051620, and MW13_051620 are qualified as "UJ" based on potential indeterminate bias.

CMS12:

The trip blank (GWTB02_052020) exhibited a detection of acetone (0.7 ug/L). The associated results in sample MW16_052020 are qualified as "U" at the reporting limit based on potential blank contamination.

The CCV analyzed on 5/26/2020 at 20:17 exhibited a %D above the control limit for tert-butyl alcohol (-23%). The associated results in sample MW19_052020, MW16_052020, and MW18_052020 are qualified as "UJ" based on potential indeterminate bias.

SVOCs by SW-846 Method 8270D and 8270D SIM:

CMS12:

The laboratory control sample (LCS) for batch 20147WAC026Y exhibited percent recoveries below the lower control limit (LCL) for 2,6-dinitrotoluene (65%), 2,4-dimethylphenol (51%), isophorone (62%), benzidine (5%), 2-nitroaniline (65%), and 2,4,6-trichlorophenol (68%). The associated results in sample MW19_052020, MW16_052020, GWDUP01_052020, and MW18_052020 are qualified as "UJ" based on potential low bias.

PCBs by SW-846 Method 8082A:

CMS12:

The LCS and laboratory control sample duplicate (LCSD) for batch 201430007AY exhibited relative percent differences (RPDs) above the control limit for PCB-1016 (54%) and PCB-1260 (37%). The associated results in sample MW19_052020, MW16_052020, GWDUP01_052020, and MW18_052020 are qualified as "UJ" based on potential indeterminate bias.

Pesticides by SW-846 Method 8081B:

CMS11:

The sample MW13_051620 exhibited a percent recovery below the LCL for the surrogate decachlorobiphenyl (30%). The associated results are qualified as "UJ" based on potential low bias.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Groundwater Samples
Langan Project No.: 170229024
June 5, 2020 Page 9 of 11

Metals by SW-846 Method 6010D and 6020B:

CMS11:

The method blank (MB) for batch 201391404704 exhibited a detection of chromium (0.00038 mg/L). The associated results in sample MW22_051620, MW13N_051620, and MW13_051620 are qualified as "U" at the higher of the sample concentration and the reporting limit based on potential blank contamination.

CMS12:

The MB for batch 201421404701AY exhibited a detection of chromium (0.00052 mg/L). The associated results in sample MW19_052020, MW16_052020, GWDUP01_052020, and MW18_052020 are qualified as "U" at the reporting limit based on potential blank contamination.

Hexavalent Chromium by SW-846 Method 7196A:

CMS11:

The matrix spike and matrix spike duplicate (MS/MSD) for batch 20137027601A exhibited a percent recovery below the LCL for hexavalent chromium (0%). The associated results in sample MW22_051620, GWFB01_051620, MW13N_051620, and MW13_051620 are qualified as "UJ" based on potential low bias.

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260C:

CMS11:

The MS for batch 5201422AA exhibited a percent recovery above the upper control limit (UCL) for vinyl chloride (122%). Organic results are not qualified on the basis of MS recoveries alone. No qualification is necessary.

Herbicides by SW-846 Method 8151A:

CMS11:

The MS/MSD for batch 201400007A exhibited percent recoveries above the UCL for 2,4-D (159%, 170%), 2,4,5-T (187%, 203%), and 2,4,5-TP (160%, 174%). Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

Technical Memorandum

CMS12:

The sample GWDUP01_052020 exhibited a percent recovery above the UCL for the surrogate 2,4-dichlorophenylacetic acid (143%). The associated results are non-detections. No qualification is necessary.

The LCS/LCSD for batch 201430018AY exhibited percent recoveries above the UCL for 2,4,5-TP (143%, 156%), 2,4-D (144%, 152%), and 2,4,5-T (173%). The associated results are non-detections. No qualification is necessary.

PCBs by SW-846 Method 8082A:

CMS12:

The LCS for batch 201430007AY exhibited percent recoveries above the UCL for PCB-1016 (137%) and PCB-1260 (140%). The associated results are non-detections. No qualification is necessary.

Metals by SW-846 Method 6010D and 6020B:

CMS11:

The MB for batch 201391404704 exhibited a detection of manganese (0.00064 mg/L). The associated results are >10X the contamination. No qualification is necessary.

The MB for batch 201411404703 exhibited a detection of manganese (0.003 mg/L). The associated results are >10X the contamination. No qualification is necessary.

The laboratory duplicate and parent sample (MW13_051620) exhibited a RPD above the control limit for dissolved lead (21%). The associated results are less than 5x the RL. No qualification is necessary.

The MS/MSD for batch 201391404703 exhibited percent recoveries above the UCL for total lead (205%, 355%) and total manganese (150%, 156%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

The MS/MSD for batch 201391404703 exhibited a percent recovery below the LCL for total barium (41%, 49%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

The MS/MSD for batch 201391404703 exhibited a RPD above the control limit for total lead (21%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Groundwater Samples
Langan Project No.: 170229024
June 5, 2020 Page 11 of 11

The MS/MSD for batch 201391404704 exhibited a percent recovery above the UCL for dissolved barium (173%, 258%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

The MS/MSD for batch 201391404704 exhibited a percent recovery below the LCL for dissolved manganese (36%, -24%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

COMMENTS:

One field duplicate and parent sample pair was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than $\pm 1X$ the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 30%. The following analytes did not meet the precision criteria:

- GWDUP01_052020 and MW18_052020: all criteria met.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All of the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake, CEP
Senior Project Chemist

2700 Kelly Road, Suite 200 Warrington, PA 18976 T: 215.491.6500 F: 215.491.6501
Mailing Address: P.O. Box 1569 Doylestown, PA 18901

To: Woo Kim, Langan Senior Staff Engineer
From: Emily Strake, Langan Senior Project Chemist
Date: June 5, 2020
Re: Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Air Samples
Langan Project No.: 170229024

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of air samples collected in May 2020 by Langan Engineering and Environmental Services ("Langan") at the 45 Commercial Street site ("the site"). The samples were analyzed by Eurofins Lancaster Laboratories (NYSDOH NELAP registration # 10670) for volatile organic compounds (VOCs) by the methods specified below.

- VOCs by USEPA Method TO-15

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

TABLE 1: SAMPLE SUMMARY

SDG	Lab Sample ID	Client Sample ID	Sample Date	Analytical Parameters
CMS03	1311677	SV05_050820	5/8/2020	VOCs
CMS03	1311678	SV04_050820	5/8/2020	VOCs
CMS03	1311679	SV02_050820	5/8/2020	VOCs
CMS03	1311680	SVDUP01_050820	5/8/2020	VOCs
CMS03	1311681	AA01_050820	5/8/2020	VOCs
CMS03	1311682	SV03_050820	5/8/2020	VOCs
CMS03	1311683	SV01_050820	5/8/2020	VOCs

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Air Samples
Langan Project No.: 170229024
June 5, 2020 Page 2 of 4

Validation Overview

This data validation was performed in accordance with USEPA Region II Standard Operating Procedure (SOP) #HW-31, "Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15" (September 2016, Revision 6), the USEPA Contract Laboratory Program "National Functional Guidelines for Organic Superfund Methods Data Review" (EPA-540-R-2017-002, January 2017), and the specifics of the methods employed.

Validation includes review of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, internal standard area counts, target compound identification and quantification, chromatograms, and overall system performance.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- R** – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- J** – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ** – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- U** – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- NJ** – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Air Samples
Langan Project No.: 170229024
June 5, 2020 Page 3 of 4

TABLE 2: VALIDATOR-APPLIED QUALIFICATION

<i>Client Sample ID</i>	<i>Analysis</i>	<i>CAS #</i>	<i>Analyte</i>	<i>Validator Qualifier</i>
SV02_050820	TO15	540-84-1	2,2,4-Trimethylpentane	J
SVDUP01_050820	TO15	540-84-1	2,2,4-Trimethylpentane	J
SV02_050820	TO15	75-15-0	Carbon Disulfide	J
SVDUP01_050820	TO15	75-15-0	Carbon Disulfide	J
SV02_050820	TO15	78-93-3	Methyl Ethyl Ketone (2-Butanone)	J
SVDUP01_050820	TO15	78-93-3	Methyl Ethyl Ketone (2-Butanone)	J
SV02_050820	TO15	142-82-5	n-Heptane	J
SVDUP01_050820	TO15	142-82-5	n-Heptane	J
SV02_050820	TO15	110-54-3	n-Hexane	UJ
SVDUP01_050820	TO15	110-54-3	n-Hexane	J
SV02_050820	TO15	109-66-0	n-Pentane	J
SVDUP01_050820	TO15	109-66-0	n-Pentane	J
SV02_050820	TO15	1634-04-4	Tert-Butyl Methyl Ether	UJ
SVDUP01_050820	TO15	1634-04-4	Tert-Butyl Methyl Ether	J

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by USEPA Method TO-15:

The field duplicate and parent sample (SVDUP01_050820 and SV02_050820) exhibited absolute differences greater than the reporting limit (RL) for 2,2,4-trimethylpentane (20.2 ug/m³), carbon disulfide (30.6 ug/m³), n-heptane (8.6 ug/m³), n-hexane (78.5 ug/m³), n-pentane (255.1 ug/m³), and

Technical Memorandum

Data Usability Summary Report
For 45 Commercial Street
Brooklyn, New York, NY
May 2020 Air Samples
Langan Project No.: 170229024
June 5, 2020 Page 4 of 4

tert-butyl methyl ether (20.4 ug/m³). The associated results are qualified as "J" or "UJ" based on potential indeterminate bias.

The field duplicate and parent sample (SVDUP01_050820 and SV02_050820) exhibited a relative percent difference above the control limit for 2-butanone (72%). The associated results are qualified as "J" based on potential indeterminate bias.

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. No other deficiencies were identified.

COMMENTS:

One field duplicate and parent sample pair was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than $\pm 1X$ the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 30%. The following analytes did not meet the precision criteria:

- SVDUP01_050820 and SV02_050820: 2,2,4-trimethylpentane, carbon disulfide, n-heptane, n-hexane, n-pentane, tert-butyl methyl ether, 2-butanone

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All of the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Emily Strake, CEP
Senior Project Chemist

APPENDIX H

Community Air Monitoring Program Summary Data

Date: 5/6/2020
Observer: Luke McCartney

Particulate Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.008	0.006
Maximum 15min Average	0.013	0.010
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.007	0.006
Maximum 1min Reading	0.013	0.010

Organic Vapor Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.0	0.0
Maximum 15min Average	0.7	0.0
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.0	0.0
Maximum 1min Reading	0.7	0.0

All reported particulate concentrations are in mg/m³ or milligrams per cubic meter and all reported organic vapor concentrations are in ppm or parts per million, unless specified otherwise.

May 6, 2020						
Number of Instances Where Downwind Particulates Exceeds Upwind Particulate + .150 mg/m ³ =						0
Number of Comparable Data Points =						17
PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:59	0.007		7:59	0.007		
8:00			8:00			
8:01			8:01			
8:02			8:02			
8:03			8:03			
8:04			8:04			
8:05			8:05			
8:06			8:06			
8:07			8:07			
8:08			8:08			
8:09			8:09			
8:10			8:10			
8:11			8:11			
8:12			8:12			
8:13			8:13			
8:14	0.008	0.008	8:14	0.006	0.006	-
8:15			8:15			
8:16			8:16			
8:17			8:17			
8:18			8:18			
8:19			8:19			
8:20			8:20			
8:21			8:21			
8:22			8:22			
8:23			8:23			
8:24			8:24			
8:25			8:25			
8:26			8:26			
8:27			8:27			
8:28			8:28			
8:29	0.008	0.008	8:29	0.007	0.007	-
8:30			8:30			
8:31			8:31			
8:32			8:32			
8:33			8:33			
8:34			8:34			
8:35			8:35			
8:36			8:36			
8:37			8:37			
8:38			8:38			
8:39			8:39			
8:40			8:40			
8:41			8:41			
8:42			8:42			
8:43			8:43			
8:44	0.008	0.008	8:44	0.006	0.006	-
8:45			8:45			
8:46			8:46			
8:47			8:47			
8:48			8:48			
8:49			8:49			
8:50			8:50			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
8:51			8:51			
8:52			8:52			
8:53			8:53			
8:54			8:54			
8:55			8:55			
8:56			8:56			
8:57			8:57			
8:58			8:58			
8:59	0.01	0.010	8:59	0.006	0.006	-
9:00			9:00			
9:01			9:01			
9:02			9:02			
9:03			9:03			
9:04			9:04			
9:05			9:05			
9:06			9:06			
9:07			9:07			
9:08			9:08			
9:09			9:09			
9:10			9:10			
9:11			9:11			
9:12			9:12			
9:13			9:13			
9:14	0.009	0.009	9:14	0.007	0.007	-
9:15			9:15			
9:16			9:16			
9:17			9:17			
9:18			9:18			
9:19			9:19			
9:20			9:20			
9:21			9:21			
9:22			9:22			
9:23			9:23			
9:24			9:24			
9:25			9:25			
9:26			9:26			
9:27			9:27			
9:28			9:28			
9:29	0.011	0.011	9:29	0.006	0.006	-
9:30			9:30			
9:31			9:31			
9:32			9:32			
9:33			9:33			
9:34			9:34			
9:35			9:35			
9:36			9:36			
9:37			9:37			
9:38			9:38			
9:39			9:39			
9:40			9:40			
9:41			9:41			
9:42			9:42			
9:43			9:43			
9:44	0.011	0.011	9:44	0.007	0.007	-
9:45			9:45			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
9:46			9:46			
9:47			9:47			
9:48			9:48			
9:49			9:49			
9:50			9:50			
9:51			9:51			
9:52			9:52			
9:53			9:53			
9:54			9:54			
9:55			9:55			
9:56			9:56			
9:57			9:57			
9:58			9:58			
9:59	0.011	0.011	9:59	0.007	0.007	-
10:00			10:00			
10:01			10:01			
10:02			10:02			
10:03			10:03			
10:04			10:04			
10:05			10:05			
10:06			10:06			
10:07			10:07			
10:08			10:08			
10:09			10:09			
10:10			10:10			
10:11			10:11			
10:12			10:12			
10:13			10:13			
10:14	0.01	0.010	10:14	0.007	0.007	-
10:15			10:15			
10:16			10:16			
10:17			10:17			
10:18			10:18			
10:19			10:19			
10:20			10:20			
10:21			10:21			
10:22			10:22			
10:23			10:23			
10:24			10:24			
10:25			10:25			
10:26			10:26			
10:27			10:27			
10:28			10:28			
10:29	0.012	0.012	10:29	0.006	0.006	-
10:30			10:30			
10:31			10:31			
10:32			10:32			
10:33			10:33			
10:34			10:34			
10:35			10:35			
10:36			10:36			
10:37			10:37			
10:38			10:38			
10:39			10:39			
10:40			10:40			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
10:41			10:41			
10:42			10:42			
10:43			10:43			
10:44	0.012	0.012	10:44	0.007	0.007	-
10:45			10:45			
10:46			10:46			
10:47			10:47			
10:48			10:48			
10:49			10:49			
10:50			10:50			
10:51			10:51			
10:52			10:52			
10:53			10:53			
10:54			10:54			
10:55			10:55			
10:56			10:56			
10:57			10:57			
10:58			10:58			
10:59	0.012	0.012	10:59	0.008	0.008	-
11:00			11:00			
11:01			11:01			
11:02			11:02			
11:03			11:03			
11:04			11:04			
11:05			11:05			
11:06			11:06			
11:07			11:07			
11:08			11:08			
11:09			11:09			
11:10			11:10			
11:11			11:11			
11:12			11:12			
11:13			11:13			
11:14	0.013	0.013	11:14	0.008	0.008	-
11:15			11:15			
11:16			11:16			
11:17			11:17			
11:18			11:18			
11:19			11:19			
11:20			11:20			
11:21			11:21			
11:22			11:22			
11:23			11:23			
11:24			11:24			
11:25			11:25			
11:26			11:26			
11:27			11:27			
11:28			11:28			
11:29	0.013	0.013	11:29	0.008	0.008	-
11:30			11:30			
11:31			11:31			
11:32			11:32			
11:33			11:33			
11:34			11:34			
11:35			11:35			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
11:36			11:36			
11:37			11:37			
11:38			11:38			
11:39			11:39			
11:40			11:40			
11:41			11:41			
11:42			11:42			
11:43			11:43			
11:44	0.012	0.012	11:44	0.009	0.009	-
11:45			11:45			
11:46			11:46			
11:47			11:47			
11:48			11:48			
11:49			11:49			
11:50			11:50			
11:51			11:51			
11:52			11:52			
11:53			11:53			
11:54			11:54			
11:55			11:55			
11:56			11:56			
11:57			11:57			
11:58			11:58			
11:59	0.012	0.012	11:59	0.008	0.008	-
12:00			12:00			
12:01			12:01			
12:02			12:02			
12:03			12:03			
12:04			12:04			
12:05			12:05			
12:06			12:06			
12:07			12:07			
12:08			12:08			
12:09			12:09			
12:10			12:10			
12:11			12:11			
12:12			12:12			
12:13			12:13			
12:14	0.013	0.013	12:14	0.008	0.008	-
12:15			12:15			
12:16			12:16			
12:17			12:17			
12:18			12:18			
12:19			12:19			
12:20			12:20			
12:21			12:21			
12:22			12:22			
12:23			12:23			
12:24			12:24			
12:25			12:25			
12:26			12:26			
12:27			12:27			
12:28			12:28			
12:29	0.012	0.012	12:29	0.008	0.008	-
12:30			12:30			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
12:31			12:31			
12:32			12:32			
12:33			12:33			
12:34			12:34			
12:35			12:35			
12:36			12:36			
12:37			12:37			
12:38			12:38			
12:39			12:39			
12:40			12:40			
12:41			12:41			
12:42			12:42			
12:43			12:43			
12:44	0.013	0.013	12:44	0.008	0.008	-
12:45			12:45			
12:46			12:46			
12:47			12:47			
12:48			12:48			
12:49			12:49			
12:50			12:50			
12:51			12:51			
12:52			12:52			
12:53			12:53			
12:54			12:54			
12:55			12:55			
12:56			12:56			
12:57			12:57			
12:58			12:58			
12:59	0.013	0.013	12:59	0.010	0.010	-
13:00			13:00			
13:01			13:01			
13:02			13:02			
13:03			13:03			
13:04			13:04			
13:05			13:05			
13:06			13:06			
13:07			13:07			
13:08			13:08			
13:09			13:09			
13:10			13:10			
13:11			13:11			
13:12			13:12			
13:13			13:13			
13:14	0.012	0.012	13:14	0.008	0.008	-
13:15			13:15			
13:16			13:16			
13:17			13:17			
13:18			13:18			
13:19			13:19			
13:20			13:20			
13:21			13:21			
13:22			13:22			
13:23			13:23			
13:24			13:24			
13:25			13:25			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
13:26			13:26			
13:27			13:27			
13:28			13:28			
13:29	0.012	0.012	13:29	0.007	0.007	-
13:30			13:30			
13:31			13:31			
13:32			13:32			
13:33			13:33			
13:34			13:34			
13:35			13:35			
13:36			13:36			
13:37			13:37			
13:38			13:38			
13:39			13:39			
13:40			13:40			
13:41			13:41			
13:42			13:42			
13:43			13:43			
13:44	0.013	0.013	13:44	0.009	0.009	-
13:45			13:45			
13:46			13:46			
13:47			13:47			
13:48			13:48			
13:49			13:49			
13:50			13:50			
13:51			13:51			
13:52			13:52			
13:53			13:53			
13:54			13:54			
13:55			13:55			
13:56			13:56			
13:57			13:57			
13:58			13:58			
13:59	0.012	0.012	13:59	0.009	0.009	-
14:00			14:00			
14:01			14:01			
14:02			14:02			
14:03			14:03			
14:04			14:04			
14:05			14:05			
14:06			14:06			
14:07			14:07			
14:08			14:08			
14:09			14:09			
14:10			14:10			
14:11			14:11			
14:12			14:12			
14:13			14:13			
14:14	0.016	0.016	14:14	0.009	0.009	-
14:15			14:15			
14:16			14:16			
14:17			14:17			
14:18			14:18			
14:19			14:19			
14:20			14:20			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
14:21			14:21			
14:22			14:22			
14:23			14:23			
14:24			14:24			
14:25			14:25			
14:26			14:26			
14:27			14:27			
14:28			14:28			
14:29	0.012	0.012	14:29	0.009	0.009	-
14:30			14:30			
14:31			14:31			
14:32			14:32			
14:33			14:33			
14:34			14:34			
14:35			14:35			
14:36			14:36			
14:37			14:37			
14:38			14:38			
14:39			14:39			
14:40			14:40			
14:41			14:41			
14:42			14:42			
14:43			14:43			
14:44	0.012	0.012	14:44	0.008	0.008	-

May 6, 2020						
Number of Instances Where Downwind VOCs Exceeds Upwind VOCs + 5ppm =						0
Number of Comparable Data Points =						348
PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:48			7:48	0		
7:49			7:49	0		
7:50			7:50	0		
7:51			7:51	0		
7:52			7:52	0		
7:53			7:53	0		
7:54			7:54	0		
7:55			7:55	0		
7:56			7:56	0		
7:57			7:57	0		
7:58			7:58	0		
7:59			7:59	0		
8:00			8:00	0		
8:01	0		8:01	0		
8:02	0	0.0	8:02	0		
8:03	0	0.0	8:03	0	0.0	-
8:04	0	0.0	8:04	0	0.0	-
8:05	0	0.0	8:05	0	0.0	-
8:06	0	0.0	8:06	0	0.0	-
8:07	0	0.0	8:07	0	0.0	-
8:08	0.1	0.0	8:08	0	0.0	-
8:09	0.1	0.0	8:09	0	0.0	-
8:10	0.1	0.0	8:10	0	0.0	-
8:11	0.1	0.0	8:11	0	0.0	-
8:12	0.2	0.1	8:12	0	0.0	-
8:13	0.2	0.1	8:13	0	0.0	-
8:14	0.2	0.1	8:14	0	0.0	-
8:15	0.2	0.1	8:15	0	0.0	-
8:16	0.2	0.1	8:16	0	0.0	-
8:17	0.2	0.1	8:17	0	0.0	-
8:18	0.3	0.1	8:18	0	0.0	-
8:19	0.3	0.1	8:19	0	0.0	-
8:20	0.3	0.2	8:20	0	0.0	-
8:21	0.3	0.2	8:21	0	0.0	-
8:22	0.3	0.2	8:22	0	0.0	-
8:23	0.3	0.2	8:23	0	0.0	-
8:24	0.4	0.2	8:24	0	0.0	-
8:25	0.4	0.3	8:25	0	0.0	-
8:26	0.4	0.3	8:26	0	0.0	-
8:27	0.4	0.3	8:27	0	0.0	-
8:28	0.4	0.3	8:28	0	0.0	-
8:29	0.4	0.3	8:29	0	0.0	-
8:30	0.4	0.3	8:30	0	0.0	-
8:31	0.5	0.4	8:31	0	0.0	-
8:32	0.5	0.4	8:32	0	0.0	-
8:33	0.5	0.4	8:33	0	0.0	-
8:34	0.5	0.4	8:34	0	0.0	-
8:35	0.5	0.4	8:35	0	0.0	-
8:36	0.5	0.4	8:36	0	0.0	-
8:37	0.5	0.4	8:37	0	0.0	-
8:38	0.5	0.5	8:38	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
8:39	0.5	0.5	8:39	0	0.0	-
8:40	0.6	0.5	8:40	0	0.0	-
8:41	0.6	0.5	8:41	0	0.0	-
8:42	0.6	0.5	8:42	0	0.0	-
8:43	0.6	0.5	8:43	0	0.0	-
8:44	0.6	0.5	8:44	0	0.0	-
8:45	0.6	0.5	8:45	0	0.0	-
8:46	0.6	0.5	8:46	0	0.0	-
8:47	0.6	0.6	8:47	0	0.0	-
8:48	0.6	0.6	8:48	0	0.0	-
8:49	0.7	0.6	8:49	0	0.0	-
8:50	0.7	0.6	8:50	0	0.0	-
8:51	0.7	0.6	8:51	0	0.0	-
8:52	0.7	0.6	8:52	0	0.0	-
8:53	0.7	0.6	8:53	0	0.0	-
8:54	0.7	0.6	8:54	0	0.0	-
8:55	0.7	0.6	8:55	0	0.0	-
8:56	0.7	0.7	8:56	0	0.0	-
8:57	0.7	0.7	8:57	0	0.0	-
8:58	0.7	0.7	8:58	0	0.0	-
8:59	0.7	0.7	8:59	0	0.0	-
9:00	0.7	0.7	9:00	0	0.0	-
9:01	0.7	0.7	9:01	0	0.0	-
9:02	0.7	0.7	9:02	0	0.0	-
9:03	0.7	0.7	9:03	0	0.0	-
9:04	0.7	0.7	9:04	0	0.0	-
9:05	0.7	0.7	9:05	0	0.0	-
9:06	0.7	0.7	9:06	0	0.0	-
9:07	0.7	0.7	9:07	0	0.0	-
9:08	0.7	0.7	9:08	0	0.0	-
9:09	0.7	0.7	9:09	0	0.0	-
9:10	0.7	0.7	9:10	0	0.0	-
9:11	0.7	0.7	9:11	0	0.0	-
9:12	0.7	0.7	9:12	0	0.0	-
9:13	0.7	0.7	9:13	0	0.0	-
9:14	0.7	0.7	9:14	0	0.0	-
9:15	0.7	0.7	9:15	0	0.0	-
9:16	0.7	0.7	9:16	0	0.0	-
9:17	0.7	0.7	9:17	0	0.0	-
9:18	0.7	0.7	9:18	0	0.0	-
9:19	0.7	0.7	9:19	0	0.0	-
9:20	0.7	0.7	9:20	0	0.0	-
9:21	0.7	0.7	9:21	0	0.0	-
9:22	0.7	0.7	9:22	0	0.0	-
9:23	0.6	0.7	9:23	0	0.0	-
9:24	0.6	0.7	9:24	0	0.0	-
9:25	0.6	0.7	9:25	0	0.0	-
9:26	0.6	0.7	9:26	0	0.0	-
9:27	0.6	0.7	9:27	0	0.0	-
9:28	0.6	0.7	9:28	0	0.0	-
9:29	0.6	0.7	9:29	0	0.0	-
9:30	0.6	0.6	9:30	0	0.0	-
9:31	0.6	0.6	9:31	0	0.0	-
9:32	0.6	0.6	9:32	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
9:33	0.5	0.6	9:33	0	0.0	-
9:34	0.5	0.6	9:34	0	0.0	-
9:35	0.5	0.6	9:35	0	0.0	-
9:36	0.5	0.6	9:36	0	0.0	-
9:37	0.5	0.6	9:37	0	0.0	-
9:38	0.5	0.6	9:38	0	0.0	-
9:39	0.5	0.6	9:39	0	0.0	-
9:40	0.5	0.5	9:40	0	0.0	-
9:41	0.5	0.5	9:41	0	0.0	-
9:42	0.5	0.5	9:42	0	0.0	-
9:43	0.5	0.5	9:43	0	0.0	-
9:44	0.5	0.5	9:44	0	0.0	-
9:45	0.5	0.5	9:45	0	0.0	-
9:46	0.5	0.5	9:46	0	0.0	-
9:47	0.5	0.5	9:47	0	0.0	-
9:48	0.5	0.5	9:48	0	0.0	-
9:49	0.5	0.5	9:49	0	0.0	-
9:50	0.4	0.5	9:50	0	0.0	-
9:51	0.4	0.5	9:51	0	0.0	-
9:52	0.4	0.5	9:52	0	0.0	-
9:53	0.4	0.5	9:53	0	0.0	-
9:54	0.4	0.5	9:54	0	0.0	-
9:55	0.4	0.5	9:55	0	0.0	-
9:56	0.4	0.5	9:56	0	0.0	-
9:57	0.4	0.4	9:57	0	0.0	-
9:58	0.4	0.4	9:58	0	0.0	-
9:59	0.4	0.4	9:59	0	0.0	-
10:00	0.4	0.4	10:00	0	0.0	-
10:01	0.4	0.4	10:01	0	0.0	-
10:02	0.4	0.4	10:02	0	0.0	-
10:03	0.4	0.4	10:03	0	0.0	-
10:04	0.4	0.4	10:04	0	0.0	-
10:05	0.4	0.4	10:05	0	0.0	-
10:06	0.4	0.4	10:06	0	0.0	-
10:07	0.4	0.4	10:07	0	0.0	-
10:08	0.4	0.4	10:08	0	0.0	-
10:09	0.4	0.4	10:09	0	0.0	-
10:10	0.4	0.4	10:10	0	0.0	-
10:11	0.4	0.4	10:11	0	0.0	-
10:12	0.4	0.4	10:12	0	0.0	-
10:13	0.4	0.4	10:13	0	0.0	-
10:14	0.4	0.4	10:14	0	0.0	-
10:15	0.4	0.4	10:15	0	0.0	-
10:16	0.4	0.4	10:16	0	0.0	-
10:17	0.4	0.4	10:17	0	0.0	-
10:18	0.4	0.4	10:18	0	0.0	-
10:19	0.4	0.4	10:19	0	0.0	-
10:20	0.4	0.4	10:20	0	0.0	-
10:21	0.4	0.4	10:21	0	0.0	-
10:22	0.4	0.4	10:22	0	0.0	-
10:23	0.4	0.4	10:23	0	0.0	-
10:24	0.4	0.4	10:24	0	0.0	-
10:25	0.4	0.4	10:25	0	0.0	-
10:26	0.4	0.4	10:26	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
10:27	0.4	0.4	10:27	0	0.0	-
10:28	0.4	0.4	10:28	0	0.0	-
10:29	0.4	0.4	10:29	0	0.0	-
10:30	0.4	0.4	10:30	0	0.0	-
10:31	0.4	0.4	10:31	0	0.0	-
10:32	0.4	0.4	10:32	0	0.0	-
10:33	0.3	0.4	10:33	0	0.0	-
10:34	0.3	0.4	10:34	0	0.0	-
10:35	0.3	0.4	10:35	0	0.0	-
10:36	0.3	0.4	10:36	0	0.0	-
10:37	0.3	0.4	10:37	0	0.0	-
10:38	0.3	0.4	10:38	0	0.0	-
10:39	0.3	0.4	10:39	0	0.0	-
10:40	0.3	0.3	10:40	0	0.0	-
10:41	0.4	0.3	10:41	0	0.0	-
10:42	0.4	0.3	10:42	0	0.0	-
10:43	0.4	0.3	10:43	0	0.0	-
10:44	0.3	0.3	10:44	0	0.0	-
10:45	0.4	0.3	10:45	0	0.0	-
10:46	0.4	0.3	10:46	0	0.0	-
10:47	0.4	0.3	10:47	0	0.0	-
10:48	0.4	0.3	10:48	0	0.0	-
10:49	0.3	0.3	10:49	0	0.0	-
10:50	0.3	0.3	10:50	0	0.0	-
10:51	0.3	0.3	10:51	0	0.0	-
10:52	0.3	0.3	10:52	0	0.0	-
10:53	0.3	0.3	10:53	0	0.0	-
10:54	0.3	0.3	10:54	0	0.0	-
10:55	0.3	0.3	10:55	0	0.0	-
10:56	0.3	0.3	10:56	0	0.0	-
10:57	0.3	0.3	10:57	0	0.0	-
10:58	0.3	0.3	10:58	0	0.0	-
10:59	0.3	0.3	10:59	0	0.0	-
11:00	0.3	0.3	11:00	0	0.0	-
11:01	0.3	0.3	11:01	0	0.0	-
11:02	0.3	0.3	11:02	0	0.0	-
11:03	0.3	0.3	11:03	0	0.0	-
11:04	0.3	0.3	11:04	0	0.0	-
11:05	0.3	0.3	11:05	0	0.0	-
11:06	0.3	0.3	11:06	0	0.0	-
11:07	0.3	0.3	11:07	0	0.0	-
11:08	0.3	0.3	11:08	0	0.0	-
11:09	0.3	0.3	11:09	0	0.0	-
11:10	0.3	0.3	11:10	0	0.0	-
11:11	0.3	0.3	11:11	0	0.0	-
11:12	0.4	0.3	11:12	0	0.0	-
11:13	0.4	0.3	11:13	0	0.0	-
11:14	0.3	0.3	11:14	0	0.0	-
11:15	0.3	0.3	11:15	0	0.0	-
11:16	0.3	0.3	11:16	0	0.0	-
11:17	0.3	0.3	11:17	0	0.0	-
11:18	0.3	0.3	11:18	0	0.0	-
11:19	0.3	0.3	11:19	0	0.0	-
11:20	0.3	0.3	11:20	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:21	0.3	0.3	11:21	0	0.0	-
11:22	0.3	0.3	11:22	0	0.0	-
11:23	0.3	0.3	11:23	0	0.0	-
11:24	0.3	0.3	11:24	0	0.0	-
11:25	0.3	0.3	11:25	0	0.0	-
11:26	0.3	0.3	11:26	0	0.0	-
11:27	0.3	0.3	11:27	0	0.0	-
11:28	0.3	0.3	11:28	0	0.0	-
11:29	0.3	0.3	11:29	0	0.0	-
11:30	0.3	0.3	11:30	0	0.0	-
11:31	0.3	0.3	11:31	0	0.0	-
11:32	0.3	0.3	11:32	0	0.0	-
11:33	0.3	0.3	11:33	0	0.0	-
11:34	0.3	0.3	11:34	0	0.0	-
11:35	0.3	0.3	11:35	0	0.0	-
11:36	0.3	0.3	11:36	0	0.0	-
11:37	0.3	0.3	11:37	0	0.0	-
11:38	0.3	0.3	11:38	0	0.0	-
11:39	0.3	0.3	11:39	0	0.0	-
11:40	0.3	0.3	11:40	0	0.0	-
11:41	0.3	0.3	11:41	0	0.0	-
11:42	0.3	0.3	11:42	0	0.0	-
11:43	0.3	0.3	11:43	0	0.0	-
11:44	0.3	0.3	11:44	0	0.0	-
11:45	0.3	0.3	11:45	0	0.0	-
11:46	0.3	0.3	11:46	0	0.0	-
11:47	0.3	0.3	11:47	0	0.0	-
11:48	0.3	0.3	11:48	0	0.0	-
11:49	0.3	0.3	11:49	0	0.0	-
11:50	0.3	0.3	11:50	0	0.0	-
11:51	0.3	0.3	11:51	0	0.0	-
11:52	0.3	0.3	11:52	0	0.0	-
11:53	0.3	0.3	11:53	0	0.0	-
11:54	0.3	0.3	11:54	0	0.0	-
11:55	0.3	0.3	11:55	0	0.0	-
11:56	0.3	0.3	11:56	0	0.0	-
11:57	0.3	0.3	11:57	0	0.0	-
11:58	0.3	0.3	11:58	0	0.0	-
11:59	0.3	0.3	11:59	0	0.0	-
12:00	0.3	0.3	12:00	0	0.0	-
12:01	0.3	0.3	12:01	0	0.0	-
12:02	0.3	0.3	12:02	0	0.0	-
12:03	0.3	0.3	12:03	0	0.0	-
12:04	0.3	0.3	12:04	0	0.0	-
12:05	0.3	0.3	12:05	0	0.0	-
12:06	0.3	0.3	12:06	0	0.0	-
12:07	0.3	0.3	12:07	0	0.0	-
12:08	0.3	0.3	12:08	0	0.0	-
12:09	0.3	0.3	12:09	0	0.0	-
12:10	0.3	0.3	12:10	0	0.0	-
12:11	0.3	0.3	12:11	0	0.0	-
12:12	0.3	0.3	12:12	0	0.0	-
12:13	0.3	0.3	12:13	0	0.0	-
12:14	0.3	0.3	12:14	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
12:15	0.3	0.3	12:15	0	0.0	-
12:16	0.3	0.3	12:16	0	0.0	-
12:17	0.3	0.3	12:17	0	0.0	-
12:18	0.3	0.3	12:18	0	0.0	-
12:19	0.3	0.3	12:19	0	0.0	-
12:20	0.3	0.3	12:20	0	0.0	-
12:21	0.3	0.3	12:21	0	0.0	-
12:22	0.3	0.3	12:22	0	0.0	-
12:23	0.3	0.3	12:23	0	0.0	-
12:24	0.3	0.3	12:24	0	0.0	-
12:25	0.3	0.3	12:25	0	0.0	-
12:26	0.3	0.3	12:26	0	0.0	-
12:27	0.3	0.3	12:27	0	0.0	-
12:28	0.3	0.3	12:28	0	0.0	-
12:29	0.3	0.3	12:29	0	0.0	-
12:30	0.3	0.3	12:30	0	0.0	-
12:31	0.3	0.3	12:31	0	0.0	-
12:32	0.3	0.3	12:32	0	0.0	-
12:33	0.3	0.3	12:33	0	0.0	-
12:34	0.3	0.3	12:34	0	0.0	-
12:35	0.3	0.3	12:35	0	0.0	-
12:36	0.3	0.3	12:36	0	0.0	-
12:37	0.3	0.3	12:37	0	0.0	-
12:38	0.3	0.3	12:38	0	0.0	-
12:39	0.3	0.3	12:39	0	0.0	-
12:40	0.3	0.3	12:40	0	0.0	-
12:41	0.3	0.3	12:41	0	0.0	-
12:42	0.3	0.3	12:42	0	0.0	-
12:43	0.3	0.3	12:43	0	0.0	-
12:44	0.3	0.3	12:44	0	0.0	-
12:45	0.3	0.3	12:45	0	0.0	-
12:46	0.3	0.3	12:46	0	0.0	-
12:47	0.3	0.3	12:47	0	0.0	-
12:48	0.3	0.3	12:48	0	0.0	-
12:49	0.3	0.3	12:49	0	0.0	-
12:50	0.3	0.3	12:50	0	0.0	-
12:51	0.3	0.3	12:51	0	0.0	-
12:52	0.3	0.3	12:52	0	0.0	-
12:53	0.3	0.3	12:53	0	0.0	-
12:54	0.3	0.3	12:54	0	0.0	-
12:55	0.3	0.3	12:55	0	0.0	-
12:56	0.3	0.3	12:56	0	0.0	-
12:57	0.3	0.3	12:57	0	0.0	-
12:58	0.3	0.3	12:58	0	0.0	-
12:59	0.3	0.3	12:59	0	0.0	-
13:00	0.3	0.3	13:00	0	0.0	-
13:01	0.3	0.3	13:01	0	0.0	-
13:02	0.3	0.3	13:02	0	0.0	-
13:03	0.3	0.3	13:03	0	0.0	-
13:04	0.3	0.3	13:04	0	0.0	-
13:05	0.3	0.3	13:05	0	0.0	-
13:06	0.3	0.3	13:06	0	0.0	-
13:07	0.3	0.3	13:07	0	0.0	-
13:08	0.3	0.3	13:08	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
13:09	0.3	0.3	13:09	0	0.0	-
13:10	0.3	0.3	13:10	0	0.0	-
13:11	0.3	0.3	13:11	0	0.0	-
13:12	0.3	0.3	13:12	0	0.0	-
13:13	0.3	0.3	13:13	0	0.0	-
13:14	0.3	0.3	13:14	0	0.0	-
13:15	0.3	0.3	13:15	0	0.0	-
13:16	0.3	0.3	13:16	0	0.0	-
13:17	0.3	0.3	13:17	0	0.0	-
13:18	0.3	0.3	13:18	0	0.0	-
13:19	0.3	0.3	13:19	0	0.0	-
13:20	0.3	0.3	13:20	0	0.0	-
13:21	0.3	0.3	13:21	0	0.0	-
13:22	0.3	0.3	13:22	0	0.0	-
13:23	0.3	0.3	13:23	0	0.0	-
13:24	0.3	0.3	13:24	0.1	0.0	-
13:25	0.3	0.3	13:25	0	0.0	-
13:26	0.3	0.3	13:26	0.1	0.0	-
13:27	0.3	0.3	13:27	0	0.0	-
13:28	0.2	0.3	13:28	0	0.0	-
13:29	0.3	0.3	13:29	0	0.0	-
13:30	0.2	0.3	13:30	0.1	0.0	-
13:31	0.3	0.3	13:31	0.1	0.0	-
13:32	0.3	0.3	13:32	0.1	0.0	-
13:33	0.3	0.3	13:33	0.1	0.0	-
13:34	0.3	0.3	13:34	0.2	0.0	-
13:35	0.2	0.3	13:35	0.2	0.1	-
13:36	0.3	0.3	13:36	0.1	0.1	-
13:37	0.2	0.3	13:37	0.2	0.1	-
13:38	0.3	0.3	13:38	0	0.1	-
13:39	0.2	0.3	13:39	0.1	0.1	-
13:40	0.3	0.3	13:40	0	0.1	-
13:41	0.3	0.3	13:41	0.1	0.1	-
13:42	0.3	0.3	13:42	0.1	0.1	-
13:43	0.3	0.3	13:43	0.1	0.1	-
13:44	0.3	0.3	13:44	0.2	0.1	-
13:45	0.3	0.3	13:45	0.4	0.1	-
13:46	0.3	0.3	13:46	0.2	0.1	-
13:47	0.3	0.3	13:47	0.3	0.1	-
13:48	0.3	0.3	13:48	0.2	0.2	-
13:49	0.3	0.3	13:49	0.1	0.2	-
13:50	0.3	0.3	13:50	0	0.2	-
13:51	0.3	0.3	13:51	0	0.1	-
13:52	0.3	0.3	13:52	0	0.1	-
13:53	0.3	0.3	13:53	0	0.1	-
13:54	0.3	0.3	13:54	0.2	0.1	-
13:55	0.3	0.3	13:55	0.2	0.1	-
13:56	0.3	0.3	13:56	0.2	0.1	-
13:57	0.3	0.3	13:57	0.1	0.1	-
13:58	0.3	0.3	13:58	0	0.1	-
13:59	0.3	0.3	13:59	0	0.1	-
14:00	0.3	0.3	14:00	0.1	0.1	-
14:01	0.3	0.3	14:01	0.1	0.1	-
14:02	0.3	0.3	14:02	0.2	0.1	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
14:03	0.3	0.3	14:03	0.1	0.1	-
14:04	0.3	0.3	14:04	0.1	0.1	-
14:05	0.3	0.3	14:05	0.2	0.1	-
14:06	0.3	0.3	14:06	0.1	0.1	-
14:07	0.3	0.3	14:07	0.2	0.1	-
14:08	0.3	0.3	14:08	0.1	0.1	-
14:09	0.3	0.3	14:09	0.2	0.1	-
14:10	0.3	0.3	14:10	0.2	0.1	-
14:11	0.3	0.3	14:11	0.1	0.1	-
14:12	0.3	0.3	14:12	0.1	0.1	-
14:13	0.3	0.3	14:13	0	0.1	-
14:14	0.3	0.3	14:14	0.1	0.1	-
14:15	0.3	0.3	14:15	0	0.1	-
14:16	0.3	0.3	14:16	0.1	0.1	-
14:17	0.3	0.3	14:17	0	0.1	-
14:18	0.3	0.3	14:18	0.1	0.1	-
14:19	0.3	0.3	14:19	0.1	0.1	-
14:20	0.3	0.3	14:20	0.1	0.1	-
14:21	0.3	0.3	14:21	0	0.1	-
14:22	0.3	0.3	14:22	0	0.1	-
14:23	0.3	0.3	14:23	0	0.1	-
14:24	0.4	0.3	14:24	0.1	0.1	-
14:25	0.3	0.3	14:25	0.1	0.1	-
14:26	0.3	0.3	14:26	0.1	0.1	-
14:27	0.3	0.3	14:27	0.1	0.1	-
14:28	0.3	0.3	14:28	0.1	0.1	-
14:29	0.3	0.3	14:29	0.1	0.1	-
14:30	0.3	0.3	14:30	0.2	0.1	-
14:31	0.3	0.3	14:31	0.1	0.1	-
14:32	0.3	0.3	14:32	0.1	0.1	-
14:33	0.3	0.3	14:33	0.2	0.1	-
14:34	0.3	0.3	14:34	0.2	0.1	-
14:35	0.3	0.3	14:35	0.2	0.1	-
14:36	0.3	0.3	14:36	0.1	0.1	-
14:37	0.3	0.3	14:37	0.1	0.1	-
14:38	0.3	0.3	14:38	0.2	0.1	-
14:39	0.3	0.3	14:39	0.1	0.1	-
14:40	0.3	0.3	14:40	0.1	0.1	-
14:41	0.3	0.3	14:41	0.1	0.1	-
14:42	0.3	0.3	14:42	0.1	0.1	-
14:43	0.3	0.3	14:43	0.2	0.1	-
14:44	0.3	0.3	14:44	0.2	0.1	-
14:45	0.3	0.3	14:45	0.2	0.1	-
14:46	0.3	0.3	14:46	0.2	0.1	-
14:47	0.3	0.3	14:47	0.3	0.2	-
14:48	0.3	0.3	14:48	0.2	0.2	-
14:49	0.3	0.3	14:49	0.2	0.2	-
14:50	0.3	0.3	14:50	0.2	0.2	-
14:51	0.3	0.3	14:51	0.3	0.2	-
14:52	0.3	0.3	14:52	0.3	0.2	-
14:53	0.3	0.3	14:53	0.4	0.2	-
14:54	0.3	0.3	14:54	0.4	0.2	-
14:55	0.3	0.3	14:55	0.4	0.2	-
14:56	0.3	0.3	14:56	0.5	0.2	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
14:57	0.3	0.3	14:57	0.4	0.3	-
14:58	0.3	0.3	14:58	0.4	0.3	-
14:59	0.3	0.3	14:59	0.5	0.3	-
15:00	0.3	0.3	15:00	0.4	0.3	-
15:01	0.3	0.3	15:01	0.4	0.3	-
15:02	0.3	0.3	15:02	0.5	0.4	-
15:03	0.3	0.3	15:03	0.4	0.4	-

Date: 5/7/2020
Observer: Reid Balkind

Particulate Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.007	0.015
Maximum 15min Average	0.012	0.058
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.006	0.014
Maximum 1min Reading	0.023	0.167

Organic Vapor Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.4	0.0
Maximum 15min Average	0.9	0.0
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.3	0.0
Maximum 1min Reading	1.2	0.0

All reported particulate concentrations are in mg/m³ or milligrams per cubic meter and all reported organic vapor concentrations are in ppm or parts per million, unless specified otherwise.

May 7, 2020						
Number of Instances Where Downwind Particulates Exceeds Upwind Particulate + .150 mg/m ³ =						0
Number of Comparable Data Points =						256
PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:59	0.012		7:59			
8:00	0.011		8:00			
8:01	0.01		8:01	0.015		
8:02	0.01		8:02	0.014		
8:03	0.011		8:03	0.015		
8:04	0.011		8:04	0.015		
8:05	0.011		8:05	0.021		
8:06	0.01		8:06	0.015		
8:07	0.014		8:07	0.018		
8:08	0.01		8:08	0.017		
8:09	0.01		8:09	0.015		
8:10	0.01		8:10	0.014		
8:11	0.011		8:11	0.016		
8:12	0.013		8:12	0.018		
8:13	0.011	0.009	8:13	0.019	0.026	-
8:14	0.013	0.010	8:14	0.023	0.016	-
8:15	0.011	0.010	8:15	0.018	0.016	-
8:16	0.009	0.009	8:16	0.016	0.016	-
8:17	0.009	0.010	8:17	0.014	0.015	-
8:18	0.01	0.010	8:18	0.015	0.016	-
8:19	0.009	0.010	8:19	0.015	0.016	-
8:20	0.01	0.010	8:20	0.014	0.016	-
8:21	0.009	0.010	8:21	0.016	0.016	-
8:22	0.009	0.010	8:22	0.016	0.016	-
8:23	0.01	0.010	8:23	0.015	0.016	-
8:24	0.011	0.010	8:24	0.018	0.016	-
8:25	0.009	0.009	8:25	0.019	0.016	-
8:26	0.01	0.009	8:26	0.02	0.016	-
8:27	0.009	0.009	8:27	0.014	0.016	-
8:28	0.01	0.009	8:28	0.014	0.016	-
8:29	0.009	0.009	8:29	0.014	0.017	-
8:30	0.009	0.009	8:30	0.014	0.017	-
8:31	0.01	0.009	8:31	0.014	0.017	-
8:32	0.01	0.009	8:32	0.015	0.018	-
8:33	0.011	0.009	8:33	0.017	0.018	-
8:34	0.01	0.009	8:34	0.018	0.018	-
8:35	0.009	0.009	8:35	0.018	0.018	-
8:36	0.009	0.009	8:36	0.019	0.018	-
8:37	0.009	0.009	8:37	0.014	0.018	-
8:38	0.008	0.009	8:38	0.015	0.019	-
8:39	0.009	0.009	8:39	0.016	0.019	-
8:40	0.01	0.009	8:40	0.021	0.019	-
8:41	0.009	0.009	8:41	0.018	0.019	-
8:42	0.008	0.009	8:42	0.016	0.020	-
8:43	0.009	0.009	8:43	0.021	0.020	-
8:44	0.01	0.009	8:44	0.019	0.020	-
8:45	0.009	0.009	8:45	0.018	0.020	-
8:46	0.009	0.009	8:46	0.019	0.019	-
8:47	0.008	0.009	8:47	0.018	0.019	-
8:48	0.009	0.009	8:48	0.019	0.019	-
8:49	0.009	0.009	8:49	0.017	0.019	-
8:50	0.009	0.009	8:50	0.017	0.019	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
8:51	0.01	0.009	8:51	0.023	0.019	-
8:52	0.009	0.009	8:52	0.021	0.019	-
8:53	0.009	0.009	8:53	0.017	0.018	-
8:54	0.009	0.009	8:54	0.016	0.018	-
8:55	0.009	0.009	8:55	0.019	0.019	-
8:56	0.01	0.009	8:56	0.034	0.019	-
8:57	0.009	0.009	8:57	0.019	0.019	-
8:58	0.009	0.009	8:58	0.019	0.019	-
8:59	0.009	0.009	8:59	0.018	0.019	-
9:00	0.009	0.009	9:00	0.016	0.020	-
9:01	0.01	0.009	9:01	0.018	0.021	-
9:02	0.01	0.009	9:02	0.017	0.023	-
9:03	0.009	0.009	9:03	0.016	0.023	-
9:04	0.01	0.009	9:04	0.016	0.024	-
9:05	0.01	0.009	9:05	0.018	0.025	-
9:06	0.01	0.009	9:06	0.017	0.025	-
9:07	0.009	0.009	9:07	0.015	0.025	-
9:08	0.009	0.009	9:08	0.015	0.026	-
9:09	0.009	0.009	9:09	0.021	0.026	-
9:10	0.008	0.009	9:10	0.022	0.027	-
9:11	0.011	0.009	9:11	0.036	0.026	-
9:12	0.008	0.009	9:12	0.018	0.025	-
9:13	0.008	0.009	9:13	0.028	0.026	-
9:14	0.01	0.009	9:14	0.031	0.025	-
9:15	0.009	0.009	9:15	0.023	0.025	-
9:16	0.008	0.009	9:16	0.045	0.025	-
9:17	0.008	0.009	9:17	0.03	0.023	-
9:18	0.009	0.009	9:18	0.024	0.023	-
9:19	0.01	0.009	9:19	0.025	0.023	-
9:20	0.008	0.009	9:20	0.021	0.022	-
9:21	0.009	0.009	9:21	0.024	0.022	-
9:22	0.01	0.009	9:22	0.022	0.022	-
9:23	0.009	0.008	9:23	0.025	0.021	-
9:24	0.01	0.008	9:24	0.024	0.021	-
9:25	0.008	0.008	9:25	0.019	0.020	-
9:26	0.008	0.008	9:26	0.021	0.020	-
9:27	0.01	0.008	9:27	0.022	0.020	-
9:28	0.011	0.008	9:28	0.021	0.020	-
9:29	0.008	0.008	9:29	0.028	0.020	-
9:30	0.008	0.008	9:30	0.023	0.020	-
9:31	0.008	0.008	9:31	0.021	0.019	-
9:32	0.008	0.008	9:32	0.022	0.019	-
9:33	0.008	0.008	9:33	0.02	0.019	-
9:34	0.007	0.008	9:34	0.019	0.019	-
9:35	0.008	0.008	9:35	0.02	0.019	-
9:36	0.008	0.008	9:36	0.018	0.018	-
9:37	0.008	0.008	9:37	0.018	0.018	-
9:38	0.009	0.008	9:38	0.017	0.018	-
9:39	0.008	0.008	9:39	0.015	0.019	-
9:40	0.008	0.009	9:40	0.016	0.019	-
9:41	0.008	0.009	9:41	0.019	0.020	-
9:42	0.009	0.009	9:42	0.023	0.021	-
9:43	0.009	0.008	9:43	0.021	0.022	-
9:44	0.009	0.008	9:44	0.021	0.023	-
9:45	0.01	0.008	9:45	0.018	0.023	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
9:46	0.009	0.008	9:46	0.019	0.023	-
9:47	0.008	0.008	9:47	0.02	0.023	-
9:48	0.008	0.008	9:48	0.016	0.023	-
9:49	0.007	0.008	9:49	0.017	0.023	-
9:50	0.008	0.008	9:50	0.018	0.023	-
9:51	0.009	0.008	9:51	0.018	0.023	-
9:52	0.008	0.008	9:52	0.019	0.023	-
9:53	0.009	0.008	9:53	0.022	0.023	-
9:54	0.009	0.008	9:54	0.023	0.023	-
9:55	0.008	0.008	9:55	0.022	0.022	-
9:56	0.008	0.008	9:56	0.039	0.022	-
9:57	0.007	0.008	9:57	0.042	0.021	-
9:58	0.007	0.008	9:58	0.033	0.019	-
9:59	0.008	0.008	9:59	0.024	0.018	-
10:00	0.008	0.008	10:00	0.017	0.018	-
10:01	0.008	0.008	10:01	0.017	0.018	-
10:02	0.009	0.008	10:02	0.018	0.018	-
10:03	0.008	0.008	10:03	0.018	0.019	-
10:04	0.007	0.008	10:04	0.017	0.019	-
10:05	0.007	0.008	10:05	0.017	0.019	-
10:06	0.008	0.008	10:06	0.018	0.019	-
10:07	0.008	0.007	10:07	0.018	0.019	-
10:08	0.007	0.007	10:08	0.018	0.020	-
10:09	0.008	0.007	10:09	0.017	0.020	-
10:10	0.008	0.007	10:10	0.018	0.020	-
10:11	0.008	0.007	10:11	0.019	0.020	-
10:12	0.007	0.007	10:12	0.017	0.020	-
10:13	0.007	0.007	10:13	0.018	0.021	-
10:14	0.008	0.007	10:14	0.019	0.021	-
10:15	0.008	0.007	10:15	0.022	0.021	-
10:16	0.008	0.007	10:16	0.022	0.021	-
10:17	0.007	0.007	10:17	0.02	0.021	-
10:18	0.007	0.007	10:18	0.02	0.021	-
10:19	0.007	0.007	10:19	0.02	0.021	-
10:20	0.007	0.007	10:20	0.022	0.024	-
10:21	0.007	0.008	10:21	0.021	0.029	-
10:22	0.007	0.008	10:22	0.02	0.031	-
10:23	0.007	0.008	10:23	0.021	0.034	-
10:24	0.007	0.008	10:24	0.023	0.037	-
10:25	0.007	0.008	10:25	0.021	0.039	-
10:26	0.007	0.008	10:26	0.021	0.041	-
10:27	0.008	0.008	10:27	0.021	0.049	-
10:28	0.007	0.008	10:28	0.02	0.052	-
10:29	0.008	0.008	10:29	0.021	0.054	-
10:30	0.007	0.008	10:30	0.022	0.055	-
10:31	0.007	0.008	10:31	0.022	0.055	-
10:32	0.008	0.008	10:32	0.022	0.057	-
10:33	0.009	0.008	10:33	0.022	0.058	-
10:34	0.008	0.008	10:34	0.054	0.058	-
10:35	0.009	0.008	10:35	0.102	0.057	-
10:36	0.008	0.008	10:36	0.059	0.052	-
10:37	0.008	0.008	10:37	0.055	0.050	-
10:38	0.009	0.008	10:38	0.069	0.048	-
10:39	0.009	0.008	10:39	0.048	0.045	-
10:40	0.009	0.008	10:40	0.058	0.044	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
10:41	0.009	0.008	10:41	0.145	0.041	-
10:42	0.01	0.008	10:42	0.062	0.034	-
10:43	0.009	0.008	10:43	0.047	0.033	-
10:44	0.007	0.008	10:44	0.032	0.032	-
10:45	0.007	0.009	10:45	0.031	0.032	-
10:46	0.008	0.009	10:46	0.046	0.032	-
10:47	0.007	0.009	10:47	0.035	0.031	-
10:48	0.007	0.009	10:48	0.027	0.031	-
10:49	0.007	0.009	10:49	0.037	0.031	-
10:50	0.007	0.010	10:50	0.033	0.030	-
10:51	0.009	0.010	10:51	0.03	0.030	-
10:52	0.008	0.010	10:52	0.025	0.029	-
10:53	0.009	0.010	10:53	0.025	0.029	-
10:54	0.008	0.010	10:54	0.023	0.029	-
10:55	0.007	0.010	10:55	0.024	0.030	-
10:56	0.014	0.010	10:56	0.036	0.030	-
10:57	0.011	0.010	10:57	0.037	0.030	-
10:58	0.011	0.009	10:58	0.032	0.029	-
10:59	0.01	0.009	10:59	0.035	0.038	-
11:00	0.01	0.009	11:00	0.035	0.039	-
11:01	0.01	0.009	11:01	0.033	0.039	-
11:02	0.01	0.009	11:02	0.031	0.041	-
11:03	0.01	0.009	11:03	0.027	0.041	-
11:04	0.01	0.009	11:04	0.03	0.041	-
11:05	0.009	0.009	11:05	0.024	0.041	-
11:06	0.009	0.009	11:06	0.025	0.043	-
11:07	0.008	0.009	11:07	0.025	0.043	-
11:08	0.008	0.009	11:08	0.023	0.044	-
11:09	0.009	0.009	11:09	0.028	0.044	-
11:10	0.009	0.009	11:10	0.026	0.044	-
11:11	0.009	0.009	11:11	0.036	0.045	-
11:12	0.007	0.009	11:12	0.022	0.045	-
11:13	0.011	0.009	11:13	0.167	0.046	-
11:14	0.009	0.008	11:14	0.052	0.037	-
11:15	0.008	0.008	11:15	0.034	0.035	-
11:16	0.008	0.008	11:16	0.06	0.035	-
11:17	0.009	0.008	11:17	0.031	0.034	-
11:18	0.009	0.008	11:18	0.026	0.035	-
11:19	0.008	0.008	11:19	0.038	0.036	-
11:20	0.011	0.009	11:20	0.049	0.036	-
11:21	0.009	0.008	11:21	0.034	0.035	-
11:22	0.01	0.009	11:22	0.037	0.038	-
11:23	0.008	0.009	11:23	0.025	0.039	-
11:24	0.008	0.009	11:24	0.026	0.040	-
11:25	0.007	0.009	11:25	0.043	0.041	-
11:26	0.008	0.009	11:26	0.036	0.040	-
11:27	0.007	0.009	11:27	0.028	0.041	-
11:28	0.007	0.010	11:28	0.033	0.041	-
11:29	0.008	0.010	11:29	0.031	0.041	-
11:30	0.007	0.010	11:30	0.029	0.040	-
11:31	0.009	0.010	11:31	0.045	0.040	-
11:32	0.011	0.010	11:32	0.05	0.038	-
11:33	0.008	0.010	11:33	0.03	0.037	-
11:34	0.011	0.010	11:34	0.041	0.036	-
11:35	0.009	0.010	11:35	0.038	0.035	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
11:36	0.011	0.010	11:36	0.079	0.034	-
11:37	0.011	0.009	11:37	0.053	0.031	-
11:38	0.009	0.009	11:38	0.039	0.029	-
11:39	0.011	0.009	11:39	0.034	0.028	-
11:40	0.011	0.009	11:40	0.04	0.027	-
11:41	0.012	0.009	11:41	0.038	0.026	-
11:42	0.01	0.009	11:42	0.034	0.025	-
11:43	0.011	0.009	11:43	0.027	0.024	-
11:44	0.01	0.009	11:44	0.022	0.024	-
11:45	0.007	0.008	11:45	0.026	0.030	-
11:46	0.008	0.009	11:46	0.025	0.030	-
11:47	0.008	0.009	11:47	0.024	0.030	-
11:48	0.009	0.009	11:48	0.023	0.030	-
11:49	0.007	0.009	11:49	0.023	0.030	-
11:50	0.008	0.009	11:50	0.025	0.030	-
11:51	0.01	0.009	11:51	0.025	0.030	-
11:52	0.009	0.009	11:52	0.023	0.030	-
11:53	0.011	0.009	11:53	0.025	0.030	-
11:54	0.008	0.009	11:54	0.027	0.030	-
11:55	0.007	0.009	11:55	0.023	0.030	-
11:56	0.01	0.009	11:56	0.024	0.030	-
11:57	0.008	0.009	11:57	0.024	0.030	-
11:58	0.009	0.009	11:58	0.026	0.030	-
11:59	0.008	0.009	11:59	0.104	0.030	-
12:00	0.009	0.009	12:00	0.024	0.024	-
12:01	0.008	0.009	12:01	0.027	0.026	-
12:02	0.009	0.009	12:02	0.025	0.026	-
12:03	0.013	0.009	12:03	0.026	0.027	-
12:04	0.009	0.009	12:04	0.022	0.026	-
12:05	0.008	0.009	12:05	0.026	0.027	-
12:06	0.007	0.009	12:06	0.022	0.027	-
12:07	0.007	0.009	12:07	0.024	0.027	-
12:08	0.01	0.009	12:08	0.027	0.027	-
12:09	0.008	0.009	12:09	0.028	0.027	-
12:10	0.007	0.008	12:10	0.021	0.027	-
12:11	0.009	0.008	12:11	0.023	0.027	-
12:12	0.013	0.008	12:12	0.024	0.027	-
12:13	0.011	0.008	12:13	0.023	0.027	-
12:14	0.007	0.008	12:14	0.023	0.027	-
12:15	0.009	0.008	12:15	0.042	0.027	-
12:16	0.011	0.008	12:16	0.039	0.025	-
12:17	0.007	0.008	12:17	0.028	0.025	-
12:18	0.009	0.008	12:18	0.025	0.024	-
12:19	0.008	0.008	12:19	0.027	0.024	-
12:20	0.007	0.008	12:20	0.031	0.024	-
12:21	0.008	0.008	12:21	0.025	0.024	-
12:22	0.007	0.008	12:22	0.025	0.023	-
12:23	0.007	0.008	12:23	0.023	0.023	-
12:24	0.006	0.008	12:24	0.022	0.023	-
12:25	0.007	0.008	12:25	0.022	0.023	-
12:26	0.008	0.008	12:26	0.023	0.024	-
12:27	0.007	0.008	12:27	0.023	0.024	-
12:28	0.007	0.008	12:28	0.024	0.023	-
12:29	0.008	0.008	12:29	0.023	0.023	-
12:30	0.009	0.008	12:30	0.022	0.023	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
12:31	0.009	0.008	12:31	0.025	0.023	-
12:32	0.01	0.008	12:32	0.027	0.024	-
12:33	0.008	0.008	12:33	0.023	0.024	-
12:34	0.007	0.008	12:34	0.022	0.024	-
12:35	0.008	0.008	12:35	0.024	0.024	-
12:36	0.007	0.008	12:36	0.023	0.024	-
12:37	0.007	0.008	12:37	0.023	0.024	-
12:38	0.008	0.008	12:38	0.026	0.024	-
12:39	0.008	0.008	12:39	0.022	0.023	-
12:40	0.008	0.008	12:40	0.024	0.023	-
12:41	0.007	0.008	12:41	0.023	0.024	-
12:42	0.007	0.008	12:42	0.021	0.024	-
12:43	0.007	0.008	12:43	0.021	0.024	-
12:44	0.008	0.008	12:44	0.021	0.024	-
12:45	0.008	0.008	12:45	0.022	0.025	-
12:46	0.008	0.008	12:46	0.036	0.025	-
12:47	0.008	0.008	12:47	0.023	0.024	-
12:48	0.01	0.008	12:48	0.024	0.024	-
12:49	0.009	0.008	12:49	0.024	0.024	-
12:50	0.007	0.008	12:50	0.022	0.024	-
12:51	0.007	0.008	12:51	0.023	0.024	-
12:52	0.008	0.008	12:52	0.022	0.024	-
12:53	0.007	0.008	12:53	0.021	0.024	-
12:54	0.007	0.008	12:54	0.024	0.025	-
12:55	0.008	0.008	12:55	0.026	0.024	-
12:56	0.008	0.008	12:56	0.023	0.024	-
12:57	0.008	0.008	12:57	0.024	0.024	-
12:58	0.008	0.008	12:58	0.023	0.024	-
12:59	0.01	0.008	12:59	0.031	0.024	-
13:00	0.008	0.008	13:00	0.027	0.023	-
13:01	0.009	0.008	13:01	0.024	0.023	-
13:02	0.008	0.008	13:02	0.025	0.023	-
13:03	0.009	0.008	13:03	0.025	0.023	-
13:04	0.009	0.008	13:04	0.025	0.023	-
13:05	0.006	0.009	13:05	0.023	0.023	-
13:06	0.006	0.010	13:06	0.022	0.023	-
13:07	0.007	0.010	13:07	0.022	0.023	-
13:08	0.009	0.010	13:08	0.024	0.024	-
13:09	0.008	0.010	13:09	0.022	0.024	-
13:10	0.009	0.010	13:10	0.022	0.024	-
13:11	0.008	0.010	13:11	0.024	0.024	-
13:12	0.007	0.010	13:12	0.021	0.024	-
13:13	0.007	0.010	13:13	0.023	0.024	-
13:14	0.007	0.010	13:14	0.023	0.024	-
13:15	0.013	0.010	13:15	0.023	0.024	-
13:16	0.008	0.010	13:16	0.025	0.024	-
13:17	0.008	0.011	13:17	0.025	0.024	-
13:18	0.008	0.011	13:18	0.025	0.024	-
13:19	0.023	0.011	13:19	0.025	0.024	-
13:20	0.015	0.010	13:20	0.023	0.024	-
13:21	0.01	0.010	13:21	0.024	0.024	-
13:22	0.01	0.009	13:22	0.024	0.024	-
13:23	0.009	0.009	13:23	0.024	0.024	-
13:24	0.008	0.009	13:24	0.024	0.024	-
13:25	0.009	0.010	13:25	0.026	0.024	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
13:26	0.01	0.010	13:26	0.025	0.024	-
13:27	0.008	0.010	13:27	0.023	0.024	-
13:28	0.009	0.011	13:28	0.022	0.024	-
13:29	0.009	0.011	13:29	0.022	0.024	-
13:30	0.012	0.011	13:30	0.027	0.024	-
13:31	0.011	0.012	13:31	0.024	0.024	-
13:32	0.01	0.012	13:32	0.024	0.024	-
13:33	0.009	0.012	13:33	0.024	0.024	-
13:34	0.009	0.012	13:34	0.024	0.024	-
13:35	0.01	0.012	13:35	0.023	0.024	-
13:36	0.008	0.012	13:36	0.023	0.024	-
13:37	0.009	0.012	13:37	0.024	0.024	-
13:38	0.011	0.012	13:38	0.024	0.024	-
13:39	0.01	0.012	13:39	0.023	0.024	-
13:40	0.01	0.012	13:40	0.024	0.024	-
13:41	0.014	0.013	13:41	0.023	0.024	-
13:42	0.018	0.012	13:42	0.023	0.024	-
13:43	0.014	0.012	13:43	0.023	0.024	-
13:44	0.012	0.011	13:44	0.028	0.024	-
13:45	0.02	0.011	13:45	0.022	0.024	-
13:46	0.017	0.011	13:46	0.025	0.024	-
13:47	0.01	0.010	13:47	0.025	0.024	-
13:48	0.008	0.010	13:48	0.024	0.024	-
13:49	0.008	0.010	13:49	0.026	0.024	-
13:50	0.008	0.010	13:50	0.022	0.024	-
13:51	0.009	0.010	13:51	0.022	0.024	-
13:52	0.009	0.010	13:52	0.025	0.024	-
13:53	0.011	0.010	13:53	0.026	0.024	-
13:54	0.014	0.010	13:54	0.024	0.024	-
13:55	0.018	0.009	13:55	0.026	0.024	-
13:56	0.011	0.009	13:56	0.023	0.024	-
13:57	0.009	0.009	13:57	0.024	0.024	-
13:58	0.008	0.009	13:58	0.023	0.025	-
13:59	0.008	0.009	13:59	0.022	0.025	-
14:00	0.011	0.009	14:00	0.026	0.025	-
14:01	0.008	0.008	14:01	0.024	0.025	-
14:02	0.009	0.009	14:02	0.023	0.025	-
14:03	0.008	0.009	14:03	0.024	0.025	-
14:04	0.008	0.009	14:04	0.026	0.025	-
14:05	0.009	0.008	14:05	0.024	0.025	-
14:06	0.008	0.008	14:06	0.025	0.025	-
14:07	0.008	0.008	14:07	0.022	0.024	-
14:08	0.01	0.008	14:08	0.025	0.024	-
14:09	0.009	0.008	14:09	0.026	0.024	-
14:10	0.008	0.008	14:10	0.025	0.024	-
14:11	0.009	0.008	14:11	0.025	0.024	-
14:12	0.009	0.008	14:12	0.029	0.024	-
14:13	0.008	0.008	14:13	0.024	0.023	-
14:14	0.008	0.008	14:14	0.025	0.023	-
14:15	0.008	0.008	14:15	0.027	0.023	-
14:16	0.009	0.008	14:16	0.026	0.023	-
14:17	0.009	0.008	14:17	0.024	0.023	-
14:18	0.008	0.008	14:18	0.022	0.023	-
14:19	0.007	0.008	14:19	0.021	0.023	-
14:20	0.007	0.008	14:20	0.022	0.023	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
14:21	0.008	0.008	14:21	0.023	0.023	-
14:22	0.008	0.008	14:22	0.022	0.023	-
14:23	0.007	0.008	14:23	0.022	0.023	-
14:24	0.008	0.009	14:24	0.022	0.024	-
14:25	0.008	0.009	14:25	0.022	0.024	-
14:26	0.008	0.009	14:26	0.023	0.024	-
14:27	0.008	0.009	14:27	0.023	0.025	-
14:28	0.009	0.009	14:28	0.022	0.024	-
14:29	0.009	0.009	14:29	0.026	0.024	-
14:30	0.008	0.009	14:30	0.024	0.024	-
14:31	0.007	0.008	14:31	0.024	0.024	-
14:32	0.008	0.008	14:32	0.024	0.024	-
14:33	0.01	0.008	14:33	0.022	0.024	-
14:34	0.008	0.008	14:34	0.022	0.024	-
14:35	0.01	0.008	14:35	0.024	0.024	-
14:36	0.008	0.008	14:36	0.023	0.024	-
14:37	0.01	0.008	14:37	0.028	0.024	-
14:38	0.01	0.008	14:38	0.028	0.024	-
14:39	0.011	0.008	14:39	0.026	0.024	-
14:40	0.007	0.008	14:40	0.026	0.023	-
14:41	0.008	0.008	14:41	0.026	0.023	-
14:42	0.008	0.008	14:42	0.021	0.023	-
14:43	0.007	0.008	14:43	0.022	0.023	-
14:44	0.008	0.008	14:44	0.023	0.023	-
14:45	0.007	0.008	14:45	0.022	0.024	-
14:46	0.007	0.008	14:46	0.022	0.024	-
14:47	0.008	0.008	14:47	0.021	0.024	-
14:48	0.008	0.008	14:48	0.028	0.024	-
14:49			14:49	0.023	0.024	
14:50			14:50	0.023	0.024	
14:51			14:51			

May 7, 2020						
Number of Instances Where Downwind VOCs Exceeds Upwind VOCs + 5ppm =						0
Number of Comparable Data Points =						348
PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:28	0.4		7:28			
7:29	0.4		7:29			
7:30	0.5		7:30			
7:31	0.5		7:31			
7:32	0.5		7:32			
7:33	0.5		7:33			
7:34	0.5		7:34	0		
7:35	0.5		7:35	0		
7:36	0.5		7:36	0		
7:37	0.5		7:37	0		
7:38	0.5		7:38	0		
7:39	0.5		7:39	0		
7:40	0.5		7:40	0		
7:41	0.5		7:41	0		
7:42	0.6	0.5	7:42	0		
7:43	0.7	0.5	7:43	0	0.0	-
7:44	0.7	0.5	7:44	0	0.0	-
7:45	0.6	0.5	7:45	0	0.0	-
7:46	0.7	0.6	7:46	0	0.0	-
7:47	0.7	0.6	7:47	0	0.0	-
7:48	0.7	0.6	7:48	0	0.0	-
7:49	0.8	0.6	7:49	0	0.0	-
7:50	1.2	0.6	7:50	0	0.0	-
7:51	0.8	0.7	7:51	0	0.0	-
7:52	0.6	0.7	7:52	0	0.0	-
7:53	0.6	0.7	7:53	0	0.0	-
7:54	0.6	0.7	7:54	0	0.0	-
7:55	0.6	0.7	7:55	0	0.0	-
7:56	0.7	0.7	7:56	0	0.0	-
7:57	0.6	0.7	7:57	0	0.0	-
7:58	0.6	0.7	7:58	0	0.0	-
7:59	0.6	0.7	7:59	0	0.0	-
8:00	0.6	0.7	8:00	0	0.0	-
8:01	0.6	0.7	8:01	0	0.0	-
8:02	0.6	0.7	8:02	0	0.0	-
8:03	0.6	0.7	8:03	0	0.0	-
8:04	0.6	0.7	8:04	0	0.0	-
8:05	0.6	0.6	8:05	0	0.0	-
8:06	0.6	0.6	8:06	0	0.0	-
8:07	0.6	0.6	8:07	0	0.0	-
8:08	0.6	0.6	8:08	0	0.0	-
8:09	0.7	0.6	8:09	0	0.0	-
8:10	0.6	0.6	8:10	0	0.0	-
8:11	0.6	0.6	8:11	0	0.0	-
8:12	0.6	0.6	8:12	0	0.0	-
8:13	0.6	0.6	8:13	0	0.0	-
8:14	0.6	0.6	8:14	0	0.0	-
8:15	0.6	0.6	8:15	0	0.0	-
8:16	0.6	0.6	8:16	0	0.0	-
8:17	0.6	0.6	8:17	0	0.0	-
8:18	0.6	0.6	8:18	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
8:19	0.6	0.6	8:19	0	0.0	-
8:20	0.6	0.6	8:20	0	0.0	-
8:21	0.6	0.6	8:21	0	0.0	-
8:22	0.6	0.6	8:22	0	0.0	-
8:23	0.6	0.6	8:23	0	0.0	-
8:24	0.6	0.6	8:24	0	0.0	-
8:25	0.6	0.6	8:25	0	0.0	-
8:26	0.5	0.6	8:26	0	0.0	-
8:27	0.5	0.6	8:27	0	0.0	-
8:28	0.5	0.6	8:28	0	0.0	-
8:29	0.5	0.6	8:29	0	0.0	-
8:30	0.5	0.6	8:30	0	0.0	-
8:31	0.5	0.6	8:31	0	0.0	-
8:32	0.5	0.6	8:32	0	0.0	-
8:33	0.5	0.5	8:33	0	0.0	-
8:34	0.6	0.5	8:34	0	0.0	-
8:35	0.6	0.5	8:35	0	0.0	-
8:36	0.6	0.5	8:36	0	0.0	-
8:37	0.6	0.5	8:37	0	0.0	-
8:38	0.6	0.5	8:38	0	0.0	-
8:39	0.5	0.5	8:39	0	0.0	-
8:40	0.6	0.5	8:40	0	0.0	-
8:41	0.5	0.5	8:41	0	0.0	-
8:42	0.5	0.5	8:42	0	0.0	-
8:43	0.5	0.5	8:43	0	0.0	-
8:44	0.5	0.5	8:44	0	0.0	-
8:45	0.5	0.5	8:45	0	0.0	-
8:46	0.5	0.5	8:46	0	0.0	-
8:47	0.5	0.5	8:47	0	0.0	-
8:48	0.5	0.5	8:48	0	0.0	-
8:49	0.5	0.5	8:49	0	0.0	-
8:50	0.5	0.5	8:50	0	0.0	-
8:51	0.5	0.5	8:51	0	0.0	-
8:52	0.5	0.5	8:52	0	0.0	-
8:53	0.4	0.5	8:53	0	0.0	-
8:54	0.4	0.5	8:54	0	0.0	-
8:55	0.5	0.5	8:55	0	0.0	-
8:56	0.4	0.5	8:56	0	0.0	-
8:57	0.4	0.5	8:57	0	0.0	-
8:58	0.4	0.5	8:58	0	0.0	-
8:59	0.4	0.5	8:59	0	0.0	-
9:00	0.4	0.5	9:00	0	0.0	-
9:01	0.5	0.5	9:01	0	0.0	-
9:02	0.5	0.5	9:02	0	0.0	-
9:03	0.4	0.4	9:03	0	0.0	-
9:04	0.5	0.4	9:04	0	0.0	-
9:05	0.5	0.4	9:05	0	0.0	-
9:06	0.5	0.4	9:06	0	0.0	-
9:07	0.5	0.4	9:07	0	0.0	-
9:08	0.5	0.5	9:08	0	0.0	-
9:09	0.5	0.5	9:09	0	0.0	-
9:10	0.5	0.5	9:10	0	0.0	-
9:11	0.5	0.5	9:11	0	0.0	-
9:12	0.4	0.5	9:12	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
9:13	0.4	0.5	9:13	0	0.0	-
9:14	0.4	0.5	9:14	0	0.0	-
9:15	0.3	0.5	9:15	0	0.0	-
9:16	0.4	0.5	9:16	0	0.0	-
9:17	0.3	0.4	9:17	0	0.0	-
9:18	0.4	0.4	9:18	0	0.0	-
9:19	0.4	0.4	9:19	0	0.0	-
9:20	0.3	0.4	9:20	0	0.0	-
9:21	0.3	0.4	9:21	0	0.0	-
9:22	0.4	0.4	9:22	0	0.0	-
9:23	0.3	0.4	9:23	0	0.0	-
9:24	0.4	0.4	9:24	0	0.0	-
9:25	0.4	0.4	9:25	0	0.0	-
9:26	0.4	0.4	9:26	0	0.0	-
9:27	0.4	0.4	9:27	0	0.0	-
9:28	0.4	0.4	9:28	0	0.0	-
9:29	0.5	0.4	9:29	0	0.0	-
9:30	0.4	0.4	9:30	0	0.0	-
9:31	0.4	0.4	9:31	0	0.0	-
9:32	0.4	0.4	9:32	0	0.0	-
9:33	0.4	0.4	9:33	0	0.0	-
9:34	0.4	0.4	9:34	0	0.0	-
9:35	0.5	0.4	9:35	0	0.0	-
9:36	0.6	0.4	9:36	0	0.0	-
9:37	0.6	0.4	9:37	0	0.0	-
9:38	0.6	0.5	9:38	0	0.0	-
9:39	0.6	0.5	9:39	0	0.0	-
9:40	0.6	0.5	9:40	0	0.0	-
9:41	0.6	0.5	9:41	0	0.0	-
9:42	0.6	0.5	9:42	0	0.0	-
9:43	0.7	0.5	9:43	0	0.0	-
9:44	0.7	0.5	9:44	0	0.0	-
9:45	0.6	0.6	9:45	0	0.0	-
9:46	0.7	0.6	9:46	0	0.0	-
9:47	0.7	0.6	9:47	0	0.0	-
9:48	0.7	0.6	9:48	0	0.0	-
9:49	0.7	0.6	9:49	0	0.0	-
9:50	0.7	0.6	9:50	0	0.0	-
9:51	0.7	0.7	9:51	0	0.0	-
9:52	0.7	0.7	9:52	0	0.0	-
9:53	0.7	0.7	9:53	0	0.0	-
9:54	0.8	0.7	9:54	0	0.0	-
9:55	0.8	0.7	9:55	0	0.0	-
9:56	0.7	0.7	9:56	0	0.0	-
9:57	0.7	0.7	9:57	0	0.0	-
9:58	0.6	0.7	9:58	0	0.0	-
9:59	0.6	0.7	9:59	0	0.0	-
10:00	0.6	0.7	10:00	0	0.0	-
10:01	0.7	0.7	10:01	0	0.0	-
10:02	0.7	0.7	10:02	0	0.0	-
10:03	0.6	0.7	10:03	0	0.0	-
10:04	0.7	0.7	10:04	0	0.0	-
10:05	0.7	0.7	10:05	0	0.0	-
10:06	0.7	0.7	10:06	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
10:07	0.7	0.7	10:07	0	0.0	-
10:08	0.7	0.7	10:08	0	0.0	-
10:09	0.7	0.7	10:09	0	0.0	-
10:10	0.7	0.7	10:10	0	0.0	-
10:11	0.7	0.7	10:11	0	0.0	-
10:12	0.7	0.7	10:12	0	0.0	-
10:13	0.7	0.7	10:13	0	0.0	-
10:14	0.7	0.7	10:14	0	0.0	-
10:15	0.7	0.7	10:15	0	0.0	-
10:16	0.7	0.7	10:16	0	0.0	-
10:17	0.8	0.7	10:17	0	0.0	-
10:18	0.8	0.7	10:18	0	0.0	-
10:19	0.8	0.7	10:19	0	0.0	-
10:20	0.7	0.7	10:20	0	0.0	-
10:21	0.8	0.7	10:21	0	0.0	-
10:22	0.8	0.7	10:22	0	0.0	-
10:23	0.8	0.7	10:23	0	0.0	-
10:24	0.8	0.7	10:24	0	0.0	-
10:25	0.7	0.7	10:25	0	0.0	-
10:26	0.7	0.7	10:26	0	0.0	-
10:27	0.8	0.8	10:27	0	0.0	-
10:28	0.8	0.8	10:28	0	0.0	-
10:29	0.8	0.8	10:29	0	0.0	-
10:30	0.8	0.8	10:30	0	0.0	-
10:31	0.8	0.8	10:31	0	0.0	-
10:32	0.8	0.8	10:32	0	0.0	-
10:33	0.8	0.8	10:33	0	0.0	-
10:34	0.7	0.8	10:34	0	0.0	-
10:35	0.7	0.8	10:35	0	0.0	-
10:36	0.6	0.8	10:36	0	0.0	-
10:37	0.6	0.7	10:37	0	0.0	-
10:38	0.6	0.7	10:38	0	0.0	-
10:39	0.6	0.7	10:39	0	0.0	-
10:40	0.6	0.7	10:40	0	0.0	-
10:41	0.5	0.7	10:41	0	0.0	-
10:42	0.5	0.7	10:42	0	0.0	-
10:43	0.5	0.7	10:43	0	0.0	-
10:44	0.5	0.6	10:44	0	0.0	-
10:45	0.6	0.6	10:45	0	0.0	-
10:46	0.6	0.6	10:46	0	0.0	-
10:47	0.6	0.6	10:47	0	0.0	-
10:48	0.6	0.6	10:48	0	0.0	-
10:49	0.6	0.6	10:49	0	0.0	-
10:50	0.6	0.6	10:50	0	0.0	-
10:51	0.7	0.6	10:51	0	0.0	-
10:52	0.7	0.6	10:52	0	0.0	-
10:53	0.7	0.6	10:53	0	0.0	-
10:54	0.7	0.6	10:54	0	0.0	-
10:55	0.7	0.6	10:55	0	0.0	-
10:56	0.8	0.6	10:56	0	0.0	-
10:57	0.8	0.6	10:57	0	0.0	-
10:58	0.8	0.7	10:58	0	0.0	-
10:59	0.8	0.7	10:59	0	0.0	-
11:00	0.8	0.7	11:00	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:01	0.8	0.7	11:01	0	0.0	-
11:02	0.9	0.7	11:02	0	0.0	-
11:03	0.9	0.8	11:03	0	0.0	-
11:04	1	0.8	11:04	0	0.0	-
11:05	0.9	0.8	11:05	0	0.0	-
11:06	0.9	0.8	11:06	0	0.0	-
11:07	0.9	0.8	11:07	0	0.0	-
11:08	0.9	0.8	11:08	0	0.0	-
11:09	0.9	0.9	11:09	0	0.0	-
11:10	0.9	0.9	11:10	0	0.0	-
11:11	0.9	0.9	11:11	0	0.0	-
11:12	0.9	0.9	11:12	0	0.0	-
11:13	0.9	0.9	11:13	0	0.0	-
11:14	0.8	0.9	11:14	0	0.0	-
11:15	0.7	0.9	11:15	0	0.0	-
11:16	0.8	0.9	11:16	0	0.0	-
11:17	0.7	0.9	11:17	0	0.0	-
11:18	0.6	0.8	11:18	0	0.0	-
11:19	0.7	0.8	11:19	0	0.0	-
11:20	0.7	0.8	11:20	0	0.0	-
11:21	0.7	0.8	11:21	0	0.0	-
11:22	0.8	0.8	11:22	0	0.0	-
11:23	0.6	0.8	11:23	0	0.0	-
11:24	0.7	0.8	11:24	0	0.0	-
11:25	0.7	0.7	11:25	0	0.0	-
11:26	0.7	0.7	11:26	0	0.0	-
11:27	0.8	0.7	11:27	0	0.0	-
11:28	0.6	0.7	11:28	0	0.0	-
11:29	0.7	0.7	11:29	0	0.0	-
11:30	0.7	0.7	11:30	0	0.0	-
11:31	0.7	0.7	11:31	0	0.0	-
11:32	0.7	0.7	11:32	0	0.0	-
11:33	0.7	0.7	11:33	0	0.0	-
11:34	0.7	0.7	11:34	0	0.0	-
11:35	0.7	0.7	11:35	0	0.0	-
11:36	0.8	0.7	11:36	0	0.0	-
11:37	0.7	0.7	11:37	0	0.0	-
11:38	0.7	0.7	11:38	0	0.0	-
11:39	0.7	0.7	11:39	0	0.0	-
11:40	0.8	0.7	11:40	0	0.0	-
11:41	0.7	0.7	11:41	0	0.0	-
11:42	0.7	0.7	11:42	0	0.0	-
11:43	0.7	0.7	11:43	0	0.0	-
11:44	0.8	0.7	11:44	0	0.0	-
11:45	0.8	0.7	11:45	0	0.0	-
11:46	0.9	0.7	11:46	0	0.0	-
11:47	0.8	0.7	11:47	0	0.0	-
11:48	0.8	0.8	11:48	0	0.0	-
11:49	0.9	0.8	11:49	0	0.0	-
11:50	0.8	0.8	11:50	0	0.0	-
11:51	0.8	0.8	11:51	0	0.0	-
11:52	0.9	0.8	11:52	0	0.0	-
11:53	0.9	0.8	11:53	0	0.0	-
11:54	0.9	0.8	11:54	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:55	0.9	0.8	11:55	0	0.0	-
11:56	0.9	0.8	11:56	0	0.0	-
11:57	0.9	0.8	11:57	0	0.0	-
11:58	0.9	0.9	11:58	0	0.0	-
11:59	0.9	0.9	11:59	0	0.0	-
12:00	0.8	0.9	12:00	0	0.0	-
12:01	1.1	0.9	12:01	0	0.0	-
12:02	0.8	0.9	12:02	0	0.0	-
12:03	0.9	0.9	12:03	0	0.0	-
12:04	0.8	0.9	12:04	0	0.0	-
12:05	0.9	0.9	12:05	0	0.0	-
12:06	0.9	0.9	12:06	0	0.0	-
12:07	0.9	0.9	12:07	0	0.0	-
12:08	0.8	0.9	12:08	0	0.0	-
12:09	0.9	0.9	12:09	0	0.0	-
12:10	0.9	0.9	12:10	0	0.0	-
12:11	0.9	0.9	12:11	0	0.0	-
12:12	0.9	0.9	12:12	0	0.0	-
12:13	0.8	0.9	12:13	0	0.0	-
12:14	0.9	0.9	12:14	0	0.0	-
12:15	0.9	0.9	12:15	0	0.0	-
12:16	0.8	0.9	12:16	0	0.0	-
12:17	0.8	0.9	12:17	0	0.0	-
12:18	0.8	0.9	12:18	0	0.0	-
12:19	0.8	0.9	12:19	0	0.0	-
12:20	0.8	0.9	12:20	0	0.0	-
12:21	0.8	0.8	12:21	0	0.0	-
12:22	0.8	0.8	12:22	0	0.0	-
12:23	0.8	0.8	12:23	0	0.0	-
12:24	0.8	0.8	12:24	0	0.0	-
12:25	0.8	0.8	12:25	0	0.0	-
12:26	0.8	0.8	12:26	0	0.0	-
12:27	0.8	0.8	12:27	0	0.0	-
12:28	0.8	0.8	12:28	0	0.0	-
12:29	0.8	0.8	12:29	0	0.0	-
12:30	0.8	0.8	12:30	0	0.0	-
12:31	0.8	0.8	12:31	0	0.0	-
12:32	0.8	0.8	12:32	0	0.0	-
12:33	0.8	0.8	12:33	0	0.0	-
12:34	0.8	0.8	12:34	0	0.0	-
12:35	0.8	0.8	12:35	0	0.0	-
12:36	0.8	0.8	12:36	0	0.0	-
12:37	0.8	0.8	12:37	0	0.0	-
12:38	0.9	0.8	12:38	0	0.0	-
12:39	0.8	0.8	12:39	0	0.0	-
12:40	0.8	0.8	12:40	0	0.0	-
12:41	0.8	0.8	12:41	0	0.0	-
12:42	0.8	0.8	12:42	0	0.0	-
12:43	0.9	0.8	12:43	0	0.0	-
12:44	0.9	0.8	12:44	0	0.0	-
12:45	0.9	0.8	12:45	0	0.0	-
12:46	0.9	0.8	12:46	0	0.0	-
12:47	0.8	0.8	12:47	0	0.0	-
12:48	0.8	0.8	12:48	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
12:49	0.8	0.8	12:49	0	0.0	-
12:50	0.8	0.8	12:50	0	0.0	-
12:51	0.8	0.8	12:51	0	0.0	-
12:52	0.8	0.8	12:52	0	0.0	-
12:53	0.8	0.8	12:53	0	0.0	-
12:54	0.8	0.8	12:54	0	0.0	-
12:55	0.8	0.8	12:55	0	0.0	-
12:56	0.8	0.8	12:56	0	0.0	-
12:57	0.8	0.8	12:57	0	0.0	-
12:58	0.8	0.8	12:58	0	0.0	-
12:59	0.8	0.8	12:59	0	0.0	-
13:00	0.9	0.8	13:00	0	0.0	-
13:01	0.9	0.8	13:01	0	0.0	-
13:02	0.9	0.8	13:02	0	0.0	-
13:03	0.9	0.8	13:03	0	0.0	-
13:04	0.9	0.8	13:04	0	0.0	-
13:05	0.8	0.8	13:05	0	0.0	-
13:06	0.9	0.8	13:06	0	0.0	-
13:07	0.9	0.8	13:07	0	0.0	-
13:08	0.9	0.9	13:08	0	0.0	-
13:09	0.9	0.9	13:09	0	0.0	-
13:10	0.9	0.9	13:10	0	0.0	-
13:11	0.9	0.9	13:11	0	0.0	-
13:12	0.9	0.9	13:12	0	0.0	-
13:13	0.9	0.9	13:13	0	0.0	-
13:14	0.9	0.9	13:14	0	0.0	-
13:15	0.9	0.9	13:15	0	0.0	-
13:16	1	0.9	13:16	0	0.0	-
13:17	1	0.9	13:17	0	0.0	-
13:18	0.9	0.9	13:18	0	0.0	-
13:19	0.9	0.9	13:19	0	0.0	-
13:20	1	0.9	13:20	0	0.0	-
13:21	1	0.9	13:21	0	0.0	-
13:22	0.9	0.9	13:22	0	0.0	-
13:23	1	0.9	13:23	0	0.0	-
13:24	1	0.9	13:24	0	0.0	-
13:25	1	0.9	13:25	0	0.0	-
13:26	0.9	0.9	13:26	0	0.0	-
13:27	0.9	0.9	13:27	0	0.0	-
13:28	0.9	0.9	13:28	0	0.0	-
13:29	1	1.0	13:29	0	0.0	-
13:30	1	1.0	13:30	0	0.0	-
13:31	1	1.0	13:31	0	0.0	-
13:32	1	1.0	13:32	0	0.0	-
13:33	1	1.0	13:33	0	0.0	-
13:34	1	1.0	13:34	0	0.0	-
13:35	1	1.0	13:35	0	0.0	-
13:36	1	1.0	13:36	0	0.0	-
13:37	1	1.0	13:37	0	0.0	-
13:38	1	1.0	13:38	0	0.0	-
13:39	1	1.0	13:39	0	0.0	-
13:40	1	1.0	13:40	0	0.0	-
13:41	1	1.0	13:41	0	0.0	-
13:42	1	1.0	13:42	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
13:43	1	1.0	13:43	0	0.0	-
13:44	1	1.0	13:44	0	0.0	-
13:45	1	1.0	13:45	0	0.0	-
13:46	1	1.0	13:46	0	0.0	-
13:47	1	1.0	13:47	0	0.0	-
13:48	1	1.0	13:48	0	0.0	-
13:49	1	1.0	13:49	0	0.0	-
13:50	1	1.0	13:50	0	0.0	-
13:51	1	1.0	13:51	0	0.0	-
13:52	1	1.0	13:52	0	0.0	-
13:53	1.1	1.0	13:53	0	0.0	-
13:54	1.1	1.0	13:54	0	0.0	-
13:55	1	1.0	13:55	0	0.0	-
13:56	1	1.0	13:56	0	0.0	-
13:57	1	1.0	13:57	0	0.0	-
13:58	1	1.0	13:58	0	0.0	-
13:59	1	1.0	13:59	0	0.0	-
14:00	1	1.0	14:00	0	0.0	-
14:01	1	1.0	14:01	0	0.0	-
14:02	1	1.0	14:02	0	0.0	-
14:03	1	1.0	14:03	0	0.0	-
14:04	1	1.0	14:04	0.1	0.0	-
14:05	1	1.0	14:05	0	0.0	-
14:06	1	1.0	14:06	0	0.0	-
14:07	1	1.0	14:07	0	0.0	-
14:08	1	1.0	14:08	0	0.0	-
14:09	1	1.0	14:09	0	0.0	-
14:10	0.9	1.0	14:10	0	0.0	-
14:11	1	1.0	14:11	0	0.0	-
14:12	1	1.0	14:12	0	0.0	-
14:13	1	1.0	14:13	0	0.0	-
14:14	1	1.0	14:14	0	0.0	-
14:15	1	1.0	14:15	0	0.0	-
14:16	1	1.0	14:16	0	0.0	-
14:17	1	1.0	14:17	0	0.0	-
14:18	1	1.0	14:18	0	0.0	-
14:19	1	1.0	14:19	0	0.0	-
14:20	1	1.0	14:20	0	0.0	-
14:21	1.1	1.0	14:21	0	0.0	-
14:22	1	1.0	14:22	0	0.0	-
14:23	1	1.0	14:23	0	0.0	-
14:24	1	1.0	14:24	0	0.0	-
14:25	1	1.0	14:25	0	0.0	-
14:26	1	1.0	14:26	0	0.0	-
14:27	0.9	1.0	14:27	0	0.0	-
14:28	0.9	1.0	14:28	0	0.0	-
14:29	0.9	1.0	14:29	0	0.0	-
14:30	0.9	1.0	14:30	0	0.0	-
14:31	0.8	1.0	14:31	0	0.0	-
14:32	0.8	1.0	14:32	0	0.0	-
14:33	0.8	0.9	14:33	0	0.0	-
14:34	0.8	0.9	14:34	0	0.0	-
14:35	0.8	0.9	14:35	0	0.0	-
14:36	0.8	0.9	14:36	0	0.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
14:37	0.8	0.9	14:37	0	0.0	-
14:38	0.8	0.9	14:38	0	0.0	-
14:39	0.8	0.9	14:39	0	0.0	-
14:40	0.8	0.8	14:40	0	0.0	-
14:41	0.9	0.8	14:41	0	0.0	-
14:42	0.8	0.8	14:42	0	0.0	-
14:43	0.8	0.8	14:43	0	0.0	-
14:44	0.8	0.8	14:44	0	0.0	-
14:45	0.8	0.8	14:45	0	0.0	-
14:46	0.8	0.8	14:46	0	0.0	-
14:47	0.8	0.8	14:47	0	0.0	-
14:48	0.8	0.8	14:48	0	0.0	-
14:49	0.8	0.8	14:49	0	0.0	-
14:50	0.8	0.8	14:50		0.0	-

Date: 5/8/2020
Observer: Reid Balkind

Particulate Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.004	0.005
Maximum 15min Average	0.020	0.023
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.003	0.003
Maximum 1min Reading	0.070	0.115

Organic Vapor Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.2	0.1
Maximum 15min Average	0.8	0.4
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.1	0.0
Maximum 1min Reading	1.8	1.0

All reported particulate concentrations are in mg/m³ or milligrams per cubic meter and all reported organic vapor concentrations are in ppm or parts per million, unless specified otherwise.

May 8, 2020						
Number of Instances Where Downwind Particulates Exceeds Upwind Particulate + .150 mg/m ³ =						0
Number of Comparable Data Points =						256
PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
6:55	0.005		6:55			
6:56	0.004		6:56			
6:57	0.007		6:57			
6:58	0.004		6:58			
6:59	0.004		6:59			
7:00	0.004		7:00	0.005		
7:01	0.005		7:01	0.004		
7:02	0.004		7:02	0.003		
7:03	0.004		7:03	0.003		
7:04	0.004		7:04	0.003		
7:05	0.004		7:05	0.003		
7:06	0.004		7:06	0.003		
7:07	0.004		7:07	0.003		
7:08	0.004		7:08	0.003		
7:09	0.004	0.008	7:09	0.003	0.012	-
7:10	0.004	0.005	7:10	0.004	0.006	-
7:11	0.004	0.005	7:11	0.004	0.006	-
7:12	0.005	0.006	7:12	0.004	0.007	-
7:13	0.005	0.006	7:13	0.005	0.007	-
7:14	0.004	0.006	7:14	0.005	0.007	-
7:15	0.005	0.006	7:15	0.004	0.007	-
7:16	0.005	0.006	7:16	0.005	0.008	-
7:17	0.005	0.006	7:17	0.007	0.008	-
7:18	0.006	0.006	7:18	0.007	0.008	-
7:19	0.006	0.006	7:19	0.005	0.009	-
7:20	0.005	0.007	7:20	0.006	0.010	-
7:21	0.005	0.007	7:21	0.006	0.011	-
7:22	0.005	0.007	7:22	0.014	0.013	-
7:23	0.005	0.008	7:23	0.007	0.013	-
7:24	0.008	0.009	7:24	0.009	0.015	-
7:25	0.008	0.009	7:25	0.008	0.016	-
7:26	0.008	0.009	7:26	0.008	0.016	-
7:27	0.007	0.011	7:27	0.007	0.017	-
7:28	0.006	0.012	7:28	0.009	0.017	-
7:29	0.006	0.014	7:29	0.008	0.018	-
7:30	0.007	0.015	7:30	0.01	0.019	-
7:31	0.006	0.015	7:31	0.008	0.019	-
7:32	0.007	0.015	7:32	0.015	0.019	-
7:33	0.008	0.015	7:33	0.008	0.020	-
7:34	0.013	0.016	7:34	0.022	0.021	-
7:35	0.009	0.016	7:35	0.03	0.023	-
7:36	0.008	0.016	7:36	0.029	0.022	-
7:37	0.011	0.016	7:37	0.021	0.021	-
7:38	0.016	0.015	7:38	0.028	0.020	-
7:39	0.018	0.014	7:39	0.024	0.019	-
7:40	0.011	0.014	7:40	0.016	0.019	-
7:41	0.031	0.013	7:41	0.013	0.018	-
7:42	0.028	0.012	7:42	0.014	0.018	-
7:43	0.025	0.010	7:43	0.025	0.018	-
7:44	0.02	0.009	7:44	0.019	0.016	-
7:45	0.014	0.007	7:45	0.013	0.017	-
7:46	0.01	0.007	7:46	0.013	0.017	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:47	0.009	0.006	7:47	0.025	0.016	-
7:48	0.01	0.006	7:48	0.03	0.015	-
7:49	0.015	0.006	7:49	0.046	0.013	-
7:50	0.011	0.005	7:50	0.015	0.010	-
7:51	0.004	0.004	7:51	0.013	0.010	-
7:52	0.004	0.004	7:52	0.009	0.009	-
7:53	0.004	0.004	7:53	0.016	0.009	-
7:54	0.007	0.005	7:54	0.013	0.009	-
7:55	0.007	0.004	7:55	0.013	0.008	-
7:56	0.006	0.004	7:56	0.01	0.008	-
7:57	0.004	0.004	7:57	0.005	0.007	-
7:58	0.004	0.004	7:58	0.005	0.007	-
7:59	0.003	0.004	7:59	0.034	0.007	-
8:00	0.004	0.004	8:00	0.008	0.005	-
8:01	0.004	0.004	8:01	0.004	0.005	-
8:02	0.004	0.004	8:02	0.004	0.005	-
8:03	0.004	0.004	8:03	0.004	0.005	-
8:04	0.004	0.005	8:04	0.004	0.005	-
8:05	0.004	0.005	8:05	0.004	0.006	-
8:06	0.004	0.005	8:06	0.004	0.006	-
8:07	0.004	0.005	8:07	0.006	0.007	-
8:08	0.005	0.005	8:08	0.01	0.007	-
8:09	0.005	0.005	8:09	0.006	0.007	-
8:10	0.005	0.005	8:10	0.006	0.007	-
8:11	0.004	0.005	8:11	0.005	0.008	-
8:12	0.004	0.005	8:12	0.005	0.009	-
8:13	0.005	0.006	8:13	0.005	0.011	-
8:14	0.005	0.006	8:14	0.006	0.012	-
8:15	0.005	0.007	8:15	0.004	0.014	-
8:16	0.004	0.007	8:16	0.004	0.015	-
8:17	0.005	0.008	8:17	0.004	0.016	-
8:18	0.005	0.008	8:18	0.006	0.016	-
8:19	0.005	0.007	8:19	0.008	0.016	-
8:20	0.005	0.007	8:20	0.007	0.015	-
8:21	0.005	0.008	8:21	0.021	0.016	-
8:22	0.005	0.008	8:22	0.012	0.015	-
8:23	0.006	0.008	8:23	0.008	0.014	-
8:24	0.006	0.008	8:24	0.008	0.015	-
8:25	0.005	0.008	8:25	0.020	0.016	-
8:26	0.005	0.009	8:26	0.012	0.016	-
8:27	0.013	0.009	8:27	0.033	0.015	-
8:28	0.014	0.008	8:28	0.028	0.014	-
8:29	0.012	0.008	8:29	0.032	0.013	-
8:30	0.013	0.007	8:30	0.023	0.011	-
8:31	0.009	0.007	8:31	0.011	0.010	-
8:32	0.005	0.006	8:32	0.005	0.010	-
8:33	0.004	0.007	8:33	0.005	0.011	-
8:34	0.005	0.007	8:34	0.007	0.012	-
8:35	0.01	0.007	8:35	0.008	0.013	-
8:36	0.007	0.007	8:36	0.007	0.013	-
8:37	0.006	0.007	8:37	0.01	0.013	-
8:38	0.007	0.007	8:38	0.016	0.013	-
8:39	0.011	0.007	8:39	0.023	0.015	-
8:40	0.007	0.007	8:40	0.015	0.014	-
8:41	0.007	0.007	8:41	0.007	0.014	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
8:42	0.004	0.007	8:42	0.007	0.016	-
8:43	0.006	0.008	8:43	0.016	0.017	-
8:44	0.006	0.008	8:44	0.009	0.017	-
8:45	0.006	0.008	8:45	0.008	0.017	-
8:46	0.005	0.008	8:46	0.009	0.017	-
8:47	0.011	0.008	8:47	0.022	0.017	-
8:48	0.008	0.007	8:48	0.013	0.016	-
8:49	0.006	0.007	8:49	0.019	0.016	-
8:50	0.009	0.007	8:50	0.013	0.015	-
8:51	0.006	0.007	8:51	0.008	0.016	-
8:52	0.006	0.007	8:52	0.011	0.016	-
8:53	0.01	0.007	8:53	0.038	0.016	-
8:54	0.01	0.007	8:54	0.021	0.014	-
8:55	0.006	0.006	8:55	0.014	0.013	-
8:56	0.009	0.006	8:56	0.038	0.012	-
8:57	0.012	0.006	8:57	0.021	0.010	-
8:58	0.006	0.006	8:58	0.008	0.009	-
8:59	0.005	0.006	8:59	0.008	0.009	-
9:00	0.005	0.006	9:00	0.011	0.009	-
9:01	0.005	0.006	9:01	0.007	0.009	-
9:02	0.005	0.007	9:02	0.007	0.010	-
9:03	0.005	0.007	9:03	0.01	0.010	-
9:04	0.006	0.008	9:04	0.017	0.011	-
9:05	0.008	0.008	9:05	0.023	0.010	-
9:06	0.008	0.008	9:06	0.007	0.010	-
9:07	0.005	0.008	9:07	0.006	0.011	-
9:08	0.006	0.009	9:08	0.007	0.011	-
9:09	0.005	0.009	9:09	0.006	0.012	-
9:10	0.005	0.010	9:10	0.006	0.014	-
9:11	0.005	0.011	9:11	0.008	0.015	-
9:12	0.006	0.011	9:12	0.01	0.016	-
9:13	0.008	0.011	9:13	0.008	0.016	-
9:14	0.01	0.011	9:14	0.008	0.017	-
9:15	0.01	0.011	9:15	0.008	0.019	-
9:16	0.013	0.011	9:16	0.013	0.020	-
9:17	0.011	0.011	9:17	0.015	0.019	-
9:18	0.012	0.011	9:18	0.018	0.020	-
9:19	0.009	0.011	9:19	0.013	0.019	-
9:20	0.009	0.011	9:20	0.021	0.019	-
9:21	0.013	0.011	9:21	0.015	0.018	-
9:22	0.012	0.011	9:22	0.013	0.018	-
9:23	0.011	0.010	9:23	0.018	0.018	-
9:24	0.014	0.010	9:24	0.036	0.017	-
9:25	0.015	0.010	9:25	0.019	0.015	-
9:26	0.013	0.009	9:26	0.025	0.015	-
9:27	0.009	0.009	9:27	0.011	0.014	-
9:28	0.006	0.009	9:28	0.027	0.014	-
9:29	0.008	0.009	9:29	0.028	0.013	-
9:30	0.01	0.009	9:30	0.021	0.012	-
9:31	0.012	0.009	9:31	0.012	0.012	-
9:32	0.01	0.009	9:32	0.016	0.012	-
9:33	0.01	0.009	9:33	0.014	0.012	-
9:34	0.01	0.009	9:34	0.008	0.012	-
9:35	0.008	0.009	9:35	0.01	0.012	-
9:36	0.013	0.008	9:36	0.009	0.011	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
9:37	0.008	0.008	9:37	0.009	0.011	-
9:38	0.007	0.008	9:38	0.013	0.011	-
9:39	0.009	0.008	9:39	0.009	0.011	-
9:40	0.008	0.008	9:40	0.009	0.011	-
9:41	0.008	0.007	9:41	0.014	0.011	-
9:42	0.007	0.007	9:42	0.012	0.010	-
9:43	0.008	0.007	9:43	0.012	0.010	-
9:44	0.008	0.007	9:44	0.01	0.009	-
9:45	0.008	0.007	9:45	0.023	0.009	-
9:46	0.015	0.007	9:46	0.018	0.008	-
9:47	0.008	0.007	9:47	0.01	0.009	-
9:48	0.007	0.008	9:48	0.009	0.010	-
9:49	0.006	0.008	9:49	0.008	0.010	-
9:50	0.006	0.010	9:50	0.007	0.011	-
9:51	0.006	0.012	9:51	0.007	0.011	-
9:52	0.006	0.013	9:52	0.008	0.011	-
9:53	0.006	0.014	9:53	0.007	0.011	-
9:54	0.006	0.014	9:54	0.007	0.011	-
9:55	0.006	0.014	9:55	0.007	0.011	-
9:56	0.006	0.014	9:56	0.007	0.011	-
9:57	0.006	0.014	9:57	0.007	0.011	-
9:58	0.006	0.015	9:58	0.007	0.012	-
9:59	0.005	0.015	9:59	0.007	0.012	-
10:00	0.007	0.015	10:00	0.007	0.012	-
10:01	0.025	0.015	10:01	0.032	0.012	-
10:02	0.012	0.014	10:02	0.018	0.010	-
10:03	0.008	0.013	10:03	0.011	0.009	-
10:04	0.032	0.014	10:04	0.02	0.009	-
10:05	0.039	0.012	10:05	0.01	0.008	-
10:06	0.025	0.010	10:06	0.012	0.008	-
10:07	0.014	0.010	10:07	0.008	0.008	-
10:08	0.016	0.010	10:08	0.008	0.008	-
10:09	0.007	0.010	10:09	0.008	0.008	-
10:10	0.006	0.011	10:10	0.008	0.008	-
10:11	0.008	0.013	10:11	0.008	0.008	-
10:12	0.009	0.015	10:12	0.009	0.008	-
10:13	0.007	0.015	10:13	0.008	0.008	-
10:14	0.007	0.015	10:14	0.008	0.008	-
10:15	0.007	0.015	10:15	0.008	0.008	-
10:16	0.006	0.016	10:16	0.007	0.008	-
10:17	0.008	0.016	10:17	0.007	0.008	-
10:18	0.013	0.017	10:18	0.007	0.009	-
10:19	0.008	0.018	10:19	0.007	0.009	-
10:20	0.009	0.019	10:20	0.008	0.009	-
10:21	0.029	0.019	10:21	0.007	0.009	-
10:22	0.015	0.018	10:22	0.007	0.009	-
10:23	0.009	0.018	10:23	0.01	0.009	-
10:24	0.031	0.020	10:24	0.012	0.009	-
10:25	0.027	0.019	10:25	0.009	0.008	-
10:26	0.034	0.018	10:26	0.008	0.008	-
10:27	0.015	0.017	10:27	0.008	0.009	-
10:28	0.013	0.017	10:28	0.009	0.009	-
10:29	0.007	0.017	10:29	0.008	0.010	-
10:30	0.01	0.018	10:30	0.01	0.010	-
10:31	0.01	0.019	10:31	0.009	0.010	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
10:32	0.03	0.019	10:32	0.009	0.010	-
10:33	0.023	0.019	10:33	0.009	0.011	-
10:34	0.023	0.018	10:34	0.007	0.011	-
10:35	0.007	0.017	10:35	0.007	0.012	-
10:36	0.018	0.018	10:36	0.008	0.013	-
10:37	0.01	0.018	10:37	0.009	0.013	-
10:38	0.046	0.018	10:38	0.008	0.013	-
10:39	0.008	0.016	10:39	0.008	0.013	-
10:40	0.012	0.017	10:40	0.009	0.013	-
10:41	0.02	0.016	10:41	0.012	0.013	-
10:42	0.014	0.016	10:42	0.019	0.013	-
10:43	0.012	0.015	10:43	0.013	0.012	-
10:44	0.02	0.015	10:44	0.011	0.011	-
10:45	0.032	0.014	10:45	0.011	0.011	-
10:46	0.016	0.012	10:46	0.016	0.011	-
10:47	0.017	0.012	10:47	0.016	0.010	-
10:48	0.01	0.012	10:48	0.015	0.010	-
10:49	0.015	0.011	10:49	0.017	0.010	-
10:50	0.02	0.013	10:50	0.016	0.009	-
10:51	0.018	0.014	10:51	0.012	0.009	-
10:52	0.015	0.016	10:52	0.009	0.009	-
10:53	0.013	0.015	10:53	0.009	0.009	-
10:54	0.014	0.015	10:54	0.01	0.009	-
10:55	0.01	0.015	10:55	0.007	0.009	-
10:56	0.01	0.014	10:56	0.007	0.009	-
10:57	0.007	0.014	10:57	0.007	0.009	-
10:58	0.007	0.014	10:58	0.007	0.009	-
10:59	0.007	0.014	10:59	0.008	0.009	-
11:00	0.007	0.014	11:00	0.008	0.010	-
11:01	0.008	0.014	11:01	0.008	0.010	-
11:02	0.012	0.014	11:02	0.008	0.010	-
11:03	0.008	0.013	11:03	0.01	0.010	-
11:04	0.042	0.013	11:04	0.014	0.011	-
11:05	0.033	0.011	11:05	0.015	0.012	-
11:06	0.045	0.014	11:06	0.011	0.013	-
11:07	0.006	0.012	11:07	0.008	0.013	-
11:08	0.009	0.012	11:08	0.008	0.013	-
11:09	0.007	0.013	11:09	0.007	0.014	-
11:10	0.006	0.013	11:10	0.008	0.014	-
11:11	0.006	0.014	11:11	0.008	0.014	-
11:12	0.005	0.014	11:12	0.008	0.015	-
11:13	0.006	0.015	11:13	0.012	0.015	-
11:14	0.008	0.015	11:14	0.016	0.015	-
11:15	0.007	0.015	11:15	0.01	0.015	-
11:16	0.006	0.015	11:16	0.009	0.015	-
11:17	0.006	0.015	11:17	0.01	0.015	-
11:18	0.008	0.016	11:18	0.024	0.015	-
11:19	0.013	0.016	11:19	0.028	0.015	-
11:20	0.07	0.016	11:20	0.023	0.015	-
11:21	0.01	0.012	11:21	0.017	0.015	-
11:22	0.012	0.012	11:22	0.011	0.015	-
11:23	0.021	0.012	11:23	0.013	0.015	-
11:24	0.015	0.011	11:24	0.011	0.015	-
11:25	0.014	0.011	11:25	0.014	0.016	-
11:26	0.015	0.011	11:26	0.018	0.016	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
11:27	0.015	0.012	11:27	0.013	0.016	-
11:28	0.008	0.012	11:28	0.009	0.016	-
11:29	0.007	0.012	11:29	0.011	0.016	-
11:30	0.006	0.012	11:30	0.009	0.016	-
11:31	0.006	0.012	11:31	0.011	0.016	-
11:32	0.015	0.012	11:32	0.02	0.016	-
11:33	0.012	0.012	11:33	0.022	0.016	-
11:34	0.012	0.012	11:34	0.019	0.015	-
11:35	0.012	0.012	11:35	0.02	0.014	-
11:36	0.013	0.012	11:36	0.02	0.014	-
11:37	0.012	0.011	11:37	0.018	0.013	-
11:38	0.009	0.013	11:38	0.015	0.013	-
11:39	0.011	0.016	11:39	0.016	0.013	-
11:40	0.015	0.016	11:40	0.017	0.014	-
11:41	0.023	0.016	11:41	0.018	0.014	-
11:42	0.017	0.015	11:42	0.019	0.014	-
11:43	0.01	0.014	11:43	0.012	0.014	-
11:44	0.009	0.014	11:44	0.011	0.021	-
11:45	0.009	0.014	11:45	0.009	0.021	-
11:46	0.007	0.014	11:46	0.01	0.021	-
11:47	0.008	0.014	11:47	0.011	0.022	-
11:48	0.011	0.014	11:48	0.011	0.022	-
11:49	0.011	0.014	11:49	0.01	0.022	-
11:50	0.009	0.014	11:50	0.011	0.022	-
11:51	0.01	0.014	11:51	0.012	0.023	-
11:52	0.029	0.014	11:52	0.015	0.023	-
11:53	0.059	0.013	11:53	0.016	0.023	-
11:54	0.011	0.010	11:54	0.027	0.023	-
11:55	0.013	0.010	11:55	0.025	0.022	-
11:56	0.011	0.010	11:56	0.016	0.021	-
11:57	0.01	0.010	11:57	0.019	0.021	-
11:58	0.008	0.010	11:58	0.115	0.021	-
11:59	0.008	0.010	11:59	0.013	0.014	-
12:00	0.007	0.011	12:00	0.011	0.014	-
12:01	0.008	0.011	12:01	0.013	0.014	-
12:02	0.008	0.011	12:02	0.013	0.014	-
12:03	0.009	0.011	12:03	0.014	0.016	-
12:04	0.008	0.012	12:04	0.015	0.016	-
12:05	0.009	0.012	12:05	0.016	0.016	-
12:06	0.011	0.012	12:06	0.015	0.017	-
12:07	0.012	0.012	12:07	0.014	0.016	-
12:08	0.015	0.012	12:08	0.015	0.016	-
12:09	0.011	0.012	12:09	0.015	0.016	-
12:10	0.01	0.012	12:10	0.014	0.015	-
12:11	0.01	0.012	12:11	0.017	0.015	-
12:12	0.016	0.012	12:12	0.012	0.015	-
12:13	0.015	0.011	12:13	0.015	0.015	-
12:14	0.009	0.011	12:14	0.012	0.015	-
12:15	0.009	0.011	12:15	0.01	0.015	-
12:16	0.015	0.011	12:16	0.014	0.015	-
12:17	0.01	0.011	12:17	0.046	0.015	-
12:18	0.02	0.011	12:18	0.015	0.013	-
12:19	0.011	0.010	12:19	0.017	0.013	-
12:20	0.011	0.010	12:20	0.02	0.013	-
12:21	0.01	0.010	12:21	0.01	0.012	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
12:22	0.009	0.010	12:22	0.009	0.012	-
12:23	0.01	0.010	12:23	0.01	0.013	-
12:24	0.012	0.010	12:24	0.011	0.013	-
12:25	0.01	0.010	12:25	0.010	0.013	-
12:26	0.01	0.010	12:26	0.01	0.013	-
12:27	0.011	0.010	12:27	0.014	0.013	-
12:28	0.013	0.010	12:28	0.017	0.014	-
12:29	0.01	0.010	12:29	0.014	0.014	-
12:30	0.009	0.010	12:30	0.013	0.016	-
12:31	0.01	0.010	12:31	0.012	0.016	-
12:32	0.009	0.010	12:32	0.014	0.016	-
12:33	0.01	0.010	12:33	0.011	0.016	-
12:34	0.01	0.010	12:34	0.013	0.016	-
12:35	0.011	0.010	12:35	0.014	0.016	-
12:36	0.011	0.010	12:36	0.012	0.017	-
12:37	0.01	0.010	12:37	0.013	0.017	-
12:38	0.009	0.010	12:38	0.013	0.017	-
12:39	0.011	0.010	12:39	0.013	0.018	-
12:40	0.009	0.010	12:40	0.010	0.021	-
12:41	0.01	0.011	12:41	0.013	0.023	-
12:42	0.011	0.011	12:42	0.022	0.023	-
12:43	0.013	0.011	12:43	0.02	0.022	-
12:44	0.01	0.011	12:44	0.041	0.022	-
12:45	0.009	0.011	12:45	0.017	0.020	-
12:46	0.008	0.011	12:46	0.011	0.019	-
12:47	0.008	0.011	12:47	0.012	0.019	-
12:48	0.01	0.011	12:48	0.018	0.019	-
12:49	0.011	0.011	12:49	0.017	0.019	-
12:50	0.012	0.011	12:50	0.021	0.019	-
12:51	0.011	0.011	12:51	0.017	0.018	-
12:52	0.01	0.011	12:52	0.015	0.019	-
12:53	0.01	0.011	12:53	0.019	0.019	-
12:54	0.014	0.011	12:54	0.059	0.018	-
12:55	0.022	0.011	12:55	0.037	0.015	-
12:56	0.01	0.010	12:56	0.016	0.014	-
12:57	0.009	0.010	12:57	0.016	0.014	-
12:58	0.009	0.010	12:58	0.012	0.013	-
12:59	0.009	0.010	12:59	0.01	0.013	-
13:00	0.009	0.010	13:00	0.01	0.013	-
13:01	0.009	0.010	13:01	0.011	0.013	-
13:02	0.009	0.010	13:02	0.013	0.013	-
13:03	0.009	0.010	13:03	0.012	0.013	-
13:04	0.009	0.010	13:04	0.013	0.013	-
13:05	0.01	0.010	13:05	0.011	0.013	-
13:06	0.014	0.010	13:06	0.025	0.013	-
13:07	0.01	0.010	13:07	0.016	0.012	-
13:08	0.012	0.010	13:08	0.016	0.012	-
13:09	0.011	0.010	13:09	0.014	0.012	-
13:10	0.01	0.011	13:10	0.012	0.011	-
13:11	0.009	0.012	13:11	0.012	0.011	-
13:12	0.009	0.012	13:12	0.011	0.011	-
13:13	0.01	0.012	13:13	0.012	0.011	-
13:14	0.009	0.014	13:14	0.012	0.011	-
13:15	0.01	0.016	13:15	0.011	0.011	-
13:16	0.009	0.016	13:16	0.011	0.011	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
13:17	0.014	0.018	13:17	0.012	0.011	-
13:18	0.01	0.019	13:18	0.013	0.011	-
13:19	0.01	0.021	13:19	0.012	0.010	-
13:20	0.01	0.022	13:20	0.012	0.010	-
13:21	0.009	0.023	13:21	0.011	0.010	-
13:22	0.009	0.023	13:22	0.01	0.011	-
13:23	0.013	0.023	13:23	0.01	0.011	-
13:24	0.023	0.023	13:24	0.01	0.011	-
13:25	0.021	0.022	13:25	0.010	0.011	-
13:26	0.01	0.022	13:26	0.01	0.012	-
13:27	0.013	0.022	13:27	0.01	0.012	-
13:28	0.041	0.022	13:28	0.01	0.012	-
13:29	0.031	0.019	13:29	0.01	0.012	-
13:30	0.023	0.019	13:30	0.01	0.012	-
13:31	0.029	0.020	13:31	0.01	0.012	-
13:32	0.035	0.019	13:32	0.01	0.012	-
13:33	0.031	0.017	13:33	0.01	0.012	-
13:34	0.027	0.016	13:34	0.011	0.012	-
13:35	0.028	0.015	13:35	0.011	0.012	-
13:36	0.012	0.014	13:36	0.017	0.012	-
13:37	0.01	0.014	13:37	0.017	0.012	-
13:38	0.012	0.014	13:38	0.014	0.012	-
13:39	0.013	0.014	13:39	0.012	0.011	-
13:40	0.011	0.014	13:40	0.012	0.012	-
13:41	0.01	0.014	13:41	0.011	0.012	-
13:42	0.01	0.014	13:42	0.011	0.012	-
13:43	0.01	0.014	13:43	0.011	0.012	-
13:44	0.02	0.014	13:44	0.01	0.012	-
13:45	0.041	0.014	13:45	0.01	0.012	-
13:46	0.012	0.012	13:46	0.013	0.012	-
13:47	0.011	0.012	13:47	0.012	0.012	-
13:48	0.011	0.012	13:48	0.014	0.012	-
13:49	0.011	0.012	13:49	0.01	0.012	-
13:50	0.011	0.012	13:50	0.011	0.012	-
13:51	0.012	0.012	13:51	0.011	0.012	-
13:52	0.012	0.012	13:52	0.012	0.012	-
13:53	0.012	0.012	13:53	0.012	0.011	-
13:54	0.012	0.012	13:54	0.013	0.012	-
13:55	0.012	0.012	13:55	0.012	0.012	-
13:56	0.012	0.012	13:56	0.012	0.012	-
13:57	0.012	0.013	13:57	0.014	0.012	-
13:58	0.014	0.013	13:58	0.015	0.012	-
13:59	0.014	0.013	13:59	0.013	0.012	-
14:00	0.013	0.012	14:00	0.012	0.012	-
14:01	0.013	0.012	14:01	0.019	0.013	-
14:02	0.012	0.012	14:02	0.015	0.013	-
14:03	0.012	0.012	14:03	0.011	0.013	-
14:04	0.012	0.013	14:04	0.011	0.013	-
14:05	0.012	0.013	14:05	0.011	0.013	-
14:06	0.012	0.013	14:06	0.011	0.013	-
14:07	0.012	0.013	14:07	0.011	0.013	-
14:08	0.012	0.013	14:08	0.011	0.013	-
14:09	0.012	0.013	14:09	0.011	0.013	-
14:10	0.013	0.013	14:10	0.012	0.013	-
14:11	0.013	0.013	14:11	0.013	0.013	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
14:12	0.013	0.013	14:12	0.014	0.013	-
14:13	0.014	0.013	14:13	0.012	0.012	-
14:14	0.012	0.013	14:14	0.012	0.012	-
14:15	0.012	0.013	14:15	0.012	0.012	-
14:16	0.012	0.013	14:16	0.012	0.012	-
14:17	0.013	0.013	14:17	0.013	0.012	-
14:18	0.014	0.013	14:18	0.013	0.012	-
14:19	0.015	0.013	14:19	0.015	0.012	-
14:20	0.014	0.013	14:20	0.012	0.012	-
14:21	0.013	0.013	14:21	0.012	0.012	-
14:22	0.013	0.013	14:22	0.012	0.012	-
14:23	0.012	0.013	14:23	0.012	0.012	-
14:24	0.012	0.013	14:24	0.012	0.013	-
14:25	0.012	0.013	14:25	0.012	0.013	-
14:26	0.012	0.013	14:26	0.099	0.018	-
14:27	0.012	0.013	14:27	0.029	0.019	-
14:28	0.013	0.013	14:28	0.043	0.021	-
14:29	0.013	0.013	14:29	0.013	0.021	-
14:30	0.014	0.013	14:30	0.025	0.022	-
14:31	0.015	0.013	14:31	0.021	0.023	-
14:32	0.013	0.013	14:32	0.014	0.023	-
14:33	0.013	0.013	14:33	0.013	0.023	-
14:34	0.013	0.013	14:34	0.013	0.023	-
14:35	0.013	0.013	14:35	0.013	0.023	-
14:36	0.013	0.013	14:36	0.013	0.023	-
14:37	0.013	0.013	14:37	0.014	0.023	-
14:38	0.014	0.013	14:38	0.014	0.023	-
14:39	0.014	0.013	14:39	0.015	0.023	-
14:40	0.013	0.013	14:40	0.014	0.024	-
14:41	0.013	0.013	14:41	0.013	0.018	-
14:42	0.013	0.013	14:42	0.013	0.017	-
14:43	0.013	0.013	14:43	0.013	0.015	-
14:44	0.013	0.013	14:44	0.013	0.015	-
14:45	0.013	0.013	14:45	0.013	0.014	-
14:46	0.013	0.013	14:46	0.013	0.013	-
14:47	0.013	0.014	14:47	0.013	0.013	-
14:48	0.013	0.014	14:48	0.013	0.013	-
14:49	0.013	0.014	14:49	0.013	0.013	-
14:50	0.013	0.014	14:50	0.016	0.014	-
14:51	0.013	0.014	14:51	0.016	0.014	-
14:52	0.013	0.014	14:52	0.018	0.014	-
14:53	0.014	0.014	14:53	0.019	0.014	-
14:54	0.013	0.014	14:54	0.018	0.015	-
14:55	0.014	0.014	14:55	0.014	0.015	-
14:56	0.014	0.014	14:56	0.014	0.015	-
14:57	0.014	0.014	14:57	0.014	0.015	-
14:58	0.014	0.014	14:58	0.014	0.015	-
14:59	0.014	0.014	14:59	0.014	0.015	-
15:00	0.014	0.014	15:00	0.014	0.015	-
15:01	0.014	0.014	15:01	0.013	0.015	-
15:02	0.014	0.014	15:02	0.014	0.015	-
15:03	0.014	0.015	15:03	0.013	0.015	-
15:04	0.014	0.015	15:04	0.014	0.015	-
15:05	0.014	0.015	15:05	0.014	0.015	-
15:06	0.014	0.015	15:06	0.014	0.015	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
15:07	0.015	0.015	15:07	0.014	0.014	-
15:08	0.014	0.015	15:08	0.014	0.014	-
15:09	0.014	0.015	15:09	0.014	0.014	-
15:10	0.014	0.015	15:10	0.014	0.014	-
15:11	0.015	0.016	15:11	0.014	0.014	-
15:12	0.015	0.016	15:12	0.014	0.014	-
15:13	0.015	0.016	15:13	0.014	0.014	-
15:14	0.015	0.016	15:14	0.014	0.014	-
15:15	0.015	0.016	15:15	0.014	0.014	-
15:16	0.015	0.016	15:16	0.014	0.014	-
15:17	0.015	0.016	15:17	0.015	0.014	-
15:18	0.016	0.016	15:18	0.015	0.014	-
15:19	0.016	0.016	15:19	0.015	0.014	-
15:20	0.016	0.016	15:20	0.015	0.014	-
15:21	0.016	0.016	15:21	0.015	0.014	-
15:22	0.017	0.016	15:22	0.015	0.014	-
15:23	0.016	0.016	15:23	0.015	0.014	-
15:24	0.016	0.016	15:24	0.015	0.015	-
15:25	0.016	0.016	15:25	0.015	0.015	-
15:26	0.015	0.016	15:26	0.015	0.015	-
15:27	0.016	0.016	15:27	0.015	0.015	-
15:28	0.016	0.016	15:28	0.015	0.015	-
15:29	0.016	0.016	15:29	0.01	0.015	-
15:30	0.016	0.016	15:30	0.011	0.014	-
15:31	0.016	0.016	15:31	0.074	0.018	-
15:32	0.016	0.016	15:32	0.01	0.018	-
15:33	0.016	0.016	15:33	0.034	0.019	-
15:34	0.016	0.016	15:34	0.005	0.019	-
15:35	0.016	0.016	15:35	0.012	0.018	-
15:36	0.016	0.016	15:36	0.007	0.018	-
15:37	0.016	0.016	15:37	0.004	0.017	-
15:38	0.016	0.016	15:38	0.011	0.017	-
15:39	0.016	0.017	15:39	0.004	0.016	-
15:40	0.016	0.017	15:40	0.007	0.016	-
15:41	0.016	0.017	15:41	0.009	0.015	-
15:42	0.016	0.017	15:42			
15:43	0.017	0.017	15:43			
15:44	0.017	0.017	15:44			
15:45	0.017	0.017	15:45			
15:46	0.016	0.017	15:46			
15:47	0.017	0.017	15:47			
15:48	0.017	0.017	15:48			
15:49	0.017	0.017	15:49			
15:50	0.016	0.017	15:50			
15:51	0.016	0.017	15:51			
15:52	0.017	0.017	15:52			
15:53	0.017	0.017	15:53			
15:54	0.017	0.017	15:54			
15:55	0.017	0.017	15:55			
15:56	0.017	0.017	15:56			
15:57	0.017	0.017	15:57			
15:58	0.017	0.017	15:58			
15:59	0.017	0.017	15:59			
16:00	0.017	0.017	16:00			
16:01	0.017	0.018	16:01			

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
16:02	0.018	0.018	16:02			

May 8, 2020						
Number of Instances Where Downwind VOCs Exceeds Upwind VOCs + 5ppm =						0
Number of Comparable Data Points =						348
PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
6:57			6:57	0		
6:58			6:58	0		
6:59			6:59	0		
7:00			7:00	0		
7:01			7:01	0		
7:02	0.2		7:02	0		
7:03	0.1		7:03	0		
7:04	0.2		7:04	0		
7:05	0.2		7:05	0		
7:06	0.2		7:06	0.3		
7:07	0.2		7:07	0		
7:08	0.2		7:08	0		
7:09	0.2		7:09	0.2		
7:10	0.2		7:10	0.2		
7:11	0.2	0.2	7:11	0.2		
7:12	0.2	0.2	7:12	0.2	0.1	-
7:13	0.2	0.2	7:13	0.2	0.1	-
7:14	0.2	0.2	7:14	0.1	0.1	-
7:15	0.3	0.2	7:15	0.1	0.1	-
7:16	0.3	0.2	7:16	0.1	0.1	-
7:17	0.3	0.2	7:17	0.1	0.1	-
7:18	0.3	0.2	7:18	0.2	0.1	-
7:19	0.3	0.2	7:19	0.2	0.1	-
7:20	0.3	0.2	7:20	0.3	0.1	-
7:21	0.3	0.2	7:21	0	0.2	-
7:22	0.3	0.3	7:22	0.2	0.1	-
7:23	0.3	0.3	7:23	0.4	0.2	-
7:24	0.4	0.3	7:24	0	0.2	-
7:25	0.3	0.3	7:25	0.1	0.2	-
7:26	0.4	0.3	7:26	0.1	0.2	-
7:27	0.4	0.3	7:27	0.1	0.2	-
7:28	0.4	0.3	7:28	0.6	0.1	-
7:29	0.4	0.3	7:29	0.1	0.2	-
7:30	0.4	0.3	7:30	0.1	0.2	-
7:31	0.4	0.3	7:31	0.1	0.2	-
7:32	0.4	0.4	7:32	0	0.2	-
7:33	0.4	0.4	7:33	0	0.2	-
7:34	0.4	0.4	7:34	0	0.2	-
7:35	0.5	0.4	7:35	0.1	0.1	-
7:36	0.4	0.4	7:36	0.7	0.1	-
7:37	0.4	0.4	7:37	1	0.2	-
7:38	0.4	0.4	7:38	0.4	0.2	-
7:39	0.5	0.4	7:39	0.1	0.2	-
7:40	0.4	0.4	7:40	0.2	0.2	-
7:41	0.4	0.4	7:41	0.2	0.2	-
7:42	0.4	0.4	7:42	0.2	0.2	-
7:43	0.4	0.4	7:43	0.1	0.3	-
7:44	0.5	0.4	7:44	0.2	0.2	-
7:45	0.6	0.4	7:45	0.1	0.2	-
7:46	0.5	0.4	7:46	0.2	0.2	-
7:47	0.5	0.4	7:47	0.2	0.2	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:48	0.6	0.5	7:48	0.2	0.2	-
7:49	0.9	0.5	7:49	0.1	0.3	-
7:50	0.6	0.5	7:50	0.2	0.3	-
7:51	0.5	0.5	7:51	0.1	0.3	-
7:52	0.5	0.5	7:52	0.1	0.2	-
7:53	0.4	0.5	7:53	0.1	0.2	-
7:54	0.4	0.5	7:54	0.1	0.2	-
7:55	0.6	0.5	7:55	0	0.2	-
7:56	0.5	0.5	7:56	0	0.1	-
7:57	0.4	0.5	7:57	0	0.1	-
7:58	0.4	0.5	7:58	0	0.1	-
7:59	0.4	0.5	7:59	0.1	0.1	-
8:00	0.4	0.5	8:00	0.1	0.1	-
8:01	0.4	0.5	8:01	0.2	0.1	-
8:02	0.5	0.5	8:02	0.2	0.1	-
8:03	0.5	0.5	8:03	0.2	0.1	-
8:04	0.5	0.5	8:04	0.3	0.1	-
8:05	0.5	0.5	8:05	0.2	0.1	-
8:06	0.5	0.5	8:06	0.2	0.1	-
8:07	0.5	0.5	8:07	0.2	0.1	-
8:08	0.5	0.5	8:08	0.3	0.1	-
8:09	0.5	0.5	8:09	0.3	0.1	-
8:10	0.5	0.5	8:10	0.2	0.2	-
8:11	0.5	0.5	8:11	0.2	0.2	-
8:12	0.5	0.5	8:12	0.3	0.2	-
8:13	0.5	0.5	8:13	0.3	0.2	-
8:14	0.5	0.5	8:14	0.3	0.2	-
8:15	0.6	0.5	8:15	0.2	0.2	-
8:16	0.5	0.5	8:16	0.3	0.2	-
8:17	0.5	0.5	8:17	0.3	0.2	-
8:18	0.5	0.5	8:18	0.2	0.3	-
8:19	0.5	0.5	8:19	0.2	0.3	-
8:20	0.5	0.5	8:20	0.2	0.2	-
8:21	0.6	0.5	8:21	0.1	0.2	-
8:22	0.7	0.5	8:22	0.2	0.2	-
8:23	0.6	0.5	8:23	0.1	0.2	-
8:24	0.6	0.5	8:24	0.4	0.2	-
8:25	0.6	0.5	8:25	0.3	0.2	-
8:26	0.6	0.6	8:26	0.2	0.2	-
8:27	0.6	0.6	8:27	0.3	0.2	-
8:28	0.7	0.6	8:28	0.3	0.2	-
8:29	0.7	0.6	8:29	0.3	0.2	-
8:30	0.7	0.6	8:30	0.2	0.2	-
8:31	0.7	0.6	8:31	0.2	0.2	-
8:32	0.6	0.6	8:32	0.3	0.2	-
8:33	0.6	0.6	8:33	0.3	0.2	-
8:34	0.6	0.6	8:34	0.3	0.2	-
8:35	0.6	0.6	8:35	0.3	0.2	-
8:36	0.6	0.6	8:36	0.2	0.3	-
8:37	0.5	0.6	8:37	0.2	0.3	-
8:38	0.6	0.6	8:38	0.3	0.3	-
8:39	0.6	0.6	8:39	0.3	0.3	-
8:40	0.7	0.6	8:40	0.3	0.3	-
8:41	0.8	0.6	8:41	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
8:42	0.6	0.6	8:42	0.3	0.3	-
8:43	0.6	0.6	8:43	0.2	0.3	-
8:44	0.6	0.6	8:44	0.3	0.3	-
8:45	0.6	0.6	8:45	0.2	0.3	-
8:46	0.6	0.6	8:46	0.3	0.3	-
8:47	0.7	0.6	8:47	0.3	0.3	-
8:48	0.6	0.6	8:48	0.3	0.3	-
8:49	0.6	0.6	8:49	0.3	0.3	-
8:50	0.6	0.6	8:50	0.3	0.3	-
8:51	0.6	0.6	8:51	0.2	0.3	-
8:52	0.6	0.6	8:52	0.3	0.3	-
8:53	0.6	0.6	8:53	0.3	0.3	-
8:54	0.7	0.6	8:54	0.3	0.3	-
8:55	0.6	0.6	8:55	0.3	0.3	-
8:56	0.6	0.6	8:56	0.3	0.3	-
8:57	0.6	0.6	8:57	0.3	0.3	-
8:58	0.6	0.6	8:58	0.3	0.3	-
8:59	0.6	0.6	8:59	0.3	0.3	-
9:00	0.6	0.6	9:00	0.3	0.3	-
9:01	0.6	0.6	9:01	0.3	0.3	-
9:02	0.6	0.6	9:02	0.3	0.3	-
9:03	0.6	0.6	9:03	0.3	0.3	-
9:04	0.6	0.6	9:04	0.3	0.3	-
9:05	0.6	0.6	9:05	0.3	0.3	-
9:06	0.6	0.6	9:06	0.3	0.3	-
9:07	0.6	0.6	9:07	0.3	0.3	-
9:08	0.5	0.6	9:08	0.3	0.3	-
9:09	0.5	0.6	9:09	0.3	0.3	-
9:10	0.5	0.6	9:10	0.2	0.3	-
9:11	0.6	0.6	9:11	0.3	0.3	-
9:12	0.6	0.6	9:12	0.2	0.3	-
9:13	0.6	0.6	9:13	0.3	0.3	-
9:14	0.6	0.6	9:14	0.3	0.3	-
9:15	0.6	0.6	9:15	0.2	0.3	-
9:16	0.5	0.6	9:16	0.3	0.3	-
9:17	0.5	0.6	9:17	0.3	0.3	-
9:18	0.5	0.6	9:18	0.3	0.3	-
9:19	0.6	0.6	9:19	0.2	0.3	-
9:20	0.6	0.6	9:20	0.3	0.3	-
9:21	0.5	0.6	9:21	0.3	0.3	-
9:22	0.5	0.5	9:22	0.4	0.3	-
9:23	0.5	0.5	9:23	0.3	0.3	-
9:24	0.6	0.6	9:24	0.3	0.3	-
9:25	0.5	0.6	9:25	0.3	0.3	-
9:26	0.5	0.5	9:26	0.3	0.3	-
9:27	0.5	0.5	9:27	0.3	0.3	-
9:28	0.5	0.5	9:28	0.3	0.3	-
9:29	0.5	0.5	9:29	0.3	0.3	-
9:30	0.6	0.5	9:30	0.3	0.3	-
9:31	0.5	0.5	9:31	0.3	0.3	-
9:32	0.6	0.5	9:32	0.3	0.3	-
9:33	0.6	0.5	9:33	0.3	0.3	-
9:34	0.5	0.5	9:34	0.4	0.3	-
9:35	0.5	0.5	9:35	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
9:36	0.5	0.5	9:36	0.3	0.3	-
9:37	0.5	0.5	9:37	0.3	0.3	-
9:38	0.5	0.5	9:38	0.4	0.3	-
9:39	0.5	0.5	9:39	0.3	0.3	-
9:40	0.5	0.5	9:40	0.3	0.3	-
9:41	0.5	0.5	9:41	0.3	0.3	-
9:42	0.5	0.5	9:42	0.3	0.3	-
9:43	0.5	0.5	9:43	0.3	0.3	-
9:44	0.5	0.5	9:44	0.3	0.3	-
9:45	0.6	0.5	9:45	0.3	0.3	-
9:46	0.5	0.5	9:46	0.3	0.3	-
9:47	0.6	0.5	9:47	0.3	0.3	-
9:48	0.5	0.5	9:48	0.3	0.3	-
9:49	0.5	0.5	9:49	0.3	0.3	-
9:50	0.5	0.5	9:50	0.3	0.3	-
9:51	0.5	0.5	9:51	0.3	0.3	-
9:52	0.5	0.5	9:52	0.3	0.3	-
9:53	0.5	0.5	9:53	0.3	0.3	-
9:54	0.5	0.5	9:54	0.3	0.3	-
9:55	0.5	0.5	9:55	0.3	0.3	-
9:56	0.5	0.5	9:56	0.3	0.3	-
9:57	0.5	0.5	9:57	0.3	0.3	-
9:58	0.5	0.5	9:58	0.3	0.3	-
9:59	0.5	0.5	9:59	0.3	0.3	-
10:00	0.5	0.5	10:00	0.3	0.3	-
10:01	0.5	0.5	10:01	0.3	0.3	-
10:02	0.5	0.5	10:02	0.4	0.3	-
10:03	0.5	0.5	10:03	0.3	0.3	-
10:04	0.5	0.5	10:04	0.3	0.3	-
10:05	0.5	0.5	10:05	0.5	0.3	-
10:06	0.5	0.5	10:06	0.4	0.3	-
10:07	0.4	0.5	10:07	0.3	0.3	-
10:08	0.4	0.5	10:08	0.3	0.3	-
10:09	0.4	0.5	10:09	0.3	0.3	-
10:10	0.5	0.5	10:10	0.3	0.3	-
10:11	0.5	0.5	10:11	0.3	0.3	-
10:12	0.5	0.5	10:12	0.3	0.3	-
10:13	0.5	0.5	10:13	0.3	0.3	-
10:14	0.5	0.5	10:14	0.3	0.3	-
10:15	0.4	0.5	10:15	0.3	0.3	-
10:16	0.5	0.5	10:16	0.3	0.3	-
10:17	0.4	0.5	10:17	0.3	0.3	-
10:18	0.4	0.5	10:18	0.3	0.3	-
10:19	0.5	0.5	10:19	0.3	0.3	-
10:20	0.5	0.5	10:20	0.3	0.3	-
10:21	0.5	0.5	10:21	0.3	0.3	-
10:22	0.5	0.5	10:22	0.3	0.3	-
10:23	0.5	0.5	10:23	0.3	0.3	-
10:24	0.6	0.5	10:24	0.3	0.3	-
10:25	0.5	0.5	10:25	0.5	0.3	-
10:26	0.5	0.5	10:26	0.3	0.3	-
10:27	0.5	0.5	10:27	0.4	0.3	-
10:28	0.5	0.5	10:28	0.4	0.3	-
10:29	0.5	0.5	10:29	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
10:30	0.5	0.5	10:30	0.3	0.3	-
10:31	0.6	0.5	10:31	0.3	0.3	-
10:32	0.5	0.5	10:32	0.3	0.3	-
10:33	0.5	0.5	10:33	0.3	0.3	-
10:34	0.5	0.5	10:34	0.3	0.3	-
10:35	0.5	0.5	10:35	0.3	0.3	-
10:36	0.5	0.5	10:36	0.3	0.3	-
10:37	0.5	0.5	10:37	0.4	0.3	-
10:38	0.5	0.5	10:38	0.3	0.3	-
10:39	0.5	0.5	10:39	0.3	0.3	-
10:40	0.5	0.5	10:40	0.3	0.3	-
10:41	0.5	0.5	10:41	0.3	0.3	-
10:42	0.6	0.5	10:42	0.3	0.3	-
10:43	0.6	0.5	10:43	0.4	0.3	-
10:44	0.5	0.5	10:44	0.3	0.3	-
10:45	0.5	0.5	10:45	0.4	0.3	-
10:46	0.6	0.5	10:46	0.4	0.3	-
10:47	0.6	0.5	10:47	0.5	0.3	-
10:48	1.8	0.6	10:48	0.3	0.3	-
10:49	1	0.6	10:49	0.4	0.3	-
10:50	0.9	0.7	10:50	0.4	0.3	-
10:51	0.8	0.7	10:51	0.4	0.4	-
10:52	0.7	0.7	10:52	0.3	0.4	-
10:53	0.6	0.7	10:53	0.4	0.4	-
10:54	0.7	0.7	10:54	0.4	0.4	-
10:55	0.6	0.7	10:55	0.4	0.4	-
10:56	0.6	0.7	10:56	0.4	0.4	-
10:57	0.6	0.7	10:57	0.3	0.4	-
10:58	0.6	0.7	10:58	0.3	0.4	-
10:59	0.6	0.7	10:59	0.3	0.4	-
11:00	0.6	0.8	11:00	0.3	0.4	-
11:01	0.6	0.8	11:01	0.3	0.4	-
11:02	0.7	0.8	11:02	0.3	0.4	-
11:03	0.6	0.7	11:03	0.3	0.3	-
11:04	0.7	0.7	11:04	0.3	0.3	-
11:05	0.6	0.6	11:05	0.3	0.3	-
11:06	0.7	0.6	11:06	0.4	0.3	-
11:07	0.6	0.6	11:07	0.3	0.3	-
11:08	0.6	0.6	11:08	0.3	0.3	-
11:09	0.6	0.6	11:09	0.3	0.3	-
11:10	0.6	0.6	11:10	0.3	0.3	-
11:11	0.6	0.6	11:11	0.3	0.3	-
11:12	0.6	0.6	11:12	0.4	0.3	-
11:13	0.5	0.6	11:13	0.3	0.3	-
11:14	0.6	0.6	11:14	0.3	0.3	-
11:15	0.6	0.6	11:15	0.3	0.3	-
11:16	0.6	0.6	11:16	0.3	0.3	-
11:17	0.5	0.6	11:17	0.3	0.3	-
11:18	0.6	0.6	11:18	0.3	0.3	-
11:19	0.6	0.6	11:19	0.2	0.3	-
11:20	0.6	0.6	11:20	0.2	0.3	-
11:21	0.6	0.6	11:21	0.2	0.3	-
11:22	0.6	0.6	11:22	0.2	0.3	-
11:23	0.6	0.6	11:23	0.2	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:24	0.6	0.6	11:24	0.3	0.3	-
11:25	0.6	0.6	11:25	0.2	0.3	-
11:26	0.5	0.6	11:26	0.3	0.3	-
11:27	0.5	0.6	11:27	0.2	0.3	-
11:28	0.5	0.6	11:28	0.3	0.3	-
11:29	0.5	0.6	11:29	0.2	0.3	-
11:30	0.5	0.6	11:30	0.2	0.2	-
11:31	0.5	0.6	11:31	0.2	0.2	-
11:32	0.5	0.6	11:32	0.2	0.2	-
11:33	0.6	0.6	11:33	0.2	0.2	-
11:34	0.6	0.6	11:34	0.2	0.2	-
11:35	0.6	0.6	11:35	0.2	0.2	-
11:36	0.6	0.6	11:36	0.2	0.2	-
11:37	0.6	0.6	11:37	0.2	0.2	-
11:38	0.5	0.5	11:38	0.2	0.2	-
11:39	0.6	0.5	11:39	0.2	0.2	-
11:40	0.5	0.5	11:40	0.2	0.2	-
11:41	0.5	0.5	11:41	0.2	0.2	-
11:42	0.6	0.5	11:42	0.3	0.2	-
11:43	0.5	0.5	11:43	0.3	0.2	-
11:44	0.5	0.5	11:44	0.2	0.2	-
11:45	0.5	0.5	11:45	0.2	0.2	-
11:46	0.5	0.5	11:46	0.2	0.2	-
11:47	0.5	0.5	11:47	0.2	0.2	-
11:48	0.5	0.5	11:48	0.2	0.2	-
11:49	0.5	0.5	11:49	0.2	0.2	-
11:50	0.5	0.5	11:50	0.2	0.2	-
11:51	0.5	0.5	11:51	0.2	0.2	-
11:52	0.5	0.5	11:52	0.2	0.2	-
11:53	0.5	0.5	11:53	0.2	0.2	-
11:54	0.5	0.5	11:54	0.3	0.2	-
11:55	0.5	0.5	11:55	0.2	0.2	-
11:56	0.5	0.5	11:56	0.2	0.2	-
11:57	0.5	0.5	11:57	0.3	0.2	-
11:58	0.5	0.5	11:58	0.3	0.2	-
11:59	0.5	0.5	11:59	0.2	0.2	-
12:00	0.4	0.5	12:00	0.2	0.2	-
12:01	0.4	0.5	12:01	0.2	0.2	-
12:02	0.5	0.5	12:02	0.2	0.2	-
12:03	0.4	0.5	12:03	0.2	0.2	-
12:04	0.4	0.5	12:04	0.2	0.2	-
12:05	0.5	0.5	12:05	0.3	0.2	-
12:06	0.5	0.5	12:06	0.2	0.2	-
12:07	0.5	0.5	12:07	0.3	0.2	-
12:08	0.5	0.5	12:08	0.3	0.2	-
12:09	0.5	0.5	12:09	0.3	0.2	-
12:10	0.5	0.5	12:10	0.3	0.2	-
12:11	0.5	0.5	12:11	0.3	0.2	-
12:12	0.5	0.5	12:12	0.2	0.3	-
12:13	0.5	0.5	12:13	0.3	0.2	-
12:14	0.5	0.5	12:14	0.3	0.2	-
12:15	0.5	0.5	12:15	0.2	0.3	-
12:16	0.5	0.5	12:16	0.2	0.3	-
12:17	0.5	0.5	12:17	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
12:18	0.5	0.5	12:18	0.3	0.3	-
12:19	0.5	0.5	12:19	0.3	0.3	-
12:20	0.5	0.5	12:20	0.2	0.3	-
12:21	0.5	0.5	12:21	0.2	0.3	-
12:22	0.5	0.5	12:22	0.2	0.3	-
12:23	0.5	0.5	12:23	0.2	0.3	-
12:24	0.5	0.5	12:24	0.2	0.3	-
12:25	0.5	0.5	12:25	0.3	0.2	-
12:26	0.5	0.5	12:26	0.2	0.2	-
12:27	0.5	0.5	12:27	0.3	0.2	-
12:28	0.5	0.5	12:28	0.3	0.2	-
12:29	0.6	0.5	12:29	0.2	0.2	-
12:30	0.5	0.5	12:30	0.2	0.2	-
12:31	0.6	0.5	12:31	0.2	0.2	-
12:32	0.6	0.5	12:32	0.2	0.2	-
12:33	0.6	0.5	12:33	0.2	0.2	-
12:34	0.6	0.5	12:34	0.2	0.2	-
12:35	0.6	0.5	12:35	0.2	0.2	-
12:36	0.6	0.5	12:36	0.3	0.2	-
12:37	0.6	0.6	12:37	0.2	0.2	-
12:38	0.6	0.6	12:38	0.2	0.2	-
12:39	0.7	0.6	12:39	0.3	0.2	-
12:40	0.7	0.6	12:40	0.3	0.2	-
12:41	0.6	0.6	12:41	0.3	0.2	-
12:42	0.6	0.6	12:42	0.3	0.2	-
12:43	0.6	0.6	12:43	0.3	0.2	-
12:44	0.6	0.6	12:44	0.3	0.2	-
12:45	0.6	0.6	12:45	0.3	0.2	-
12:46	0.7	0.6	12:46	0.3	0.3	-
12:47	0.6	0.6	12:47	0.3	0.3	-
12:48	0.6	0.6	12:48	0.3	0.3	-
12:49	0.6	0.6	12:49	0.3	0.3	-
12:50	0.6	0.6	12:50	0.3	0.3	-
12:51	0.6	0.6	12:51	0.3	0.3	-
12:52	0.6	0.6	12:52	0.3	0.3	-
12:53	0.6	0.6	12:53	0.3	0.3	-
12:54	0.7	0.6	12:54	0.3	0.3	-
12:55	1.1	0.6	12:55	0.3	0.3	-
12:56	0.8	0.7	12:56	0.3	0.3	-
12:57	0.7	0.7	12:57	0.3	0.3	-
12:58	0.7	0.7	12:58	0.3	0.3	-
12:59	0.7	0.7	12:59	0.3	0.3	-
13:00	0.7	0.7	13:00	0.3	0.3	-
13:01	0.7	0.7	13:01	0.3	0.3	-
13:02	0.7	0.7	13:02	0.3	0.3	-
13:03	0.7	0.7	13:03	0.3	0.3	-
13:04	0.7	0.7	13:04	0.3	0.3	-
13:05	0.7	0.7	13:05	0.3	0.3	-
13:06	0.7	0.7	13:06	0.3	0.3	-
13:07	0.7	0.7	13:07	0.3	0.3	-
13:08	0.7	0.7	13:08	0.3	0.3	-
13:09	0.7	0.7	13:09	0.3	0.3	-
13:10	0.7	0.7	13:10	0.3	0.3	-
13:11	0.7	0.7	13:11	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
13:12	0.7	0.7	13:12	0.3	0.3	-
13:13	0.7	0.7	13:13	0.3	0.3	-
13:14	0.7	0.7	13:14	0.3	0.3	-
13:15	0.7	0.7	13:15	0.3	0.3	-
13:16	0.7	0.7	13:16	0.3	0.3	-
13:17	0.7	0.7	13:17	0.3	0.3	-
13:18	0.7	0.7	13:18	0.3	0.3	-
13:19	0.8	0.7	13:19	0.3	0.3	-
13:20	0.7	0.7	13:20	0.3	0.3	-
13:21	0.8	0.7	13:21	0.3	0.3	-
13:22	0.7	0.7	13:22	0.3	0.3	-
13:23	0.7	0.7	13:23	0.3	0.3	-
13:24	0.7	0.7	13:24	0.3	0.3	-
13:25	0.7	0.7	13:25	0.4	0.3	-
13:26	0.7	0.7	13:26	0.3	0.3	-
13:27	0.7	0.7	13:27	0.3	0.3	-
13:28	0.7	0.7	13:28	0.3	0.3	-
13:29	0.7	0.7	13:29	0.3	0.3	-
13:30	0.7	0.7	13:30	0.3	0.3	-
13:31	0.7	0.7	13:31	0.3	0.3	-
13:32	0.7	0.7	13:32	0.4	0.3	-
13:33	0.7	0.7	13:33	0.3	0.3	-
13:34	0.7	0.7	13:34	0.4	0.3	-
13:35	0.7	0.7	13:35	0.3	0.3	-
13:36	0.7	0.7	13:36	0.4	0.3	-
13:37	0.8	0.7	13:37	0.3	0.3	-
13:38	0.8	0.7	13:38	0.3	0.3	-
13:39	0.7	0.7	13:39	0.3	0.3	-
13:40	0.7	0.7	13:40	0.3	0.3	-
13:41	0.7	0.7	13:41	0.3	0.3	-
13:42	0.7	0.7	13:42	0.3	0.3	-
13:43	0.7	0.7	13:43	0.3	0.3	-
13:44	0.7	0.7	13:44	0.3	0.3	-
13:45	0.7	0.7	13:45	0.3	0.3	-
13:46	0.7	0.7	13:46	0.3	0.3	-
13:47	0.7	0.7	13:47	0.3	0.3	-
13:48	0.7	0.7	13:48	0.3	0.3	-
13:49	0.7	0.7	13:49	0.3	0.3	-
13:50	0.7	0.7	13:50	0.3	0.3	-
13:51	0.7	0.7	13:51	0.3	0.3	-
13:52	0.7	0.7	13:52	0.3	0.3	-
13:53	0.7	0.7	13:53	0.2	0.3	-
13:54	0.7	0.7	13:54	0.3	0.3	-
13:55	0.8	0.7	13:55	0.3	0.3	-
13:56	0.8	0.7	13:56	0.3	0.3	-
13:57	0.8	0.7	13:57	0.3	0.3	-
13:58	0.8	0.7	13:58	0.3	0.3	-
13:59	0.8	0.7	13:59	0.3	0.3	-
14:00	0.8	0.7	14:00	0.3	0.3	-
14:01	0.8	0.7	14:01	0.3	0.3	-
14:02	0.8	0.8	14:02	0.3	0.3	-
14:03	0.7	0.8	14:03	0.3	0.3	-
14:04	0.8	0.8	14:04	0.3	0.3	-
14:05	0.8	0.8	14:05	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
14:06	0.8	0.8	14:06	0.3	0.3	-
14:07	0.8	0.8	14:07	0.3	0.3	-
14:08	0.8	0.8	14:08	0.3	0.3	-
14:09	0.8	0.8	14:09	0.3	0.3	-
14:10	0.8	0.8	14:10	0.3	0.3	-
14:11	0.8	0.8	14:11	0.3	0.3	-
14:12	0.8	0.8	14:12	0.3	0.3	-
14:13	0.8	0.8	14:13	0.3	0.3	-
14:14	0.8	0.8	14:14	0.3	0.3	-
14:15	0.8	0.8	14:15	0.3	0.3	-
14:16	0.8	0.8	14:16	0.3	0.3	-
14:17	0.8	0.8	14:17	0.3	0.3	-
14:18	0.8	0.8	14:18	0.3	0.3	-
14:19	0.9	0.8	14:19	0.3	0.3	-
14:20	0.8	0.8	14:20	0.3	0.3	-
14:21	0.8	0.8	14:21	0.3	0.3	-
14:22	0.8	0.8	14:22	0.3	0.3	-
14:23	0.8	0.8	14:23	0.3	0.3	-
14:24	0.8	0.8	14:24	0.3	0.3	-
14:25	0.8	0.8	14:25	0.3	0.3	-
14:26	0.8	0.8	14:26	0.3	0.3	-
14:27	0.8	0.8	14:27	0.3	0.3	-
14:28	0.9	0.8	14:28	0.3	0.3	-
14:29	0.8	0.8	14:29	0.3	0.3	-
14:30	0.8	0.8	14:30	0.3	0.3	-
14:31	0.9	0.8	14:31	0.3	0.3	-
14:32	0.9	0.8	14:32	0.3	0.3	-
14:33	0.8	0.8	14:33	0.3	0.3	-
14:34	0.8	0.8	14:34	0.3	0.3	-
14:35	0.8	0.8	14:35	0.3	0.3	-
14:36	0.8	0.8	14:36	0.3	0.3	-
14:37	0.8	0.8	14:37	0.3	0.3	-
14:38	0.9	0.8	14:38	0.3	0.3	-
14:39	0.8	0.8	14:39	0.3	0.3	-
14:40	0.8	0.8	14:40	0.3	0.3	-
14:41	0.8	0.8	14:41	0.3	0.3	-
14:42	0.8	0.8	14:42	0.3	0.3	-
14:43	0.8	0.8	14:43	0.3	0.3	-
14:44	0.9	0.8	14:44	0.3	0.3	-
14:45	0.9	0.8	14:45	0.3	0.3	-
14:46	0.9	0.8	14:46	0.3	0.3	-
14:47	0.9	0.8	14:47	0.3	0.3	-
14:48	0.8	0.8	14:48	0.3	0.3	-
14:49	0.9	0.8	14:49	0.3	0.3	-
14:50	0.9	0.8	14:50	0.3	0.3	-
14:51	0.9	0.9	14:51	0.3	0.3	-
14:52	0.9	0.9	14:52	0.3	0.3	-
14:53	0.9	0.9	14:53	0.3	0.3	-
14:54	1.1	0.9	14:54	0.4	0.3	-
14:55	1	0.9	14:55	0.3	0.3	-
14:56	1.1	0.9	14:56	0.3	0.3	-
14:57	0.9	0.9	14:57	0.3	0.3	-
14:58	0.9	0.9	14:58	0.3	0.3	-
14:59	0.9	0.9	14:59	0.3	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
15:00	0.9	0.9	15:00	0.3	0.3	-
15:01	0.9	0.9	15:01	0.3	0.3	-
15:02	0.9	0.9	15:02	0.3	0.3	-
15:03	0.9	0.9	15:03	0.3	0.3	-
15:04	0.9	0.9	15:04	0.3	0.3	-
15:05	0.9	0.9	15:05	0.3	0.3	-
15:06	0.9	0.9	15:06	0.3	0.3	-
15:07	0.9	0.9	15:07	0.3	0.3	-
15:08	0.9	0.9	15:08	0.3	0.3	-
15:09	0.9	0.9	15:09	0.3	0.3	-
15:10	0.9	0.9	15:10	0.3	0.3	-
15:11	0.9	0.9	15:11	0.3	0.3	-
15:12	0.9	0.9	15:12	0.3	0.3	-
15:13	0.9	0.9	15:13	0.4	0.3	-
15:14	0.9	0.9	15:14	0.4	0.3	-
15:15	0.9	0.9	15:15	0.4	0.3	-
15:16	0.9	0.9	15:16	0.4	0.3	-
15:17	0.9	0.9	15:17	0.4	0.3	-
15:18	0.9	0.9	15:18	0.4	0.3	-
15:19	0.9	0.9	15:19	0.4	0.3	-
15:20	0.9	0.9	15:20	0.4	0.3	-
15:21	0.9	0.9	15:21	0.4	0.4	-
15:22	0.9	0.9	15:22	0.4	0.4	-
15:23	0.9	0.9	15:23	0.4	0.4	-
15:24	0.9	0.9	15:24	0.4	0.4	-
15:25	0.9	0.9	15:25	0.4	0.4	-
15:26	0.9	0.9	15:26	0.4	0.4	-
15:27	0.9	0.9	15:27	0.4	0.4	-
15:28	0.9	0.9	15:28	0.4	0.4	-
15:29	0.9	0.9	15:29	0.4	0.4	-
15:30	0.9	0.9	15:30	0.4	0.4	-
15:31	0.9	0.9	15:31	0.4	0.4	-
15:32	0.9	0.9	15:32	0.4	0.4	-
15:33	0.9	0.9	15:33	0.4	0.4	-
15:34	0.9	0.9	15:34	0.4	0.4	-
15:35	0.9	0.9	15:35	0.4	0.4	-
15:36	0.9	0.9	15:36	0.4	0.4	-
15:37	0.9	0.9	15:37	0.4	0.4	-
15:38	0.9	0.9	15:38	0.4	0.4	-
15:39	0.9	0.9	15:39	0.4	0.4	-
15:40	0.9	0.9	15:40	0.4	0.4	-
15:41	0.9	0.9	15:41	0.4	0.4	-
15:42	0.9	0.9	15:42	0.4	0.4	-
15:43	0.9	0.9	15:43	0.4	0.4	-
15:44	0.9	0.9	15:44	0.4	0.4	-
15:45	0.9	0.9	15:45	0.4	0.4	-
15:46	0.9	0.9	15:46	0.4	0.4	-
15:47	0.9	0.9	15:47		0.4	-
15:48	0.9	0.9	15:48		0.4	-
15:49	0.9	0.9	15:49		0.4	-
15:50	0.9	0.9	15:50		0.4	-
15:51	0.9	0.9	15:51		0.4	-
15:52	0.9	0.9	15:52		0.4	-
15:53	0.9	0.9	15:53		0.4	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
15:54	0.9	0.9	15:54		0.4	-
15:55	0.9	0.9	15:55		0.4	-
15:56	0.9	0.9	15:56		0.4	-
15:57	0.9	0.9	15:57		0.4	-
15:58	0.9	0.9	15:58		0.4	-
15:59	0.9	0.9	15:59		0.4	-
16:00	0.9	0.9	16:00		0.4	-

Date: 5/11/2020
Observer: Reid Balkind

Particulate Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.000	0.007
Maximum 15min Average	0.000	0.016
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.001	0.006
Maximum 1min Reading	0.107	0.066

Organic Vapor Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.1	0.5
Maximum 15min Average	0.5	1.0
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.1	0.4
Maximum 1min Reading	0.6	1.2

All reported particulate concentrations are in mg/m³ or milligrams per cubic meter and all reported organic vapor concentrations are in ppm or parts per million, unless specified otherwise.

May 11, 2020						
Number of Instances Where Downwind Particulates Exceeds Upwind Particulate + .150 mg/m ³ =						0
Number of Comparable Data Points =						0
PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
6:46	0.066		6:46			
6:47	0.02		6:47			
6:48	0.008		6:48			
6:49	0.002		6:49	0.011		
6:50	0.001		6:50	0.009		
6:51	0.002		6:51	0.008		
6:52	0.107		6:52	0.008		
6:53	0.008		6:53	0.008		
6:54	0.03		6:54	0.008		
6:55	0.007		6:55	0.008		
6:56	0.015		6:56	0.007		
6:57	0.001		6:57	0.007		
6:58	0.011		6:58	0.007		
6:59			6:59	0.007		
7:00			7:00	0.007	0.011	
7:01			7:01	0.007	0.007	
7:02			7:02	0.007	0.008	
7:03			7:03	0.007	0.008	
7:04			7:04	0.007	0.008	
7:05			7:05	0.007	0.008	
7:06			7:06	0.007	0.008	
7:07			7:07	0.007	0.008	
7:08			7:08	0.007	0.008	
7:09			7:09	0.008	0.008	
7:10			7:10	0.008	0.008	
7:11			7:11	0.009	0.008	
7:12			7:12	0.008	0.008	
7:13			7:13	0.008	0.008	
7:14			7:14	0.008	0.008	
7:15			7:15	0.007	0.008	
7:16			7:16	0.008	0.008	
7:17			7:17	0.007	0.008	
7:18			7:18	0.007	0.008	
7:19			7:19	0.013	0.009	
7:20			7:20	0.009	0.008	
7:21			7:21	0.008	0.008	
7:22			7:22	0.007	0.008	
7:23			7:23	0.007	0.009	
7:24			7:24	0.008	0.009	
7:25			7:25	0.008	0.009	
7:26			7:26	0.007	0.009	
7:27			7:27	0.008	0.009	
7:28			7:28	0.009	0.009	
7:29			7:29	0.008	0.009	
7:30			7:30	0.008	0.009	
7:31			7:31	0.008	0.010	
7:32			7:32	0.011	0.010	
7:33			7:33	0.01	0.010	
7:34			7:34	0.009	0.010	
7:35			7:35	0.008	0.010	
7:36			7:36	0.009	0.010	
7:37			7:37	0.011	0.010	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:38			7:38	0.011	0.010	
7:39			7:39	0.01	0.010	
7:40			7:40	0.01	0.010	
7:41			7:41	0.01	0.010	
7:42			7:42	0.009	0.009	
7:43			7:43	0.009	0.009	
7:44			7:44	0.009	0.010	
7:45			7:45	0.009	0.010	
7:46			7:46	0.012	0.010	
7:47			7:47	0.011	0.009	
7:48			7:48	0.01	0.009	
7:49			7:49	0.01	0.009	
7:50			7:50	0.009	0.009	
7:51			7:51	0.009	0.009	
7:52			7:52	0.009	0.009	
7:53			7:53	0.009	0.010	
7:54			7:54	0.009	0.010	
7:55			7:55	0.009	0.010	
7:56			7:56	0.009	0.010	
7:57			7:57	0.009	0.010	
7:58			7:58	0.011	0.010	
7:59			7:59	0.009	0.010	
8:00			8:00	0.01	0.010	
8:01			8:01	0.009	0.010	
8:02			8:02	0.009	0.010	
8:03			8:03	0.009	0.010	
8:04			8:04	0.009	0.010	
8:05			8:05	0.012	0.011	
8:06			8:06	0.01	0.010	
8:07			8:07	0.01	0.011	
8:08			8:08	0.01	0.011	
8:09			8:09	0.01	0.011	
8:10			8:10	0.01	0.011	
8:11			8:11	0.01	0.011	
8:12			8:12	0.011	0.012	
8:13			8:13	0.012	0.012	
8:14			8:14	0.01	0.012	
8:15			8:15	0.012	0.012	
8:16			8:16	0.011	0.012	
8:17			8:17	0.01	0.012	
8:18			8:18	0.01	0.013	
8:19			8:19	0.01	0.013	
8:20			8:20	0.011	0.013	
8:21			8:21	0.011	0.013	
8:22			8:22	0.011	0.013	
8:23			8:23	0.012	0.014	
8:24			8:24	0.014	0.015	
8:25			8:25	0.013	0.015	
8:26			8:26	0.018	0.015	
8:27			8:27	0.013	0.015	
8:28			8:28	0.013	0.015	
8:29			8:29	0.015	0.016	
8:30			8:30	0.013	0.015	
8:31			8:31	0.012	0.015	
8:32			8:32	0.012	0.016	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
8:33			8:33	0.014	0.016	
8:34			8:34	0.014	0.015	
8:35			8:35	0.014	0.015	
8:36			8:36	0.014	0.015	
8:37			8:37	0.023	0.015	
8:38			8:38	0.017	0.014	
8:39			8:39	0.02	0.014	
8:40			8:40	0.017	0.013	
8:41			8:41	0.015	0.013	
8:42			8:42	0.014	0.013	
8:43			8:43	0.019	0.013	
8:44			8:44	0.013	0.012	
8:45			8:45	0.014	0.012	
8:46			8:46	0.013	0.012	
8:47			8:47	0.012	0.012	
8:48			8:48	0.012	0.012	
8:49			8:49	0.012	0.012	
8:50			8:50	0.012	0.012	
8:51			8:51	0.012	0.012	
8:52			8:52	0.013	0.012	
8:53			8:53	0.012	0.012	
8:54			8:54	0.012	0.012	
8:55			8:55	0.012	0.012	
8:56			8:56	0.012	0.012	
8:57			8:57	0.012	0.012	
8:58			8:58	0.012	0.012	
8:59			8:59	0.012	0.012	
9:00			9:00	0.013	0.012	
9:01			9:01	0.013	0.012	
9:02			9:02	0.012	0.012	
9:03			9:03	0.012	0.012	
9:04			9:04	0.013	0.012	
9:05			9:05	0.012	0.012	
9:06			9:06	0.013	0.012	
9:07			9:07	0.012	0.012	
9:08			9:08	0.012	0.012	
9:09			9:09	0.013	0.012	
9:10			9:10	0.013	0.012	
9:11			9:11	0.012	0.011	
9:12			9:12	0.012	0.011	
9:13			9:13	0.012	0.011	
9:14			9:14	0.012	0.011	
9:15			9:15	0.011	0.011	
9:16			9:16	0.011	0.011	
9:17			9:17	0.013	0.011	
9:18			9:18	0.011	0.011	
9:19			9:19	0.011	0.011	
9:20			9:20	0.011	0.011	
9:21			9:21	0.011	0.011	
9:22			9:22	0.011	0.011	
9:23			9:23	0.011	0.011	
9:24			9:24	0.011	0.011	
9:25			9:25	0.011	0.011	
9:26			9:26	0.012	0.011	
9:27			9:27	0.011	0.011	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
9:28			9:28	0.011	0.012	
9:29			9:29	0.011	0.012	
9:30			9:30	0.012	0.012	
9:31			9:31	0.011	0.012	
9:32			9:32	0.011	0.012	
9:33			9:33	0.011	0.012	
9:34			9:34	0.011	0.012	
9:35			9:35	0.011	0.012	
9:36			9:36	0.012	0.012	
9:37			9:37	0.012	0.012	
9:38			9:38	0.012	0.012	
9:39			9:39	0.012	0.012	
9:40			9:40	0.012	0.012	
9:41			9:41	0.012	0.012	
9:42			9:42	0.013	0.012	
9:43			9:43	0.013	0.012	
9:44			9:44	0.012	0.011	
9:45			9:45	0.012	0.011	
9:46			9:46	0.012	0.011	
9:47			9:47	0.011	0.011	
9:48			9:48	0.013	0.011	
9:49			9:49	0.014	0.011	
9:50			9:50	0.013	0.010	
9:51			9:51	0.011	0.010	
9:52			9:52	0.011	0.010	
9:53			9:53	0.011	0.010	
9:54			9:54	0.012	0.010	
9:55			9:55	0.01	0.009	
9:56			9:56	0.01	0.009	
9:57			9:57	0.01	0.009	
9:58			9:58	0.009	0.009	
9:59			9:59	0.009	0.009	
10:00			10:00	0.01	0.008	
10:01			10:01	0.010	0.008	
10:02			10:02	0.01	0.008	
10:03			10:03	0.01	0.009	
10:04			10:04	0.01	0.009	
10:05			10:05	0.01	0.010	
10:06			10:06	0.01	0.010	
10:07			10:07	0.008	0.014	
10:08			10:08	0.007	0.014	
10:09			10:09	0.007	0.014	
10:10			10:10	0.007	0.014	
10:11			10:11	0.007	0.014	
10:12			10:12	0.007	0.014	
10:13			10:13	0.007	0.014	
10:14			10:14	0.006	0.014	
10:15			10:15	0.006	0.014	
10:16			10:16	0.007	0.014	
10:17			10:17	0.031	0.014	
10:18			10:18	0.01	0.013	
10:19			10:19	0.015	0.013	
10:20			10:20	0.017	0.012	
10:21			10:21	0.066	0.012	
10:22			10:22	0.006	0.008	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
10:23			10:23	0.011	0.008	
10:24			10:24	0.009	0.008	
10:25			10:25	0.007	0.008	
10:26			10:26	0.007	0.008	
10:27			10:27	0.007	0.008	
10:28			10:28	0.007	0.009	
10:29			10:29	0.008	0.009	
10:30			10:30	0.008	0.009	
10:31			10:31	0.008	0.009	
10:32			10:32	0.008	0.009	
10:33			10:33	0.008	0.009	
10:34			10:34	0.008	0.010	
10:35			10:35	0.008	0.010	
10:36			10:36	0.009	0.010	
10:37			10:37	0.009	0.010	
10:38			10:38	0.01	0.010	
10:39			10:39	0.01	0.010	
10:40			10:40	0.009	0.010	
10:41			10:41	0.01	0.010	
10:42			10:42	0.009	0.010	
10:43			10:43	0.01	0.010	
10:44			10:44	0.011	0.010	
10:45			10:45	0.01	0.010	
10:46			10:46	0.010	0.010	
10:47			10:47	0.01	0.010	
10:48			10:48	0.01	0.010	
10:49			10:49	0.01	0.010	
10:50			10:50	0.01	0.010	
10:51			10:51	0.01	0.010	
10:52			10:52	0.009	0.010	
10:53			10:53	0.009	0.010	
10:54			10:54	0.009	0.010	
10:55			10:55	0.009	0.010	
10:56			10:56	0.01	0.010	
10:57			10:57	0.011	0.010	
10:58			10:58	0.01	0.010	
10:59			10:59	0.01	0.010	
11:00			11:00	0.011	0.010	
11:01			11:01	0.010	0.010	
11:02			11:02	0.01	0.010	
11:03			11:03	0.011	0.010	
11:04			11:04	0.01	0.010	
11:05			11:05	0.01	0.010	
11:06			11:06	0.011	0.010	
11:07			11:07	0.01	0.010	
11:08			11:08	0.01	0.010	
11:09			11:09	0.011	0.009	
11:10			11:10	0.01	0.009	
11:11			11:11	0.01	0.009	
11:12			11:12	0.011	0.009	
11:13			11:13	0.011	0.009	
11:14			11:14	0.008	0.009	
11:15			11:15	0.008	0.009	
11:16			11:16	0.010	0.009	
11:17			11:17	0.011	0.008	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
11:18			11:18	0.008	0.008	
11:19			11:19	0.009	0.008	
11:20			11:20	0.009	0.008	
11:21			11:21	0.009	0.008	
11:22			11:22	0.008	0.008	
11:23			11:23	0.007	0.008	
11:24			11:24	0.007	0.008	
11:25			11:25	0.011	0.008	
11:26			11:26	0.01	0.008	
11:27			11:27	0.008	0.008	
11:28			11:28	0.007	0.008	
11:29			11:29	0.007	0.008	
11:30			11:30	0.007	0.008	
11:31			11:31	0.007	0.009	
11:32			11:32	0.008	0.009	
11:33			11:33	0.008	0.009	
11:34			11:34	0.008	0.009	
11:35			11:35	0.008	0.009	
11:36			11:36	0.009	0.009	
11:37			11:37	0.009	0.010	
11:38			11:38	0.009	0.010	
11:39			11:39	0.009	0.010	
11:40			11:40	0.009	0.010	
11:41			11:41	0.009	0.010	
11:42			11:42	0.009	0.010	
11:43			11:43	0.009	0.010	
11:44			11:44	0.009	0.010	
11:45			11:45	0.009	0.010	
11:46			11:46	0.009	0.010	
11:47			11:47	0.01	0.010	
11:48			11:48	0.012	0.010	
11:49			11:49	0.01	0.009	
11:50			11:50	0.01	0.009	
11:51			11:51	0.014	0.009	
11:52			11:52	0.012	0.009	
11:53			11:53	0.01	0.008	
11:54			11:54	0.009	0.008	
11:55			11:55	0.01	0.008	
11:56			11:56	0.01	0.008	
11:57			11:57	0.009	0.008	
11:58			11:58	0.008	0.008	
11:59			11:59	0.008	0.008	
12:00			12:00	0.008	0.008	
12:01			12:01	0.008	0.008	
12:02			12:02	0.008	0.008	
12:03			12:03	0.008	0.008	
12:04			12:04	0.008	0.008	
12:05			12:05	0.008	0.008	
12:06			12:06	0.008	0.008	
12:07			12:07	0.007	0.008	
12:08			12:08	0.007	0.008	
12:09			12:09	0.007	0.008	
12:10			12:10	0.008	0.008	
12:11			12:11	0.008	0.009	
12:12			12:12	0.008	0.009	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
12:13			12:13	0.008	0.009	
12:14			12:14	0.008	0.009	
12:15			12:15	0.008	0.009	
12:16			12:16	0.008	0.009	
12:17			12:17	0.008	0.009	
12:18			12:18	0.008	0.009	
12:19			12:19	0.008	0.009	
12:20			12:20	0.008	0.009	
12:21			12:21	0.008	0.009	
12:22			12:22	0.008	0.009	
12:23			12:23	0.008	0.009	
12:24			12:24	0.008	0.009	
12:25			12:25	0.016	0.009	
12:26			12:26	0.01	0.009	
12:27			12:27	0.009	0.009	
12:28			12:28	0.008	0.009	
12:29			12:29	0.008	0.009	
12:30			12:30	0.009	0.009	
12:31			12:31	0.009	0.009	
12:32			12:32	0.009	0.009	
12:33			12:33	0.009	0.009	
12:34			12:34	0.009	0.009	
12:35			12:35	0.009	0.009	
12:36			12:36	0.009	0.009	
12:37			12:37	0.009	0.009	
12:38			12:38	0.009	0.009	
12:39			12:39	0.009	0.009	
12:40			12:40	0.009	0.009	
12:41			12:41	0.009	0.009	
12:42			12:42	0.009	0.009	
12:43			12:43	0.009	0.009	
12:44			12:44	0.008	0.009	
12:45			12:45	0.008	0.009	
12:46			12:46	0.008	0.009	
12:47			12:47	0.009	0.009	
12:48			12:48	0.009	0.009	
12:49			12:49	0.009	0.010	
12:50			12:50	0.009	0.010	
12:51			12:51	0.009	0.010	
12:52			12:52	0.009	0.010	
12:53			12:53	0.01	0.010	
12:54			12:54	0.009	0.010	
12:55			12:55	0.009	0.010	
12:56			12:56	0.009	0.010	
12:57			12:57	0.009	0.010	
12:58			12:58	0.009	0.010	
12:59			12:59	0.009	0.010	
13:00			13:00	0.01	0.010	
13:01			13:01	0.010	0.010	
13:02			13:02	0.01	0.010	
13:03			13:03	0.013	0.010	
13:04			13:04	0.011	0.010	
13:05			13:05	0.012	0.010	
13:06			13:06	0.011	0.010	
13:07			13:07	0.011	0.011	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
13:08			13:08	0.009	0.011	
13:09			13:09	0.01	0.011	
13:10			13:10	0.009	0.011	
13:11			13:11	0.01	0.011	
13:12			13:12	0.009	0.011	
13:13			13:13	0.01	0.011	
13:14			13:14	0.01	0.011	
13:15			13:15	0.01	0.011	
13:16			13:16	0.011	0.011	
13:17			13:17	0.011	0.011	
13:18			13:18	0.012	0.011	
13:19			13:19	0.012	0.011	
13:20			13:20	0.012	0.011	
13:21			13:21	0.012	0.011	
13:22			13:22	0.012	0.011	
13:23			13:23	0.011	0.011	
13:24			13:24	0.011	0.011	
13:25			13:25	0.011	0.011	
13:26			13:26	0.01	0.011	
13:27			13:27	0.01	0.011	
13:28			13:28	0.011	0.011	
13:29			13:29	0.01	0.011	
13:30			13:30	0.01	0.011	
13:31			13:31	0.010	0.011	
13:32			13:32	0.010	0.011	
13:33			13:33	0.011	0.011	
13:34			13:34	0.011	0.011	
13:35			13:35	0.011	0.011	
13:36			13:36	0.011	0.011	
13:37			13:37	0.011	0.011	
13:38			13:38	0.011	0.011	
13:39			13:39	0.011	0.011	
13:40			13:40	0.013	0.011	
13:41			13:41	0.012	0.011	
13:42			13:42	0.011	0.011	
13:43			13:43	0.011	0.011	
13:44			13:44	0.011	0.011	
13:45			13:45	0.012	0.011	
13:46			13:46	0.012	0.011	
13:47			13:47	0.013	0.011	
13:48			13:48	0.013	0.012	
13:49			13:49	0.012	0.012	
13:50			13:50	0.012	0.012	
13:51			13:51	0.012	0.012	
13:52			13:52	0.012	0.012	
13:53			13:53	0.012	0.012	
13:54			13:54	0.013	0.012	
13:55			13:55	0.013	0.012	
13:56			13:56	0.013	0.012	
13:57			13:57	0.013	0.012	
13:58			13:58	0.013	0.012	
13:59			13:59	0.013	0.013	
14:00			14:00	0.015	0.013	
14:01			14:01	0.013	0.013	
14:02			14:02	0.014	0.013	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
14:03			14:03	0.015	0.013	
14:04			14:04	0.015	0.013	
14:05			14:05	0.014	0.013	
14:06			14:06	0.014	0.013	
14:07			14:07	0.014	0.014	
14:08			14:08	0.014	0.014	
14:09			14:09	0.014	0.014	
14:10			14:10	0.013	0.014	
14:11			14:11	0.013	0.014	
14:12			14:12	0.014	0.014	
14:13			14:13	0.015	0.014	
14:14			14:14	0.014	0.014	
14:15			14:15	0.014	0.014	
14:16			14:16	0.014	0.014	
14:17			14:17	0.014	0.014	
14:18			14:18	0.013	0.014	
14:19			14:19	0.014	0.014	
14:20			14:20	0.014	0.014	
14:21			14:21	0.014	0.014	
14:22			14:22	0.012	0.014	
14:23			14:23	0.012	0.014	
14:24			14:24	0.012	0.013	
14:25			14:25	0.012	0.013	
14:26			14:26	0.014	0.013	
14:27			14:27	0.012	0.013	
14:28			14:28	0.011	0.013	
14:29			14:29	0.011	0.013	
14:30			14:30	0.011	0.013	
14:31			14:31	0.011	0.012	
14:32			14:32	0.011	0.012	
14:33			14:33	0.009	0.012	
14:34			14:34	0.009	0.012	
14:35			14:35	0.007	0.011	
14:36			14:36	0.008	0.011	
14:37			14:37	0.007	0.010	
14:38			14:38	0.007	0.010	
14:39			14:39	0.007	0.010	
14:40			14:40	0.007	0.009	
14:41			14:41	0.008	0.009	
14:42			14:42	0.007	0.009	
14:43			14:43	0.007	0.008	
14:44			14:44	0.007	0.008	
14:45			14:45	0.006	0.008	
14:46			14:46	0.006	0.008	
14:47			14:47	0.006	0.007	
14:48			14:48	0.006	0.007	
14:49			14:49	0.006	0.007	
14:50			14:50	0.006	0.007	
14:51			14:51	0.008	0.007	
14:52			14:52	0.007	0.007	
14:53			14:53	0.006	0.007	
14:54			14:54	0.006	0.007	
14:55			14:55	0.006	0.007	
14:56			14:56	0.006	0.006	
14:57			14:57	0.006	0.006	

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
14:58			14:58	0.006	0.006	
14:59			14:59	0.006	0.006	
15:00			15:00	0.006	0.006	
15:01			15:01	0.006	0.006	
15:02			15:02	0.006	0.006	
15:03			15:03	0.006	0.006	
15:04			15:04	0.006	0.006	
15:05			15:05	0.005	0.006	
15:06			15:06	0.005	0.006	
15:07			15:07	0.006	0.006	
15:08			15:08	0.006	0.006	
15:09			15:09	0.006	0.006	
15:10			15:10	0.006	0.006	
15:11			15:11	0.007	0.006	
15:12			15:12	0.007	0.006	
15:13			15:13	0.007	0.006	
15:14			15:14	0.006	0.006	
15:15			15:15	0.006	0.006	
15:16			15:16	0.006	0.006	
15:17			15:17	0.007	0.006	
15:18			15:18	0.007	0.006	
15:19			15:19	0.006	0.006	
15:20			15:20	0.007	0.006	
15:21			15:21	0.006	0.006	
15:22			15:22	0.006	0.006	
15:23			15:23	0.007	0.006	
15:24			15:24	0.006	0.006	
15:25			15:25	0.006	0.006	
15:26			15:26	0.006	0.006	
15:27			15:27	0.004	0.006	
15:28			15:28	0.006	0.006	
15:29			15:29	0.007	0.006	
15:30			15:30	0.007	0.006	
15:31			15:31	0.004	0.006	
15:32			15:32	0.006	0.006	
15:33			15:33	0.004	0.006	
15:34			15:34	0.005	0.006	
15:35			15:35	0.003	0.006	
15:36			15:36	0.002	0.005	
15:37			15:37	0.002	0.005	
15:38			15:38	0.002	0.005	
15:39			15:39	0.001	0.004	

May 11, 2020						
Number of Instances Where Downwind VOCs Exceeds Upwind VOCs + 5ppm =						0
Number of Comparable Data Points =						348
PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
6:49	0.1		6:49			
6:50	0.1		6:50			
6:51	0.1		6:51			
6:52	0.1		6:52	0.4		
6:53	0.1		6:53	0.4		
6:54	0.1		6:54	0.4		
6:55	0.1		6:55	0.4		
6:56	0.1		6:56	0.5		
6:57	0.1		6:57	0.5		
6:58	0.1		6:58	0.5		
6:59	0.1		6:59	0.5		
7:00	0.1		7:00	0.6		
7:01	0.1		7:01	0.6		
7:02	0.1		7:02	0.6		
7:03	0.1	0.1	7:03	0.6		
7:04	0.1	0.1	7:04	0.6	0.5	-
7:05	0.1	0.1	7:05	0.6	0.5	-
7:06	0.1	0.1	7:06	0.6	0.5	-
7:07	0.1	0.1	7:07	0.7	0.5	-
7:08	0.1	0.1	7:08	0.7	0.5	-
7:09	0.1	0.1	7:09	0.7	0.6	-
7:10	0.1	0.1	7:10	0.7	0.6	-
7:11	0.1	0.1	7:11	0.8	0.6	-
7:12	0.1	0.1	7:12	0.7	0.6	-
7:13	0.1	0.1	7:13	0.7	0.6	-
7:14	0.1	0.1	7:14	0.8	0.6	-
7:15	0.1	0.1	7:15	0.8	0.7	-
7:16	0.1	0.1	7:16	0.8	0.7	-
7:17	0.1	0.1	7:17	0.8	0.7	-
7:18	0.1	0.1	7:18	0.9	0.7	-
7:19	0.1	0.1	7:19	0.8	0.7	-
7:20	0.1	0.1	7:20	0.8	0.7	-
7:21	0.1	0.1	7:21	1	0.8	-
7:22	0.1	0.1	7:22	1.1	0.8	-
7:23	0.1	0.1	7:23	0.9	0.8	-
7:24	0.1	0.1	7:24	0.8	0.8	-
7:25	0.1	0.1	7:25	0.8	0.8	-
7:26	0.1	0.1	7:26	0.9	0.8	-
7:27	0.1	0.1	7:27	0.9	0.8	-
7:28	0.1	0.1	7:28	0.9	0.9	-
7:29	0.1	0.1	7:29	0.9	0.9	-
7:30	0.1	0.1	7:30	0.9	0.9	-
7:31	0.1	0.1	7:31	0.9	0.9	-
7:32	0.1	0.1	7:32	0.9	0.9	-
7:33	0.1	0.1	7:33	0.9	0.9	-
7:34	0.1	0.1	7:34	0.9	0.9	-
7:35	0.1	0.1	7:35	0.9	0.9	-
7:36	0.1	0.1	7:36	0.9	0.9	-
7:37	0.1	0.1	7:37	0.9	0.9	-
7:38	0.1	0.1	7:38	0.9	0.9	-
7:39	0.1	0.1	7:39	0.9	0.9	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:40	0.1	0.1	7:40	1	0.9	-
7:41	0.1	0.1	7:41	0.9	0.9	-
7:42	0.1	0.1	7:42	1	0.9	-
7:43	0.1	0.1	7:43	1	0.9	-
7:44	0.1	0.1	7:44	0.9	0.9	-
7:45	0.1	0.1	7:45	0.9	0.9	-
7:46	0.1	0.1	7:46	0.9	0.9	-
7:47	0.1	0.1	7:47	0.9	0.9	-
7:48	0.1	0.1	7:48	0.9	0.9	-
7:49	0.1	0.1	7:49	0.9	0.9	-
7:50	0.1	0.1	7:50	0.9	0.9	-
7:51	0.1	0.1	7:51	0.9	0.9	-
7:52	0.1	0.1	7:52	0.9	0.9	-
7:53	0.1	0.1	7:53	0.9	0.9	-
7:54	0.1	0.1	7:54	0.9	0.9	-
7:55	0.1	0.1	7:55	0.9	0.9	-
7:56	0.1	0.1	7:56	0.9	0.9	-
7:57	0.1	0.1	7:57	0.9	0.9	-
7:58	0.1	0.1	7:58	0.9	0.9	-
7:59	0.1	0.1	7:59	0.9	0.9	-
8:00	0.1	0.1	8:00	0.9	0.9	-
8:01	0.1	0.1	8:01	0.9	0.9	-
8:02	0.1	0.1	8:02	0.9	0.9	-
8:03	0.1	0.1	8:03	0.9	0.9	-
8:04	0.1	0.1	8:04	0.9	0.9	-
8:05	0.1	0.1	8:05	0.9	0.9	-
8:06	0.1	0.1	8:06	0.9	0.9	-
8:07	0.1	0.1	8:07	0.9	0.9	-
8:08	0.2	0.1	8:08	0.9	0.9	-
8:09	0.2	0.1	8:09	0.9	0.9	-
8:10	0.2	0.1	8:10	0.9	0.9	-
8:11	0.2	0.1	8:11	0.9	0.9	-
8:12	0.2	0.1	8:12	0.9	0.9	-
8:13	0.2	0.1	8:13	0.9	0.9	-
8:14	0.2	0.1	8:14	0.9	0.9	-
8:15	0.2	0.2	8:15	0.9	0.9	-
8:16	0.2	0.2	8:16	0.9	0.9	-
8:17	0.2	0.2	8:17	0.9	0.9	-
8:18	0.2	0.2	8:18	0.9	0.9	-
8:19	0.2	0.2	8:19	0.9	0.9	-
8:20	0.2	0.2	8:20	0.9	0.9	-
8:21	0.2	0.2	8:21	0.9	0.9	-
8:22	0.2	0.2	8:22	0.9	0.9	-
8:23	0.2	0.2	8:23	0.9	0.9	-
8:24	0.2	0.2	8:24	0.9	0.9	-
8:25	0.2	0.2	8:25	1	0.9	-
8:26	0.2	0.2	8:26	1	0.9	-
8:27	0.2	0.2	8:27	1.1	0.9	-
8:28	0.2	0.2	8:28	1.1	0.9	-
8:29	0.2	0.2	8:29	1	0.9	-
8:30	0.2	0.2	8:30	1	0.9	-
8:31	0.2	0.2	8:31	1	1.0	-
8:32	0.2	0.2	8:32	1	1.0	-
8:33	0.2	0.2	8:33	1	1.0	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
8:34	0.2	0.2	8:34	0.9	1.0	-
8:35	0.2	0.2	8:35	1	1.0	-
8:36	0.2	0.2	8:36	1	1.0	-
8:37	0.2	0.2	8:37	1	1.0	-
8:38	0.2	0.2	8:38	1	1.0	-
8:39	0.2	0.2	8:39	1	1.0	-
8:40	0.2	0.2	8:40	0.9	1.0	-
8:41	0.2	0.2	8:41	1.1	1.0	-
8:42	0.2	0.2	8:42	1	1.0	-
8:43	0.2	0.2	8:43	1	1.0	-
8:44	0.2	0.2	8:44	0.9	1.0	-
8:45	0.2	0.2	8:45	1	1.0	-
8:46	0.2	0.2	8:46	1.2	1.0	-
8:47	0.2	0.2	8:47	1	1.0	-
8:48	0.2	0.2	8:48	0.9	1.0	-
8:49	0.2	0.2	8:49	0.9	1.0	-
8:50	0.2	0.2	8:50	0.9	1.0	-
8:51	0.2	0.2	8:51	0.9	1.0	-
8:52	0.2	0.2	8:52	0.9	1.0	-
8:53	0.2	0.2	8:53	0.9	1.0	-
8:54	0.2	0.2	8:54	0.9	1.0	-
8:55	0.2	0.2	8:55	0.9	1.0	-
8:56	0.2	0.2	8:56	0.9	1.0	-
8:57	0.2	0.2	8:57	0.9	0.9	-
8:58	0.2	0.2	8:58	0.9	0.9	-
8:59	0.2	0.2	8:59	0.9	0.9	-
9:00	0.2	0.2	9:00	0.9	0.9	-
9:01	0.2	0.2	9:01	0.9	0.9	-
9:02	0.2	0.2	9:02	0.9	0.9	-
9:03	0.2	0.2	9:03	0.9	0.9	-
9:04	0.2	0.2	9:04	0.9	0.9	-
9:05	0.2	0.2	9:05	0.9	0.9	-
9:06	0.2	0.2	9:06	0.9	0.9	-
9:07	0.2	0.2	9:07	0.9	0.9	-
9:08	0.2	0.2	9:08	0.9	0.9	-
9:09	0.2	0.2	9:09	0.9	0.9	-
9:10	0.2	0.2	9:10	0.9	0.9	-
9:11	0.2	0.2	9:11	0.9	0.9	-
9:12	0.3	0.2	9:12	0.9	0.9	-
9:13	0.3	0.2	9:13	0.9	0.9	-
9:14	0.3	0.2	9:14	0.9	0.9	-
9:15	0.3	0.2	9:15	0.9	0.9	-
9:16	0.3	0.2	9:16	0.8	0.9	-
9:17	0.3	0.2	9:17	0.8	0.9	-
9:18	0.3	0.2	9:18	0.9	0.9	-
9:19	0.3	0.3	9:19	0.9	0.9	-
9:20	0.3	0.3	9:20	0.9	0.9	-
9:21	0.3	0.3	9:21	0.9	0.9	-
9:22	0.3	0.3	9:22	0.9	0.9	-
9:23	0.3	0.3	9:23	0.9	0.9	-
9:24	0.3	0.3	9:24	0.9	0.9	-
9:25	0.3	0.3	9:25	0.9	0.9	-
9:26	0.3	0.3	9:26	0.9	0.9	-
9:27	0.3	0.3	9:27	0.9	0.9	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
9:28	0.4	0.3	9:28	0.9	0.9	-
9:29	0.3	0.3	9:29	0.9	0.9	-
9:30	0.4	0.3	9:30	0.9	0.9	-
9:31	0.4	0.3	9:31	0.9	0.9	-
9:32	0.4	0.3	9:32	0.9	0.9	-
9:33	0.3	0.3	9:33	0.8	0.9	-
9:34	0.4	0.3	9:34	0.8	0.9	-
9:35	0.4	0.3	9:35	0.9	0.9	-
9:36	0.4	0.3	9:36	0.9	0.9	-
9:37	0.5	0.4	9:37	0.9	0.9	-
9:38	0.4	0.4	9:38	0.9	0.9	-
9:39	0.5	0.4	9:39	0.9	0.9	-
9:40	0.4	0.4	9:40	0.9	0.9	-
9:41	0.4	0.4	9:41	0.9	0.9	-
9:42	0.4	0.4	9:42	0.9	0.9	-
9:43	0.5	0.4	9:43	0.9	0.9	-
9:44	0.5	0.4	9:44	0.9	0.9	-
9:45	0.5	0.4	9:45	0.9	0.9	-
9:46	0.6	0.4	9:46	0.9	0.9	-
9:47	0.4	0.4	9:47	0.9	0.9	-
9:48	0.5	0.5	9:48	0.9	0.9	-
9:49	0.5	0.5	9:49	0.9	0.9	-
9:50	0.5	0.5	9:50	0.9	0.9	-
9:51	0.5	0.5	9:51	1	0.9	-
9:52	0.5	0.5	9:52	0.9	0.9	-
9:53	0.5	0.5	9:53	0.9	0.9	-
9:54	0.4	0.5	9:54	0.9	0.9	-
9:55	0.5	0.5	9:55	0.9	0.9	-
9:56	0.4	0.5	9:56	1	0.9	-
9:57	0.5	0.5	9:57	0.9	0.9	-
9:58	0.4	0.5	9:58	0.9	0.9	-
9:59	0.4	0.5	9:59	0.9	0.9	-
10:00	0.4	0.5	10:00	0.9	0.9	-
10:01	0.4	0.5	10:01	0.9	0.9	-
10:02	0.4	0.5	10:02	0.9	0.9	-
10:03	0.4	0.4	10:03	0.9	0.9	-
10:04	0.4	0.4	10:04	0.9	0.9	-
10:05	0.4	0.4	10:05	1	0.9	-
10:06	0.4	0.4	10:06	0.9	0.9	-
10:07	0.5	0.4	10:07	0.9	0.9	-
10:08	0.4	0.4	10:08	1	0.9	-
10:09	0.4	0.4	10:09	0.9	0.9	-
10:10	0.4	0.4	10:10	1	0.9	-
10:11	0.4	0.4	10:11	1	0.9	-
10:12	0.4	0.4	10:12	0.9	0.9	-
10:13	0.4	0.4	10:13	1	0.9	-
10:14	0.4	0.4	10:14	0.9	0.9	-
10:15	0.4	0.4	10:15	1	0.9	-
10:16	0.3	0.4	10:16	0.9	0.9	-
10:17	0.4	0.4	10:17	1	0.9	-
10:18	0.4	0.4	10:18	0.9	0.9	-
10:19	0.4	0.4	10:19	0.9	0.9	-
10:20	0.4	0.4	10:20	1	0.9	-
10:21	0.4	0.4	10:21	1	0.9	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
10:22	0.4	0.4	10:22	0.9	1.0	-
10:23	0.4	0.4	10:23	0.9	1.0	-
10:24	0.4	0.4	10:24	0.9	0.9	-
10:25	0.3	0.4	10:25	0.9	0.9	-
10:26	0.4	0.4	10:26	0.9	0.9	-
10:27	0.4	0.4	10:27	0.9	0.9	-
10:28	0.5	0.4	10:28	1	0.9	-
10:29	0.4	0.4	10:29	1	0.9	-
10:30	0.4	0.4	10:30	1	0.9	-
10:31	0.4	0.4	10:31	0.9	0.9	-
10:32	0.4	0.4	10:32	0.9	0.9	-
10:33	0.4	0.4	10:33	0.9	0.9	-
10:34	0.4	0.4	10:34	1	0.9	-
10:35	0.5	0.4	10:35	0.9	0.9	-
10:36	0.5	0.4	10:36	0.9	0.9	-
10:37	0.5	0.4	10:37	0.9	0.9	-
10:38	0.4	0.4	10:38	1	0.9	-
10:39	0.4	0.4	10:39	0.9	0.9	-
10:40	0.4	0.4	10:40	1	0.9	-
10:41	0.4	0.4	10:41	1	0.9	-
10:42	0.3	0.4	10:42	0.9	0.9	-
10:43	0.4	0.4	10:43	0.9	0.9	-
10:44	0.3	0.4	10:44	0.9	0.9	-
10:45	0.4	0.4	10:45	0.9	0.9	-
10:46	0.4	0.4	10:46	0.9	0.9	-
10:47	0.4	0.4	10:47	0.9	0.9	-
10:48	0.3	0.4	10:48	0.9	0.9	-
10:49	0.4	0.4	10:49	0.9	0.9	-
10:50	0.4	0.4	10:50	0.9	0.9	-
10:51	0.4	0.4	10:51	0.9	0.9	-
10:52	0.3	0.4	10:52	0.9	0.9	-
10:53	0.4	0.4	10:53	0.9	0.9	-
10:54	0.4	0.4	10:54	0.9	0.9	-
10:55	0.3	0.4	10:55	0.9	0.9	-
10:56	0.3	0.4	10:56	0.9	0.9	-
10:57	0.3	0.4	10:57	0.9	0.9	-
10:58	0.3	0.4	10:58	0.9	0.9	-
10:59	0.4	0.4	10:59	0.9	0.9	-
11:00	0.3	0.4	11:00	0.9	0.9	-
11:01	0.4	0.4	11:01	0.9	0.9	-
11:02	0.3	0.3	11:02	0.9	0.9	-
11:03	0.3	0.3	11:03	0.9	0.9	-
11:04	0.3	0.3	11:04	0.9	0.9	-
11:05	0.3	0.3	11:05	0.9	0.9	-
11:06	0.3	0.3	11:06	0.9	0.9	-
11:07	0.3	0.3	11:07	0.9	0.9	-
11:08	0.3	0.3	11:08	0.9	0.9	-
11:09	0.3	0.3	11:09	0.9	0.9	-
11:10	0.3	0.3	11:10	0.9	0.9	-
11:11	0.3	0.3	11:11	0.9	0.9	-
11:12	0.3	0.3	11:12	0.9	0.9	-
11:13	0.3	0.3	11:13	0.9	0.9	-
11:14	0.3	0.3	11:14	0.9	0.9	-
11:15	0.3	0.3	11:15	0.9	0.9	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:16	0.2	0.3	11:16	0.9	0.9	-
11:17	0.2	0.3	11:17	0.9	0.9	-
11:18	0.3	0.3	11:18	1	0.9	-
11:19	0.3	0.3	11:19	0.9	0.9	-
11:20	0.3	0.3	11:20	0.9	0.9	-
11:21	0.3	0.3	11:21	0.9	0.9	-
11:22	0.3	0.3	11:22	1	0.9	-
11:23	0.3	0.3	11:23	0.9	0.9	-
11:24	0.3	0.3	11:24	0.9	0.9	-
11:25	0.2	0.3	11:25	0.9	0.9	-
11:26	0.2	0.3	11:26	1	0.9	-
11:27	0.3	0.3	11:27	1	0.9	-
11:28	0.2	0.3	11:28	1	0.9	-
11:29	0.2	0.3	11:29	1	0.9	-
11:30	0.2	0.3	11:30	0.9	0.9	-
11:31	0.2	0.3	11:31	0.9	0.9	-
11:32	0.2	0.3	11:32	0.9	0.9	-
11:33	0.2	0.2	11:33	0.9	0.9	-
11:34	0.2	0.2	11:34	0.9	0.9	-
11:35	0.2	0.2	11:35	0.9	0.9	-
11:36	0.2	0.2	11:36	0.9	0.9	-
11:37	0.2	0.2	11:37	0.9	0.9	-
11:38	0.3	0.2	11:38	0.9	0.9	-
11:39	0.2	0.2	11:39	0.9	0.9	-
11:40	0.2	0.2	11:40	0.9	0.9	-
11:41	0.2	0.2	11:41	0.9	0.9	-
11:42	0.2	0.2	11:42	0.9	0.9	-
11:43	0.2	0.2	11:43	0.9	0.9	-
11:44	0.2	0.2	11:44	0.9	0.9	-
11:45	0.2	0.2	11:45	0.9	0.9	-
11:46	0.2	0.2	11:46	0.8	0.9	-
11:47	0.2	0.2	11:47	0.8	0.9	-
11:48	0.2	0.2	11:48	0.8	0.9	-
11:49	0.2	0.2	11:49	0.8	0.9	-
11:50	0.2	0.2	11:50	0.9	0.9	-
11:51	0.2	0.2	11:51	0.8	0.9	-
11:52	0.1	0.2	11:52	0.8	0.9	-
11:53	0.2	0.2	11:53	0.9	0.9	-
11:54	0.2	0.2	11:54	0.9	0.9	-
11:55	0.1	0.2	11:55	0.8	0.9	-
11:56	0.2	0.2	11:56	0.8	0.9	-
11:57	0.2	0.2	11:57	0.8	0.8	-
11:58	0.2	0.2	11:58	0.8	0.8	-
11:59	0.2	0.2	11:59	0.8	0.8	-
12:00	0.1	0.2	12:00	0.8	0.8	-
12:01	0.1	0.2	12:01	0.8	0.8	-
12:02	0.1	0.2	12:02	0.8	0.8	-
12:03	0.2	0.2	12:03	0.8	0.8	-
12:04	0.2	0.2	12:04	0.8	0.8	-
12:05	0.2	0.2	12:05	0.8	0.8	-
12:06	0.2	0.2	12:06	0.8	0.8	-
12:07	0.2	0.2	12:07	0.8	0.8	-
12:08	0.2	0.2	12:08	0.8	0.8	-
12:09	0.1	0.2	12:09	0.8	0.8	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
12:10	0.2	0.2	12:10	0.8	0.8	-
12:11	0.2	0.2	12:11	0.8	0.8	-
12:12	0.2	0.2	12:12	0.8	0.8	-
12:13	0.2	0.2	12:13	0.8	0.8	-
12:14	0.2	0.2	12:14	0.8	0.8	-
12:15	0.2	0.2	12:15	0.8	0.8	-
12:16	0.2	0.2	12:16	0.8	0.8	-
12:17	0.2	0.2	12:17	0.8	0.8	-
12:18	0.2	0.2	12:18	0.8	0.8	-
12:19	0.2	0.2	12:19	0.7	0.8	-
12:20	0.2	0.2	12:20	0.7	0.8	-
12:21	0.2	0.2	12:21	0.7	0.8	-
12:22	0.2	0.2	12:22	0.8	0.8	-
12:23	0.2	0.2	12:23	0.8	0.8	-
12:24	0.2	0.2	12:24	0.7	0.8	-
12:25	0.2	0.2	12:25	0.7	0.8	-
12:26	0.2	0.2	12:26	0.7	0.8	-
12:27	0.2	0.2	12:27	0.7	0.8	-
12:28	0.2	0.2	12:28	0.7	0.8	-
12:29	0.2	0.2	12:29	0.7	0.7	-
12:30	0.2	0.2	12:30	0.7	0.7	-
12:31	0.2	0.2	12:31	0.7	0.7	-
12:32	0.2	0.2	12:32	0.7	0.7	-
12:33	0.2	0.2	12:33	0.7	0.7	-
12:34	0.2	0.2	12:34	0.7	0.7	-
12:35	0.2	0.2	12:35	0.7	0.7	-
12:36	0.2	0.2	12:36	0.7	0.7	-
12:37	0.2	0.2	12:37	0.7	0.7	-
12:38	0.2	0.2	12:38	0.7	0.7	-
12:39	0.2	0.2	12:39	0.7	0.7	-
12:40	0.2	0.2	12:40	0.7	0.7	-
12:41	0.2	0.2	12:41	0.7	0.7	-
12:42	0.2	0.2	12:42	0.7	0.7	-
12:43	0.2	0.2	12:43	0.8	0.7	-
12:44	0.2	0.2	12:44	0.8	0.7	-
12:45	0.2	0.2	12:45	0.8	0.7	-
12:46	0.2	0.2	12:46	0.8	0.7	-
12:47	0.2	0.2	12:47	0.8	0.7	-
12:48	0.2	0.2	12:48	0.8	0.7	-
12:49	0.2	0.2	12:49	0.8	0.7	-
12:50	0.2	0.2	12:50	0.8	0.7	-
12:51	0.2	0.2	12:51	0.8	0.8	-
12:52	0.2	0.2	12:52	0.8	0.8	-
12:53	0.2	0.2	12:53	0.8	0.8	-
12:54	0.2	0.2	12:54	0.8	0.8	-
12:55	0.2	0.2	12:55	0.8	0.8	-
12:56	0.2	0.2	12:56	0.8	0.8	-
12:57	0.2	0.2	12:57	0.8	0.8	-
12:58	0.2	0.2	12:58	0.8	0.8	-
12:59	0.2	0.2	12:59	0.8	0.8	-
13:00	0.3	0.2	13:00	0.8	0.8	-
13:01	0.3	0.2	13:01	0.8	0.8	-
13:02	0.3	0.2	13:02	0.7	0.8	-
13:03	0.3	0.2	13:03	0.7	0.8	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
13:04	0.4	0.2	13:04	0.7	0.8	-
13:05	0.3	0.2	13:05	0.7	0.8	-
13:06	0.3	0.3	13:06	0.7	0.8	-
13:07	0.4	0.3	13:07	0.7	0.8	-
13:08	0.3	0.3	13:08	0.7	0.8	-
13:09	0.3	0.3	13:09	0.7	0.8	-
13:10	0.4	0.3	13:10	0.7	0.7	-
13:11	0.3	0.3	13:11	0.7	0.7	-
13:12	0.3	0.3	13:12	0.7	0.7	-
13:13	0.3	0.3	13:13	0.7	0.7	-
13:14	0.3	0.3	13:14	0.7	0.7	-
13:15	0.4	0.3	13:15	0.7	0.7	-
13:16	0.3	0.3	13:16	0.7	0.7	-
13:17	0.4	0.3	13:17	0.7	0.7	-
13:18	0.4	0.3	13:18	0.7	0.7	-
13:19	0.3	0.3	13:19	0.7	0.7	-
13:20	0.4	0.3	13:20	0.7	0.7	-
13:21	0.4	0.3	13:21	0.7	0.7	-
13:22	0.4	0.3	13:22	0.8	0.7	-
13:23	0.4	0.4	13:23	0.8	0.7	-
13:24	0.4	0.4	13:24	0.7	0.7	-
13:25	0.4	0.4	13:25	0.8	0.7	-
13:26	0.4	0.4	13:26	0.8	0.7	-
13:27	0.4	0.4	13:27	0.8	0.7	-
13:28	0.3	0.4	13:28	0.8	0.7	-
13:29	0.4	0.4	13:29	0.8	0.7	-
13:30	0.3	0.4	13:30	0.8	0.7	-
13:31	0.3	0.4	13:31	0.8	0.8	-
13:32	0.4	0.4	13:32	0.8	0.8	-
13:33	0.3	0.4	13:33	0.8	0.8	-
13:34	0.3	0.4	13:34	0.8	0.8	-
13:35	0.4	0.4	13:35	0.8	0.8	-
13:36	0.4	0.4	13:36	0.8	0.8	-
13:37	0.4	0.4	13:37	0.8	0.8	-
13:38	0.4	0.4	13:38	0.8	0.8	-
13:39	0.3	0.4	13:39	0.8	0.8	-
13:40	0.4	0.4	13:40	0.8	0.8	-
13:41	0.4	0.4	13:41	0.8	0.8	-
13:42	0.4	0.4	13:42	0.8	0.8	-
13:43	0.4	0.4	13:43	0.8	0.8	-
13:44	0.4	0.4	13:44	0.8	0.8	-
13:45	0.3	0.4	13:45	0.8	0.8	-
13:46	0.4	0.4	13:46	0.8	0.8	-
13:47	0.4	0.4	13:47	0.8	0.8	-
13:48	0.4	0.4	13:48	0.8	0.8	-
13:49	0.4	0.4	13:49	0.9	0.8	-
13:50	0.3	0.4	13:50	0.9	0.8	-
13:51	0.3	0.4	13:51	0.8	0.8	-
13:52	0.3	0.4	13:52	0.8	0.8	-
13:53	0.3	0.4	13:53	0.9	0.8	-
13:54	0.3	0.4	13:54	0.8	0.8	-
13:55	0.4	0.4	13:55	0.8	0.8	-
13:56	0.3	0.4	13:56	0.8	0.8	-
13:57	0.3	0.3	13:57	0.8	0.8	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
13:58	0.3	0.3	13:58	0.8	0.8	-
13:59	0.4	0.3	13:59	0.8	0.8	-
14:00	0.3	0.3	14:00	0.8	0.8	-
14:01	0.3	0.3	14:01	0.8	0.8	-
14:02	0.4	0.3	14:02	0.8	0.8	-
14:03	0.3	0.3	14:03	0.8	0.8	-
14:04	0.4	0.3	14:04	0.8	0.8	-
14:05	0.4	0.3	14:05	0.8	0.8	-
14:06	0.4	0.3	14:06	0.8	0.8	-
14:07	0.4	0.3	14:07	0.8	0.8	-
14:08	0.4	0.4	14:08	0.8	0.8	-
14:09	0.4	0.4	14:09	0.8	0.8	-
14:10	0.4	0.4	14:10	0.8	0.8	-
14:11	0.4	0.4	14:11	0.8	0.8	-
14:12	0.3	0.4	14:12	0.8	0.8	-
14:13	0.4	0.4	14:13	0.8	0.8	-
14:14	0.3	0.4	14:14	0.8	0.8	-
14:15	0.4	0.4	14:15	0.8	0.8	-
14:16	0.3	0.4	14:16	0.8	0.8	-
14:17	0.3	0.4	14:17	0.8	0.8	-
14:18	0.3	0.4	14:18	0.8	0.8	-
14:19	0.3	0.4	14:19	0.8	0.8	-
14:20	0.3	0.4	14:20	0.8	0.8	-
14:21	0.3	0.3	14:21	0.8	0.8	-
14:22	0.3	0.3	14:22	0.8	0.8	-
14:23	0.3	0.3	14:23	0.8	0.8	-
14:24	0.3	0.3	14:24	0.9	0.8	-
14:25	0.2	0.3	14:25	0.8	0.8	-
14:26	0.3	0.3	14:26	0.8	0.8	-
14:27	0.2	0.3	14:27	0.8	0.8	-
14:28	0.3	0.3	14:28	0.8	0.8	-
14:29	0.3	0.3	14:29	0.8	0.8	-
14:30	0.2	0.3	14:30	0.8	0.8	-
14:31	0.2	0.3	14:31	0.9	0.8	-
14:32	0.2	0.3	14:32	0.8	0.8	-
14:33	0.2	0.3	14:33	0.9	0.8	-
14:34	0.2	0.3	14:34	0.8	0.8	-
14:35	0.2	0.2	14:35	0.8	0.8	-
14:36	0.2	0.2	14:36	0.8	0.8	-
14:37	0.2	0.2	14:37	0.8	0.8	-
14:38	0.1	0.2	14:38	0.8	0.8	-
14:39	0.2	0.2	14:39	0.8	0.8	-
14:40	0.1	0.2	14:40	0.8	0.8	-
14:41	0.2	0.2	14:41	0.8	0.8	-
14:42	0.1	0.2	14:42	0.8	0.8	-
14:43	0.1	0.2	14:43	0.8	0.8	-
14:44	0.1	0.2	14:44	0.8	0.8	-
14:45	0.1	0.2	14:45	0.8	0.8	-
14:46	0.1	0.2	14:46	0.8	0.8	-
14:47	0.1	0.1	14:47	0.8	0.8	-
14:48	0.2	0.1	14:48	0.8	0.8	-
14:49	0.1	0.1	14:49	0.8	0.8	-
14:50	0.2	0.1	14:50	0.8	0.8	-
14:51	0.2	0.1	14:51	0.8	0.8	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
14:52	0.2	0.1	14:52	0.8	0.8	-
14:53	0.1	0.1	14:53	0.9	0.8	-
14:54	0.1	0.1	14:54	0.9	0.8	-
14:55	0.1	0.1	14:55	0.8	0.8	-
14:56	0.1	0.1	14:56	0.8	0.8	-
14:57	0.1	0.1	14:57	0.8	0.8	-
14:58	0.1	0.1	14:58	0.8	0.8	-
14:59	0.1	0.1	14:59	0.8	0.8	-
15:00	0.1	0.1	15:00	0.8	0.8	-
15:01	0.1	0.1	15:01	0.8	0.8	-
15:02	0.2	0.1	15:02	0.8	0.8	-
15:03	0.1	0.1	15:03	0.8	0.8	-
15:04	0.1	0.1	15:04	0.8	0.8	-
15:05	0.1	0.1	15:05	0.8	0.8	-
15:06	0.1	0.1	15:06	0.8	0.8	-
15:07	0.1	0.1	15:07	0.8	0.8	-
15:08	0.1	0.1	15:08	0.8	0.8	-
15:09	0.1	0.1	15:09	0.8	0.8	-
15:10	0.1	0.1	15:10	0.7	0.8	-
15:11	0.1	0.1	15:11	0.7	0.8	-
15:12	0.1	0.1	15:12	0.7	0.8	-
15:13	0.1	0.1	15:13	0.7	0.8	-
15:14	0.1	0.1	15:14	0.7	0.8	-
15:15	0.1	0.1	15:15	0.7	0.8	-
15:16	0.1	0.1	15:16	0.7	0.8	-
15:17	0.1	0.1	15:17	0.7	0.8	-
15:18	0.1	0.1	15:18	0.7	0.7	-
15:19	0.1	0.1	15:19	0.7	0.7	-
15:20	0.1	0.1	15:20	0.7	0.7	-
15:21	0.1	0.1	15:21	0.7	0.7	-
15:22	0.1	0.1	15:22	0.7	0.7	-
15:23	0.1	0.1	15:23	0.7	0.7	-
15:24	0.1	0.1	15:24	0.7	0.7	-
15:25	0.1	0.1	15:25	0.7	0.7	-
15:26	0.1	0.1	15:26	0.7	0.7	-
15:27	0.1	0.1	15:27	0.7	0.7	-
15:28	0.1	0.1	15:28	0.7	0.7	-
15:29	0.1	0.1	15:29	0.7	0.7	-
15:30	0.1	0.1	15:30	0.7	0.7	-
15:31	0.1	0.1	15:31	0.7	0.7	-
15:32	0.1	0.1	15:32	0.7	0.7	-
15:33	0.1	0.1	15:33	0.7	0.7	-
15:34	0.1	0.1	15:34	0.7	0.7	-
15:35	0.1	0.1	15:35	0.7	0.7	-
15:36	0.1	0.1	15:36	0.7	0.7	-
15:37	0.1	0.1	15:37	0.7	0.7	-
15:38	0.1	0.1	15:38	0.7	0.7	-
15:39	0.1	0.1	15:39	0.6	0.7	-
15:40	0.1	0.1	15:40	0.6	0.7	-
15:41	0.1	0.1	15:41	0.7	0.7	-
15:42	0.1	0.1	15:42	0.6	0.7	-
15:43	0.1	0.1	15:43	0.6	0.7	-
15:44	0.1	0.1	15:44	0.6	0.7	-
15:45	0.1	0.1	15:45	0.6	0.7	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
15:46	0.1	0.1	15:46	0.6	0.7	-
15:47	0.1	0.1	15:47	0.6	0.7	-
15:48	0.1	0.1	15:48	0.6	0.6	-
15:49	0.1	0.1	15:49	0.6	0.6	-
15:50	0.1	0.1	15:50	0.6	0.6	-
15:51	0.1	0.1	15:51	0.6	0.6	-
15:52	0.1	0.1	15:52	0.6	0.6	-
15:53	0.1	0.1	15:53	0.6	0.6	-
15:54	0.1	0.1	15:54	0.6	0.6	-
15:55	0.1	0.1	15:55	0.6	0.6	-
15:56	0.1	0.1	15:56	0.6	0.6	-
15:57	0.1	0.1	15:57	0.6	0.6	-
15:58	0.1	0.1	15:58	0.6	0.6	-
15:59	0.1	0.1	15:59	0.6	0.6	-
16:00	0.1	0.1	16:00	0.6	0.6	-
16:01	0.1	0.1	16:01	0.7	0.6	-
16:02	0.1	0.1	16:02	0.7	0.6	-
16:03	0.1	0.1	16:03	0.7	0.6	-
16:04	0.1	0.1	16:04	0.7	0.6	-
16:05	0.1	0.1	16:05	0.7	0.6	-
16:06	0.1	0.1	16:06	0.7	0.6	-
16:07	0.1	0.1	16:07	0.7	0.6	-
16:08	0.1	0.1	16:08	0.7	0.6	-
16:09	0.1	0.1	16:09	0.7	0.7	-
16:10	0.1	0.1	16:10	0.7	0.7	-
16:11	0.1	0.1	16:11	0.7	0.7	-
16:12	0.1	0.1	16:12	0.7	0.7	-
16:13	0.1	0.1	16:13	0.7	0.7	-
16:14	0.1	0.1	16:14	0.7	0.7	-
16:15	0.1	0.1	16:15	0.7	0.7	-
16:16	0.1	0.1	16:16	0.7	0.7	-
16:17	0.1	0.1	16:17	0.7	0.7	-
16:18	0.1	0.1	16:18	0.7	0.7	-
16:19	0.1	0.1	16:19	0.7	0.7	-
16:20	0.1	0.1	16:20	0.7	0.7	-
16:21	0.1	0.1	16:21	0.7	0.7	-
16:22	0.1	0.1	16:22	0.7	0.7	-
16:23	0.1	0.1	16:23	0.7	0.7	-
16:24	0.1	0.1	16:24	0.7	0.7	-
16:25	0.1	0.1	16:25	0.7	0.7	-
16:26	0.1	0.1	16:26	0.7	0.7	-
16:27	0.1	0.1	16:27	0.7	0.7	-
16:28	0.1	0.1	16:28	0.7	0.7	-
16:29	0.1	0.1	16:29	0.7	0.7	-
16:30	0.1	0.1	16:30	0.7	0.7	-
16:31	0.1	0.1	16:31	0.7	0.7	-
16:32	0.1	0.1	16:32	0.7	0.7	-
16:33	0.1	0.1	16:33	0.7	0.7	-
16:34	0.1	0.1	16:34	0.7	0.7	-
16:35	0.1	0.1	16:35	0.7	0.7	-
16:36	0.1	0.1	16:36	0.7	0.7	-
16:37	0.1	0.1	16:37	0.7	0.7	-
16:38	0.1	0.1	16:38	0.7	0.7	-
16:39	0.1	0.1	16:39	0.7	0.7	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
16:40	0.1	0.1	16:40	0.7	0.7	-
16:41	0.1	0.1	16:41	0.7	0.7	-
16:42	0.1	0.1	16:42	0.7	0.7	-
16:43	0.1	0.1	16:43	0.7	0.7	-
16:44	0.1	0.1	16:44	0.7	0.7	-
16:45	0.1	0.1	16:45	0.7	0.7	-
16:46	0.1	0.1	16:46	0.7	0.7	-
16:47	0.1	0.1	16:47	0.7	0.7	-
16:48	0.1	0.1	16:48	0.7	0.7	-
16:49	0.1	0.1	16:49	0.7	0.7	-
16:50	0.1	0.1	16:50	0.7	0.7	-
16:51	0.1	0.1	16:51	0.8	0.7	-
16:52	0.1	0.1	16:52	0.7	0.7	-
16:53	0.1	0.1	16:53	0.8	0.7	-
16:54	0.1	0.1	16:54	0.7	0.7	-
16:55	0.1	0.1	16:55		0.7	-

Date: 5/13/2020
Observer: Reid Balkind

Particulate Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.006	0.008
Maximum 15min Average	0.077	0.018
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.005	0.006
Maximum 1min Reading	0.659	0.030

Organic Vapor Monitoring		
	Upwind	Downwind
Minimum 15min Average	2.5	0.0
Maximum 15min Average	3.6	1.8
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	2.3	0.0
Maximum 1min Reading	3.8	5.2

All reported particulate concentrations are in mg/m³ or milligrams per cubic meter and all reported organic vapor concentrations are in ppm or parts per million, unless specified otherwise.

May 13, 2020						
Number of Instances Where Downwind Particulates Exceeds Upwind Particulate + .150 mg/m ³ =						0
Number of Comparable Data Points =						256
PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:03			7:03	0.013		
7:04			7:04	0.012		
7:05			7:05	0.007		
7:06			7:06	0.007		
7:07			7:07	0.007		
7:08			7:08	0.007		
7:09	0.009		7:09	0.007		
7:10	0.007		7:10	0.008		
7:11	0.006		7:11	0.008		
7:12	0.005		7:12	0.008		
7:13	0.005		7:13	0.008		
7:14	0.005		7:14	0.007		
7:15	0.005		7:15	0.008		
7:16	0.005		7:16	0.011		
7:17	0.006	0.017	7:17	0.01	0.012	-
7:18	0.006	0.008	7:18	0.009	0.010	-
7:19	0.006	0.008	7:19	0.009	0.010	-
7:20	0.005	0.008	7:20	0.01	0.011	-
7:21	0.011	0.009	7:21	0.008	0.011	-
7:22	0.005	0.010	7:22	0.008	0.012	-
7:23	0.014	0.010	7:23	0.008	0.012	-
7:24	0.005	0.009	7:24	0.007	0.012	-
7:25	0.005	0.010	7:25	0.014	0.013	-
7:26	0.007	0.011	7:26	0.011	0.012	-
7:27	0.006	0.011	7:27	0.01	0.012	-
7:28	0.021	0.012	7:28	0.008	0.013	-
7:29	0.006	0.012	7:29	0.012	0.013	-
7:30	0.008	0.013	7:30	0.011	0.013	-
7:31	0.012	0.013	7:31	0.016	0.014	-
7:32	0.009	0.014	7:32	0.013	0.014	-
7:33	0.007	0.015	7:33	0.011	0.014	-
7:34	0.006	0.015	7:34	0.016	0.015	-
7:35	0.019	0.016	7:35	0.012	0.014	-
7:36	0.016	0.015	7:36	0.016	0.015	-
7:37	0.007	0.014	7:37	0.011	0.015	-
7:38	0.005	0.014	7:38	0.012	0.016	-
7:39	0.011	0.016	7:39	0.015	0.017	-
7:40	0.019	0.016	7:40	0.012	0.018	-
7:41	0.011	0.017	7:41	0.011	0.018	-
7:42	0.018	0.017	7:42	0.014	0.018	-
7:43	0.028	0.017	7:43	0.017	0.018	-
7:44	0.016	0.015	7:44	0.013	0.017	-
7:45	0.015	0.017	7:45	0.019	0.017	-
7:46	0.02	0.016	7:46	0.017	0.017	-
7:47	0.021	0.015	7:47	0.018	0.016	-
7:48	0.014	0.015	7:48	0.017	0.016	-
7:49	0.017	0.015	7:49	0.013	0.016	-
7:50	0.008	0.015	7:50	0.02	0.016	-
7:51	0.007	0.015	7:51	0.021	0.015	-
7:52	0.006	0.015	7:52	0.026	0.015	-
7:53	0.024	0.015	7:53	0.02	0.014	-
7:54	0.019	0.013	7:54	0.027	0.014	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:55	0.025	0.013	7:55	0.017	0.014	-
7:56	0.019	0.011	7:56	0.015	0.014	-
7:57	0.009	0.010	7:57	0.008	0.014	-
7:58	0.011	0.010	7:58	0.008	0.014	-
7:59	0.033	0.010	7:59	0.012	0.015	-
8:00	0.008	0.008	8:00	0.012	0.016	-
8:01	0.008	0.008	8:01	0.01	0.016	-
8:02	0.018	0.008	8:02	0.009	0.016	-
8:03	0.018	0.007	8:03	0.017	0.016	-
8:04	0.009	0.006	8:04	0.013	0.015	-
8:05	0.006	0.006	8:05	0.013	0.015	-
8:06	0.006	0.007	8:06	0.011	0.014	-
8:07	0.007	0.007	8:07	0.023	0.014	-
8:08	0.006	0.007	8:08	0.019	0.014	-
8:09	0.006	0.008	8:09	0.023	0.013	-
8:10	0.006	0.008	8:10	0.02	0.012	-
8:11	0.006	0.008	8:11	0.01	0.012	-
8:12	0.005	0.008	8:12	0.014	0.012	-
8:13	0.006	0.009	8:13	0.014	0.011	-
8:14	0.007	0.009	8:14	0.029	0.011	-
8:15	0.007	0.009	8:15	0.012	0.010	-
8:16	0.007	0.009	8:16	0.008	0.010	-
8:17	0.006	0.012	8:17	0.008	0.010	-
8:18	0.007	0.014	8:18	0.009	0.010	-
8:19	0.008	0.019	8:19	0.008	0.011	-
8:20	0.008	0.023	8:20	0.009	0.011	-
8:21	0.007	0.024	8:21	0.01	0.011	-
8:22	0.011	0.024	8:22	0.014	0.011	-
8:23	0.016	0.024	8:23	0.008	0.011	-
8:24	0.011	0.024	8:24	0.012	0.012	-
8:25	0.009	0.030	8:25	0.011	0.012	-
8:26	0.01	0.074	8:26	0.01	0.013	-
8:27	0.008	0.074	8:27	0.008	0.013	-
8:28	0.008	0.075	8:28	0.008	0.014	-
8:29	0.009	0.077	8:29	0.009	0.014	-
8:30	0.015	0.077	8:30	0.013	0.014	-
8:31	0.045	0.077	8:31	0.016	0.014	-
8:32	0.043	0.074	8:32	0.012	0.014	-
8:33	0.084	0.073	8:33	0.012	0.014	-
8:34	0.065	0.069	8:34	0.014	0.014	-
8:35	0.024	0.065	8:35	0.013	0.014	-
8:36	0.008	0.064	8:36	0.01	0.014	-
8:37	0.01	0.064	8:37	0.012	0.014	-
8:38	0.017	0.064	8:38	0.014	0.014	-
8:39	0.1	0.063	8:39	0.024	0.014	-
8:40	0.659	0.057	8:40	0.019	0.013	-
8:41	0.02	0.014	8:41	0.012	0.013	-
8:42	0.018	0.013	8:42	0.016	0.012	-
8:43	0.035	0.012	8:43	0.018	0.012	-
8:44	0.013	0.010	8:44	0.009	0.011	-
8:45	0.008	0.010	8:45	0.01	0.011	-
8:46	0.011	0.010	8:46	0.011	0.011	-
8:47	0.027	0.010	8:47	0.015	0.011	-
8:48	0.013	0.009	8:48	0.017	0.012	-
8:49	0.009	0.009	8:49	0.012	0.011	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
8:50	0.008	0.009	8:50	0.011	0.012	-
8:51	0.008	0.010	8:51	0.01	0.012	-
8:52	0.009	0.010	8:52	0.015	0.011	-
8:53	0.008	0.010	8:53	0.012	0.011	-
8:54	0.009	0.010	8:54	0.01	0.011	-
8:55	0.008	0.010	8:55	0.011	0.011	-
8:56	0.008	0.010	8:56	0.009	0.011	-
8:57	0.008	0.011	8:57	0.008	0.011	-
8:58	0.01	0.011	8:58	0.009	0.011	-
8:59	0.01	0.011	8:59	0.009	0.011	-
9:00	0.011	0.011	9:00	0.012	0.011	-
9:01	0.009	0.011	9:01	0.012	0.011	-
9:02	0.011	0.011	9:02	0.017	0.011	-
9:03	0.012	0.012	9:03	0.013	0.011	-
9:04	0.013	0.012	9:04	0.016	0.010	-
9:05	0.011	0.012	9:05	0.01	0.010	-
9:06	0.012	0.012	9:06	0.009	0.010	-
9:07	0.01	0.012	9:07	0.009	0.009	-
9:08	0.01	0.012	9:08	0.009	0.010	-
9:09	0.011	0.012	9:09	0.009	0.010	-
9:10	0.01	0.013	9:10	0.009	0.010	-
9:11	0.011	0.013	9:11	0.011	0.010	-
9:12	0.012	0.013	9:12	0.008	0.011	-
9:13	0.011	0.013	9:13	0.008	0.011	-
9:14	0.012	0.014	9:14	0.009	0.011	-
9:15	0.013	0.014	9:15	0.016	0.011	-
9:16	0.012	0.014	9:16	0.014	0.011	-
9:17	0.02	0.016	9:17	0.008	0.010	-
9:18	0.015	0.015	9:18	0.008	0.010	-
9:19	0.011	0.015	9:19	0.008	0.010	-
9:20	0.01	0.015	9:20	0.008	0.011	-
9:21	0.01	0.016	9:21	0.008	0.011	-
9:22	0.011	0.016	9:22	0.01	0.011	-
9:23	0.012	0.016	9:23	0.01	0.011	-
9:24	0.021	0.016	9:24	0.008	0.011	-
9:25	0.018	0.015	9:25	0.013	0.012	-
9:26	0.013	0.015	9:26	0.022	0.011	-
9:27	0.013	0.015	9:27	0.02	0.010	-
9:28	0.012	0.016	9:28	0.008	0.010	-
9:29	0.018	0.016	9:29	0.007	0.011	-
9:30	0.017	0.016	9:30	0.006	0.011	-
9:31	0.033	0.016	9:31	0.006	0.011	-
9:32	0.013	0.015	9:32	0.007	0.012	-
9:33	0.012	0.015	9:33	0.007	0.013	-
9:34	0.015	0.016	9:34	0.021	0.013	-
9:35	0.016	0.016	9:35	0.01	0.012	-
9:36	0.016	0.016	9:36	0.016	0.012	-
9:37	0.011	0.016	9:37	0.01	0.012	-
9:38	0.013	0.017	9:38	0.01	0.012	-
9:39	0.012	0.017	9:39	0.01	0.012	-
9:40	0.012	0.017	9:40	0.008	0.012	-
9:41	0.019	0.017	9:41	0.008	0.012	-
9:42	0.016	0.017	9:42	0.011	0.012	-
9:43	0.015	0.017	9:43	0.021	0.012	-
9:44	0.021	0.017	9:44	0.013	0.011	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
9:45	0.016	0.017	9:45	0.011	0.011	-
9:46	0.016	0.017	9:46	0.014	0.011	-
9:47	0.02	0.017	9:47	0.018	0.011	-
9:48	0.02	0.016	9:48	0.013	0.011	-
9:49	0.017	0.016	9:49	0.01	0.011	-
9:50	0.021	0.016	9:50	0.011	0.011	-
9:51	0.017	0.015	9:51	0.01	0.011	-
9:52	0.016	0.015	9:52	0.009	0.012	-
9:53	0.015	0.015	9:53	0.01	0.012	-
9:54	0.015	0.015	9:54	0.008	0.012	-
9:55	0.015	0.015	9:55	0.008	0.012	-
9:56	0.014	0.015	9:56	0.009	0.012	-
9:57	0.014	0.015	9:57	0.011	0.012	-
9:58	0.017	0.015	9:58	0.012	0.012	-
9:59	0.02	0.015	9:59	0.009	0.011	-
10:00	0.016	0.015	10:00	0.013	0.011	-
10:01	0.014	0.015	10:01	0.021	0.011	-
10:02	0.014	0.014	10:02	0.009	0.010	-
10:03	0.014	0.014	10:03	0.012	0.010	-
10:04	0.013	0.014	10:04	0.011	0.010	-
10:05	0.014	0.014	10:05	0.019	0.010	-
10:06	0.015	0.014	10:06	0.014	0.009	-
10:07	0.019	0.014	10:07	0.016	0.009	-
10:08	0.014	0.013	10:08	0.009	0.008	-
10:09	0.019	0.013	10:09	0.007	0.008	-
10:10	0.014	0.013	10:10	0.007	0.008	-
10:11	0.013	0.013	10:11	0.007	0.009	-
10:12	0.014	0.013	10:12	0.007	0.010	-
10:13	0.014	0.013	10:13	0.008	0.010	-
10:14	0.014	0.013	10:14	0.008	0.010	-
10:15	0.013	0.013	10:15	0.008	0.011	-
10:16	0.013	0.014	10:16	0.007	0.011	-
10:17	0.012	0.014	10:17	0.007	0.012	-
10:18	0.012	0.015	10:18	0.010	0.012	-
10:19	0.012	0.015	10:19	0.013	0.012	-
10:20	0.012	0.015	10:20	0.008	0.011	-
10:21	0.013	0.015	10:21	0.008	0.012	-
10:22	0.013	0.015	10:22	0.007	0.012	-
10:23	0.013	0.016	10:23	0.008	0.012	-
10:24	0.013	0.016	10:24	0.012	0.012	-
10:25	0.013	0.016	10:25	0.017	0.013	-
10:26	0.014	0.016	10:26	0.02	0.013	-
10:27	0.019	0.016	10:27	0.009	0.013	-
10:28	0.014	0.016	10:28	0.011	0.013	-
10:29	0.015	0.016	10:29	0.02	0.013	-
10:30	0.016	0.017	10:30	0.011	0.013	-
10:31	0.022	0.017	10:31	0.014	0.013	-
10:32	0.017	0.017	10:32	0.008	0.013	-
10:33	0.016	0.017	10:33	0.009	0.013	-
10:34	0.014	0.017	10:34	0.01	0.014	-
10:35	0.016	0.017	10:35	0.009	0.014	-
10:36	0.016	0.017	10:36	0.009	0.014	-
10:37	0.015	0.017	10:37	0.012	0.014	-
10:38	0.014	0.018	10:38	0.015	0.014	-
10:39	0.017	0.018	10:39	0.018	0.014	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
10:40	0.016	0.018	10:40	0.017	0.013	-
10:41	0.017	0.018	10:41	0.017	0.013	-
10:42	0.016	0.018	10:42	0.015	0.013	-
10:43	0.02	0.018	10:43	0.016	0.014	-
10:44	0.017	0.018	10:44	0.012	0.015	-
10:45	0.018	0.018	10:45	0.01	0.015	-
10:46	0.02	0.018	10:46	0.018	0.015	-
10:47	0.017	0.018	10:47	0.012	0.014	-
10:48	0.023	0.019	10:48	0.013	0.015	-
10:49	0.015	0.019	10:49	0.015	0.015	-
10:50	0.016	0.020	10:50	0.013	0.015	-
10:51	0.02	0.022	10:51	0.012	0.016	-
10:52	0.02	0.022	10:52	0.011	0.016	-
10:53	0.019	0.022	10:53	0.01	0.016	-
10:54	0.017	0.021	10:54	0.011	0.017	-
10:55	0.016	0.021	10:55	0.01	0.017	-
10:56	0.016	0.022	10:56	0.012	0.017	-
10:57	0.017	0.022	10:57	0.03	0.018	-
10:58	0.018	0.022	10:58	0.029	0.016	-
10:59	0.02	0.022	10:59	0.013	0.015	-
11:00	0.021	0.022	11:00	0.011	0.015	-
11:01	0.02	0.022	11:01	0.014	0.015	-
11:02	0.029	0.021	11:02	0.016	0.014	-
11:03	0.027	0.021	11:03	0.022	0.014	-
11:04	0.031	0.020	11:04	0.011	0.013	-
11:05	0.035	0.019	11:05	0.021	0.013	-
11:06	0.019	0.018	11:06	0.018	0.012	-
11:07	0.019	0.018	11:07	0.012	0.012	-
11:08	0.016	0.017	11:08	0.021	0.012	-
11:09	0.018	0.018	11:09	0.011	0.011	-
11:10	0.021	0.018	11:10	0.015	0.011	-
11:11	0.017	0.017	11:11	0.019	0.011	-
11:12	0.017	0.017	11:12	0.011	0.010	-
11:13	0.021	0.017	11:13	0.012	0.010	-
11:14	0.016	0.017	11:14	0.009	0.010	-
11:15	0.019	0.017	11:15	0.009	0.011	-
11:16	0.017	0.017	11:16	0.009	0.012	-
11:17	0.015	0.017	11:17	0.009	0.012	-
11:18	0.017	0.018	11:18	0.013	0.012	-
11:19	0.018	0.018	11:19	0.01	0.012	-
11:20	0.02	0.018	11:20	0.009	0.013	-
11:21	0.015	0.018	11:21	0.013	0.013	-
11:22	0.015	0.019	11:22	0.011	0.014	-
11:23	0.018	0.020	11:23	0.009	0.014	-
11:24	0.018	0.020	11:24	0.014	0.015	-
11:25	0.015	0.021	11:25	0.009	0.016	-
11:26	0.02	0.022	11:26	0.008	0.016	-
11:27	0.015	0.022	11:27	0.009	0.016	-
11:28	0.016	0.022	11:28	0.015	0.017	-
11:29	0.017	0.023	11:29	0.019	0.017	-
11:30	0.019	0.023	11:30	0.022	0.017	-
11:31	0.02	0.024	11:31	0.014	0.017	-
11:32	0.028	0.024	11:32	0.009	0.017	-
11:33	0.021	0.023	11:33	0.015	0.017	-
11:34	0.015	0.024	11:34	0.015	0.017	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
11:35	0.025	0.024	11:35	0.02	0.016	-
11:36	0.021	0.024	11:36	0.019	0.016	-
11:37	0.028	0.024	11:37	0.019	0.015	-
11:38	0.028	0.023	11:38	0.023	0.015	-
11:39	0.027	0.023	11:39	0.017	0.014	-
11:40	0.023	0.022	11:40	0.016	0.014	-
11:41	0.025	0.022	11:41	0.014	0.013	-
11:42	0.023	0.021	11:42	0.015	0.013	-
11:43	0.024	0.021	11:43	0.016	0.012	-
11:44	0.024	0.021	11:44	0.026	0.012	-
11:45	0.024	0.020	11:45	0.012	0.011	-
11:46	0.022	0.020	11:46	0.013	0.011	-
11:47	0.019	0.020	11:47	0.012	0.011	-
11:48	0.026	0.020	11:48	0.011	0.011	-
11:49	0.027	0.019	11:49	0.013	0.011	-
11:50	0.019	0.019	11:50	0.011	0.011	-
11:51	0.021	0.019	11:51	0.011	0.010	-
11:52	0.019	0.019	11:52	0.011	0.010	-
11:53	0.019	0.019	11:53	0.011	0.010	-
11:54	0.018	0.019	11:54	0.011	0.010	-
11:55	0.018	0.019	11:55	0.01	0.010	-
11:56	0.019	0.019	11:56	0.01	0.010	-
11:57	0.019	0.019	11:57	0.009	0.010	-
11:58	0.019	0.019	11:58	0.009	0.010	-
11:59	0.016	0.019	11:59	0.009	0.010	-
12:00	0.019	0.019	12:00	0.011	0.011	-
12:01	0.019	0.019	12:01	0.012	0.011	-
12:02	0.019	0.020	12:02	0.012	0.012	-
12:03	0.021	0.020	12:03	0.011	0.012	-
12:04	0.02	0.020	12:04	0.011	0.011	-
12:05	0.02	0.020	12:05	0.009	0.011	-
12:06	0.019	0.020	12:06	0.011	0.011	-
12:07	0.019	0.021	12:07	0.009	0.011	-
12:08	0.02	0.022	12:08	0.009	0.012	-
12:09	0.018	0.022	12:09	0.009	0.012	-
12:10	0.018	0.022	12:10	0.008	0.012	-
12:11	0.018	0.022	12:11	0.009	0.012	-
12:12	0.019	0.021	12:12	0.013	0.012	-
12:13	0.019	0.021	12:13	0.014	0.012	-
12:14	0.021	0.022	12:14	0.017	0.012	-
12:15	0.022	0.021	12:15	0.017	0.011	-
12:16	0.022	0.021	12:16	0.014	0.011	-
12:17	0.022	0.021	12:17	0.012	0.011	-
12:18	0.027	0.021	12:18	0.009	0.011	-
12:19	0.019	0.021	12:19	0.01	0.011	-
12:20	0.022	0.022	12:20	0.011	0.011	-
12:21	0.027	0.022	12:21	0.01	0.011	-
12:22	0.031	0.021	12:22	0.011	0.011	-
12:23	0.019	0.021	12:23	0.01	0.011	-
12:24	0.018	0.021	12:24	0.009	0.012	-
12:25	0.017	0.021	12:25	0.01	0.012	-
12:26	0.017	0.021	12:26	0.011	0.012	-
12:27	0.017	0.022	12:27	0.013	0.012	-
12:28	0.022	0.022	12:28	0.011	0.012	-
12:29	0.019	0.022	12:29	0.013	0.012	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
12:30	0.019	0.022	12:30	0.014	0.012	-
12:31	0.02	0.022	12:31	0.012	0.011	-
12:32	0.021	0.022	12:32	0.01	0.011	-
12:33	0.02	0.022	12:33	0.011	0.011	-
12:34	0.034	0.022	12:34	0.013	0.011	-
12:35	0.025	0.021	12:35	0.012	0.011	-
12:36	0.02	0.020	12:36	0.011	0.011	-
12:37	0.021	0.020	12:37	0.012	0.011	-
12:38	0.021	0.020	12:38	0.012	0.011	-
12:39	0.022	0.020	12:39	0.013	0.011	-
12:40	0.022	0.020	12:40	0.011	0.011	-
12:41	0.021	0.020	12:41	0.01	0.011	-
12:42	0.022	0.021	12:42	0.01	0.011	-
12:43	0.019	0.021	12:43	0.011	0.011	-
12:44	0.02	0.021	12:44	0.013	0.011	-
12:45	0.021	0.020	12:45	0.01	0.011	-
12:46	0.02	0.021	12:46	0.009	0.010	-
12:47	0.02	0.021	12:47	0.009	0.010	-
12:48	0.019	0.021	12:48	0.012	0.010	-
12:49	0.019	0.021	12:49	0.014	0.010	-
12:50	0.02	0.021	12:50	0.012	0.010	-
12:51	0.02	0.021	12:51	0.011	0.010	-
12:52	0.02	0.021	12:52	0.011	0.010	-
12:53	0.022	0.021	12:53	0.01	0.010	-
12:54	0.022	0.021	12:54	0.012	0.010	-
12:55	0.02	0.021	12:55	0.01	0.009	-
12:56	0.026	0.021	12:56	0.009	0.009	-
12:57	0.02	0.020	12:57	0.009	0.010	-
12:58	0.019	0.021	12:58	0.01	0.010	-
12:59	0.019	0.021	12:59	0.01	0.010	-
13:00	0.022	0.021	13:00	0.009	0.010	-
13:01	0.023	0.021	13:01	0.009	0.010	-
13:02	0.023	0.021	13:02	0.009	0.011	-
13:03	0.022	0.021	13:03	0.009	0.011	-
13:04	0.019	0.021	13:04	0.01	0.012	-
13:05	0.019	0.021	13:05	0.009	0.012	-
13:06	0.021	0.022	13:06	0.01	0.012	-
13:07	0.024	0.022	13:07	0.009	0.012	-
13:08	0.02	0.022	13:08	0.009	0.012	-
13:09	0.018	0.022	13:09	0.009	0.012	-
13:10	0.017	0.022	13:10	0.01	0.012	-
13:11	0.02	0.022	13:11	0.015	0.012	-
13:12	0.023	0.022	13:12	0.012	0.012	-
13:13	0.025	0.022	13:13	0.01	0.012	-
13:14	0.023	0.022	13:14	0.013	0.012	-
13:15	0.019	0.022	13:15	0.013	0.012	-
13:16	0.02	0.022	13:16	0.014	0.011	-
13:17	0.024	0.022	13:17	0.013	0.012	-
13:18	0.028	0.022	13:18	0.019	0.012	-
13:19	0.02	0.021	13:19	0.012	0.011	-
13:20	0.028	0.021	13:20	0.011	0.011	-
13:21	0.022	0.021	13:21	0.01	0.011	-
13:22	0.02	0.020	13:22	0.01	0.011	-
13:23	0.02	0.020	13:23	0.011	0.011	-
13:24	0.019	0.020	13:24	0.01	0.011	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
13:25	0.019	0.020	13:25	0.009	0.011	-
13:26	0.018	0.020	13:26	0.01	0.011	-
13:27	0.019	0.020	13:27	0.01	0.011	-
13:28	0.026	0.020	13:28	0.01	0.011	-
13:29	0.023	0.020	13:29	0.012	0.011	-
13:30	0.025	0.020	13:30	0.01	0.011	-
13:31	0.023	0.020	13:31	0.017	0.011	-
13:32	0.019	0.019	13:32	0.012	0.010	-
13:33	0.019	0.020	13:33	0.010	0.010	-
13:34	0.018	0.020	13:34	0.011	0.010	-
13:35	0.018	0.020	13:35	0.01	0.010	-
13:36	0.02	0.020	13:36	0.009	0.010	-
13:37	0.02	0.020	13:37	0.009	0.011	-
13:38	0.018	0.020	13:38	0.01	0.011	-
13:39	0.019	0.020	13:39	0.011	0.011	-
13:40	0.018	0.020	13:40	0.012	0.011	-
13:41	0.02	0.020	13:41	0.01	0.011	-
13:42	0.02	0.020	13:42	0.01	0.011	-
13:43	0.019	0.020	13:43	0.01	0.011	-
13:44	0.019	0.021	13:44	0.01	0.011	-
13:45	0.024	0.021	13:45	0.01	0.011	-
13:46	0.02	0.020	13:46	0.01	0.012	-
13:47	0.021	0.020	13:47	0.01	0.013	-
13:48	0.019	0.019	13:48	0.015	0.015	-

May 13, 2020						
Number of Instances Where Downwind VOCs Exceeds Upwind VOCs + 5ppm =						0
Number of Comparable Data Points =						348
PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:06	2.3		7:06			
7:07	2.4		7:07			
7:08	2.5		7:08			
7:09	2.6		7:09	1.1		
7:10	2.7		7:10	1.2		
7:11	2.8		7:11	0.7		
7:12	2.8		7:12	1		
7:13	2.9		7:13	0.7		
7:14	2.9		7:14	0.9		
7:15	2.9		7:15	0.6		
7:16	3		7:16	0.8		
7:17	3		7:17	0.5		
7:18	3.1		7:18	0.5		
7:19	3.1		7:19	0.4		
7:20	3.1	2.8	7:20	0.2		
7:21	3.2	2.9	7:21	0.2	0.7	-
7:22	3.2	2.9	7:22	0.4	0.7	-
7:23	3.3	3.0	7:23	0.2	0.7	-
7:24	3.3	3.0	7:24	0.2	0.6	-
7:25	3.3	3.1	7:25	0.2	0.6	-
7:26	3.3	3.1	7:26	0.2	0.5	-
7:27	3.3	3.1	7:27	0.4	0.5	-
7:28	3.4	3.2	7:28	0.7	0.4	-
7:29	3.5	3.2	7:29	0.6	0.4	-
7:30	3.4	3.2	7:30	0.2	0.4	-
7:31	3.5	3.3	7:31	0.3	0.4	-
7:32	3.4	3.3	7:32	0.3	0.3	-
7:33	3.5	3.3	7:33	0.4	0.3	-
7:34	3.5	3.3	7:34	1.1	0.3	-
7:35	3.6	3.4	7:35	0.5	0.4	-
7:36	3.6	3.4	7:36	0.2	0.4	-
7:37	3.5	3.4	7:37	0.3	0.4	-
7:38	3.5	3.4	7:38	0.6	0.4	-
7:39	3.5	3.5	7:39	0.4	0.4	-
7:40	3.5	3.5	7:40	0.7	0.4	-
7:41	3.5	3.5	7:41	0.8	0.5	-
7:42	3.5	3.5	7:42	0.5	0.5	-
7:43	3.6	3.5	7:43	0.3	0.5	-
7:44	3.7	3.5	7:44	0.5	0.5	-
7:45	3.6	3.5	7:45	0.4	0.5	-
7:46	3.6	3.5	7:46	1.3	0.5	-
7:47	3.6	3.6	7:47	0.1	0.6	-
7:48	3.6	3.6	7:48	0.5	0.5	-
7:49	3.5	3.6	7:49	0.2	0.5	-
7:50	3.5	3.6	7:50	0.3	0.5	-
7:51	3.6	3.6	7:51	1.1	0.5	-
7:52	3.6	3.6	7:52	0.5	0.5	-
7:53	3.6	3.6	7:53	0.8	0.5	-
7:54	3.6	3.6	7:54	0.3	0.6	-
7:55	3.6	3.6	7:55	0.3	0.6	-
7:56	3.5	3.6	7:56	0.5	0.5	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:57	3.5	3.6	7:57	1.8	0.5	-
7:58	3.5	3.6	7:58	0.5	0.6	-
7:59	3.5	3.6	7:59	0.7	0.6	-
8:00	3.5	3.6	8:00	1.1	0.6	-
8:01	3.6	3.6	8:01	2.4	0.7	-
8:02	3.6	3.6	8:02	0.7	0.7	-
8:03	3.5	3.5	8:03	2.6	0.8	-
8:04	3.5	3.5	8:04	0.3	0.9	-
8:05	3.5	3.5	8:05	0.2	0.9	-
8:06	3.6	3.5	8:06	0.1	0.9	-
8:07	3.6	3.5	8:07	0.1	0.9	-
8:08	3.6	3.5	8:08	0.2	0.8	-
8:09	3.6	3.5	8:09	0.1	0.8	-
8:10	3.6	3.5	8:10	0.2	0.8	-
8:11	3.6	3.6	8:11	0	0.8	-
8:12	3.6	3.6	8:12	0	0.7	-
8:13	3.5	3.6	8:13	1.4	0.6	-
8:14	3.5	3.6	8:14	1.4	0.7	-
8:15	3.6	3.6	8:15	0.8	0.7	-
8:16	3.5	3.6	8:16	0.3	0.7	-
8:17	3.5	3.6	8:17	0.3	0.6	-
8:18	3.5	3.6	8:18	0.5	0.5	-
8:19	3.5	3.6	8:19	0.3	0.4	-
8:20	3.5	3.6	8:20	0.3	0.4	-
8:21	3.5	3.5	8:21	0.7	0.4	-
8:22	3.8	3.6	8:22	1.1	0.4	-
8:23	3.8	3.6	8:23	1.7	0.5	-
8:24	3.5	3.6	8:24	0.5	0.6	-
8:25	3.5	3.6	8:25	0.4	0.6	-
8:26	3.5	3.6	8:26	0.5	0.6	-
8:27	3.5	3.5	8:27	0.3	0.7	-
8:28	3.5	3.5	8:28	0.3	0.7	-
8:29	3.5	3.5	8:29	2.4	0.6	-
8:30	3.5	3.5	8:30	2.5	0.7	-
8:31	3.6	3.5	8:31	1.7	0.8	-
8:32	3.6	3.6	8:32	3.8	0.9	-
8:33	3.6	3.6	8:33	1	1.1	-
8:34	3.6	3.6	8:34	0.3	1.2	-
8:35	3.5	3.6	8:35	0.2	1.2	-
8:36	3.6	3.6	8:36	1	1.2	-
8:37	3.5	3.6	8:37	1.3	1.2	-
8:38	3.6	3.5	8:38	5.2	1.2	-
8:39	3.5	3.5	8:39	1.5	1.4	-
8:40	3.6	3.5	8:40	1.4	1.5	-
8:41	3.5	3.5	8:41	2	1.6	-
8:42	3.4	3.5	8:42	2.8	1.7	-
8:43	3.4	3.5	8:43	0.3	1.8	-
8:44	3.5	3.5	8:44	0.3	1.8	-
8:45	3.7	3.5	8:45	1.1	1.7	-
8:46	3.7	3.6	8:46	0.4	1.6	-
8:47	3.8	3.6	8:47	0.2	1.5	-
8:48	3.7	3.6	8:48	0	1.3	-
8:49	3.5	3.6	8:49	0	1.2	-
8:50	3.5	3.6	8:50	0	1.2	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
8:51	3.4	3.6	8:51	0	1.2	-
8:52	3.5	3.6	8:52	0.1	1.1	-
8:53	3.4	3.5	8:53	0	1.0	-
8:54	3.4	3.5	8:54	0	0.7	-
8:55	3.4	3.5	8:55	0	0.6	-
8:56	3.4	3.5	8:56	0	0.5	-
8:57	3.4	3.5	8:57	0.2	0.3	-
8:58	3.4	3.5	8:58	0.3	0.2	-
8:59	3.3	3.5	8:59	0	0.2	-
9:00	3.4	3.5	9:00	0	0.2	-
9:01	3.4	3.5	9:01	0.1	0.1	-
9:02	3.4	3.4	9:02	0.9	0.1	-
9:03	3.4	3.4	9:03	0.2	0.1	-
9:04	3.4	3.4	9:04	0.3	0.1	-
9:05	3.4	3.4	9:05	0.1	0.1	-
9:06	3.3	3.4	9:06	0	0.1	-
9:07	3.3	3.4	9:07	0	0.1	-
9:08	3.3	3.4	9:08	0	0.1	-
9:09	3.3	3.4	9:09	0	0.1	-
9:10	3.3	3.4	9:10	0	0.1	-
9:11	3.3	3.4	9:11	0.1	0.1	-
9:12	3.2	3.3	9:12	0.6	0.1	-
9:13	3.2	3.3	9:13	0.4	0.2	-
9:14	3.2	3.3	9:14	0.4	0.2	-
9:15	3.3	3.3	9:15	0.5	0.2	-
9:16	3.3	3.3	9:16	0.3	0.2	-
9:17	3.4	3.3	9:17	0	0.3	-
9:18	3.2	3.3	9:18	0.2	0.2	-
9:19	3.2	3.3	9:19	0	0.2	-
9:20	3.2	3.3	9:20	0.1	0.2	-
9:21	3.3	3.3	9:21	0.2	0.2	-
9:22	3.3	3.3	9:22	0.5	0.2	-
9:23	3.3	3.3	9:23	0.4	0.2	-
9:24	3.2	3.3	9:24	0.5	0.2	-
9:25	3.2	3.3	9:25	0.4	0.3	-
9:26	3.2	3.2	9:26	0.3	0.3	-
9:27	3.2	3.2	9:27	0.1	0.3	-
9:28	3.2	3.2	9:28	0.5	0.3	-
9:29	3.1	3.2	9:29	0.4	0.3	-
9:30	3.1	3.2	9:30	0.1	0.3	-
9:31	3.1	3.2	9:31	0	0.3	-
9:32	3.1	3.2	9:32	0.1	0.2	-
9:33	3.1	3.2	9:33	0.4	0.3	-
9:34	3.1	3.2	9:34	0.3	0.3	-
9:35	3.1	3.2	9:35	0.3	0.3	-
9:36	3.1	3.2	9:36	0.2	0.3	-
9:37	3.1	3.1	9:37	0.3	0.3	-
9:38	3.1	3.1	9:38	0.2	0.3	-
9:39	3.1	3.1	9:39	0.2	0.3	-
9:40	3	3.1	9:40	0.4	0.3	-
9:41	3	3.1	9:41	0.6	0.3	-
9:42	3	3.1	9:42	0.3	0.3	-
9:43	3	3.1	9:43	0.4	0.3	-
9:44	3	3.1	9:44	1.2	0.3	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
9:45	2.9	3.1	9:45	0.6	0.3	-
9:46	3	3.0	9:46	0.4	0.4	-
9:47	2.9	3.0	9:47	0.2	0.4	-
9:48	2.9	3.0	9:48	0.7	0.4	-
9:49	3	3.0	9:49	0.6	0.4	-
9:50	3	3.0	9:50	0.3	0.4	-
9:51	3	3.0	9:51	0.4	0.4	-
9:52	3.1	3.0	9:52	0.4	0.5	-
9:53	3	3.0	9:53	0.2	0.5	-
9:54	3	3.0	9:54	0.3	0.5	-
9:55	3	3.0	9:55	0.1	0.5	-
9:56	3	3.0	9:56	0.2	0.4	-
9:57	3	3.0	9:57	0.6	0.4	-
9:58	3	3.0	9:58	0.1	0.4	-
9:59	3	3.0	9:59	0.3	0.4	-
10:00	2.9	3.0	10:00	0.1	0.4	-
10:01	3	3.0	10:01	0.5	0.3	-
10:02	3.1	3.0	10:02	0	0.3	-
10:03	2.9	3.0	10:03	0	0.3	-
10:04	2.9	3.0	10:04	0	0.3	-
10:05	2.9	3.0	10:05	0.4	0.2	-
10:06	2.9	3.0	10:06	0.3	0.2	-
10:07	3	3.0	10:07	0.2	0.2	-
10:08	3	3.0	10:08	0	0.2	-
10:09	2.9	3.0	10:09	0	0.2	-
10:10	2.9	3.0	10:10	0	0.2	-
10:11	2.9	3.0	10:11	0	0.2	-
10:12	2.9	2.9	10:12	0	0.2	-
10:13	2.9	2.9	10:13	0	0.1	-
10:14	3	2.9	10:14	0	0.1	-
10:15	3	2.9	10:15	0	0.1	-
10:16	3	2.9	10:16	0	0.1	-
10:17	3	2.9	10:17	0	0.1	-
10:18	2.9	2.9	10:18	0.1	0.1	-
10:19	3	2.9	10:19	0	0.1	-
10:20	3.1	3.0	10:20	0	0.1	-
10:21	3	3.0	10:21	0	0.0	-
10:22	3	3.0	10:22	0	0.0	-
10:23	3	3.0	10:23	0	0.0	-
10:24	3	3.0	10:24	0	0.0	-
10:25	2.9	3.0	10:25	0.1	0.0	-
10:26	2.9	3.0	10:26	0	0.0	-
10:27	3.1	3.0	10:27	0	0.0	-
10:28	2.8	3.0	10:28	0.2	0.0	-
10:29	2.9	3.0	10:29	0.6	0.0	-
10:30	2.9	3.0	10:30	0.5	0.1	-
10:31	2.9	3.0	10:31	0.4	0.1	-
10:32	2.9	3.0	10:32	0	0.1	-
10:33	2.9	3.0	10:33	0	0.1	-
10:34	2.9	2.9	10:34	0.1	0.1	-
10:35	2.9	2.9	10:35	0.1	0.1	-
10:36	2.9	2.9	10:36	0.1	0.1	-
10:37	2.9	2.9	10:37	0.1	0.1	-
10:38	2.9	2.9	10:38	0.1	0.1	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
10:39	2.9	2.9	10:39	0.1	0.2	-
10:40	2.8	2.9	10:40	0.1	0.2	-
10:41	2.8	2.9	10:41	0.1	0.2	-
10:42	2.8	2.9	10:42	0.1	0.2	-
10:43	2.8	2.9	10:43	0.1	0.2	-
10:44	2.9	2.9	10:44	0.1	0.2	-
10:45	2.9	2.9	10:45	0.5	0.1	-
10:46	2.9	2.9	10:46	0.1	0.1	-
10:47	2.8	2.9	10:47	0.2	0.1	-
10:48	2.9	2.9	10:48	0.1	0.1	-
10:49	2.9	2.9	10:49	0.4	0.1	-
10:50	2.9	2.9	10:50	0.5	0.2	-
10:51	2.9	2.9	10:51	0.1	0.2	-
10:52	2.9	2.9	10:52	0.4	0.2	-
10:53	2.9	2.9	10:53	0.1	0.2	-
10:54	2.9	2.9	10:54	0.1	0.2	-
10:55	2.8	2.9	10:55	0.1	0.2	-
10:56	2.8	2.9	10:56	0	0.2	-
10:57	2.8	2.9	10:57	0	0.2	-
10:58	2.9	2.9	10:58	0.3	0.2	-
10:59	2.8	2.9	10:59	0.8	0.2	-
11:00	2.8	2.9	11:00	0.4	0.2	-
11:01	2.8	2.9	11:01	0.2	0.2	-
11:02	2.9	2.9	11:02	1.5	0.2	-
11:03	3	2.9	11:03	1	0.3	-
11:04	2.8	2.9	11:04	1.1	0.4	-
11:05	2.8	2.9	11:05	0.4	0.4	-
11:06	2.8	2.8	11:06	0	0.4	-
11:07	2.9	2.8	11:07	0	0.4	-
11:08	2.7	2.8	11:08	0.2	0.4	-
11:09	2.8	2.8	11:09	0.3	0.4	-
11:10	2.8	2.8	11:10	0.1	0.4	-
11:11	2.9	2.8	11:11	0.2	0.4	-
11:12	3	2.8	11:12	0.1	0.4	-
11:13	2.7	2.8	11:13	0.7	0.4	-
11:14	2.7	2.8	11:14	0	0.5	-
11:15	2.7	2.8	11:15	0	0.4	-
11:16	2.9	2.8	11:16	0.1	0.4	-
11:17	2.9	2.8	11:17	0	0.4	-
11:18	2.8	2.8	11:18	0	0.3	-
11:19	2.8	2.8	11:19	0	0.2	-
11:20	2.8	2.8	11:20	0	0.1	-
11:21	2.8	2.8	11:21	0	0.1	-
11:22	2.8	2.8	11:22	0.6	0.1	-
11:23	2.9	2.8	11:23	0	0.2	-
11:24	2.9	2.8	11:24	0	0.1	-
11:25	2.8	2.8	11:25	0	0.1	-
11:26	2.8	2.8	11:26	0	0.1	-
11:27	2.8	2.8	11:27	0	0.1	-
11:28	2.8	2.8	11:28	0.2	0.1	-
11:29	2.9	2.8	11:29	0.3	0.1	-
11:30	2.9	2.8	11:30	0.8	0.1	-
11:31	2.8	2.8	11:31	0	0.1	-
11:32	2.8	2.8	11:32	0	0.1	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:33	2.8	2.8	11:33	0	0.1	-
11:34	2.8	2.8	11:34	0.3	0.1	-
11:35	2.9	2.8	11:35	0.6	0.1	-
11:36	2.8	2.8	11:36	0.5	0.2	-
11:37	2.8	2.8	11:37	0.6	0.2	-
11:38	2.9	2.8	11:38	0.1	0.2	-
11:39	2.8	2.8	11:39	0	0.2	-
11:40	2.7	2.8	11:40	0	0.2	-
11:41	2.7	2.8	11:41	0.2	0.2	-
11:42	2.7	2.8	11:42	0	0.2	-
11:43	2.8	2.8	11:43	0	0.2	-
11:44	2.8	2.8	11:44	0	0.2	-
11:45	2.7	2.8	11:45	0.2	0.2	-
11:46	2.7	2.8	11:46	0	0.2	-
11:47	2.7	2.8	11:47	0	0.2	-
11:48	2.7	2.8	11:48	0	0.2	-
11:49	2.7	2.8	11:49	0	0.2	-
11:50	2.6	2.7	11:50	0.2	0.1	-
11:51	2.6	2.7	11:51	0.3	0.1	-
11:52	2.7	2.7	11:52	0.1	0.1	-
11:53	2.8	2.7	11:53	0.1	0.1	-
11:54	2.8	2.7	11:54	0	0.1	-
11:55	2.7	2.7	11:55	0	0.1	-
11:56	2.8	2.7	11:56	0	0.1	-
11:57	2.8	2.7	11:57	0	0.1	-
11:58	2.8	2.7	11:58	0	0.1	-
11:59	2.8	2.7	11:59	0	0.1	-
12:00	2.8	2.7	12:00	0	0.1	-
12:01	2.7	2.7	12:01	0.1	0.0	-
12:02	2.8	2.7	12:02	0	0.1	-
12:03	2.8	2.7	12:03	0	0.1	-
12:04	2.8	2.8	12:04	0	0.1	-
12:05	2.8	2.8	12:05	0	0.1	-
12:06	2.7	2.8	12:06	0	0.0	-
12:07	2.7	2.8	12:07	0	0.0	-
12:08	2.7	2.8	12:08	0	0.0	-
12:09	2.7	2.8	12:09	0	0.0	-
12:10	2.7	2.8	12:10	0	0.0	-
12:11	2.7	2.8	12:11	0	0.0	-
12:12	2.7	2.7	12:12	0.4	0.0	-
12:13	2.7	2.7	12:13	0.4	0.0	-
12:14	2.7	2.7	12:14	0.3	0.1	-
12:15	2.7	2.7	12:15	0.3	0.1	-
12:16	2.7	2.7	12:16	0.2	0.1	-
12:17	2.7	2.7	12:17	0.4	0.1	-
12:18	2.7	2.7	12:18	0.3	0.1	-
12:19	2.7	2.7	12:19	0.4	0.2	-
12:20	2.6	2.7	12:20	0.4	0.2	-
12:21	2.6	2.7	12:21	0.2	0.2	-
12:22	2.6	2.7	12:22	0.1	0.2	-
12:23	2.6	2.7	12:23	0	0.2	-
12:24	2.6	2.7	12:24	0.1	0.2	-
12:25	2.6	2.7	12:25	0.1	0.2	-
12:26	2.6	2.7	12:26	0.2	0.2	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
12:27	2.6	2.6	12:27	0.1	0.3	-
12:28	2.5	2.6	12:28	0.1	0.2	-
12:29	2.5	2.6	12:29	0.5	0.2	-
12:30	2.6	2.6	12:30	0.3	0.2	-
12:31	2.5	2.6	12:31	0.5	0.2	-
12:32	2.5	2.6	12:32	0.3	0.2	-
12:33	2.5	2.6	12:33	0.6	0.2	-
12:34	2.5	2.6	12:34	0.4	0.3	-
12:35	2.6	2.6	12:35	0.3	0.3	-
12:36	2.6	2.6	12:36	0.7	0.3	-
12:37	2.6	2.6	12:37	0.2	0.3	-
12:38	2.5	2.6	12:38	1	0.3	-
12:39	2.5	2.5	12:39	0.9	0.4	-
12:40	2.6	2.5	12:40	0.6	0.4	-
12:41	2.5	2.5	12:41	0.3	0.4	-
12:42	2.5	2.5	12:42	0.2	0.5	-
12:43	2.5	2.5	12:43	0.2	0.5	-
12:44	2.5	2.5	12:44	0.3	0.5	-
12:45	2.5	2.5	12:45	0.5	0.5	-
12:46	2.5	2.5	12:46	0.5	0.5	-
12:47	2.4	2.5	12:47	0.3	0.5	-
12:48	2.5	2.5	12:48	0.5	0.5	-
12:49	2.5	2.5	12:49	0.3	0.5	-
12:50	2.5	2.5	12:50	0.4	0.5	-
12:51	2.5	2.5	12:51	0.3	0.5	-
12:52	2.5	2.5	12:52	0.2	0.4	-
12:53	2.5	2.5	12:53	0.7	0.4	-
12:54	2.6	2.5	12:54	0.3	0.4	-
12:55	2.5	2.5	12:55	0.4	0.4	-
12:56	2.5	2.5	12:56	0.4	0.4	-
12:57	2.5	2.5	12:57	0.4	0.4	-
12:58	2.5	2.5	12:58	0.3	0.4	-
12:59	2.5	2.5	12:59	0.4	0.4	-
13:00	2.5	2.5	13:00	0.3	0.4	-
13:01	2.5	2.5	13:01	0.3	0.4	-
13:02	2.5	2.5	13:02	0.6	0.4	-
13:03	2.5	2.5	13:03	0.4	0.4	-
13:04	2.5	2.5	13:04	0.4	0.4	-
13:05	2.5	2.5	13:05	0.5	0.4	-
13:06	2.5	2.5	13:06	0.4	0.4	-
13:07	2.4	2.5	13:07	0.2	0.4	-
13:08	2.4	2.5	13:08	0.4	0.4	-
13:09	2.5	2.5	13:09	0.4	0.4	-
13:10	2.5	2.5	13:10	1	0.4	-
13:11	2.5	2.5	13:11	0.6	0.4	-
13:12	2.5	2.5	13:12	0.4	0.4	-
13:13	2.4	2.5	13:13	0.4	0.4	-
13:14	2.4	2.5	13:14	0.4	0.4	-
13:15	2.4	2.5	13:15	0.4	0.4	-
13:16	2.4	2.5	13:16	0.6	0.5	-
13:17	2.4	2.5	13:17	0.4	0.5	-
13:18	2.3	2.4	13:18	0.4	0.5	-
13:19	2.4	2.4	13:19	0.4	0.5	-
13:20	2.4	2.4	13:20	0.4	0.5	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
13:21	2.4	2.4	13:21	0.3	0.5	-
13:22	2.4	2.4	13:22	0.5	0.4	-
13:23	2.4	2.4	13:23	0.5	0.5	-
13:24	2.5	2.4	13:24	0.8	0.5	-
13:25	2.4	2.4	13:25	0.7	0.5	-
13:26	2.4	2.4	13:26	0.5	0.5	-
13:27	2.4	2.4	13:27	0.4	0.5	-
13:28	2.4	2.4	13:28	1	0.5	-
13:29	2.4	2.4	13:29	0.7	0.5	-
13:30	2.4	2.4	13:30	0.6	0.5	-
13:31	2.4	2.4	13:31	0.8	0.5	-
13:32	2.4	2.4	13:32	0.5	0.6	-
13:33	2.3	2.4	13:33	0.3	0.6	-
13:34	2.3	2.4	13:34	0.4	0.6	-
13:35	2.4	2.4	13:35	0.4	0.6	-
13:36	2.4	2.4	13:36	0.4	0.6	-
13:37	2.6	2.4	13:37	0.6	0.6	-
13:38	2.5	2.4	13:38	0.4	0.6	-
13:39	2.5	2.4	13:39	0.4	0.6	-
13:40	2.5	2.4	13:40	0.4	0.5	-
13:41	2.5	2.4	13:41	0.6	0.5	-
13:42	2.4	2.4	13:42	0.5	0.5	-
13:43	2.5	2.4	13:43	0.5	0.5	-
13:44	2.5	2.4	13:44	0.5	0.5	-
13:45	2.6	2.5	13:45	0.6	0.5	-
13:46	2.6	2.5	13:46	0.5	0.5	-
13:47	2.6	2.5	13:47	1.2	0.5	-
13:48	2.6	2.5	13:48		0.5	-
13:49	2.6	2.5	13:49		0.5	-
13:50	2.5	2.5	13:50		0.5	-

Date: 5/16/2020
Observer: Reid Balkind

Particulate Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.002	0.003
Maximum 15min Average	0.007	0.011
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.002	0.002
Maximum 1min Reading	0.016	0.014

Organic Vapor Monitoring		
	Upwind	Downwind
Minimum 15min Average	0.0	#DIV/0!
Maximum 15min Average	0.2	#DIV/0!
High Intervals "exceedances"	N/A	0
Minimum 1min Reading	0.0	0.0
Maximum 1min Reading	1.4	0.6

All reported particulate concentrations are in mg/m³ or milligrams per cubic meter and all reported organic vapor concentrations are in ppm or parts per million, unless specified otherwise.

May 16, 2020						
Number of Instances Where Downwind Particulates Exceeds Upwind Particulate + .150 mg/m ³ =						0
Number of Comparable Data Points =						256
PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
7:44			7:44	0.002		
7:45			7:45	0.002		
7:46			7:46	0.002		
7:47			7:47	0.002		
7:48			7:48	0.002		
7:49	0.004		7:49	0.002		
7:50	0.003		7:50	0.002		
7:51	0.003		7:51	0.002		
7:52	0.003		7:52	0.002		
7:53	0.003		7:53	0.002		
7:54	0.003		7:54	0.002		
7:55	0.002		7:55	0.002		
7:56	0.003		7:56	0.002		
7:57	0.005		7:57	0.002		
7:58	0.004	0.004	7:58	0.002	0.004	-
7:59	0.003	0.004	7:59	0.002	0.003	-
8:00	0.004	0.004	8:00	0.002	0.003	-
8:01	0.003	0.004	8:01	0.002	0.003	-
8:02	0.004	0.004	8:02	0.002	0.003	-
8:03	0.004	0.004	8:03	0.003	0.003	-
8:04	0.004	0.004	8:04	0.003	0.003	-
8:05	0.004	0.004	8:05	0.003	0.003	-
8:06	0.004	0.003	8:06	0.004	0.003	-
8:07	0.004	0.003	8:07	0.004	0.003	-
8:08	0.004	0.003	8:08	0.003	0.003	-
8:09	0.004	0.003	8:09	0.003	0.003	-
8:10	0.003	0.003	8:10	0.003	0.003	-
8:11	0.004	0.004	8:11	0.002	0.003	-
8:12	0.003	0.005	8:12	0.003	0.003	-
8:13	0.002	0.005	8:13	0.003	0.003	-
8:14	0.004	0.005	8:14	0.003	0.003	-
8:15	0.005	0.005	8:15	0.003	0.003	-
8:16	0.003	0.005	8:16	0.003	0.003	-
8:17	0.002	0.005	8:17	0.003	0.003	-
8:18	0.003	0.005	8:18	0.002	0.003	-
8:19	0.004	0.005	8:19	0.003	0.003	-
8:20	0.003	0.005	8:20	0.003	0.003	-
8:21	0.003	0.005	8:21	0.003	0.003	-
8:22	0.003	0.004	8:22	0.003	0.003	-
8:23	0.003	0.004	8:23	0.003	0.003	-
8:24	0.003	0.004	8:24	0.004	0.003	-
8:25	0.014	0.004	8:25	0.004	0.003	-
8:26	0.013	0.004	8:26	0.003	0.003	-
8:27	0.005	0.003	8:27	0.003	0.003	-
8:28	0.003	0.003	8:28	0.003	0.003	-
8:29	0.003	0.003	8:29	0.003	0.003	-
8:30	0.003	0.003	8:30	0.003	0.003	-
8:31	0.003	0.003	8:31	0.004	0.003	-
8:32	0.003	0.003	8:32	0.003	0.003	-
8:33	0.004	0.003	8:33	0.004	0.003	-
8:34	0.003	0.003	8:34	0.003	0.003	-
8:35	0.002	0.003	8:35	0.003	0.003	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
8:36	0.002	0.003	8:36	0.003	0.003	-
8:37	0.003	0.003	8:37	0.003	0.003	-
8:38	0.002	0.003	8:38	0.003	0.003	-
8:39	0.003	0.004	8:39	0.003	0.004	-
8:40	0.003	0.004	8:40	0.004	0.004	-
8:41	0.003	0.004	8:41	0.003	0.004	-
8:42	0.004	0.004	8:42	0.003	0.004	-
8:43	0.005	0.004	8:43	0.003	0.004	-
8:44	0.003	0.004	8:44	0.003	0.004	-
8:45	0.003	0.004	8:45	0.003	0.004	-
8:46	0.006	0.004	8:46	0.004	0.004	-
8:47	0.004	0.004	8:47	0.004	0.004	-
8:48	0.003	0.004	8:48	0.003	0.004	-
8:49	0.003	0.004	8:49	0.004	0.004	-
8:50	0.003	0.004	8:50	0.004	0.004	-
8:51	0.003	0.004	8:51	0.004	0.004	-
8:52	0.004	0.004	8:52	0.004	0.004	-
8:53	0.004	0.004	8:53	0.004	0.004	-
8:54	0.004	0.004	8:54	0.004	0.004	-
8:55	0.004	0.004	8:55	0.004	0.004	-
8:56	0.004	0.004	8:56	0.005	0.004	-
8:57	0.004	0.004	8:57	0.004	0.004	-
8:58	0.004	0.004	8:58	0.004	0.004	-
8:59	0.005	0.004	8:59	0.004	0.004	-
9:00	0.003	0.004	9:00	0.004	0.004	-
9:01	0.003	0.004	9:01	0.003	0.004	-
9:02	0.006	0.004	9:02	0.003	0.004	-
9:03	0.007	0.004	9:03	0.003	0.004	-
9:04	0.002	0.004	9:04	0.003	0.004	-
9:05	0.005	0.005	9:05	0.003	0.004	-
9:06	0.003	0.005	9:06	0.003	0.004	-
9:07	0.002	0.005	9:07	0.004	0.004	-
9:08	0.005	0.006	9:08	0.004	0.004	-
9:09	0.005	0.006	9:09	0.004	0.004	-
9:10	0.003	0.006	9:10	0.004	0.004	-
9:11	0.003	0.006	9:11	0.004	0.004	-
9:12	0.002	0.006	9:12	0.004	0.004	-
9:13	0.004	0.006	9:13	0.004	0.004	-
9:14	0.008	0.007	9:14	0.004	0.004	-
9:15	0.002	0.007	9:15	0.004	0.004	-
9:16	0.004	0.007	9:16	0.004	0.004	-
9:17	0.004	0.007	9:17	0.003	0.004	-
9:18	0.008	0.007	9:18	0.004	0.004	-
9:19	0.014	0.007	9:19	0.004	0.004	-
9:20	0.01	0.007	9:20	0.004	0.004	-
9:21	0.007	0.006	9:21	0.004	0.004	-
9:22	0.006	0.006	9:22	0.004	0.004	-
9:23	0.008	0.006	9:23	0.004	0.004	-
9:24	0.006	0.006	9:24	0.005	0.004	-
9:25	0.003	0.006	9:25	0.005	0.004	-
9:26	0.004	0.006	9:26	0.004	0.004	-
9:27	0.004	0.006	9:27	0.004	0.004	-
9:28	0.016	0.006	9:28	0.004	0.004	-
9:29	0.004	0.005	9:29	0.007	0.004	-
9:30	0.007	0.005	9:30	0.004	0.004	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
9:31	0.004	0.004	9:31	0.004	0.004	-
9:32	0.009	0.004	9:32	0.004	0.004	-
9:33	0.009	0.004	9:33	0.004	0.004	-
9:34	0.003	0.003	9:34	0.004	0.004	-
9:35	0.005	0.003	9:35	0.004	0.004	-
9:36	0.008	0.003	9:36	0.004	0.004	-
9:37	0.003	0.003	9:37	0.005	0.004	-
9:38	0.005	0.003	9:38	0.004	0.004	-
9:39	0.003	0.002	9:39	0.004	0.004	-
9:40	0.003	0.002	9:40	0.004	0.004	-
9:41	0.003	0.002	9:41	0.005	0.004	-
9:42	0.002	0.002	9:42	0.005	0.004	-
9:43	0.002	0.003	9:43	0.005	0.004	-
9:44	0.002	0.003	9:44	0.004	0.004	-
9:45	0.003	0.003	9:45	0.005	0.005	-
9:46	0.003	0.003	9:46	0.005	0.005	-
9:47	0.002	0.003	9:47	0.005	0.005	-
9:48	0.002	0.004	9:48	0.004	0.005	-
9:49	0.002	0.004	9:49	0.004	0.005	-
9:50	0.002	0.004	9:50	0.004	0.005	-
9:51	0.002	0.004	9:51	0.004	0.005	-
9:52	0.002	0.004	9:52	0.004	0.005	-
9:53	0.002	0.004	9:53	0.004	0.005	-
9:54	0.004	0.004	9:54	0.004	0.005	-
9:55	0.003	0.004	9:55	0.004	0.005	-
9:56	0.003	0.004	9:56	0.005	0.005	-
9:57	0.011	0.004	9:57	0.005	0.005	-
9:58	0.003	0.003	9:58	0.006	0.005	-
9:59	0.005	0.003	9:59	0.005	0.005	-
10:00	0.004	0.003	10:00	0.005	0.005	-
10:01	0.004	0.003	10:01	0.006	0.005	-
10:02	0.004	0.003	10:02	0.005	0.005	-
10:03	0.003	0.003	10:03	0.005	0.005	-
10:04	0.003	0.003	10:04	0.005	0.005	-
10:05	0.003	0.003	10:05	0.006	0.005	-
10:06	0.004	0.004	10:06	0.005	0.005	-
10:07	0.003	0.004	10:07	0.006	0.005	-
10:08	0.003	0.004	10:08	0.005	0.005	-
10:09	0.003	0.004	10:09	0.005	0.005	-
10:10	0.003	0.004	10:10	0.005	0.005	-
10:11	0.004	0.004	10:11	0.005	0.005	-
10:12	0.003	0.004	10:12	0.005	0.005	-
10:13	0.003	0.005	10:13	0.004	0.005	-
10:14	0.002	0.005	10:14	0.005	0.005	-
10:15	0.003	0.005	10:15	0.005	0.005	-
10:16	0.003	0.005	10:16	0.005	0.005	-
10:17	0.002	0.005	10:17	0.005	0.006	-
10:18	0.003	0.005	10:18	0.005	0.006	-
10:19	0.003	0.005	10:19	0.005	0.006	-
10:20	0.013	0.006	10:20	0.005	0.006	-
10:21	0.011	0.005	10:21	0.005	0.006	-
10:22	0.004	0.004	10:22	0.005	0.006	-
10:23	0.006	0.004	10:23	0.005	0.006	-
10:24	0.004	0.004	10:24	0.005	0.006	-
10:25	0.003	0.004	10:25	0.005	0.006	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
10:26	0.004	0.004	10:26	0.006	0.006	-
10:27	0.004	0.004	10:27	0.006	0.006	-
10:28	0.003	0.004	10:28	0.005	0.006	-
10:29	0.005	0.004	10:29	0.006	0.006	-
10:30	0.005	0.004	10:30	0.006	0.006	-
10:31	0.007	0.004	10:31	0.014	0.006	-
10:32	0.004	0.004	10:32	0.007	0.005	-
10:33	0.005	0.004	10:33	0.006	0.005	-
10:34	0.005	0.004	10:34	0.006	0.005	-
10:35	0.004	0.004	10:35	0.005	0.005	-
10:36	0.003	0.005	10:36	0.005	0.005	-
10:37	0.005	0.005	10:37	0.005	0.005	-
10:38	0.004	0.004	10:38	0.005	0.005	-
10:39	0.004	0.004	10:39	0.005	0.005	-
10:40	0.003	0.005	10:40	0.005	0.006	-
10:41	0.004	0.005	10:41	0.006	0.006	-
10:42	0.004	0.006	10:42	0.005	0.006	-
10:43	0.004	0.006	10:43	0.005	0.006	-
10:44	0.006	0.006	10:44	0.005	0.006	-
10:45	0.004	0.006	10:45	0.005	0.006	-
10:46	0.005	0.006	10:46	0.005	0.006	-
10:47	0.005	0.005	10:47	0.005	0.006	-
10:48	0.005	0.005	10:48	0.006	0.006	-
10:49	0.004	0.005	10:49	0.006	0.006	-
10:50	0.008	0.005	10:50	0.006	0.006	-
10:51	0.004	0.005	10:51	0.006	0.006	-
10:52	0.003	0.005	10:52	0.006	0.006	-
10:53	0.004	0.005	10:53	0.006	0.006	-
10:54	0.012	0.005	10:54	0.006	0.006	-
10:55	0.01	0.004	10:55	0.006	0.006	-
10:56	0.011	0.004	10:56	0.006	0.006	-
10:57	0.003	0.003	10:57	0.006	0.006	-
10:58	0.003	0.003	10:58	0.006	0.006	-
10:59	0.003	0.003	10:59	0.006	0.006	-
11:00	0.003	0.003	11:00	0.006	0.006	-
11:01	0.003	0.003	11:01	0.006	0.006	-
11:02	0.003	0.003	11:02	0.006	0.006	-
11:03	0.003	0.003	11:03	0.006	0.006	-
11:04	0.005	0.003	11:04	0.006	0.006	-
11:05	0.004	0.003	11:05	0.006	0.006	-
11:06	0.003	0.003	11:06	0.006	0.006	-
11:07	0.003	0.003	11:07	0.006	0.006	-
11:08	0.004	0.003	11:08	0.006	0.006	-
11:09	0.003	0.003	11:09	0.006	0.006	-
11:10	0.003	0.003	11:10	0.006	0.006	-
11:11	0.003	0.003	11:11	0.006	0.007	-
11:12	0.003	0.003	11:12	0.006	0.007	-
11:13	0.003	0.003	11:13	0.006	0.007	-
11:14	0.003	0.003	11:14	0.006	0.007	-
11:15	0.003	0.003	11:15	0.006	0.007	-
11:16	0.003	0.003	11:16	0.006	0.007	-
11:17	0.003	0.003	11:17	0.006	0.007	-
11:18	0.003	0.003	11:18	0.006	0.007	-
11:19	0.003	0.003	11:19	0.007	0.007	-
11:20	0.004	0.003	11:20	0.007	0.007	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
11:21	0.004	0.003	11:21	0.007	0.007	-
11:22	0.004	0.003	11:22	0.007	0.007	-
11:23	0.004	0.003	11:23	0.007	0.007	-
11:24	0.004	0.003	11:24	0.008	0.007	-
11:25	0.003	0.003	11:25	0.007	0.007	-
11:26	0.003	0.003	11:26	0.006	0.007	-
11:27	0.003	0.003	11:27	0.006	0.007	-
11:28	0.004	0.003	11:28	0.007	0.007	-
11:29	0.003	0.003	11:29	0.006	0.007	-
11:30	0.003	0.003	11:30	0.006	0.007	-
11:31	0.003	0.003	11:31	0.006	0.007	-
11:32	0.003	0.003	11:32	0.006	0.007	-
11:33	0.004	0.003	11:33	0.007	0.007	-
11:34	0.003	0.003	11:34	0.007	0.007	-
11:35	0.003	0.004	11:35	0.007	0.007	-
11:36	0.003	0.004	11:36	0.007	0.008	-
11:37	0.003	0.004	11:37	0.007	0.008	-
11:38	0.003	0.004	11:38	0.007	0.008	-
11:39	0.004	0.004	11:39	0.007	0.008	-
11:40	0.003	0.004	11:40	0.007	0.008	-
11:41	0.003	0.004	11:41	0.01	0.008	-
11:42	0.003	0.004	11:42	0.008	0.008	-
11:43	0.004	0.004	11:43	0.007	0.008	-
11:44	0.004	0.004	11:44	0.008	0.008	-
11:45	0.004	0.004	11:45	0.007	0.008	-
11:46	0.004	0.004	11:46	0.007	0.008	-
11:47	0.004	0.004	11:47	0.007	0.008	-
11:48	0.004	0.004	11:48	0.008	0.008	-
11:49	0.005	0.004	11:49	0.008	0.008	-
11:50	0.005	0.003	11:50	0.009	0.008	-
11:51	0.004	0.003	11:51	0.008	0.008	-
11:52	0.003	0.003	11:52	0.009	0.008	-
11:53	0.003	0.003	11:53	0.008	0.008	-
11:54	0.003	0.003	11:54	0.008	0.008	-
11:55	0.003	0.003	11:55	0.008	0.009	-
11:56	0.003	0.003	11:56	0.009	0.009	-
11:57	0.003	0.003	11:57	0.008	0.009	-
11:58	0.003	0.003	11:58	0.008	0.009	-
11:59	0.003	0.003	11:59	0.008	0.009	-
12:00	0.003	0.003	12:00	0.008	0.009	-
12:01	0.004	0.003	12:01	0.008	0.009	-
12:02	0.004	0.003	12:02	0.008	0.009	-
12:03	0.004	0.003	12:03	0.009	0.009	-
12:04	0.004	0.003	12:04	0.009	0.009	-
12:05	0.004	0.003	12:05	0.009	0.010	-
12:06	0.004	0.003	12:06	0.009	0.010	-
12:07	0.003	0.003	12:07	0.009	0.010	-
12:08	0.004	0.003	12:08	0.009	0.010	-
12:09	0.003	0.003	12:09	0.009	0.010	-
12:10	0.003	0.003	12:10	0.009	0.010	-
12:11	0.003	0.003	12:11	0.009	0.010	-
12:12	0.003	0.003	12:12	0.009	0.010	-
12:13	0.003	0.003	12:13	0.01	0.010	-
12:14	0.003	0.004	12:14	0.010	0.010	-
12:15	0.003	0.004	12:15	0.01	0.010	-

PARTICULATE DATA						
Upwind			Downwind			Exceeds Particulate Alarm Limits
Time	PM 10 (mg/m ³)	15-Minute Average	Time	PM 10 (mg/m ³)	15-Minute Average	
12:16	0.003	0.004	12:16	0.01	0.010	-
12:17	0.003	0.004	12:17	0.01	0.010	-
12:18	0.003	0.004	12:18	0.01	0.010	-
12:19	0.003	0.004	12:19	0.011	0.010	-
12:20	0.004	0.004	12:20	0.01	0.010	-
12:21	0.004	0.004	12:21	0.01	0.010	-
12:22	0.004	0.004	12:22	0.01	0.011	-
12:23	0.003	0.004	12:23	0.01	0.011	-
12:24	0.004	0.004	12:24	0.01	0.011	-
12:25	0.004	0.004	12:25	0.011	0.011	-
12:26	0.004	0.004	12:26	0.011	0.011	-
12:27	0.004	0.004	12:27	0.011	0.011	-
12:28	0.004	0.004	12:28			

May 16, 2020						
Number of Instances Where Downwind VOCs Exceeds Upwind VOCs + 5ppm =						0
Number of Comparable Data Points =						271
PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
7:44			7:44	0.1		
7:45			7:45	0.1		
7:46			7:46	0.3		
7:47			7:47	0.5		
7:48			7:48	0.6		
7:49	0		7:49	0.4		
7:50	0		7:50	0.2		
7:51	0		7:51	0.2		
7:52	0		7:52	0.4		
7:53	0		7:53	0.3		
7:54	0.9		7:54	0.4		
7:55	1.4		7:55	0.4		
7:56	0		7:56	0.2		
7:57	0		7:57	0.1		
7:58	0	0.2	7:58	0.2		
7:59	0	0.2	7:59	0.3	0.3	-
8:00	0	0.2	8:00	0.3	0.3	-
8:01	0	0.2	8:01	0.3	0.3	-
8:02	0	0.2	8:02	0.1	0.3	-
8:03	0	0.2	8:03	0.2	0.3	-
8:04	0	0.2	8:04	0.3	0.3	-
8:05	0	0.2	8:05	0.2	0.3	-
8:06	0	0.2	8:06	0.1	0.3	-
8:07	0	0.2	8:07	0	0.3	-
8:08	0	0.2	8:08	0	0.2	-
8:09	0	0.1	8:09	0	0.2	-
8:10	0	0.0	8:10	0.1	0.2	-
8:11	0	0.0	8:11	0.3	0.2	-
8:12	0	0.0	8:12	0.3	0.2	-
8:13	0	0.0	8:13	0.2	0.2	-
8:14	0	0.0	8:14	0.2	0.2	-
8:15	0	0.0	8:15	0.2	0.2	-
8:16	0	0.0	8:16	0.2	0.2	-
8:17	0	0.0	8:17	0.2	0.2	-
8:18	0	0.0	8:18	0.3	0.2	-
8:19	0	0.0	8:19	0	0.2	-
8:20	0	0.0	8:20	0.1	0.2	-
8:21	0	0.0	8:21	0.2	0.1	-
8:22	0	0.0	8:22	0.2	0.2	-
8:23	0	0.0	8:23	0.3	0.2	-
8:24	0	0.0	8:24	0.3	0.2	-
8:25	0	0.0	8:25	0.2	0.2	-
8:26	0	0.0	8:26	0.1	0.2	-
8:27	0	0.0	8:27	0.3	0.2	-
8:28	0	0.0	8:28	0.3	0.2	-
8:29	0	0.0	8:29	0.3	0.2	-
8:30	0	0.0	8:30	0.4	0.2	-
8:31	0	0.0	8:31	0.4	0.2	-
8:32	0	0.0	8:32	0	0.2	-
8:33	0	0.0	8:33	0	0.2	-
8:34	0	0.0	8:34	0.1	0.2	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
8:35	0	0.0	8:35	0.2	0.2	-
8:36	0	0.0	8:36	0.3	0.2	-
8:37	0	0.0	8:37	0.3	0.2	-
8:38	0	0.0	8:38	0.1	0.2	-
8:39	0	0.0	8:39	0.3	0.2	-
8:40	0	0.0	8:40	0.3	0.2	-
8:41	0	0.0	8:41	0.3	0.2	-
8:42	0	0.0	8:42	0.3	0.2	-
8:43	0	0.0	8:43	0.3	0.2	-
8:44	0	0.0	8:44	0.3	0.2	-
8:45	0	0.0	8:45	0.3	0.2	-
8:46	0	0.0	8:46	0.3	0.2	-
8:47	0	0.0	8:47	0.3	0.2	-
8:48	0	0.0	8:48	0.3	0.2	-
8:49	0	0.0	8:49	0.2	0.3	-
8:50	0	0.0	8:50	0.3	0.3	-
8:51	0	0.0	8:51	0.3	0.3	-
8:52	0	0.0	8:52	0.4	0.3	-
8:53	0	0.0	8:53	0.3	0.3	-
8:54	0	0.0	8:54	0.2	0.3	-
8:55	0	0.0	8:55	0.3	0.3	-
8:56	0	0.0	8:56	0.3	0.3	-
8:57	0	0.0	8:57	0.2	0.3	-
8:58	0	0.0	8:58	0.2	0.3	-
8:59	0	0.0	8:59	0	0.3	-
9:00	0	0.0	9:00	0.1	0.3	-
9:01	0	0.0	9:01	0.2	0.2	-
9:02	0	0.0	9:02	0.2	0.2	-
9:03	0	0.0	9:03	0.3	0.2	-
9:04	0	0.0	9:04	0.3	0.2	-
9:05	0	0.0	9:05	0.2	0.2	-
9:06	0	0.0	9:06	0.2	0.2	-
9:07	0	0.0	9:07	0.3	0.2	-
9:08	0	0.0	9:08	0.3	0.2	-
9:09	0	0.0	9:09	0.2	0.2	-
9:10	0	0.0	9:10	0.3	0.2	-
9:11	0	0.0	9:11	0.2	0.2	-
9:12	0	0.0	9:12	0.2	0.2	-
9:13	0	0.0	9:13	0.2	0.2	-
9:14	0	0.0	9:14	0.1	0.2	-
9:15	0	0.0	9:15	0.2	0.2	-
9:16	0	0.0	9:16	0.2	0.2	-
9:17	0	0.0	9:17	0.1	0.2	-
9:18	0	0.0	9:18	0.1	0.2	-
9:19	0	0.0	9:19	0.1	0.2	-
9:20	0	0.0	9:20	0.1	0.2	-
9:21	0	0.0	9:21	0.1	0.2	-
9:22	0	0.0	9:22	0	0.2	-
9:23	0	0.0	9:23	0	0.2	-
9:24	0	0.0	9:24	0.1	0.1	-
9:25	0	0.0	9:25	0	0.1	-
9:26	0	0.0	9:26	0	0.1	-
9:27	0	0.0	9:27	0	0.1	-
9:28	0	0.0	9:28	0	0.1	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
9:29	0	0.0	9:29	0	0.1	-
9:30	0	0.0	9:30	0	0.1	-
9:31	0	0.0	9:31	0	0.1	-
9:32	0	0.0	9:32	0	0.0	-
9:33	0	0.0	9:33	0	0.0	-
9:34	0	0.0	9:34	0	0.0	-
9:35	0	0.0	9:35	0	0.0	-
9:36	0	0.0	9:36	0	0.0	-
9:37	0	0.0	9:37	0	0.0	-
9:38	0	0.0	9:38	0	0.0	-
9:39	0	0.0	9:39	0	0.0	-
9:40	0	0.0	9:40	0	0.0	-
9:41	0	0.0	9:41	0	0.0	-
9:42	0	0.0	9:42	0	0.0	-
9:43	0	0.0	9:43	0	0.0	-
9:44	0	0.0	9:44	0	0.0	-
9:45	0	0.0	9:45	0	0.0	-
9:46	0	0.0	9:46	0	0.0	-
9:47	0	0.0	9:47	0	0.0	-
9:48	0	0.0	9:48	0.1	0.0	-
9:49	0	0.0	9:49	0	0.0	-
9:50	0	0.0	9:50	0.1	0.0	-
9:51	0	0.0	9:51	0	0.0	-
9:52	0	0.0	9:52	0	0.0	-
9:53	0	0.0	9:53	0	0.0	-
9:54	0	0.0	9:54	0	0.0	-
9:55	0	0.0	9:55	0	0.0	-
9:56	0	0.0	9:56	0	0.0	-
9:57	0	0.0	9:57	0	0.0	-
9:58	0	0.0	9:58	0	0.0	-
9:59	0	0.0	9:59	0.1	0.0	-
10:00	0	0.0	10:00	0.1	0.0	-
10:01	0	0.0	10:01	0	0.0	-
10:02	0	0.0	10:02	0.1	0.0	-
10:03	0	0.0	10:03	0.1	0.0	-
10:04	0	0.0	10:04	0.1	0.0	-
10:05	0	0.0	10:05	0.1	0.0	-
10:06	0	0.0	10:06	0	0.0	-
10:07	0	0.0	10:07	0	0.0	-
10:08	0	0.0	10:08	0.1	0.0	-
10:09	0	0.0	10:09	0.1	0.0	-
10:10	0	0.0	10:10	0.1	0.1	-
10:11	0	0.0	10:11	0.1	0.1	-
10:12	0	0.0	10:12	0.1	0.1	-
10:13	0	0.0	10:13	0.1	0.1	-
10:14	0	0.0	10:14	0.1	0.1	-
10:15	0	0.0	10:15	0.1	0.1	-
10:16	0	0.0	10:16	0.1	0.1	-
10:17	0	0.0	10:17	0.1	0.1	-
10:18	0	0.0	10:18	0.1	0.1	-
10:19	0	0.0	10:19	0.1	0.1	-
10:20	0	0.0	10:20	0.2	0.1	-
10:21	0	0.0	10:21	0	0.1	-
10:22	0	0.0	10:22	0.2	0.1	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
10:23	0	0.0	10:23	0.2	0.1	-
10:24	0	0.0	10:24	0.1	0.1	-
10:25	0	0.0	10:25	0.2	0.1	-
10:26	0	0.0	10:26	0.2	0.1	-
10:27	0	0.0	10:27	0.2	0.1	-
10:28	0	0.0	10:28	0.2	0.1	-
10:29	0	0.0	10:29	0.1	0.1	-
10:30	0	0.0	10:30	0.2	0.1	-
10:31	0	0.0	10:31	0.2	0.1	-
10:32	0	0.0	10:32	0.2	0.2	-
10:33	0	0.0	10:33	0.2	0.2	-
10:34	0	0.0	10:34	0.3	0.2	-
10:35	0	0.0	10:35	0.3	0.2	-
10:36	0	0.0	10:36	0.3	0.2	-
10:37	0	0.0	10:37	0.4	0.2	-
10:38	0	0.0	10:38	0.3	0.2	-
10:39	0	0.0	10:39	0.3	0.2	-
10:40	0	0.0	10:40	0.3	0.2	-
10:41	0	0.0	10:41	0.3	0.2	-
10:42	0	0.0	10:42	0.3	0.3	-
10:43	0	0.0	10:43	0.3	0.3	-
10:44	0	0.0	10:44	0.1	0.3	-
10:45	0	0.0	10:45	0.2	0.3	-
10:46	0	0.0	10:46	0.3	0.3	-
10:47	0	0.0	10:47	0.3	0.3	-
10:48	0	0.0	10:48	0.3	0.3	-
10:49	0	0.0	10:49	0.2	0.3	-
10:50	0	0.0	10:50	0.3	0.3	-
10:51	0	0.0	10:51	0.3	0.3	-
10:52	0	0.0	10:52	0.3	0.3	-
10:53	0	0.0	10:53	0.3	0.3	-
10:54	0	0.0	10:54	0.4	0.3	-
10:55	0	0.0	10:55	0.3	0.3	-
10:56	0	0.0	10:56	0.3	0.3	-
10:57	0	0.0	10:57	0.4	0.3	-
10:58	0	0.0	10:58	0.3	0.3	-
10:59	0	0.0	10:59	0.3	0.3	-
11:00	0	0.0	11:00	0.2	0.3	-
11:01	0	0.0	11:01	0.4	0.3	-
11:02	0	0.0	11:02	0.4	0.3	-
11:03	0	0.0	11:03	0.4	0.3	-
11:04	0	0.0	11:04	0.4	0.3	-
11:05	0	0.0	11:05	0.4	0.3	-
11:06	0	0.0	11:06	0.4	0.3	-
11:07	0	0.0	11:07	0.4	0.3	-
11:08	0	0.0	11:08	0.4	0.4	-
11:09	0	0.0	11:09	0.4	0.4	-
11:10	0	0.0	11:10	0.3	0.4	-
11:11	0	0.0	11:11	0.3	0.4	-
11:12	0	0.0	11:12	0.3	0.4	-
11:13	0	0.0	11:13	0.2	0.4	-
11:14	0	0.0	11:14	0.3	0.3	-
11:15	0	0.0	11:15	0.3	0.3	-
11:16	0	0.0	11:16	0.3	0.4	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
11:17	0	0.0	11:17	0.1	0.3	-
11:18	0	0.0	11:18	0.1	0.3	-
11:19	0	0.0	11:19	0.2	0.3	-
11:20	0	0.0	11:20	0.2	0.3	-
11:21	0	0.0	11:21	0.2	0.3	-
11:22	0	0.0	11:22	0.1	0.3	-
11:23	0	0.0	11:23	0.2	0.2	-
11:24	0	0.0	11:24	0.2	0.2	-
11:25	0	0.0	11:25	0.2	0.2	-
11:26	0	0.0	11:26	0.3	0.2	-
11:27	0	0.0	11:27	0.4	0.2	-
11:28	0	0.0	11:28	0.4	0.2	-
11:29	0	0.0	11:29	0.4	0.2	-
11:30	0	0.0	11:30	0.4	0.2	-
11:31	0	0.0	11:31	0.4	0.2	-
11:32	0	0.0	11:32	0.4	0.3	-
11:33	0	0.0	11:33	0.3	0.3	-
11:34	0	0.0	11:34	0.3	0.3	-
11:35	0	0.0	11:35	0.5	0.3	-
11:36	0	0.0	11:36	0.4	0.3	-
11:37	0	0.0	11:37	0.2	0.3	-
11:38	0	0.0	11:38	0.4	0.3	-
11:39	0	0.0	11:39	0.3	0.3	-
11:40	0	0.0	11:40	0.3	0.4	-
11:41	0	0.0	11:41	0.5	0.4	-
11:42	0	0.0	11:42	0.4	0.4	-
11:43	0	0.0	11:43	0.4	0.4	-
11:44	0	0.0	11:44	0.5	0.4	-
11:45	0	0.0	11:45	0.5	0.4	-
11:46	0	0.0	11:46	0.4	0.4	-
11:47	0	0.0	11:47	0.4	0.4	-
11:48	0	0.0	11:48	0.4	0.4	-
11:49	0	0.0	11:49	0.4	0.4	-
11:50	0	0.0	11:50	0.4	0.4	-
11:51	0	0.0	11:51	0.4	0.4	-
11:52	0	0.0	11:52	0.3	0.4	-
11:53	0	0.0	11:53	0.3	0.4	-
11:54	0	0.0	11:54	0.3	0.4	-
11:55	0	0.0	11:55	0.1	0.4	-
11:56	0	0.0	11:56	0.2	0.4	-
11:57	0	0.0	11:57	0.2	0.4	-
11:58	0	0.0	11:58	0.2	0.3	-
11:59	0	0.0	11:59	0	0.3	-
12:00	0	0.0	12:00	0.1	0.3	-
12:01	0	0.0	12:01	0.1	0.3	-
12:02	0	0.0	12:02	0.2	0.3	-
12:03	0	0.0	12:03	0.2	0.2	-
12:04	0	0.0	12:04	0.2	0.2	-
12:05	0	0.0	12:05	0.2	0.2	-
12:06	0.3	0.0	12:06	0.2	0.2	-
12:07	0.1	0.0	12:07	0.3	0.2	-
12:08	0	0.0	12:08	0.3	0.2	-
12:09	0.1	0.0	12:09	0.3	0.2	-
12:10	0	0.0	12:10	0.3	0.2	-

PID DATA						
Upwind			Downwind			Exceeds VOCs Alarm Limits
Time	VOC (ppm)	15-Minute Average	Time	VOC (ppm)	15-Minute Average	
12:11	0	0.0	12:11	0.3	0.2	-
12:12	0	0.0	12:12	0.3	0.2	-
12:13	0	0.0	12:13	0.3	0.2	-
12:14	0	0.0	12:14	0.2	0.2	-
12:15	0	0.0	12:15	0.2	0.2	-
12:16	0	0.0	12:16	0.4	0.2	-
12:17	0	0.0	12:17	0.3	0.3	-
12:18	0	0.0	12:18	0.3	0.3	-
12:19	0	0.0	12:19	0.3	0.3	-
12:20	0	0.0	12:20	0.2	0.3	-
12:21	0	0.0	12:21	0.3	0.3	-
12:22	0	0.0	12:22	0.3	0.3	-
12:23	0	0.0	12:23	0.3	0.3	-
12:24	0	0.0	12:24	0.3	0.3	-
12:25	0	0.0	12:25	0.4	0.3	-
12:26	0	0.0	12:26	0.4	0.3	-
12:27	0	0.0	12:27	0.4	0.3	-
12:28	0	0.0	12:28	0.3	0.3	-

APPENDIX I

Laboratory Analytical Reports



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: June 04, 2020 19:00

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2098617
SDG: CMS01
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

Previous versions of this report were generated on:
05/13/2020 08:32
05/20/2020 10:18

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
LB13_15.5-17.5 Grab Soil	05/06/2020 14:20	1310324
LB13_18-20 Grab Soil	05/06/2020 14:25	1310325
LB17_1-3 TCLP NVE Grab Soil	05/06/2020 12:45	1310326
LB17_6-8 TCLP NVE Grab Soil	05/06/2020 13:15	1310327
LB17_3-5 Grab Soil	05/06/2020 13:15	1310328
SODUP01_050620 Grab Soil	05/06/2020	1310329
SOFB01_050620 Water	05/06/2020 15:00	1310330
SOTB01_050620 Water	05/06/2020	1310331
LB17_1-3 Grab Soil	05/06/2020 12:45	1312680
LB17_6-8 Grab Soil	05/06/2020 13:15	1312681

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2098617

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1310324

Reporting limits were raised due to interference from the sample matrix.

Batch #: R201311AA (Sample number(s): 1310324)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Bromomethane

SW-846 8270D, GC/MS Semivolatiles

Batch #: 20128SLA026 (Sample number(s): 1310324-1310325, 1310328-1310329 UNSPK: 1310329)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Acenaphthene, Pyrene, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Naphthalene, Hexachlorocyclopentadiene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Benzidine, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene, 2-Methylnaphthalene, Dibenzofuran, Carbazole

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: 2-Chloronaphthalene

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 1310328, 1310329

Reporting limits were raised due to interference from the sample matrix.

Batch #: 20136SLB026 (Sample number(s): 1310328-1310329)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1310329

SW-846 8081B, Pesticides

Sample #s: 1310328

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Batch #: 201280010A (Sample number(s): 1310328-1310329)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1310328, 1310329

SW-846 8082A Feb 2007 Rev 1, PCBs

Batch #: 201280011A (Sample number(s): 1310329 UNSPK: 1310329)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: PCB-1016, PCB-1260

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1310329

Batch #: 201320002A (Sample number(s): 1310328)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1310328

SW-846 8151A, Herbicides

Sample #s: 1310328, 1310329

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 201280015A (Sample number(s): 1310328-1310329 UNSPK: 1310329)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

EPA 537 Version 1.1 Modified, LC/MS/MS Miscellaneous

Batch #: 20128007 (Sample number(s): 1310328-1310329 UNSPK: 1310328)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) LCS

SW-846 6010D Rev.4, July 2014, Metals

Batch #: 201321404501 (Sample number(s): 1310326-1310327 UNSPK: 1310326 BKG: 1310326)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Arsenic

SW-846 6020B Rev.2, July 2014, Metals

Batch #: 201281404901A (Sample number(s): 1310328-1310329 UNSPK: 1310329 BKG: 1310329)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Arsenic, Barium, Lead

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Copper, Lead, Manganese, Zinc, Barium

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance

windows: Arsenic, Barium, Beryllium, Lead, Silver

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Arsenic, Barium, Beryllium, Copper, Manganese, Selenium, Silver, Zinc

SW-846 7470A, Metals

Batch #: 201330571301 (Sample number(s): 1310326 UNSPK: 1310326 BKG: 1310326)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

SW-846 7471B, Metals

Batch #: 201281063801 (Sample number(s): 1310328-1310329 UNSPK: 1310329 BKG: 1310329)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Mercury

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Mercury

Sample Description: LB13_15.5-17.5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310324
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:20
SDG#: CMS01-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Acetone	67-64-1	N.D.	0.39	1.3	52.08
11995	Acrolein	107-02-8	N.D.	0.33	6.6	52.08
11995	Acrylonitrile	107-13-1	N.D.	0.052	1.3	52.08
11995	Benzene	71-43-2	0.043 J	0.033	0.33	52.08
11995	Bromodichloromethane	75-27-4	N.D.	0.026	0.33	52.08
11995	Bromoform	75-25-2	N.D.	0.33	0.66	52.08
11995	Bromomethane	74-83-9	N.D.	0.046	0.33	52.08
11995	2-Butanone	78-93-3	N.D.	0.13	0.66	52.08
11995	t-Butyl alcohol	75-65-0	N.D.	0.98	6.6	52.08
11995	n-Butylbenzene	104-51-8	N.D.	0.20	0.52	52.08
11995	sec-Butylbenzene	135-98-8	0.21 J	0.13	0.33	52.08
11995	tert-Butylbenzene	98-06-6	0.13 J	0.052	0.33	52.08
11995	Carbon Disulfide	75-15-0	0.050 J	0.039	0.33	52.08
11995	Carbon Tetrachloride	56-23-5	N.D.	0.033	0.33	52.08
11995	Chlorobenzene	108-90-7	N.D.	0.033	0.33	52.08
11995	Chloroethane	75-00-3	N.D.	0.066	0.33	52.08
11995	Chloroform	67-66-3	N.D.	0.039	0.33	52.08
11995	Chloromethane	74-87-3	N.D.	0.039	0.33	52.08
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.033	0.33	52.08
11995	Dibromochloromethane	124-48-1	N.D.	0.033	0.33	52.08
11995	1,2-Dibromoethane	106-93-4	N.D.	0.026	0.33	52.08
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.033	0.33	52.08
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.033	0.33	52.08
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.026	0.33	52.08
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.039	0.33	52.08
11995	1,1-Dichloroethane	75-34-3	N.D.	0.033	0.33	52.08
11995	1,2-Dichloroethane	107-06-2	N.D.	0.039	0.33	52.08
11995	1,1-Dichloroethene	75-35-4	N.D.	0.033	0.33	52.08
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.033	0.33	52.08
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.033	0.33	52.08
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.066	0.66	52.08
11995	1,2-Dichloropropane	78-87-5	N.D.	0.033	0.33	52.08
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.026	0.33	52.08
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.033	0.33	52.08
11995	1,4-Dioxane	123-91-1	N.D.	2.4	4.9	52.08
11995	Ethylbenzene	100-41-4	0.050 J	0.026	0.33	52.08
11995	Methyl Acetate	79-20-9	0.17 J	0.066	0.33	52.08
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.033	0.33	52.08
11995	Methylene Chloride	75-09-2	N.D.	0.13	0.33	52.08
11995	n-Propylbenzene	103-65-1	0.037 J	0.026	0.33	52.08
11995	Styrene	100-42-5	N.D.	0.026	0.33	52.08

*=This limit was used in the evaluation of the final result

Sample Description: LB13_15.5-17.5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310324
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:20
SDG#: CMS01-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.026	0.33	52.08
11995	Tetrachloroethene	127-18-4	N.D.	0.033	0.33	52.08
11995	Toluene	108-88-3	0.090 J	0.039	0.33	52.08
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.039	0.33	52.08
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.033	0.33	52.08
11995	Trichloroethene	79-01-6	N.D.	0.033	0.33	52.08
11995	Trichlorofluoromethane	75-69-4	N.D.	0.046	0.33	52.08
11995	1,2,4-Trimethylbenzene	95-63-6	0.12 J	0.033	0.33	52.08
11995	1,3,5-Trimethylbenzene	108-67-8	0.056 J	0.033	0.33	52.08
11995	Vinyl Chloride	75-01-4	N.D.	0.039	0.33	52.08
11995	Xylene (Total)	1330-20-7	0.40 J	0.092	0.66	52.08

Reporting limits were raised due to interference from the sample matrix.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	1.0	0.004	0.021	1
10726	Acenaphthylene	208-96-8	0.27	0.004	0.021	1
10726	Acetophenone	98-86-2	N.D.	0.021	0.063	1
10726	Anthracene	120-12-7	1.1	0.004	0.021	1
10726	Atrazine	1912-24-9	N.D.	0.25	0.54	1
10726	Benzaldehyde	100-52-7	N.D.	0.083	0.21	1
10726	Benidine	92-87-5	N.D.	0.42	1.3	1
10726	Benzo(a)anthracene	56-55-3	3.9	0.008	0.021	1
10726	Benzo(a)pyrene	50-32-8	3.1	0.004	0.021	1
10726	Benzo(b)fluoranthene	205-99-2	2.2	0.004	0.021	1
10726	Benzo(g,h,i)perylene	191-24-2	3.3	0.004	0.021	1
10726	Benzo(k)fluoranthene	207-08-9	0.60	0.004	0.021	1
10726	1,1'-Biphenyl	92-52-4	0.15	0.021	0.046	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.083	0.21	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.083	0.21	1
10726	Caprolactam	105-60-2	N.D.	0.042	0.21	1
10726	Carbazole	86-74-8	0.45	0.021	0.046	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.029	0.063	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.025	0.054	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.042	1
10726	2-Chlorophenol	95-57-8	N.D.	0.021	0.046	1
10726	Chrysene	218-01-9	3.6	0.004	0.021	1
10726	Dibenz(a,h)anthracene	53-70-3	0.78	0.008	0.021	1
10726	Dibenzofuran	132-64-9	0.40	0.021	0.046	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.021	0.063	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13_15.5-17.5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310324
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:20
SDG#: CMS01-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.021	0.046	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.021	0.046	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.13	0.42	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.025	0.054	1
10726	Diethylphthalate	84-66-2	N.D.	0.083	0.21	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.038	0.083	1
10726	Dimethylphthalate	131-11-3	N.D.	0.083	0.21	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.29	0.63	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.42	1.3	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.083	0.21	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.029	0.063	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.029	0.063	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.025	0.054	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.083	0.21	1
10726	Fluoranthene	206-44-0	2.5	0.004	0.021	1
10726	Fluorene	86-73-7	0.86	0.004	0.021	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.021	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.046	0.096	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.25	0.63	1
10726	Hexachloroethane	67-72-1	N.D.	0.042	0.21	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1.4	0.004	0.021	1
10726	Isophorone	78-59-1	N.D.	0.021	0.046	1
10726	2-Methylnaphthalene	91-57-6	1.1	0.004	0.042	1
10726	2-Methylphenol	95-48-7	N.D.	0.021	0.083	1
10726	4-Methylphenol	106-44-5	0.19	0.021	0.063	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	2.8	0.008	0.021	1
10726	2-Nitroaniline	88-74-4	N.D.	0.021	0.063	1
10726	Nitrobenzene	98-95-3	N.D.	0.033	0.083	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.083	0.21	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.029	0.063	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.021	0.046	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.083	0.21	1
10726	Pentachlorophenol	87-86-5	N.D.	0.083	0.21	1
10726	Phenanthrene	85-01-8	3.4	0.004	0.021	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB13_15.5-17.5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310324
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:20
SDG#: CMS01-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.021	0.046	1
10726	Pyrene	129-00-0	4.2	0.004	0.021	1
10726	Pyridine	110-86-1	N.D.	0.083	0.21	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.029	0.063	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.038	0.083	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.033	0.071	1

Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	20.5	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	R201311AA	05/10/2020 21:12	Joel Trout	52.08
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012756758	05/06/2020 23:28	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012756758	05/06/2020 23:28	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012756758	05/06/2020 14:20	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20128SLA026	05/11/2020 02:02	William H Saadeh	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20128SLA026	05/08/2020 00:58	Laura Duquette	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20128820001B	05/07/2020 12:19	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13_18-20 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310325
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:25
SDG#: CMS01-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
	SW-846 8260C					
11995	Acetone	67-64-1	0.064	0.007	0.023	0.87
11995	Acrolein	107-02-8	N.D.	0.006	0.12	0.87
11995	Acrylonitrile	107-13-1	N.D.	0.0009	0.023	0.87
11995	Benzene	71-43-2	N.D.	0.0006	0.006	0.87
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.006	0.87
11995	Bromoform	75-25-2	N.D.	0.006	0.012	0.87
11995	Bromomethane	74-83-9	N.D.	0.0008	0.006	0.87
11995	2-Butanone	78-93-3	0.004 J	0.002	0.012	0.87
11995	t-Butyl alcohol	75-65-0	0.034 J	0.017	0.12	0.87
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.009	0.87
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.006	0.87
11995	tert-Butylbenzene	98-06-6	N.D.	0.0009	0.006	0.87
11995	Carbon Disulfide	75-15-0	N.D.	0.0007	0.006	0.87
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.006	0.87
11995	Chlorobenzene	108-90-7	N.D.	0.0006	0.006	0.87
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	0.87
11995	Chloroform	67-66-3	N.D.	0.0007	0.006	0.87
11995	Chloromethane	74-87-3	N.D.	0.0007	0.006	0.87
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.006	0.87
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.006	0.87
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.006	0.87
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0006	0.006	0.87
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0006	0.006	0.87
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.006	0.87
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0007	0.006	0.87
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0006	0.006	0.87
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	0.006	0.87
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0006	0.006	0.87
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0006	0.006	0.87
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0006	0.006	0.87
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.012	0.87
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0006	0.006	0.87
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.006	0.87
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0006	0.006	0.87
11995	1,4-Dioxane	123-91-1	N.D.	0.043	0.087	0.87
11995	Ethylbenzene	100-41-4	N.D.	0.0005	0.006	0.87
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.006	0.87
11995	Methyl Tertiary Butyl Ether	1634-04-4	0.0007 J	0.0006	0.006	0.87
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.006	0.87
11995	n-Propylbenzene	103-65-1	N.D.	0.0005	0.006	0.87
11995	Styrene	100-42-5	N.D.	0.0005	0.006	0.87

*=This limit was used in the evaluation of the final result

Sample Description: LB13_18-20 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310325
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:25
SDG#: CMS01-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.006	0.87
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.006	0.87
11995	Toluene	108-88-3	N.D.	0.0007	0.006	0.87
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0007	0.006	0.87
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0006	0.006	0.87
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.006	0.87
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0008	0.006	0.87
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0006	0.006	0.87
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0006	0.006	0.87
11995	Vinyl Chloride	75-01-4	N.D.	0.0007	0.006	0.87
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.012	0.87
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	N.D.	0.004	0.022	1
10726	Acenaphthylene	208-96-8	N.D.	0.004	0.022	1
10726	Acetophenone	98-86-2	N.D.	0.022	0.066	1
10726	Anthracene	120-12-7	N.D.	0.004	0.022	1
10726	Atrazine	1912-24-9	N.D.	0.26	0.57	1
10726	Benzaldehyde	100-52-7	N.D.	0.088	0.22	1
10726	Benzidine	92-87-5	N.D.	0.44	1.3	1
10726	Benzo(a)anthracene	56-55-3	N.D.	0.009	0.022	1
10726	Benzo(a)pyrene	50-32-8	N.D.	0.004	0.022	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.004	0.022	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	0.004	0.022	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.004	0.022	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.022	0.049	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.088	0.22	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.088	0.22	1
10726	Caprolactam	105-60-2	N.D.	0.044	0.22	1
10726	Carbazole	86-74-8	N.D.	0.022	0.049	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.031	0.066	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.026	0.057	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.044	1
10726	2-Chlorophenol	95-57-8	N.D.	0.022	0.049	1
10726	Chrysene	218-01-9	N.D.	0.004	0.022	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.009	0.022	1
10726	Dibenzofuran	132-64-9	N.D.	0.022	0.049	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.022	0.066	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13_18-20 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310325
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:25
SDG#: CMS01-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.022	0.049	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.022	0.049	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.13	0.44	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.026	0.057	1
10726	Diethylphthalate	84-66-2	N.D.	0.088	0.22	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.040	0.088	1
10726	Dimethylphthalate	131-11-3	N.D.	0.088	0.22	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.31	0.66	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.44	1.3	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.088	0.22	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.031	0.066	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.031	0.066	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.026	0.057	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.088	0.22	1
10726	Fluoranthene	206-44-0	0.008 J	0.004	0.022	1
10726	Fluorene	86-73-7	N.D.	0.004	0.022	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.009	0.022	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.049	0.10	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.26	0.66	1
10726	Hexachloroethane	67-72-1	N.D.	0.044	0.22	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.004	0.022	1
10726	Isophorone	78-59-1	N.D.	0.022	0.049	1
10726	2-Methylnaphthalene	91-57-6	N.D.	0.004	0.044	1
10726	2-Methylphenol	95-48-7	N.D.	0.022	0.088	1
10726	4-Methylphenol	106-44-5	N.D.	0.022	0.066	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	N.D.	0.009	0.022	1
10726	2-Nitroaniline	88-74-4	N.D.	0.022	0.066	1
10726	Nitrobenzene	98-95-3	N.D.	0.035	0.088	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.088	0.22	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.031	0.066	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.022	0.049	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.088	0.22	1
10726	Pentachlorophenol	87-86-5	N.D.	0.088	0.22	1
10726	Phenanthrene	85-01-8	0.008 J	0.004	0.022	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB13_18-20 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310325
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 14:25
SDG#: CMS01-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.022	0.049	1
10726	Pyrene	129-00-0	0.008 J	0.004	0.022	1
10726	Pyridine	110-86-1	N.D.	0.088	0.22	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.031	0.066	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.040	0.088	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.035	0.075	1

Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	25.2	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201281AA	05/07/2020 21:17	Joel Trout	0.87
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012756758	05/06/2020 23:28	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012756758	05/06/2020 23:28	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012756758	05/06/2020 14:25	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20128SLA026	05/11/2020 02:25	William H Saadeh	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20128SLA026	05/08/2020 00:58	Laura Duquette	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20128820001B	05/07/2020 12:19	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_1-3 TCLP NVE Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: TL 1310326
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 12:45
SDG#: CMS01-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	8.00	0.0071	0.0150	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201321404501	05/11/2020 16:09	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201321404501	05/11/2020 16:09	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	201330571301	05/12/2020 14:04	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201321404501	05/11/2020 06:10	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201320571302	05/11/2020 07:20	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	201330571301	05/12/2020 04:24	James L Mertz	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20128-16818-947B	05/07/2020 14:18	Brian Reed	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_6-8 TCLP NVE Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: TL 1310327
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	0.0673	0.0071	0.0150	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201321404501	05/11/2020 16:43	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201321404501	05/11/2020 16:43	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:19	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201321404501	05/11/2020 06:10	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201320571302	05/11/2020 07:20	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	201330571301	05/12/2020 04:24	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	3	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20128-16818-947B	05/07/2020 14:18	Brian Reed	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.041	0.006	0.019	0.87
11995	Acrolein	107-02-8	N.D.	0.005	0.094	0.87
11995	Acrylonitrile	107-13-1	N.D.	0.0008	0.019	0.87
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.87
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.87
11995	Bromoform	75-25-2	N.D.	0.005	0.009	0.87
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.87
11995	2-Butanone	78-93-3	0.003 J	0.002	0.009	0.87
11995	t-Butyl alcohol	75-65-0	N.D.	0.014	0.094	0.87
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.008	0.87
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.87
11995	tert-Butylbenzene	98-06-6	N.D.	0.0008	0.005	0.87
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.87
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.87
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.87
11995	Chloroethane	75-00-3	N.D.	0.0009	0.005	0.87
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.87
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.87
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.87
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.87
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.87
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.87
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.87
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.87
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.87
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.87
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.87
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.87
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.87
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.87
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0009	0.009	0.87
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.87
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.87
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.87
11995	1,4-Dioxane	123-91-1	N.D.	0.035	0.071	0.87
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.87
11995	Methyl Acetate	79-20-9	N.D.	0.0009	0.005	0.87
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.87
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.87
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.87
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.87

*=This limit was used in the evaluation of the final result

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.87
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.87
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.87
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.87
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.87
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.87
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.87
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.87
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.87
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.87
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.009	0.87
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.34	0.004	0.018	1
10726	Acenaphthylene	208-96-8	0.11	0.004	0.018	1
10726	Acetophenone	98-86-2	N.D.	0.018	0.054	1
10726	Anthracene	120-12-7	0.55	0.004	0.018	1
10726	Atrazine	1912-24-9	N.D.	0.22	0.47	1
10726	Benzaldehyde	100-52-7	N.D.	0.072	0.18	1
10726	Benzidine	92-87-5	N.D.	0.36	1.1	1
10726	Benzo(a)anthracene	56-55-3	1.4	0.007	0.018	1
10726	Benzo(a)pyrene	50-32-8	1.2	0.004	0.018	1
10726	Benzo(b)fluoranthene	205-99-2	1.6	0.004	0.018	1
10726	Benzo(g,h,i)perylene	191-24-2	0.77	0.004	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	0.54	0.004	0.018	1
10726	1,1'-Biphenyl	92-52-4	0.058	0.018	0.039	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.072	0.18	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.072	0.18	1
10726	Caprolactam	105-60-2	N.D.	0.036	0.18	1
10726	Carbazole	86-74-8	0.25	0.018	0.039	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.025	0.054	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.022	0.047	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.007	0.036	1
10726	2-Chlorophenol	95-57-8	N.D.	0.018	0.039	1
10726	Chrysene	218-01-9	1.4	0.004	0.018	1
10726	Dibenz(a,h)anthracene	53-70-3	0.23	0.007	0.018	1
10726	Dibenzofuran	132-64-9	0.32	0.018	0.039	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.018	0.054	1

*=This limit was used in the evaluation of the final result

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Project Name: 35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.018	0.039	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.018	0.039	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.36	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.022	0.047	1
10726	Diethylphthalate	84-66-2	N.D.	0.072	0.18	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.032	0.072	1
10726	Dimethylphthalate	131-11-3	N.D.	0.072	0.18	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.25	0.54	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.36	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.072	0.18	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.025	0.054	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.025	0.054	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.022	0.047	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.072	0.18	1
10726	Fluoranthene	206-44-0	3.1	0.004	0.018	1
10726	Fluorene	86-73-7	0.48	0.004	0.018	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.007	0.018	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.039	0.083	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.22	0.54	1
10726	Hexachloroethane	67-72-1	N.D.	0.036	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.68	0.004	0.018	1
10726	Isophorone	78-59-1	N.D.	0.018	0.039	1
10726	2-Methylnaphthalene	91-57-6	0.18	0.004	0.036	1
10726	2-Methylphenol	95-48-7	N.D.	0.018	0.072	1
10726	4-Methylphenol	106-44-5	N.D.	0.018	0.054	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.20	0.007	0.018	1
10726	2-Nitroaniline	88-74-4	N.D.	0.018	0.054	1
10726	Nitrobenzene	98-95-3	N.D.	0.029	0.072	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.072	0.18	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.025	0.054	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.018	0.039	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.072	0.18	1
10726	Pentachlorophenol	87-86-5	N.D.	0.072	0.18	1
10726	Phenanthrene	85-01-8	2.7	0.004	0.018	1

*=This limit was used in the evaluation of the final result

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.018	0.039	1
10726	Pyrene	129-00-0	2.6	0.004	0.018	1
10726	Pyridine	110-86-1	N.D.	0.072	0.18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.025	0.054	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.032	0.072	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.029	0.061	1
GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	7	18	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D1	0.013	0.039	1
10401	2,4,5-T	93-76-5	N.D. D1	0.00088	0.0018	1
10401	2,4,5-TP	93-72-1	N.D. D1	0.00081	0.0018	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0039	0.018	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0050	0.018	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0086	0.018	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0036	0.018	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0036	0.018	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0036	0.018	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0053	0.018	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0036	0.018	1
Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D2	0.0020	0.0020	1
10590	Alpha BHC	319-84-6	0.00027 JPD1	0.00018	0.00090	1
10590	Beta BHC	319-85-7	0.00057 JPD1	0.00047	0.0016	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00023	0.00090	1
10590	Alpha Chlordane	5103-71-9	N.D. VD1	0.00089	0.00090	1
10590	4,4'-Ddd	72-54-8	N.D. D1	0.00036	0.0022	1
10590	4,4'-Dde	72-55-9	0.00067 JPD2	0.00036	0.0022	1
10590	4,4'-Ddt	50-29-3	0.0019 JD2	0.00085	0.0022	1
10590	Delta BHC	319-86-8	N.D. D2	0.00049	0.0016	1
10590	Dieldrin	60-57-1	N.D. D2	0.00036	0.0022	1
10590	Endosulfan I	959-98-8	N.D. VD2	0.00027	0.00090	1

*=This limit was used in the evaluation of the final result

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Endosulfan II	33213-65-9	N.D. D2	0.0012	0.0022	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.00036	0.0022	1
10590	Endrin	72-20-8	N.D. D1	0.00073	0.0022	1
10590	Heptachlor	76-44-8	N.D. D1	0.00033	0.00090	1
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.						
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.64	2.1	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.64	3.2	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.21	2.1	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.21	2.1	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.43	2.1	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.86	2.1	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.21	0.64	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.21	0.64	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.21	0.64	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.21	0.64	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.21	0.64	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.21	0.64	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.21	0.64	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.21	0.64	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.21	0.64	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.21	0.64	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.21	0.64	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.21	0.64	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.21	0.64	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.21	0.64	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.21	0.64	1
Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	15.7	0.0966	0.289	2
06126	Barium	7440-39-3	86.2	0.661	1.44	10
06127	Beryllium	7440-41-7	0.824	0.0172	0.0433	2
06128	Cadmium	7440-43-9	0.792	0.0364	0.0722	2
06131	Chromium	7440-47-3	10.4	0.111	0.289	2
02829	Trivalent Chromium soils ¹	16065-83-1	10.4	0.15	0.46	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	164	0.634	1.44	10
06135	Lead	7439-92-1	278	0.182	0.722	10
06137	Manganese	7439-96-5	229	0.773	1.44	10
06139	Nickel	7440-02-0	23.5	0.118	0.289	2
06141	Selenium	7782-49-2	1.25	0.0942	0.289	2
06142	Silver	7440-22-4	0.165	0.0293	0.0722	2
06149	Zinc	7440-66-6	312	1.94	7.22	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.20	0.0782	0.344	5
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	0.22 J	0.20	0.55	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.15	0.46	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	7.7	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201281AA	05/07/2020 21:39	Joel Trout	0.87
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012756758	05/06/2020 23:28	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012756758	05/06/2020 23:28	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012756758	05/06/2020 13:15	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20128SLA026	05/11/2020 02:48	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 08:39	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20128SLA026	05/08/2020 00:58	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201280015A	05/11/2020 13:08	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201320002A	05/12/2020 08:19	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201280010A	05/08/2020 14:00	Lisa A Reinert	1
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201320002A	05/11/2020 17:00	Scott Crawford	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201280010A	05/08/2020 00:58	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201280015A	05/07/2020 23:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20128007	05/08/2020 02:57	Jason W Knight	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20128007	05/07/2020 08:00	Katherine Mora	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 08:58	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:23	Patrick J Engle	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:21	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:21	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 08:58	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201330282901	05/12/2020 16:05	Elizabeth Saarinen	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:23	Patrick J Engle	10
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 14:00	Janeyah Rivers-Hamilton	10
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:23	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 13:57	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:21	Patrick J Engle	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:21	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:23	Patrick J Engle	10

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_3-5 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310328
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30

Collection Date/Time: 05/06/2020 13:15

SDG#: CMS01-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	201281063801	05/07/2020 09:44	Damary Valentin	5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201281404901	05/07/2020 05:40	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201281063801	05/07/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20128102201A	05/07/2020 20:06	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20128102201A	05/07/2020 18:00	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20128042501A	05/07/2020 21:35	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20128042501A	05/07/2020 08:13	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20128820001B	05/07/2020 12:19	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.066	0.006	0.019	0.88
11995	Acrolein	107-02-8	N.D.	0.005	0.096	0.88
11995	Acrylonitrile	107-13-1	N.D.	0.0008	0.019	0.88
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.88
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.88
11995	Bromoform	75-25-2	N.D.	0.005	0.01	0.88
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.88
11995	2-Butanone	78-93-3	0.003 J	0.002	0.01	0.88
11995	t-Butyl alcohol	75-65-0	0.015 J	0.014	0.096	0.88
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.008	0.88
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.88
11995	tert-Butylbenzene	98-06-6	N.D.	0.0008	0.005	0.88
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.88
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.88
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.88
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.88
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.88
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.88
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.88
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.88
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.88
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.88
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.88
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.88
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.88
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.88
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.88
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.88
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.88
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.88
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.01	0.88
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.88
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.88
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.88
11995	1,4-Dioxane	123-91-1	N.D.	0.035	0.072	0.88
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.88
11995	Methyl Acetate	79-20-9	0.001 J	0.001	0.005	0.88
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.88
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.88
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.88
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.88

*=This limit was used in the evaluation of the final result

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.88
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.88
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.88
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.88
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.88
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.88
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.88
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.88
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.88
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.88
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.01	0.88
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	17	0.036	0.18	10
10726	Acenaphthylene	208-96-8	2.8	0.004	0.018	1
10726	Acetophenone	98-86-2	N.D.	0.018	0.054	1
10726	Anthracene	120-12-7	24	0.036	0.18	10
10726	Atrazine	1912-24-9	N.D.	0.21	0.46	1
10726	Benzaldehyde	100-52-7	N.D.	0.071	0.18	1
10726	Benzidine	92-87-5	N.D.	0.36	1.1	1
10726	Benzo(a)anthracene	56-55-3	25	0.071	0.18	10
10726	Benzo(a)pyrene	50-32-8	14	0.036	0.18	10
10726	Benzo(b)fluoranthene	205-99-2	20	0.036	0.18	10
10726	Benzo(g,h,i)perylene	191-24-2	5.5	0.036	0.18	10
10726	Benzo(k)fluoranthene	207-08-9	8.3	0.036	0.18	10
10726	1,1'-Biphenyl	92-52-4	0.48	0.018	0.039	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.071	0.18	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.071	0.18	1
10726	Caprolactam	105-60-2	N.D.	0.036	0.18	1
10726	Carbazole	86-74-8	3.9	0.018	0.039	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.025	0.054	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.021	0.046	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.007	0.036	1
10726	2-Chlorophenol	95-57-8	N.D.	0.018	0.039	1
10726	Chrysene	218-01-9	22	0.036	0.18	10
10726	Dibenz(a,h)anthracene	53-70-3	2.1	0.007	0.018	1
10726	Dibenzofuran	132-64-9	9.5	0.18	0.39	10
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.018	0.054	1

*=This limit was used in the evaluation of the final result

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.018	0.039	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.018	0.039	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.36	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.021	0.046	1
10726	Diethylphthalate	84-66-2	N.D.	0.071	0.18	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.032	0.071	1
10726	Dimethylphthalate	131-11-3	N.D.	0.071	0.18	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.25	0.54	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.36	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.071	0.18	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.025	0.054	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.025	0.054	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.021	0.046	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.071	0.18	1
10726	Fluoranthene	206-44-0	71	0.36	1.8	100
10726	Fluorene	86-73-7	26	0.036	0.18	10
10726	Hexachlorobenzene	118-74-1	N.D.	0.007	0.018	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.039	0.082	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.21	0.54	1
10726	Hexachloroethane	67-72-1	N.D.	0.036	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	5.5	0.036	0.18	10
10726	Isophorone	78-59-1	N.D.	0.018	0.039	1
10726	2-Methylnaphthalene	91-57-6	5.3	0.036	0.36	10
10726	2-Methylphenol	95-48-7	N.D.	0.018	0.071	1
10726	4-Methylphenol	106-44-5	0.033 J	0.018	0.054	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.68	0.007	0.018	1
10726	2-Nitroaniline	88-74-4	N.D.	0.018	0.054	1
10726	Nitrobenzene	98-95-3	N.D.	0.029	0.071	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.071	0.18	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.025	0.054	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.018	0.039	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.071	0.18	1
10726	Pentachlorophenol	87-86-5	N.D.	0.071	0.18	1
10726	Phenanthrene	85-01-8	92	0.36	1.8	100

*=This limit was used in the evaluation of the final result

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
10726	Phenol	108-95-2	N.D.	0.018	0.039	1
10726	Pyrene	129-00-0	50	0.36	1.8	100
10726	Pyridine	110-86-1	N.D.	0.071	0.18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.025	0.054	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.032	0.071	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.029	0.061	1
GC/MS Semivolatiles SW-846 8270D SIM						
12969	1,4-Dioxane	123-91-1	N.D.	7	18	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A						
10401	2,4-D	94-75-7	N.D. D2	0.013	0.039	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00089	0.0018	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00081	0.0018	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A Feb 2007 Rev 1						
10885	PCB-1016	12674-11-2	N.D. D1	0.0039	0.018	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0050	0.018	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0086	0.018	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0036	0.018	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0036	0.018	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0036	0.018	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0053	0.018	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0036	0.018	1
Pesticides SW-846 8081B						
10590	Aldrin	309-00-2	0.00025 JPD1	0.00018	0.00090	1
10590	Alpha BHC	319-84-6	N.D. D1	0.00018	0.00090	1
10590	Beta BHC	319-85-7	N.D. D2	0.00047	0.0016	1
10590	Gamma BHC - Lindane	58-89-9	0.0078 D2	0.0011	0.0045	5
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.00018	0.00090	1
10590	4,4'-Ddd	72-54-8	N.D. D2	0.00036	0.0022	1
10590	4,4'-Dde	72-55-9	0.00044 JD1	0.00036	0.0022	1
10590	4,4'-Ddt	50-29-3	0.0013 JD2	0.00085	0.0022	1
10590	Delta BHC	319-86-8	N.D. D2	0.00049	0.0016	1
10590	Dieldrin	60-57-1	N.D. D2	0.00036	0.0022	1
10590	Endosulfan I	959-98-8	N.D. D2	0.00024	0.00090	1

*=This limit was used in the evaluation of the final result

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Endosulfan II	33213-65-9	N.D. D1	0.0012	0.0022	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.00036	0.0022	1
10590	Endrin	72-20-8	N.D. D1	0.00073	0.0022	1
10590	Heptachlor	76-44-8	N.D. D2	0.00033	0.00090	1
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.63	2.1	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.63	3.1	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.21	2.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.21	2.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.42	2.1	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.83	2.1	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.21	0.63	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.21	0.63	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.21	0.63	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.21	0.63	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.21	0.63	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.21	0.63	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.21	0.63	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.21	0.63	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.21	0.63	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.21	0.63	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.21	0.63	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.21	0.63	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.21	0.63	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.21	0.63	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.21	0.63	1
Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	7.18	0.130	0.387	2
06126	Barium	7440-39-3	156	0.886	1.94	10
06127	Beryllium	7440-41-7	0.339	0.0230	0.0581	2
06128	Cadmium	7440-43-9	0.379	0.0488	0.0968	2
06131	Chromium	7440-47-3	14.8	0.149	0.387	2
02829	Trivalent Chromium soils ¹	16065-83-1	14.8	0.15	0.46	1
	The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.					
06133	Copper	7440-50-8	124	0.850	1.94	10

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	211	0.244	0.968	10
06137	Manganese	7439-96-5	152	1.04	1.94	10
06139	Nickel	7440-02-0	16.4	0.158	0.387	2
06141	Selenium	7782-49-2	0.496	0.126	0.387	2
06142	Silver	7440-22-4	0.447	0.0393	0.0968	2
06149	Zinc	7440-66-6	230	2.60	9.68	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.57	0.0771	0.339	5
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.20	0.56	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.15	0.46	1
Wet Chemistry			SM 2540 G-2011 %Moisture Calc	%	%	
00111	Moisture ¹	n.a.	7.8	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201281AA	05/07/2020 22:02	Joel Trout	0.88
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	202012856759	05/07/2020 11:14	Essence Orden-Slocum	n.a.
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012756758	05/06/2020 23:28	Lois E Hiltz	1

*=This limit was used in the evaluation of the final result

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012756758	05/06/2020 23:28	Lois E Hiltz	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20128SLA026	05/11/2020 03:12	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20128SLA026	05/11/2020 19:04	William H Saadeh	10
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20128SLA026	05/11/2020 19:27	William H Saadeh	100
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 09:10	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20128SLA026	05/08/2020 00:58	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201280015A	05/11/2020 13:42	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201280011A	05/08/2020 10:44	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201280010A	05/08/2020 14:11	Lisa A Reinert	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201280010A	05/12/2020 01:27	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201280011A	05/08/2020 00:58	Laura Duquette	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201280010A	05/08/2020 00:58	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201280015A	05/07/2020 23:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20128007	05/08/2020 03:24	Jason W Knight	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20128007	05/07/2020 08:00	Katherine Mora	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 08:44	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:01	Patrick J Engle	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 19:47	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 13:43	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 08:44	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201330282901	05/12/2020 16:06	Elizabeth Saarinen	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:01	Patrick J Engle	10
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:01	Patrick J Engle	10
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:01	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/12/2020 13:43	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 19:47	Patrick J Engle	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 19:47	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201281404901A	05/07/2020 20:01	Patrick J Engle	10

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SODUP01_050620 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310329
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30

Collection Date/Time: 05/06/2020

SDG#: CMS01-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	201281063801	05/07/2020 09:17	Damary Valentin	5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201281404901	05/07/2020 05:40	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201281063801	05/07/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20128102201A	05/07/2020 20:08	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20128102201A	05/07/2020 18:00	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20128042501A	05/07/2020 21:35	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20128042501A	05/07/2020 08:13	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20128820001B	05/07/2020 12:19	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOFB01_050620 Water
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310330
ELLE Group #: 2098617
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 15:00
SDG#: CMS01-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.7	4.4	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.87	2.6	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.44	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.52	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.44	1.7	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	1.7	4.4	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.44	1.7	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.44	1.7	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.44	1.7	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.44	1.7	1
14473	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.44	1.7	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.44	1.7	1
14473	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.44	1.7	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	0.44	1.7	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.44	1.7	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.44	1.7	1
14473	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.44	1.7	1
14473	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.44	1.7	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.44	1.7	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.44	1.7	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.44	1.7	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20128001	05/08/2020 12:16	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20128001	05/07/2020 07:00	Austin Prince	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB01_050620 Water
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310331
ELLE Group #: 2098617
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-08TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	0.003 J	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	0.0003 J	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	1,4-Dioxane	123-91-1	N.D.	0.029	0.075	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB01_050620 Water
35 Commercial St. / 170229024

Project Name: 35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310331
ELLE Group #: 2098617
Matrix: Water

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020
SDG#: CMS01-08TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	0.0003 J	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	PPL/TCL VOCs	SW-846 8260C	1	N201283AA	05/07/2020 22:52	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	N201283AA	05/07/2020 22:51	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_1-3 Grab Soil
35 Commercial St. / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312680
ELLE Group #: 2098617
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 12:45
SDG#: CMS01-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	8,960	11.4	45.4	500
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.672	0.0175	0.0768	1
Wet Chemistry			SM 2540 G-2011 %Moisture Calc	%	%	
00111	Moisture ¹	n.a.	14.6	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201321404901A	05/12/2020 18:01	Patrick J Engle	500
00159	Mercury	SW-846 7471B	1	201331063801	05/12/2020 08:36	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201321404901	05/12/2020 02:20	James L Mertz	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201331063801	05/12/2020 05:39	James L Mertz	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20133820001A	05/12/2020 06:49	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_6-8 Grab Soil
35 Commercial St. / 170229024

Project Name: 35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312681
ELLE Group #: 2098617
Matrix: Soil

Submission Date/Time: 05/06/2020 21:30
Collection Date/Time: 05/06/2020 13:15
SDG#: CMS01-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	174	0.229	0.908	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.52	0.0898	0.395	5
Wet Chemistry			SM 2540 G-2011 %Moisture Calc	%	%	
00111	Moisture ¹	n.a.	20.8	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201321404901A	05/12/2020 18:03	Patrick J Engle	10
00159	Mercury	SW-846 7471B	1	201331063801	05/12/2020 08:41	Damary Valentin	5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201321404901	05/12/2020 02:20	James L Mertz	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201331063801	05/12/2020 05:39	James L Mertz	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20133820001A	05/12/2020 06:49	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: B201281AA	Sample number(s): 1310325,1310328-1310329		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
1,4-Dioxane	N.D.	0.037	0.075
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
n-Propylbenzene	N.D.	0.0004	0.005
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
Batch number: R201311AA	Sample number(s): 1310324		
Acetone	N.D.	0.30	1.0
Acrolein	N.D.	0.25	5.0
Acrylonitrile	N.D.	0.040	1.0
Benzene	N.D.	0.025	0.25
Bromodichloromethane	N.D.	0.020	0.25
Bromoform	N.D.	0.25	0.50
Bromomethane	N.D.	0.035	0.25
2-Butanone	N.D.	0.10	0.50
t-Butyl alcohol	N.D.	0.75	5.0
n-Butylbenzene	N.D.	0.15	0.40
sec-Butylbenzene	N.D.	0.10	0.25
tert-Butylbenzene	N.D.	0.040	0.25
Carbon Disulfide	N.D.	0.030	0.25
Carbon Tetrachloride	N.D.	0.025	0.25
Chlorobenzene	N.D.	0.025	0.25
Chloroethane	N.D.	0.050	0.25
Chloroform	N.D.	0.030	0.25
Chloromethane	N.D.	0.030	0.25
1,2-Dibromo-3-chloropropane	N.D.	0.025	0.25
Dibromochloromethane	N.D.	0.025	0.25
1,2-Dibromoethane	N.D.	0.020	0.25
1,2-Dichlorobenzene	N.D.	0.025	0.25
1,3-Dichlorobenzene	N.D.	0.025	0.25
1,4-Dichlorobenzene	N.D.	0.020	0.25
Dichlorodifluoromethane	N.D.	0.030	0.25
1,1-Dichloroethane	N.D.	0.025	0.25
1,2-Dichloroethane	N.D.	0.030	0.25
1,1-Dichloroethene	N.D.	0.025	0.25
cis-1,2-Dichloroethene	N.D.	0.025	0.25
trans-1,2-Dichloroethene	N.D.	0.025	0.25

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
1,2-Dichloroethene (Total)	N.D.	0.050	0.50
1,2-Dichloropropane	N.D.	0.025	0.25
cis-1,3-Dichloropropene	N.D.	0.020	0.25
trans-1,3-Dichloropropene	N.D.	0.025	0.25
1,4-Dioxane	N.D.	1.9	3.8
Ethylbenzene	N.D.	0.020	0.25
Methyl Acetate	N.D.	0.050	0.25
Methyl Tertiary Butyl Ether	N.D.	0.025	0.25
Methylene Chloride	N.D.	0.10	0.25
n-Propylbenzene	N.D.	0.020	0.25
Styrene	N.D.	0.020	0.25
1,1,2,2-Tetrachloroethane	N.D.	0.020	0.25
Tetrachloroethene	N.D.	0.025	0.25
Toluene	N.D.	0.030	0.25
1,1,1-Trichloroethane	N.D.	0.030	0.25
1,1,2-Trichloroethane	N.D.	0.025	0.25
Trichloroethene	N.D.	0.025	0.25
Trichlorofluoromethane	N.D.	0.035	0.25
1,2,4-Trimethylbenzene	N.D.	0.025	0.25
1,3,5-Trimethylbenzene	N.D.	0.025	0.25
Vinyl Chloride	N.D.	0.030	0.25
Xylene (Total)	N.D.	0.070	0.50
	mg/l	mg/l	mg/l
Batch number: N201283AA	Sample number(s): 1310331		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
1,4-Dioxane	N.D.	0.029	0.075
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,1,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
	mg/kg	mg/kg	mg/kg
Batch number: 20128SLA026	Sample number(s): 1310324-1310325,1310328-1310329		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17
Benidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4,2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067
2,4,6-Trichlorophenol	N.D.	0.027	0.057
	ug/kg	ug/kg	ug/kg
Batch number: 20136SLB026	Sample number(s): 1310328-1310329		
1,4-Dioxane	N.D.	0.7	2
	mg/kg	mg/kg	mg/kg
Batch number: 201280015A	Sample number(s): 1310328-1310329		
2,4-D	N.D.	0.012	0.036
2,4,5-T	N.D.	0.00082	0.0017
2,4,5-TP	N.D.	0.00075	0.0017
Batch number: 201280011A	Sample number(s): 1310329		
PCB-1016	N.D.	0.0036	0.017
PCB-1221	N.D.	0.0046	0.017
PCB-1232	N.D.	0.0080	0.017
PCB-1242	N.D.	0.0033	0.017
PCB-1248	N.D.	0.0033	0.017
PCB-1254	N.D.	0.0033	0.017
PCB-1260	N.D.	0.0049	0.017
Total PCBs	N.D.	0.0033	0.017
Batch number: 201320002A	Sample number(s): 1310328		
PCB-1016	N.D.	0.0036	0.017
PCB-1221	N.D.	0.0046	0.017
PCB-1232	N.D.	0.0080	0.017
PCB-1242	N.D.	0.0033	0.017
PCB-1248	N.D.	0.0033	0.017
PCB-1254	N.D.	0.0033	0.017
PCB-1260	N.D.	0.0049	0.017
Total PCBs	N.D.	0.0033	0.017
Batch number: 201280010A	Sample number(s): 1310328-1310329		
Aldrin	N.D.	0.00017	0.00083
Alpha BHC	N.D.	0.00017	0.00083
Beta BHC	N.D.	0.00044	0.0015
Gamma BHC - Lindane	N.D.	0.00021	0.00083
Alpha Chlordane	N.D.	0.00017	0.00083

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
4,4'-Ddd	N.D.	0.00033	0.0020
4,4'-Dde	N.D.	0.00033	0.0020
4,4'-Ddt	N.D.	0.00079	0.0020
Delta BHC	N.D.	0.00045	0.0015
Dieldrin	N.D.	0.00033	0.0020
Endosulfan I	N.D.	0.00022	0.00083
Endosulfan II	N.D.	0.0011	0.0020
Endosulfan Sulfate	N.D.	0.00033	0.0020
Endrin	N.D.	0.00068	0.0020
Heptachlor	N.D.	0.00031	0.00083
	ng/g	ng/g	ng/g
Batch number: 20128007	Sample number(s): 1310328-1310329		
6:2-Fluorotelomersulfonic acid	N.D.	0.60	2.0
8:2-Fluorotelomersulfonic acid	N.D.	0.60	3.0
NEtFOSAA	N.D.	0.20	2.0
NMeFOSAA	N.D.	0.20	2.0
Perfluorobutanesulfonic acid	N.D.	0.40	2.0
Perfluorobutanoic acid	N.D.	0.80	2.0
Perfluorodecanesulfonic acid	N.D.	0.20	0.60
Perfluorodecanoic acid	N.D.	0.20	0.60
Perfluorododecanoic acid	N.D.	0.20	0.60
Perfluoroheptanesulfonic acid	N.D.	0.20	0.60
Perfluoroheptanoic acid	N.D.	0.20	0.60
Perfluorohexanesulfonic acid	N.D.	0.20	0.60
Perfluorohexanoic acid	N.D.	0.20	0.60
Perfluorononanoic acid	N.D.	0.20	0.60
Perfluorooctanesulfonamide	N.D.	0.20	0.60
Perfluorooctanesulfonic acid	N.D.	0.20	0.60
Perfluorooctanoic acid	N.D.	0.20	0.60
Perfluoropentanoic acid	N.D.	0.20	0.60
Perfluorotetradecanoic acid	N.D.	0.20	0.60
Perfluorotridecanoic acid	N.D.	0.20	0.60
Perfluoroundecanoic acid	N.D.	0.20	0.60
	ng/l	ng/l	ng/l
Batch number: 20128001	Sample number(s): 1310330		
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
	mg/kg	mg/kg	mg/kg
Batch number: 201281063801	Sample number(s): 1310328-1310329		
Mercury	N.D.	0.0152	0.0667
Batch number: 201281404901A	Sample number(s): 1310328-1310329		
Arsenic	N.D.	0.134	0.400
Barium	N.D.	0.183	0.400
Beryllium	N.D.	0.0238	0.0600
Cadmium	N.D.	0.0504	0.100
Chromium	N.D.	0.154	0.400
Copper	N.D.	0.176	0.400
Lead	N.D.	0.0504	0.200
Manganese	N.D.	0.214	0.400
Nickel	N.D.	0.163	0.400
Selenium	N.D.	0.130	0.400
Silver	N.D.	0.0406	0.100
Zinc	0.683 J	0.536	2.00
Batch number: 201321404901A	Sample number(s): 1312680-1312681		
Lead	N.D.	0.0504	0.200
Batch number: 201331063801	Sample number(s): 1312680-1312681		
Mercury	N.D.	0.0152	0.0667
	mg/l	mg/l	mg/l
Batch number: 201321404501	Sample number(s): 1310326-1310327		
Arsenic	N.D.	0.0160	0.0300
Lead	N.D.	0.0071	0.0150
Batch number: 201330571301	Sample number(s): 1310326		
Mercury	0.000055 J	0.000050	0.00020
Batch number: 201550571305	Sample number(s): 1310327		
Mercury	N.D.	0.000079	0.00020

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
	mg/kg	mg/kg	mg/kg
Batch number: 20128102201A	Sample number(s): 1310328-1310329		
Total Cyanide (solid)	N.D.	0.18	0.50
Batch number: 20128042501A	Sample number(s): 1310328-1310329		
Hexavalent Chromium (SOLIDS)	N.D.	0.14	0.42

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: B201281AA	Sample number(s): 1310325,1310328-1310329								
Acetone	0.150	0.154	0.150	0.155	102	103	41-150	1	30
Acrolein	0.150	0.120	0.150	0.119	80	80	57-131	0	30
Acrylonitrile	0.100	0.0893	0.100	0.0874	89	87	66-120	2	30
Benzene	0.0200	0.0179	0.0200	0.0183	89	91	80-120	2	30
Bromodichloromethane	0.0200	0.0180	0.0200	0.0182	90	91	70-120	1	30
Bromoform	0.0200	0.0164	0.0200	0.0163	82	82	51-127	0	30
Bromomethane	0.0200	0.0158	0.0200	0.0161	79	80	45-140	2	30
2-Butanone	0.150	0.130	0.150	0.129	87	86	57-128	1	30
t-Butyl alcohol	0.200	0.166	0.200	0.168	83	84	74-121	1	30
n-Butylbenzene	0.0200	0.0168	0.0200	0.0176	84	88	71-121	5	30
sec-Butylbenzene	0.0200	0.0173	0.0200	0.0178	86	89	72-120	3	30
tert-Butylbenzene	0.0200	0.0165	0.0200	0.0170	83	85	68-120	3	30
Carbon Disulfide	0.0200	0.0173	0.0200	0.0180	87	90	64-133	4	30
Carbon Tetrachloride	0.0200	0.0174	0.0200	0.0177	87	89	64-134	2	30
Chlorobenzene	0.0200	0.0175	0.0200	0.0179	87	90	80-120	2	30
Chloroethane	0.0200	0.0148	0.0200	0.0154	74	77	43-135	4	30
Chloroform	0.0200	0.0182	0.0200	0.0183	91	91	80-120	1	30
Chloromethane	0.0200	0.0159	0.0200	0.0166	80	83	56-120	4	30
1,2-Dibromo-3-chloropropane	0.0200	0.0167	0.0200	0.0166	83	83	48-134	1	30
Dibromochloromethane	0.0200	0.0183	0.0200	0.0180	92	90	69-125	1	30
1,2-Dibromoethane	0.0200	0.0175	0.0200	0.0177	88	89	76-120	1	30
1,2-Dichlorobenzene	0.0200	0.0170	0.0200	0.0176	85	88	76-120	3	30
1,3-Dichlorobenzene	0.0200	0.0167	0.0200	0.0173	83	87	75-120	4	30
1,4-Dichlorobenzene	0.0200	0.0169	0.0200	0.0175	84	87	80-120	4	30
Dichlorodifluoromethane	0.0200	0.0148	0.0200	0.0155	74	78	21-127	5	30
1,1-Dichloroethane	0.0200	0.0181	0.0200	0.0183	91	92	79-120	1	30
1,2-Dichloroethane	0.0200	0.0179	0.0200	0.0180	89	90	71-128	0	30
1,1-Dichloroethene	0.0200	0.0183	0.0200	0.0184	92	92	73-129	1	30
cis-1,2-Dichloroethene	0.0200	0.0192	0.0200	0.0197	96	98	80-125	2	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
trans-1,2-Dichloroethene	0.0200	0.0178	0.0200	0.0186	89	93	80-126	4	30
1,2-Dichloroethene (Total)	0.0400	0.0370	0.0400	0.0383	93	96	80-126	3	30
1,2-Dichloropropane	0.0200	0.0183	0.0200	0.0188	92	94	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0178	0.0200	0.0181	89	91	66-120	2	30
trans-1,3-Dichloropropene	0.0200	0.0173	0.0200	0.0173	86	87	68-122	0	30
1,4-Dioxane	0.500	0.453	0.500	0.451	91	90	62-131	0	30
Ethylbenzene	0.0200	0.0175	0.0200	0.0177	88	88	78-120	1	30
Methyl Acetate	0.0200	0.0174	0.0200	0.0175	87	88	67-128	0	30
Methyl Tertiary Butyl Ether	0.0200	0.0178	0.0200	0.0178	89	89	72-120	0	30
Methylene Chloride	0.0200	0.0177	0.0200	0.0183	89	92	76-122	3	30
n-Propylbenzene	0.0200	0.0177	0.0200	0.0185	89	93	72-123	4	30
Styrene	0.0200	0.0168	0.0200	0.0172	84	86	76-120	2	30
1,1,2,2-Tetrachloroethane	0.0200	0.0177	0.0200	0.0175	88	87	69-125	1	30
Tetrachloroethene	0.0200	0.0169	0.0200	0.0173	84	87	73-120	2	30
Toluene	0.0200	0.0173	0.0200	0.0174	86	87	80-120	0	30
1,1,1-Trichloroethane	0.0200	0.0171	0.0200	0.0174	86	87	69-123	1	30
1,1,2-Trichloroethane	0.0200	0.0191	0.0200	0.0188	95	94	80-120	2	30
Trichloroethene	0.0200	0.0177	0.0200	0.0180	89	90	80-120	2	30
Trichlorofluoromethane	0.0200	0.0163	0.0200	0.0167	81	83	55-134	2	30
1,2,4-Trimethylbenzene	0.0200	0.0169	0.0200	0.0175	84	88	73-120	4	30
1,3,5-Trimethylbenzene	0.0200	0.0173	0.0200	0.0178	86	89	73-120	3	30
Vinyl Chloride	0.0200	0.0157	0.0200	0.0159	79	80	52-120	2	30
Xylene (Total)	0.0600	0.0522	0.0600	0.0527	87	88	75-120	1	30
Batch number: R201311AA	Sample number(s): 1310324								
Acetone	7.50	7.02	7.50	6.71	94	89	41-150	5	30
Acrolein	7.50	7.20	7.50	6.75	96	90	57-131	6	30
Acrylonitrile	5.00	5.24	5.00	5.09	105	102	66-120	3	30
Benzene	1.00	1.05	1.00	1.07	105	107	80-120	1	30
Bromodichloromethane	1.00	1.01	1.00	1.02	101	102	70-120	1	30
Bromoform	1.00	0.885	1.00	0.881	88	88	51-127	0	30
Bromomethane	1.00	1.41	1.00	1.19	141*	119	45-140	17	30
2-Butanone	7.50	6.62	7.50	6.35	88	85	57-128	4	30
t-Butyl alcohol	10	8.21	10	8.92	82	89	74-121	8	30
n-Butylbenzene	1.00	0.920	1.00	0.927	92	93	71-121	1	30
sec-Butylbenzene	1.00	0.922	1.00	0.935	92	93	72-120	1	30
tert-Butylbenzene	1.00	0.894	1.00	0.902	89	90	68-120	1	30
Carbon Disulfide	1.00	1.02	1.00	1.05	102	105	64-133	3	30
Carbon Tetrachloride	1.00	0.972	1.00	0.993	97	99	64-134	2	30
Chlorobenzene	1.00	0.973	1.00	0.986	97	99	80-120	1	30
Chloroethane	1.00	1.29	1.00	1.08	129	108	43-135	18	30
Chloroform	1.00	1.01	1.00	1.03	101	103	80-120	1	30
Chloromethane	1.00	0.946	1.00	0.966	95	97	56-120	2	30
1,2-Dibromo-3-chloropropane	1.00	0.989	1.00	0.965	99	97	48-134	2	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dibromochloromethane	1.00	0.996	1.00	0.994	100	99	69-125	0	30
1,2-Dibromoethane	1.00	0.972	1.00	0.981	97	98	76-120	1	30
1,2-Dichlorobenzene	1.00	0.942	1.00	0.948	94	95	76-120	1	30
1,3-Dichlorobenzene	1.00	0.948	1.00	0.960	95	96	75-120	1	30
1,4-Dichlorobenzene	1.00	0.957	1.00	0.974	96	97	80-120	2	30
Dichlorodifluoromethane	1.00	0.588	1.00	0.674	59	67	21-127	14	30
1,1-Dichloroethane	1.00	1.11	1.00	1.12	111	112	79-120	1	30
1,2-Dichloroethane	1.00	1.03	1.00	1.04	103	104	71-128	1	30
1,1-Dichloroethene	1.00	1.07	1.00	1.09	107	109	73-129	2	30
cis-1,2-Dichloroethene	1.00	1.08	1.00	1.10	108	110	80-125	1	30
trans-1,2-Dichloroethene	1.00	1.05	1.00	1.05	105	105	80-126	0	30
1,2-Dichloroethene (Total)	2.00	2.13	2.00	2.15	107	108	80-126	1	30
1,2-Dichloropropane	1.00	1.11	1.00	1.12	111	112	80-120	1	30
cis-1,3-Dichloropropene	1.00	1.06	1.00	1.08	106	108	66-120	2	30
trans-1,3-Dichloropropene	1.00	1.05	1.00	1.04	105	104	68-122	1	30
1,4-Dioxane	25	25.92	25	25.72	104	103	62-131	1	30
Ethylbenzene	1.00	1.01	1.00	1.02	101	102	78-120	1	30
Methyl Acetate	1.00	1.17	1.00	1.17	117	117	67-128	0	30
Methyl Tertiary Butyl Ether	1.00	0.918	1.00	0.919	92	92	72-120	0	30
Methylene Chloride	1.00	1.09	1.00	1.10	109	110	76-122	1	30
n-Propylbenzene	1.00	1.03	1.00	1.05	103	105	72-123	2	30
Styrene	1.00	1.01	1.00	1.02	101	102	76-120	1	30
1,1,2,2-Tetrachloroethane	1.00	1.03	1.00	1.05	103	105	69-125	2	30
Tetrachloroethene	1.00	0.925	1.00	0.945	93	95	73-120	2	30
Toluene	1.00	1.02	1.00	1.04	102	104	80-120	1	30
1,1,1-Trichloroethane	1.00	0.983	1.00	1.00	98	100	69-123	2	30
1,1,2-Trichloroethane	1.00	1.05	1.00	1.04	105	104	80-120	1	30
Trichloroethene	1.00	0.968	1.00	0.993	97	99	80-120	2	30
Trichlorofluoromethane	1.00	0.861	1.00	0.888	86	89	55-134	3	30
1,2,4-Trimethylbenzene	1.00	0.969	1.00	0.974	97	97	73-120	0	30
1,3,5-Trimethylbenzene	1.00	0.970	1.00	0.986	97	99	73-120	2	30
Vinyl Chloride	1.00	0.909	1.00	0.925	91	92	52-120	2	30
Xylene (Total)	3.00	3.00	3.00	3.02	100	101	75-120	1	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: N201283AA	Sample number(s): 1310331								
Acetone	0.150	0.180	0.150	0.180	120	120	54-157	0	30
Acrolein	0.150	0.143	0.150	0.138	95	92	47-136	3	30
Acrylonitrile	0.100	0.103	0.100	0.103	103	103	60-129	0	30
Benzene	0.0200	0.0215	0.0200	0.0215	108	107	80-120	0	30
Bromodichloromethane	0.0200	0.0199	0.0200	0.0195	100	97	71-120	2	30
Bromoform	0.0200	0.0187	0.0200	0.0182	94	91	51-120	3	30
Bromomethane	0.0200	0.0165	0.0200	0.0159	83	79	53-128	4	30
2-Butanone	0.150	0.154	0.150	0.158	102	105	59-135	3	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
t-Butyl alcohol	0.200	0.223	0.200	0.213	112	106	60-130	5	30
n-Butylbenzene	0.0200	0.0202	0.0200	0.0196	101	98	76-120	3	30
sec-Butylbenzene	0.0200	0.0207	0.0200	0.0203	103	101	77-120	2	30
tert-Butylbenzene	0.0200	0.0195	0.0200	0.0196	97	98	78-120	1	30
Carbon Disulfide	0.0200	0.0231	0.0200	0.0220	116	110	65-128	5	30
Carbon Tetrachloride	0.0200	0.0196	0.0200	0.0194	98	97	64-134	1	30
Chlorobenzene	0.0200	0.0209	0.0200	0.0199	104	99	80-120	5	30
Chloroethane	0.0200	0.0177	0.0200	0.0169	88	84	55-123	5	30
Chloroform	0.0200	0.0209	0.0200	0.0199	104	100	80-120	5	30
Chloromethane	0.0200	0.0159	0.0200	0.0149	80	75	56-121	7	30
1,2-Dibromo-3-chloropropane	0.0200	0.0178	0.0200	0.0181	89	91	47-131	2	30
Dibromochloromethane	0.0200	0.0198	0.0200	0.0190	99	95	71-120	4	30
1,2-Dibromoethane	0.0200	0.0199	0.0200	0.0190	99	95	77-120	4	30
1,2-Dichlorobenzene	0.0200	0.0201	0.0200	0.0199	100	100	80-120	1	30
1,3-Dichlorobenzene	0.0200	0.0196	0.0200	0.0197	98	98	80-120	0	30
1,4-Dichlorobenzene	0.0200	0.0202	0.0200	0.0201	101	100	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0139	0.0200	0.0135	70	68	41-127	3	30
1,1-Dichloroethane	0.0200	0.0219	0.0200	0.0218	109	109	80-120	0	30
1,2-Dichloroethane	0.0200	0.0187	0.0200	0.0188	93	94	73-124	1	30
1,1-Dichloroethene	0.0200	0.0218	0.0200	0.0209	109	104	80-131	4	30
cis-1,2-Dichloroethene	0.0200	0.0227	0.0200	0.0218	114	109	80-125	4	30
trans-1,2-Dichloroethene	0.0200	0.0214	0.0200	0.0210	107	105	80-126	2	30
1,2-Dichloroethene (Total)	0.0400	0.0441	0.0400	0.0428	110	107	80-125	3	30
1,2-Dichloropropane	0.0200	0.0229	0.0200	0.0229	115	114	80-120	0	30
cis-1,3-Dichloropropene	0.0200	0.0205	0.0200	0.0203	103	101	75-120	1	30
trans-1,3-Dichloropropene	0.0200	0.0186	0.0200	0.0185	93	92	67-120	1	30
1,4-Dioxane	0.500	0.519	0.500	0.514	104	103	63-146	1	30
Ethylbenzene	0.0200	0.0205	0.0200	0.0199	102	99	80-120	3	30
Methyl Acetate	0.0200	0.0222	0.0200	0.0225	111	113	54-136	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0193	0.0200	0.0192	97	96	69-122	1	30
Methylene Chloride	0.0200	0.0210	0.0200	0.0210	105	105	80-120	0	30
n-Propylbenzene	0.0200	0.0213	0.0200	0.0207	107	104	79-121	3	30
Styrene	0.0200	0.0200	0.0200	0.0197	100	99	80-120	1	30
1,1,2,2-Tetrachloroethane	0.0200	0.0210	0.0200	0.0214	105	107	72-120	2	30
Tetrachloroethene	0.0200	0.0202	0.0200	0.0195	101	98	80-120	4	30
Toluene	0.0200	0.0205	0.0200	0.0197	103	99	80-120	4	30
1,1,1-Trichloroethane	0.0200	0.0190	0.0200	0.0185	95	93	67-126	2	30
1,1,2-Trichloroethane	0.0200	0.0215	0.0200	0.0205	107	102	80-120	5	30
Trichloroethene	0.0200	0.0200	0.0200	0.0199	100	100	80-120	1	30
Trichlorofluoromethane	0.0200	0.0198	0.0200	0.0179	99	89	55-135	10	30
1,2,4-Trimethylbenzene	0.0200	0.0198	0.0200	0.0194	99	97	75-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0201	0.0200	0.0195	101	98	75-120	3	30
Vinyl Chloride	0.0200	0.0171	0.0200	0.0153	85	77	56-120	11	30
Xylene (Total)	0.0600	0.0614	0.0600	0.0594	102	99	80-120	3	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20128SLA026	Sample number(s): 1310324-1310325,1310328-1310329								
Acenaphthene	1.67	1.39			83		61-112		
Acenaphthylene	1.67	1.38			83		60-124		
Acetophenone	1.67	1.16			69		48-109		
Anthracene	1.67	1.52			91		67-120		
Atrazine	1.67	1.67			100		70-129		
Benzaldehyde	1.67	0.724			43		20-101		
Benzidine	8.33	5.03			60		18-105		
Benzo(a)anthracene	1.67	1.70			102		68-120		
Benzo(a)pyrene	1.67	1.69			101		68-119		
Benzo(b)fluoranthene	1.67	1.81			109		67-125		
Benzo(g,h,i)perylene	1.67	1.72			103		68-125		
Benzo(k)fluoranthene	1.67	1.57			94		66-122		
1,1'-Biphenyl	1.67	1.43			86		59-106		
Butylbenzylphthalate	1.67	1.49			89		69-125		
Di-n-butylphthalate	1.67	1.55			93		70-126		
Caprolactam	1.67	1.48			89		62-119		
Carbazole	1.67	1.56			94		69-125		
bis(2-Chloroethyl)ether	1.67	1.18			71		44-104		
bis(2-Chloroisopropyl)ether	1.67	1.07			64		40-112		
2-Chloronaphthalene	1.67	1.26			76		48-123		
2-Chlorophenol	1.67	1.32			79		51-109		
Chrysene	1.67	1.53			92		66-111		
Dibenz(a,h)anthracene	1.67	1.77			106		69-135		
Dibenzofuran	1.67	1.38			83		62-113		
1,2-Dichlorobenzene	1.67	1.16			69		38-106		
1,3-Dichlorobenzene	1.67	1.11			67		36-103		
1,4-Dichlorobenzene	1.67	1.14			68		25-127		
3,3'-Dichlorobenzidine	1.67	1.17			70		18-114		
2,4-Dichlorophenol	1.67	1.43			86		57-115		
Diethylphthalate	1.67	1.45			87		68-116		
2,4-Dimethylphenol	1.67	1.08			65		47-95		
Dimethylphthalate	1.67	1.41			85		66-113		
4,6-Dinitro-2-methylphenol	1.67	1.61			97		56-135		
2,4-Dinitrophenol	3.33	2.78			83		34-136		
2,4-Dinitrotoluene	1.67	1.43			86		61-121		
2,6-Dinitrotoluene	1.67	1.50			90		66-122		
1,2-Diphenylhydrazine	1.67	1.50			90		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.55			93		65-132		
Fluoranthene	1.67	1.60			96		65-114		
Fluorene	1.67	1.48			89		62-110		
Hexachlorobenzene	1.67	1.61			97		62-124		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachlorobutadiene	1.67	1.31			79		39-120		
Hexachlorocyclopentadiene	3.33	1.64			49		13-115		
Hexachloroethane	1.67	1.19			71		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.72			103		64-130		
Isophorone	1.67	1.28			77		51-113		
2-Methylnaphthalene	1.67	1.39			83		52-104		
2-Methylphenol	1.67	1.31			79		52-116		
4-Methylphenol	1.67	1.23			74		52-121		
Naphthalene	1.67	1.27			76		49-104		
2-Nitroaniline	1.67	1.49			89		65-132		
Nitrobenzene	1.67	1.23			74		41-118		
N-Nitrosodimethylamine	1.67	1.02			61		31-107		
N-Nitroso-di-n-propylamine	1.67	1.29			78		49-108		
N-Nitrosodiphenylamine	1.67	1.59			95		64-127		
Di-n-octylphthalate	1.67	1.46			88		65-139		
Pentachlorophenol	1.67	1.26			76		40-131		
Phenanthrene	1.67	1.52			91		67-116		
Phenol	1.67	1.25			75		57-107		
Pyrene	1.67	1.48			89		67-109		
Pyridine	1.67	0.723			43		10-117		
1,2,4-Trichlorobenzene	1.67	1.34			81		46-109		
2,4,5-Trichlorophenol	1.67	1.54			92		62-121		
2,4,6-Trichlorophenol	1.67	1.59			95		60-120		
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 20136SLB026	Sample number(s): 1310328-1310329								
1,4-Dioxane	33.33	12.52			38		21-79		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201280015A	Sample number(s): 1310328-1310329								
2,4-D	0.0834	0.128			153*		57-142		
2,4,5-T	0.00833	0.0134			161*		59-137		
2,4,5-TP	0.00833	0.0128			153*		70-130		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201280011A	Sample number(s): 1310329								
PCB-1016	0.167	0.171			102		76-121		
PCB-1260	0.167	0.178			107		79-130		
Batch number: 201320002A	Sample number(s): 1310328								
PCB-1016	0.167	0.163			97		76-121		
PCB-1260	0.167	0.176			105		79-130		
	mg/kg	mg/kg	mg/kg	mg/kg					

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 201280010A	Sample number(s): 1310328-1310329								
Aldrin	0.00333	0.00257			77		60-117		
Alpha BHC	0.00338	0.00293			87		65-124		
Beta BHC	0.00333	0.00281			84		68-129		
Gamma BHC - Lindane	0.00333	0.00293			88		68-133		
Alpha Chlordane	0.00333	0.00272			82		73-131		
4,4'-Ddd	0.00671	0.00608			91		69-138		
4,4'-Dde	0.00667	0.00540			81		68-146		
4,4'-Ddt	0.00671	0.00641			96		67-135		
Delta BHC	0.00333	0.00289			87		45-151		
Dieldrin	0.00667	0.00572			86		63-126		
Endosulfan I	0.00333	0.00260			78		62-119		
Endosulfan II	0.00667	0.00559			84		65-126		
Endosulfan Sulfate	0.00667	0.00579			87		71-132		
Endrin	0.00667	0.00616			92		86-135		
Heptachlor	0.00333	0.00280			84		66-118		
	ng/g	ng/g	ng/g	ng/g					
Batch number: 20128007	Sample number(s): 1310328-1310329								
6:2-Fluorotelomersulfonic acid	23.7	18.65			79		51-144		
8:2-Fluorotelomersulfonic acid	23.94	18.25			76		54-152		
NETFOSAA	25	23.81			95		51-145		
NMeFOSAA	25	23.01			92		55-152		
Perfluorobutanesulfonic acid	22.12	17.8			80		63-139		
Perfluorobutanoic acid	25	17.89			72		56-188		
Perfluorodecanesulfonic acid	24.08	18.59			77		60-142		
Perfluorodecanoic acid	25	20.74			83		65-144		
Perfluorododecanoic acid	25	20.83			83		62-150		
Perfluoroheptanesulfonic acid	23.78	20.53			86		67-139		
Perfluoroheptanoic acid	25	21.32			85		65-153		
Perfluorohexanesulfonic acid	23.64	20.37			86		59-139		
Perfluorohexanoic acid	25	19.37			77		64-149		
Perfluorononanoic acid	25	22.25			89		64-151		
Perfluorooctanesulfonamide	25	21.2			85		61-133		
Perfluorooctanesulfonic acid	23.9	17.12			72		54-132		
Perfluorooctanoic acid	25	20.5			82		65-147		
Perfluoropentanoic acid	25	18.3			73		71-139		
Perfluorotetradecanoic acid	25	21.4			86		66-147		
Perfluorotridecanoic acid	25	21.97			88		63-152		
Perfluoroundecanoic acid	25	21.6			86		65-146		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 20128001	Sample number(s): 1310330								
6:2-Fluorotelomersulfonic acid	24.28	19.61	24.28	21.68	81	89	56-140	10	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
8:2-Fluorotelomersulfonic acid	24.52	20.94	24.52	23.08	85	94	58-143	10	30
NEtFOSAA	25.6	25.9	25.6	28.05	101	110	53-140	8	30
NMeFOSAA	25.6	29.03	25.6	29.05	113	113	59-141	0	30
Perfluorobutanesulfonic acid	22.64	20.71	22.64	23.16	91	102	67-135	11	30
Perfluorobutanoic acid	25.6	22.67	25.6	22.5	89	88	63-160	1	30
Perfluorodecanesulfonic acid	24.64	20.82	24.64	22.17	85	90	62-135	6	30
Perfluorodecanoic acid	25.6	23.69	25.6	25.66	93	100	66-141	8	30
Perfluorododecanoic acid	25.6	23.48	25.6	25.51	92	100	65-143	8	30
Perfluoroheptanesulfonic acid	24.36	21.9	24.36	23.25	90	95	67-138	6	30
Perfluoroheptanoic acid	25.6	23.91	25.6	27.23	93	106	69-144	13	30
Perfluorohexanesulfonic acid	24.2	22.57	24.2	24.02	93	99	63-132	6	30
Perfluorohexanoic acid	25.6	23.31	25.6	23.84	91	93	69-139	2	30
Perfluorononanoic acid	25.6	26.26	25.6	27.26	103	106	66-144	4	30
Perfluorooctanesulfonamide	25.6	23.37	25.6	25.48	91	100	67-126	9	30
Perfluorooctanesulfonic acid	24.48	20.67	24.48	21.66	84	88	53-129	5	30
Perfluorooctanoic acid	25.6	23.16	25.6	24.48	90	96	67-139	6	30
Perfluoropentanoic acid	25.6	21.69	25.6	23.56	85	92	73-135	8	30
Perfluorotetradecanoic acid	25.6	25.24	25.6	26.42	99	103	69-141	5	30
Perfluorotridecanoic acid	25.6	24.33	25.6	24.84	95	97	66-146	2	30
Perfluoroundecanoic acid	25.6	23.49	25.6	24.67	92	96	66-140	5	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201281063801	Sample number(s): 1310328-1310329								
Mercury	0.100	0.0860			86		80-115		
Batch number: 201281404901A	Sample number(s): 1310328-1310329								
Arsenic	1.00	1.15			115		80-120		
Barium	5.00	5.10			102		80-120		
Beryllium	0.400	0.395			99		80-120		
Cadmium	0.500	0.523			105		80-120		
Chromium	5.00	5.22			104		86-120		
Copper	5.00	5.16			103		85-120		
Lead	0.500	0.542			108		80-120		
Manganese	5.00	4.84			97		80-120		
Nickel	5.00	4.79			96		86-120		
Selenium	1.00	1.01			101		85-120		
Silver	5.00	5.14			103		84-120		
Zinc	50	50.8			102		85-120		
Batch number: 201321404901A	Sample number(s): 1312680-1312681								
Lead	0.500	0.524			105		80-120		
Batch number: 201331063801	Sample number(s): 1312680-1312681								
Mercury	0.100	0.104			104		80-115		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 201321404501	Sample number(s): 1310326-1310327								
Arsenic	0.0600	0.0784			131*		80-120		
Lead	0.0300	0.0276			92		80-120		
Batch number: 201330571301	Sample number(s): 1310326								
Mercury	0.00100	0.000907			91		80-110		
Batch number: 201550571305	Sample number(s): 1310327								
Mercury	0.00100	0.000971			97		80-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20128102201A	Sample number(s): 1310328-1310329								
Total Cyanide (solid)	10	9.86			99		90-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20128042501A	Sample number(s): 1310328-1310329								
Hexavalent Chromium (SOLIDS)	5.00	4.72			94		80-120		
	%	%	%	%					
Batch number: 20128820001B	Sample number(s): 1310324-1310325,1310328-1310329								
Moisture	89.5	89.38			100		99-101		
Batch number: 20133820001A	Sample number(s): 1312680-1312681								
Moisture	89.5	89.37			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20128SLA026	Sample number(s): 1310324-1310325,1310328-1310329 UNSPK: 1310329									
Acenaphthene	15.31	1.64	2.08	1.64	1.92	-803 (2)	-813 (2)	61-112	8	30
Acenaphthylene	2.61	1.64	1.54	1.64	1.45	-64*	-69*	60-124	6	30
Acetophenone	N.D.	1.64	1.13	1.64	1.08	69	66	48-109	5	30
Anthracene	22.37	1.64	2.69	1.64	2.61	-1195 (2)	-1201 (2)	67-120	3	30
Atrazine	N.D.	1.64	1.66	1.64	1.59	101	97	70-129	5	30
Benzaldehyde	N.D.	1.64	1.02	1.64	0.937	62	57	20-101	8	30
Benzidine	N.D.	8.22	1.31	8.22	1.08	16*	13*	18-105	20	30
Benzo(a)anthracene	23.49	1.64	4.79	1.64	4.76	-1136 (2)	-1138 (2)	68-120	1	30
Benzo(a)pyrene	13.06	1.64	4.15	1.64	4.18	-541 (2)	-539 (2)	68-119	1	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Benzo(b)fluoranthene	18.39	1.64	4.98	1.64	5.29	-814 (2)	-796 (2)	67-125	6	30
Benzo(g,h,i)perylene	5.05	1.64	2.97	1.64	3.03	-125*	-122*	68-125	2	30
Benzo(k)fluoranthene	7.65	1.64	2.34	1.64	2.49	-322 (2)	-313 (2)	66-122	6	30
1,1'-Biphenyl	0.442	1.64	1.49	1.64	1.47	64	62	59-106	2	30
Butylbenzylphthalate	N.D.	1.64	1.44	1.64	1.38	87	84	69-125	4	30
Di-n-butylphthalate	N.D.	1.64	1.50	1.64	1.46	91	89	70-126	3	30
Caprolactam	N.D.	1.64	1.42	1.64	1.35	86	82	62-119	5	30
Carbazole	3.62	1.64	1.93	1.64	1.89	-102*	-104*	69-125	2	30
bis(2-Chloroethyl)ether	N.D.	1.64	1.12	1.64	1.03	68	63	44-104	8	30
bis(2-Chloroisopropyl)ether	N.D.	1.64	0.990	1.64	0.967	60	59	40-112	2	30
2-Chloronaphthalene	N.D.	1.64	1.21	1.64	1.77	74	108	48-123	37*	30
2-Chlorophenol	N.D.	1.64	1.23	1.64	1.19	75	72	51-109	4	30
Chrysene	20.03	1.64	4.32	1.64	4.27	-954 (2)	-958 (2)	66-111	1	30
Dibenz(a,h)anthracene	1.93	1.64	2.35	1.64	2.19	25*	16*	69-135	7	30
Dibenzofuran	8.80	1.64	1.97	1.64	1.78	-414 (2)	-426 (2)	62-113	10	30
1,2-Dichlorobenzene	N.D.	1.64	1.10	1.64	1.05	67	64	38-106	5	30
1,3-Dichlorobenzene	N.D.	1.64	1.04	1.64	0.977	63	59	36-103	6	30
1,4-Dichlorobenzene	N.D.	1.64	1.06	1.64	0.999	65	61	25-127	6	30
3,3'-Dichlorobenzidine	N.D.	1.64	1.23	1.64	1.31	75	80	18-114	6	30
2,4-Dichlorophenol	N.D.	1.64	1.34	1.64	1.31	82	80	57-115	3	30
Diethylphthalate	N.D.	1.64	1.34	1.64	1.31	82	79	68-116	3	30
2,4-Dimethylphenol	N.D.	1.64	1.03	1.64	0.985	63	60	47-95	5	30
Dimethylphthalate	N.D.	1.64	1.33	1.64	1.29	81	79	66-113	3	30
4,6-Dinitro-2-methylphenol	N.D.	1.64	0.863	1.64	0.838	52*	51*	56-135	3	30
2,4-Dinitrophenol	N.D.	3.29	1.03	3.29	1.04	31*	32*	34-136	1	30
2,4-Dinitrotoluene	N.D.	1.64	1.37	1.64	1.32	84	80	61-121	4	30
2,6-Dinitrotoluene	N.D.	1.64	1.48	1.64	1.41	90	86	66-122	5	30
1,2-Diphenylhydrazine	N.D.	1.64	1.45	1.64	1.41	88	86	74-117	3	30
bis(2-Ethylhexyl)phthalate	N.D.	1.64	1.61	1.64	1.57	98	95	65-132	3	30
Fluoranthene	65.6	1.64	7.73	1.64	7.61	-3517 (2)	-3527 (2)	65-114	2	30
Fluorene	23.77	1.64	2.47	1.64	2.15	-1294 (2)	-1314 (2)	62-110	14	30
Hexachlorobenzene	N.D.	1.64	1.54	1.64	1.51	94	92	62-124	2	30
Hexachlorobutadiene	N.D.	1.64	1.24	1.64	1.21	75	74	39-120	2	30
Hexachlorocyclopentadiene	N.D.	3.29	N.D.	3.29	N.D.	0*	0*	13-115	0	30
Hexachloroethane	N.D.	1.64	1.01	1.64	0.966	62	59	30-112	5	30
Indeno(1,2,3-cd)pyrene	5.07	1.64	2.98	1.64	2.97	-126*	-127*	64-130	1	30
Isophorone	N.D.	1.64	1.20	1.64	1.17	73	71	51-113	2	30
2-Methylnaphthalene	4.93	1.64	1.67	1.64	1.57	-197*	-203*	52-104	6	30
2-Methylphenol	N.D.	1.64	1.22	1.64	1.18	74	72	52-116	3	30
4-Methylphenol	0.0304	1.64	1.18	1.64	1.15	70	68	52-121	2	30
Naphthalene	0.628	1.64	1.45	1.64	1.41	50	48*	49-104	3	30
2-Nitroaniline	N.D.	1.64	1.48	1.64	1.42	90	87	65-132	4	30
Nitrobenzene	N.D.	1.64	1.17	1.64	1.14	71	69	41-118	2	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
N-Nitrosodimethylamine	N.D.	1.64	1.00	1.64	0.888	61	54	31-107	12	30
N-Nitroso-di-n-propylamine	N.D.	1.64	1.18	1.64	1.14	72	70	49-108	3	30
N-Nitrosodiphenylamine	N.D.	1.64	1.55	1.64	1.49	94	91	64-127	4	30
Di-n-octylphthalate	N.D.	1.64	1.49	1.64	1.46	91	89	65-139	2	30
Pentachlorophenol	N.D.	1.64	0.956	1.64	0.913	58	56	40-131	5	30
Phenanthrene	84.53	1.64	6.68	1.64	6.67	-4732 (2)	-4736 (2)	67-116	0	30
Phenol	N.D.	1.64	1.20	1.64	1.17	73	71	51-107	3	30
Pyrene	46	1.64	6.23	1.64	6.52	-2417 (2)	-2401 (2)	67-109	5	30
Pyridine	N.D.	1.64	0.563	1.64	0.563	34	34	10-117	0	30
1,2,4-Trichlorobenzene	N.D.	1.64	1.27	1.64	1.23	77	75	46-109	3	30
2,4,5-Trichlorophenol	N.D.	1.64	1.46	1.64	1.39	89	85	62-121	4	30
2,4,6-Trichlorophenol	N.D.	1.64	1.43	1.64	1.40	87	85	60-120	3	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201280015A	Sample number(s): 1310328-1310329 UNSPK: 1310329									
2,4-D	N.D.	0.0828	0.118	0.0830	0.120	142	145*	57-142	2	50
2,4,5-T	N.D.	0.00827	0.0140	0.00829	0.0141	170*	170*	59-137	0	50
2,4,5-TP	N.D.	0.00827	0.0127	0.00829	0.0133	154*	160*	70-130	4	50
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201280011A	Sample number(s): 1310329 UNSPK: 1310329									
PCB-1016	N.D.	0.165	0.109	0.166	0.108	66*	65*	76-121	1	50
PCB-1260	N.D.	0.165	0.120	0.166	0.117	72*	71*	79-130	2	50
	ng/g	ng/g	ng/g	ng/g	ng/g					
Batch number: 20128007	Sample number(s): 1310328-1310329 UNSPK: 1310328									
6:2-Fluorotelomersulfonic acid	N.D.	23.7	18.71	21.74	16.96	79	78	51-144	10	30
8:2-Fluorotelomersulfonic acid	N.D.	23.94	18.49	21.96	16.81	77	77	54-152	10	30
NEtFOSAA	N.D.	25	24.23	22.94	20.68	97	90	51-145	16	30
NMeFOSAA	N.D.	25	22.72	22.94	21.74	91	95	55-152	4	30
Perfluorobutanesulfonic acid	N.D.	22.12	17.49	20.29	17.52	79	86	63-139	0	30
Perfluorobutanoic acid	N.D.	25	17.7	22.94	16.92	71	74	56-188	4	30
Perfluorodecanesulfonic acid	N.D.	24.08	19.82	22.09	17.89	82	81	60-142	10	30
Perfluorodecanoic acid	N.D.	25	20.49	22.94	18.69	82	81	65-144	9	30
Perfluorododecanoic acid	N.D.	25	21.6	22.94	19.76	86	86	62-150	9	30
Perfluoroheptanesulfonic acid	N.D.	23.78	19.56	21.82	17.65	82	81	67-139	10	30
Perfluoroheptanoic acid	N.D.	25	21.6	22.94	19.9	86	87	65-153	8	30
Perfluorohexanesulfonic acid	N.D.	23.64	19.46	21.69	18.15	82	84	59-139	7	30
Perfluorohexanoic acid	N.D.	25	20.19	22.94	17.94	81	78	64-149	12	30
Perfluorononanoic acid	N.D.	25	21.57	22.94	19.87	86	87	64-151	8	30
Perfluorooctanesulfonamide	N.D.	25	20.25	22.94	20.23	81	88	61-133	0	30
Perfluorooctanesulfonic acid	N.D.	23.9	17.75	21.93	16.38	74	75	54-132	8	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Perfluorooctanoic acid	N.D.	25	21.22	22.94	18.91	85	82	65-147	11	30
Perfluoropentanoic acid	N.D.	25	19.43	22.94	17.83	78	78	71-139	9	30
Perfluorotetradecanoic acid	N.D.	25	21.07	22.94	19.63	84	86	66-147	7	30
Perfluorotridecanoic acid	N.D.	25	20.28	22.94	19.34	81	84	63-152	5	30
Perfluoroundecanoic acid	N.D.	25	22.02	22.94	18.88	88	82	65-146	15	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201281063801	Sample number(s): 1310328-1310329 UNSPK: 1310329									
Mercury	1.45	0.154	5.75	0.156	1.99	2799 (2)	345 (2)	80-120	97*	20
Batch number: 201281404901A	Sample number(s): 1310328-1310329 UNSPK: 1310329									
Arsenic	6.62	1.90	13.13	1.44	8.94	342*	162 (2)	75-125	38*	20
Barium	143.92	9.52	108.16	7.19	206.68	-375 (2)	872 (2)	75-125	63*	20
Beryllium	0.313	0.762	1.08	0.576	0.823	101	89	75-125	27*	20
Cadmium	0.349	0.952	1.25	0.719	1.22	95	121	75-125	3	20
Chromium	13.67	9.52	21.57	7.19	19.2	83	77	75-125	12	20
Copper	114.79	9.52	87.85	7.19	85.89	-283 (2)	-402 (2)	75-125	2	20
Lead	194.24	0.952	265.88	0.719	176.89	7523 (2)	-2412 (2)	75-125	40*	20
Manganese	139.94	9.52	104.73	7.19	124.37	-370 (2)	-216 (2)	75-118	17	20
Nickel	15.11	9.52	23.76	7.19	21.4	91	87	75-125	10	20
Selenium	0.457	1.90	2.62	1.44	2.18	113	120	75-125	18	20
Silver	0.412	9.52	10.2	7.19	7.63	103	100	75-125	29*	20
Zinc	212.44	95.24	269.81	71.94	255.64	60*	60*	75-125	5	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201321404501	Sample number(s): 1310326-1310327 UNSPK: 1310326									
Arsenic	N.D.	5.00	4.85	5.00	5.04	97	101	75-125	4	20
Lead	8.00	5.00	12.91	5.00	12.83	98	97	75-125	1	20
Batch number: 201330571301	Sample number(s): 1310326 UNSPK: 1310326									
Mercury	N.D.	0.0200	0.0164	0.0200	0.0163	82	81	80-120	0	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 201281063801	Sample number(s): 1310328-1310329 BKG: 1310329			
Mercury	1.45	1.59	9 (1)	20

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 201281404901A	Sample number(s): 1310328-1310329 BKG: 1310329			
Arsenic	6.62	14.28	73*	20
Barium	143.92	80.03	57*	20
Beryllium	0.313	0.413	28*	20
Cadmium	0.349	0.379	8 (1)	20
Chromium	13.67	11.41	18	20
Copper	114.79	73.4	44*	20
Lead	194.24	190.2	2	20
Manganese	139.94	89.64	44*	20
Nickel	15.11	14.96	1	20
Selenium	0.457	1.10	83* (1)	20
Silver	0.412	0.229	57* (1)	20
Zinc	212.44	146.07	37*	20
	mg/l	mg/l		
Batch number: 201321404501	Sample number(s): 1310326-1310327 BKG: 1310326			
Arsenic	N.D.	N.D.	0 (1)	20
Lead	8.00	8.14	2	20
Batch number: 201330571301	Sample number(s): 1310326 BKG: 1310326			
Mercury	N.D.	0.0000634	200* (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NYSDEC/NJDEP VOCs 8260C Soil
Batch number: B201281AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1310325	102	102	98	98
1310328	101	99	100	94
1310329	102	102	99	96
Blank	102	105	97	99
LCS	104	107	98	102
LCSD	102	103	98	101
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs
Batch number: N201283AA

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PPL/TCL VOCs
Batch number: N201283AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1310331	95	94	94	90
Blank	95	98	94	91
LCS	93	98	95	93
LCSD	94	94	95	91
Limits:	80-120	80-120	80-120	80-120

Analysis Name: NYSDEC/NJDEP VOCs 8260C Soil
Batch number: R201311AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1310324	51	54	74	92
Blank	84	91	90	88
LCS	72	74	73	71
LCSD	72	75	73	72
Limits:	50-141	54-135	52-141	50-131

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20128SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1310324	51	44	25	41	55	79
1310325	44	42	37	36	39	52
1310328	80	78	94	74	89	107
1310329	65	59	80	61	73	82
Blank	65	64	91	62	75	108
LCS	82	78	105	75	89	116
MS	79	75	85	73	87	104
MSD	77	71	85	71	86	100
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

Analysis Name: 1,4-Dioxane 8270D SIM
Batch number: 20136SLB026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1310328	108	72	84
1310329	295*	146*	96
Blank	93	98	81
LCS	94	84	83
Limits:	21-120	17-112	27-107

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NY Part 375 Pests Soil
Batch number: 201280010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310328	119	178*	99	174*
1310329	120	152	99	155*
Blank	85	118	84	120
LCS	64	94	63	100
Limits:	19-136	46-152	19-136	46-152

Analysis Name: 7 PCBs + Total Soil
Batch number: 201280011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310329	55	66	50*	69
Blank	86	111	94	106
LCS	92	111	100	109
MS	62	83	55	117
MSD	60	83	56	89
Limits:	53-140	45-143	53-140	45-143

Analysis Name: 2,4,5-T, 2,4-D, 2,4,5-TP 8151A
Batch number: 201280015A

	2,4-DCAA-D1	2,4-DCAA-D2
1310328	134	120
1310329	47	41
Blank	120	122
LCS	127	133
MS	121	122
MSD	125	123
Limits:	27-136	27-136

Analysis Name: 7 PCBs + Total Soil
Batch number: 201320002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310328	51*	68	47*	73
Blank	92	102	99	111
LCS	88	105	96	105
Limits:	53-140	45-143	53-140	45-143

Analysis Name: NY 21 PFAS Water
Batch number: 20128001

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Water
Batch number: 20128001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1310330	95	90	88	92	88	84
Blank	99	92	99	95	94	88
LCS	92	90	94	91	98	96
LCSD	96	92	96	96	99	90

Limits: 43-130 38-150 23-175 36-137 35-143 33-140

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1310330	95	95	97	99	98	100
Blank	100	99	99	99	104	109
LCS	102	96	100	93	98	104
LCSD	99	96	104	99	100	108

Limits: 29-182 52-124 52-121 48-130 50-124 37-169

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1310330	102	94	100	88	89	82
Blank	104	103	109	94	92	79
LCS	101	98	102	98	92	87
LCSD	106	105	106	101	91	86

Limits: 36-143 44-128 42-149 36-127 21-134 10-134

Analysis Name: NY 21 PFAS Soil
Batch number: 20128007

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1310328	98	95	96	95	96	92
1310329	99	95	100	102	99	92
Blank	113	111	110	108	108	101
LCS	117	116	115	118	107	109
MS	98	91	100	91	91	87
MSD	93	91	91	89	91	88

Limits: 40-117 38-118 38-120 36-120 38-124 39-120

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1310328	89	102	96	95	105	91
1310329	92	102	106	106	104	101
Blank	115	110	109	112	116	118
LCS	110	113	122*	117	120*	121
MS	85	92	97	99	99	100
MSD	81	95	97	95	97	89

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:00

Group Number: 2098617

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Soil
Batch number: 20128007

Limits:	25-154	44-115	45-118	39-123	43-118	26-155
	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1310328	34	102	47	103	97	101
1310329	36	103	49	106	101	100
Blank	113	116	116	107	106	110
LCS	129	118	124	115	113	116
MS	40	101	50	104	96	104
MSD	31	100	41	95	90	93
Limits:	10-152	34-124	10-156	28-126	26-125	31-127

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Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45200 Group # 2090117 Sample # 1310374-31

222 COC # **606124**

Client Information				Matrix			Analysis Requested										For Lab Use Only	
Client: <u>Lanban DPC</u>		Acct. #:		<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Tissue <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:	Total # of Containers	Preservation and Filtration Codes										FSC: _____	SCR#: _____	
Project Name/ #: <u>35 COMMERCIAL ST. / 170229024</u>		PWSID #:				TLZ VOLG TLZ SVOLG TLZ ARSENIC, LEAD, MERCURY PESTS/HERBS PCBs TALMETS (+ HEX. + THY CHLORAL) CYANIDE PFAS 1,4-DIOXANE										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other		
Project Manager: <u>GREG WYKA</u>		P.O. #:														Remarks EMAIL RESULTS TO WUDKIM AND JULIA LEUNG (SEE E-MAIL ADDRESSES)		
Sampler: <u>MIKE MCCORMACK</u>		Quote #:																
State where samples were collected: <u>NEW YORK</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
Sample Identification		Collected		Grab	Composite													
Date	Time											Date	Time					
<u>LB13-15.5-17.5</u>	<u>5/6/20</u>	<u>14:20</u>	<input checked="" type="checkbox"/>															
<u>LB13-18-20</u>		<u>14:25</u>	<input checked="" type="checkbox"/>															
<u>LB17-1-3</u>		<u>12:45</u>	<input checked="" type="checkbox"/>															
<u>LB17-6-8</u>		<u>13:15</u>	<input checked="" type="checkbox"/>															
<u>LB17-3-5</u>		<u>13:15</u>	<input checked="" type="checkbox"/>															
<u>SODF01-050620</u>			<input checked="" type="checkbox"/>															
<u>SOFF01-050620</u>		<u>1500</u>																
<u>SOTB01-050620</u>																		
Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by	Date	Time								
<u>Standard</u> Rush						<u>5/6/20</u>	<u>1545</u>	<u>Roman</u>	<u>5/6/20</u>	<u>1600</u>								
(Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by		Date	Time	Received by	Date	Time								
Requested TAT in business days:				<u>hang</u>		<u>5/6/20</u>	<u>1800</u>	<u>Julia Leung</u>	<u>5/6/20</u>	<u>1857</u>								
E-mail address: <u>G.WYKA@LANBAN.COM</u> <u>JLEUNG@LANBAN.COM</u>				Relinquished by		Date	Time	Received by	Date	Time								
				<u>Julia Leung</u>		<u>5/6/20</u>	<u>2118</u>	<u>Wendy</u>	<u>5/6/20</u>	<u>2120</u>								
Data Package Options (circle if required)				Relinquished by		Date	Time	Received by	Date	Time								
Type I (EPA Level 3 Equivalent/non-CLP)		Type VI (Raw Data Only)		<u>Wendy</u>		<u>5/6/20</u>	<u>2120</u>	<u>Wendy</u>	<u>5/6/20</u>	<u>2120</u>								
Type III (Reduced non-CLP)		NJ DKQP	TX TRRP-13					Relinquished by Commercial Carrier:										
<u>NYSDEC Category A or B</u>		MA MCP	CT RCP					UPS _____ FedEx _____ Other _____										
				EDD Required? <u>Yes</u> No				Relinquished by Commercial Carrier:										
				If yes, format: <u>EQUS</u>				UPS _____ FedEx _____ Other _____										
				Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No				Temperature upon receipt <u>0.5 - 2.0°C</u>										
				(If yes, indicate QC sample and submit triplicate sample volume.)														



Group Number(s):

Client: Langan, DPC

35 Commercial St. / 170229024

2098617

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/06/2020
 Number of Packages: 2 Number of Projects: 1
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by William Mathers

Samples Chilled Details: 35 Commercial St. / 170229024

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	Water	46730061WS	2.9	IR	Wet	Y	Loose	N
1	Soil	46730061WS	0.5	IR	Wet	Y	Loose	N
2	Soil	46730061WS	0.7	IR	Wet	Y	Loose	N

Sample Date/Time Discrepancy Details: 35 Commercial St. / 170229024

Sample ID on COC	Date/Time on Label	Comments
LB17_3-5	5/06/2020 12:05	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: May 20, 2020 10:31

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2098762
SDG: CMS02
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

A previous version of this report was generated on 05/14/2020 09:31.

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
SOFB02_050720 Water	05/07/2020 14:20	1310907
SOFB02_050720 TCLP NVE Water	05/07/2020 14:20	1310908
SOTB02_050720 Water	05/07/2020	1310909
LB17_8-10 Soil	05/07/2020 08:45	1310910
LB17_15-16 Soil	05/07/2020 09:15	1310911
LB13N_15-17 Soil	05/07/2020 10:30	1310912
LB13W_15-17 Soil	05/07/2020 11:55	1310913
LB21_1-3 Soil	05/07/2020 13:45	1310914
LB21_15-17 Soil	05/07/2020 14:15	1310915

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2098762

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1310907, 1310909

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1310914

Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Sample #s: 1310907

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzidine

Batch #: 20129WAC026 (Sample number(s): 1310907)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Benzidine

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 1310911, 1310914, 1310915

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 1310907

The holding time was not met. The analysis was added after the holding time had already expired.

Batch #: 20136SLB026 (Sample number(s): 1310911, 1310914-1310915)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1310911, 1310914

SW-846 8081B, Pesticides

Sample #s: 1310915

Reporting limits were raised due to interference from the sample matrix.

Batch #: 201290008A (Sample number(s): 1310911, 1310914-1310915 UNSPK: 1310911)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Endosulfan I

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Beta BHC, Gamma BHC - Lindane, Delta BHC, Heptachlor, Aldrin, 4,4'-Ddt, Endrin, Endosulfan II, Endosulfan Sulfate, Alpha Chlordane, Alpha BHC

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Alpha Chlordane, Gamma BHC - Lindane, Aldrin, Endosulfan Sulfate

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1310911, 1310915, MSD

SW-846 8082A, PCBs

Sample #s: 1310907

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Batch #: 201290014A (Sample number(s): 1310907)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) LCS, LCSD

SW-846 8082A Feb 2007 Rev 1, PCBs

Batch #: 201290009A (Sample number(s): 1310911, 1310914-1310915 UNSPK: 1310914)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: PCB-1016, PCB-1260

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1310914, MS, MSD

SW-846 8151A, Herbicides

Sample #s: 1310907

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Sample #s: 1310911, 1310914, 1310915

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 201290002A (Sample number(s): 1310907)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP

Batch #: 201290011A (Sample number(s): 1310911, 1310914-1310915 UNSPK: 1310915)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 2,4-D

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) Blank, LCS

EPA 537 Version 1.1 Modified, LC/MS/MS MiscellaneousSample #s: 1310907

The recovery for extraction standard d3-NMeFOSAA is outside the QC acceptance limits in the continuing closing calibration verification standard.

SW-846 6020B Rev.2, July 2014, MetalsBatch #: 201281404904A (Sample number(s): 1310910-1310911, 1310914-1310915 UNSPK: 1310911 BKG: 1310911)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Copper, Zinc, Barium

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Arsenic, Barium, Beryllium, Chromium, Lead, Manganese, Nickel, Selenium

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Barium, Lead

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Barium, Beryllium, Chromium, Copper, Nickel, Selenium, Silver, Zinc

SW-846 7471B, MetalsBatch #: 201281063802 (Sample number(s): 1310910-1310911, 1310914-1310915 UNSPK: 1310910 BKG: 1310910)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Mercury

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

SW-846 9012B, Wet ChemistryBatch #: 20133102201A (Sample number(s): 1310911, 1310914-1310915 UNSPK: 1310914 BKG: 1310914)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Total Cyanide (solid)

SW-846 7196A, Wet Chemistry

Batch #: 20129042501A (Sample number(s): 1310911, 1310914-1310915 UNSPK: 1310911 BKG: 1310911)

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: Hexavalent Chromium (SOLIDS)

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
		SW-846 8260C				
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	1,4-Dioxane	123-91-1	N.D.	0.029	0.075	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1

*=This limit was used in the evaluation of the final result

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.0001	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.010	1
14242	Anthracene	120-12-7	N.D.	0.0001	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.010	1
14242	Benzidine	92-87-5	N.D.	0.020	0.061	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.011	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	mg/l	mg/l	mg/l	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.008	0.021	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.014	0.030	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
	Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.					
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.011	1
14242	Fluoranthene	206-44-0	N.D.	0.0001	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.011	1
14242	Hexachloroethane	67-72-1	N.D.	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0001	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1

*=This limit was used in the evaluation of the final result

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/l	mg/l	mg/l	
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005	0.011	1
14242	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
14242	Phenanthrene	85-01-8	N.D.	0.0001	0.0005	1
14242	Phenol	108-95-2	N.D.	0.0005	0.002	1
14242	Pyrene	129-00-0	N.D.	0.0001	0.0005	1
14242	Pyridine	110-86-1	N.D.	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005	0.002	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzidine

GC/MS Semivolatiles	SW-846 8270D SIM	ug/l	ug/l	ug/l		
14244	1,4-Dioxane	123-91-1	N.D.	0.1	0.3	1

The holding time was not met. The analysis was added after the holding time had already expired.

Herbicides	SW-846 8151A	mg/l	mg/l	mg/l		
10407	2,4-D	94-75-7	N.D. D1	0.00024	0.00057	1
10407	2,4,5-T	93-76-5	N.D. D2	0.000062	0.00014	1
10407	2,4,5-TP	93-72-1	N.D. D1	0.0000095	0.000048	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

PCBs	SW-846 8082A	mg/l	mg/l	mg/l		
10591	PCB-1016	12674-11-2	N.D. D1	0.00010	0.00050	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00010	0.00050	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00020	0.00050	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00010	0.00050	1
10591	PCB-1248	12672-29-6	N.D. D2	0.00010	0.00050	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00010	0.00050	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00015	0.00050	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00010	0.00050	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance

*=This limit was used in the evaluation of the final result

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.						
Pesticides		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Aldrin	309-00-2	N.D. D1	0.0000020	0.000010	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0000030	0.000010	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000034	0.000010	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0000020	0.000010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000030	0.000010	1
10589	4,4'-Ddd	72-54-8	N.D. D2	0.0000050	0.000020	1
10589	4,4'-Dde	72-55-9	N.D. D2	0.0000050	0.000020	1
10589	4,4'-Ddt	50-29-3	N.D. D2	0.0000052	0.000020	1
10589	Delta BHC	319-86-8	N.D. D1	0.0000034	0.000010	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000053	0.000020	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0000043	0.000010	1
10589	Endosulfan II	33213-65-9	N.D. D1	0.000015	0.000040	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000058	0.000020	1
10589	Endrin	72-20-8	N.D. D2	0.0000081	0.000030	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000020	0.000010	1
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.6	4.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.80	2.4	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.40	2.4	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.48	1.6	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.40	1.6	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	1.6	4.0	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.40	1.6	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.40	1.6	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.40	1.6	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.40	1.6	1
14473	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.40	1.6	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.40	1.6	1
14473	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.40	1.6	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	0.40	1.6	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.40	1.6	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.40	1.6	1
14473	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.40	1.6	1
14473	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.40	1.6	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.40	1.6	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.40	1.6	1

*=This limit was used in the evaluation of the final result

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified						
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.40	1.6	1
The recovery for extraction standard d3-NMeFOSAA is outside the QC acceptance limits in the continuing closing calibration verification standard.						
Metals SW-846 6010D Rev.4, July 2014						
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014						
06025	Arsenic	7440-38-2	N.D. K4	0.00068	0.0020	1
06026	Barium	7440-39-3	N.D.	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D. K4	0.00015	0.00050	1
06031	Chromium	7440-47-3	N.D.	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	N.D.	0.000071	0.00050	1
06037	Manganese	7439-96-5	N.D.	0.00063	0.0020	1
06039	Nickel	7440-02-0	N.D.	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D. K4	0.0062	0.0100	1
SW-846 7470A						
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry SW-846 9012B						
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
SW-846 7196A						
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-01FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	PPL/TCL VOCs	SW-846 8260C	1	Y201332AA	05/12/2020 14:20	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y201332AA	05/12/2020 14:19	Corie Mellinger	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20129WAC026	05/11/2020 10:58	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136WAB026	05/18/2020 00:43	William H Saadeh	1
00813	BNA Water Extraction	SW-846 3510C	1	20129WAC026	05/09/2020 02:00	Mathias Okpo	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20136WAB026	05/15/2020 18:45	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201290002A	05/11/2020 22:34	Richard A Shober	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201290014A	05/12/2020 09:10	Covenant Mutuku	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201290013A	05/11/2020 22:47	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201290014A	05/11/2020 09:14	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201290013A	05/11/2020 09:14	Christine E Gleim	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201290002A	05/08/2020 18:05	Bradley W VanLeuven	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20132008	05/13/2020 16:31	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	2	20132008	05/11/2020 16:00	Andrew Kutchins	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201291404401	05/08/2020 11:20	Patrick J Engle	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/13/2020 13:29	Janeyah Rivers-Hamilton	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201340282801	05/13/2020 18:42	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/13/2020 13:29	Janeyah Rivers-Hamilton	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/13/2020 13:29	Janeyah Rivers-Hamilton	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201291404701A	05/09/2020 14:38	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201250571307	05/11/2020 13:58	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201291404401	05/08/2020 05:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201291404701	05/08/2020 05:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201250571307	05/08/2020 06:30	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20134117101B	05/13/2020 12:44	Jonathan Saul	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOFB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310907
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45

Collection Date/Time: 05/07/2020 14:20

SDG#: CMS02-01FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08256	Cyanide Water Distillation	SW-846 9012B	1	20134117101B	05/13/2020 08:50	Nancy J Shoop	1
00276	Hexavalent Chromium	SW-846 7196A	1	20129027601A	05/08/2020 00:50	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOFB02_050720 TCLP NVE Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: TL 1310908
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:20
SDG#: CMS02-02FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201321404503	05/12/2020 11:58	Lisa J Cooke	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201321404503	05/12/2020 02:33	James L Mertz	1
01339	Leachate Filtration	SW-846 1311	1	20132-9169-1339	05/11/2020 10:30	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310909
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020
SDG#: CMS02-03TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	0.007 J	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	0.0004 J	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	1,4-Dioxane	123-91-1	N.D.	0.029	0.075	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB02_050720 Water
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: WW 1310909
ELLE Group #: 2098762
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020
SDG#: CMS02-03TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	0.0003 J	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	PPL/TCL VOCs	SW-846 8260C	1	Y201332AA	05/12/2020 14:42	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y201332AA	05/12/2020 14:41	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_8-10 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310910
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 08:45
SDG#: CMS02-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	16.0	0.156	0.465	2
06135	Lead	7439-92-1	766	0.586	2.32	20
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	4.97	0.197	0.866	10
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	28.9	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:17	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:56	Janeyah Rivers-Hamilton	20
00159	Mercury	SW-846 7471B	1	201281063802	05/11/2020 09:01	Damary Valentin	10
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201281404904	05/08/2020 04:40	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201281063802	05/08/2020 05:50	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820001A	05/11/2020 09:28	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.044	0.007	0.023	0.95
11995	Acrolein	107-02-8	N.D.	0.006	0.12	0.95
11995	Acrylonitrile	107-13-1	N.D.	0.0009	0.023	0.95
11995	Benzene	71-43-2	N.D.	0.0006	0.006	0.95
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.006	0.95
11995	Bromoform	75-25-2	N.D.	0.006	0.012	0.95
11995	Bromomethane	74-83-9	N.D.	0.0008	0.006	0.95
11995	2-Butanone	78-93-3	0.010 J	0.002	0.012	0.95
11995	t-Butyl alcohol	75-65-0	N.D.	0.017	0.12	0.95
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.009	0.95
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.006	0.95
11995	tert-Butylbenzene	98-06-6	N.D.	0.0009	0.006	0.95
11995	Carbon Disulfide	75-15-0	0.0008 J	0.0007	0.006	0.95
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.006	0.95
11995	Chlorobenzene	108-90-7	N.D.	0.0006	0.006	0.95
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	0.95
11995	Chloroform	67-66-3	N.D.	0.0007	0.006	0.95
11995	Chloromethane	74-87-3	N.D.	0.0007	0.006	0.95
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.006	0.95
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.006	0.95
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.006	0.95
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0006	0.006	0.95
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0006	0.006	0.95
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.006	0.95
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0007	0.006	0.95
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0006	0.006	0.95
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	0.006	0.95
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0006	0.006	0.95
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0006	0.006	0.95
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0006	0.006	0.95
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.012	0.95
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0006	0.006	0.95
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.006	0.95
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0006	0.006	0.95
11995	1,4-Dioxane	123-91-1	N.D.	0.043	0.087	0.95
11995	Ethylbenzene	100-41-4	N.D.	0.0005	0.006	0.95
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.006	0.95
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.006	0.95
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.006	0.95
11995	n-Propylbenzene	103-65-1	N.D.	0.0005	0.006	0.95
11995	Styrene	100-42-5	N.D.	0.0005	0.006	0.95

*=This limit was used in the evaluation of the final result

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.006	0.95
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.006	0.95
11995	Toluene	108-88-3	N.D.	0.0007	0.006	0.95
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0007	0.006	0.95
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0006	0.006	0.95
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.006	0.95
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0008	0.006	0.95
11995	1,2,4-Trimethylbenzene	95-63-6	0.0006 J	0.0006	0.006	0.95
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0006	0.006	0.95
11995	Vinyl Chloride	75-01-4	N.D.	0.0007	0.006	0.95
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.012	0.95
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	3.5	0.008	0.040	1
10726	Acenaphthylene	208-96-8	0.35	0.008	0.040	1
10726	Acetophenone	98-86-2	N.D.	0.040	0.12	1
10726	Anthracene	120-12-7	6.5	0.008	0.040	1
10726	Atrazine	1912-24-9	N.D.	0.48	1.0	1
10726	Benzaldehyde	100-52-7	N.D.	0.16	0.40	1
10726	Benzidine	92-87-5	N.D.	0.81	2.4	1
10726	Benzo(a)anthracene	56-55-3	11	0.081	0.20	5
10726	Benzo(a)pyrene	50-32-8	9.1	0.008	0.040	1
10726	Benzo(b)fluoranthene	205-99-2	9.4	0.008	0.040	1
10726	Benzo(g,h,i)perylene	191-24-2	4.5	0.008	0.040	1
10726	Benzo(k)fluoranthene	207-08-9	3.9	0.008	0.040	1
10726	1,1'-Biphenyl	92-52-4	0.31	0.040	0.089	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.16	0.40	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.16	0.40	1
10726	Caprolactam	105-60-2	N.D.	0.081	0.40	1
10726	Carbazole	86-74-8	2.9	0.040	0.089	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.056	0.12	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.048	0.10	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.016	0.081	1
10726	2-Chlorophenol	95-57-8	N.D.	0.040	0.089	1
10726	Chrysene	218-01-9	9.7	0.040	0.20	5
10726	Dibenz(a,h)anthracene	53-70-3	1.5	0.016	0.040	1
10726	Dibenzofuran	132-64-9	2.3	0.040	0.089	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.040	0.12	1

*=This limit was used in the evaluation of the final result

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.040	0.089	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.040	0.089	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.24	0.81	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.048	0.10	1
10726	Diethylphthalate	84-66-2	N.D.	0.16	0.40	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.073	0.16	1
10726	Dimethylphthalate	131-11-3	N.D.	0.16	0.40	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.56	1.2	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.81	2.4	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.16	0.40	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.056	0.12	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.056	0.12	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.048	0.10	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.16	0.40	1
10726	Fluoranthene	206-44-0	25	0.040	0.20	5
10726	Fluorene	86-73-7	3.9	0.008	0.040	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.016	0.040	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.089	0.19	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.48	1.2	1
10726	Hexachloroethane	67-72-1	N.D.	0.081	0.40	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	4.4	0.008	0.040	1
10726	Isophorone	78-59-1	N.D.	0.040	0.089	1
10726	2-Methylnaphthalene	91-57-6	1.2	0.008	0.081	1
10726	2-Methylphenol	95-48-7	0.057 J	0.040	0.16	1
10726	4-Methylphenol	106-44-5	0.18	0.040	0.12	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	3.4	0.016	0.040	1
10726	2-Nitroaniline	88-74-4	N.D.	0.040	0.12	1
10726	Nitrobenzene	98-95-3	N.D.	0.065	0.16	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.16	0.40	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.056	0.12	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.040	0.089	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.16	0.40	1
10726	Pentachlorophenol	87-86-5	N.D.	0.16	0.40	1
10726	Phenanthrene	85-01-8	27	0.040	0.20	5

*=This limit was used in the evaluation of the final result

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	0.12	0.040	0.089	1
10726	Pyrene	129-00-0	21	0.040	0.20	5
10726	Pyridine	110-86-1	N.D.	0.16	0.40	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.056	0.12	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.073	0.16	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.065	0.14	1

GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	8	20	10

Reporting limits were raised due to interference from the sample matrix.

Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D1	0.014	0.043	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00099	0.0021	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.0012	0.0021	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0085	0.040	1
10885	PCB-1221	11104-28-2	N.D. D1	0.011	0.040	1
10885	PCB-1232	11141-16-5	N.D. D1	0.019	0.040	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0078	0.040	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0078	0.040	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0078	0.040	1
10885	PCB-1260	11096-82-5	N.D. D1	0.012	0.040	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0078	0.040	1

Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D2	0.0040	0.020	10
10590	Alpha BHC	319-84-6	0.0092 JPD2	0.0040	0.020	10
10590	Beta BHC	319-85-7	N.D. D1	0.010	0.036	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0050	0.020	10
10590	Alpha Chlordane	5103-71-9	N.D. VD1	0.010	0.020	10
10590	4,4'-Ddd	72-54-8	N.D. D2	0.0078	0.047	10
10590	4,4'-Dde	72-55-9	N.D. D2	0.0078	0.047	10
10590	4,4'-Ddt	50-29-3	N.D. D2	0.019	0.047	10

*=This limit was used in the evaluation of the final result

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Delta BHC	319-86-8	N.D. D1	0.011	0.036	10
10590	Dieldrin	60-57-1	N.D. D1	0.0078	0.047	10
10590	Endosulfan I	959-98-8	N.D. D2	0.0052	0.020	10
10590	Endosulfan II	33213-65-9	N.D. D1	0.026	0.047	10
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	0.0078	0.047	10
10590	Endrin	72-20-8	N.D. D1	0.016	0.047	10
10590	Heptachlor	76-44-8	N.D. D1	0.0074	0.020	10
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.70	2.3	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.70	3.5	1
14027	NETFOSAA ¹	2991-50-6	N.D.	0.23	2.3	1
NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.23	2.3	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.46	2.3	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.93	2.3	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.23	0.70	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.23	0.70	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.23	0.70	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.23	0.70	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.23	0.70	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.23	0.70	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.23	0.70	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.23	0.70	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.23	0.70	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.23	0.70	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.23	0.70	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.23	0.70	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.23	0.70	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.23	0.70	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.23	0.70	1
Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	10.4	0.136	0.406	2
06126	Barium	7440-39-3	61.9	0.186	0.406	2
06127	Beryllium	7440-41-7	0.474	0.0242	0.0609	2
06128	Cadmium	7440-43-9	0.280	0.0512	0.102	2
06131	Chromium	7440-47-3	16.9	0.156	0.406	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
02829	Trivalent Chromium soils ¹ The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.	16065-83-1	16.9	0.17	0.51	1
06133	Copper	7440-50-8	68.1	0.178	0.406	2
06135	Lead	7439-92-1	1,490	2.56	10.2	100
06137	Manganese	7439-96-5	239	1.09	2.03	10
06139	Nickel	7440-02-0	34.0	0.165	0.406	2
06141	Selenium	7782-49-2	0.479	0.132	0.406	2
06142	Silver	7440-22-4	0.244	0.0412	0.102	2
06149	Zinc	7440-66-6	531	5.44	20.3	20
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.458	0.0171	0.0750	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	0.42 J	0.23	0.63	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.17	0.51	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹ Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	17.9	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201311AA	05/10/2020 22:20	Joel Trout	0.95
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012856765	05/07/2020 22:12	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012856765	05/07/2020 22:12	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012856765	05/07/2020 09:15	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 05:07	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 19:50	William H Saadeh	5
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 09:42	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20129SLA026	05/09/2020 09:20	Joseph Underdonk	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201290011A	05/11/2020 16:28	Richard A Shober	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201290009A	05/11/2020 08:13	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201290008A	05/11/2020 14:58	Lisa A Reinert	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201290009A	05/09/2020 09:10	Joseph Underdonk	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201290008A	05/09/2020 09:15	Joseph Underdonk	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201290011A	05/10/2020 20:05	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20129002	05/08/2020 21:38	Anthony C Polaski	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20129002	05/08/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201340282901	05/13/2020 15:00	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 12:04	Janeyah Rivers-Hamilton	100
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:00	Janeyah Rivers-Hamilton	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 09:45	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:03	Janeyah Rivers-Hamilton	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB17_15-16 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310911
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 09:15
SDG#: CMS02-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:19	Janeyah Rivers-Hamilton	20
00159	Mercury	SW-846 7471B	1	201281063802	05/11/2020 09:11	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201281404904	05/08/2020 04:40	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201281063802	05/08/2020 05:50	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20133102201A	05/13/2020 12:50	Jonathan Saul	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20133102201A	05/12/2020 17:30	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20129042501A	05/09/2020 06:55	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20129042501A	05/08/2020 09:37	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820001A	05/11/2020 09:28	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13N_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310912
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 10:30
SDG#: CMS02-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.11	0.006	0.019	0.76
11995	Acrolein	107-02-8	N.D.	0.005	0.093	0.76
11995	Acrylonitrile	107-13-1	N.D.	0.0007	0.019	0.76
11995	Benzene	71-43-2	0.0008 J	0.0005	0.005	0.76
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.76
11995	Bromoform	75-25-2	N.D.	0.005	0.009	0.76
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.76
11995	2-Butanone	78-93-3	0.005 J	0.002	0.009	0.76
11995	t-Butyl alcohol	75-65-0	0.030 J	0.014	0.093	0.76
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.007	0.76
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.76
11995	tert-Butylbenzene	98-06-6	N.D.	0.0007	0.005	0.76
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.76
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.76
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.76
11995	Chloroethane	75-00-3	N.D.	0.0009	0.005	0.76
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.76
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.76
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.76
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.76
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.76
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.76
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.76
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.76
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.76
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.76
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.76
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.76
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0009	0.009	0.76
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.76
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.76
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.76
11995	1,4-Dioxane	123-91-1	N.D.	0.034	0.070	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.76
11995	Methyl Acetate	79-20-9	0.001 J	0.0009	0.005	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.76
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.76
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.76
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.76

*=This limit was used in the evaluation of the final result

Sample Description: LB13N_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310912
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 10:30
SDG#: CMS02-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.76
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.76
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.76
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.76
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.76
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.76
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.76
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.76
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.76
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.009	0.76
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	4.5	0.008	0.041	1
10726	Acenaphthylene	208-96-8	0.36	0.008	0.041	1
10726	Acetophenone	98-86-2	N.D.	0.041	0.12	1
10726	Anthracene	120-12-7	7.2	0.008	0.041	1
10726	Atrazine	1912-24-9	N.D.	0.49	1.1	1
10726	Benzaldehyde	100-52-7	N.D.	0.16	0.41	1
10726	Benzidine	92-87-5	N.D.	0.81	2.4	1
10726	Benzo(a)anthracene	56-55-3	12	0.081	0.20	5
10726	Benzo(a)pyrene	50-32-8	9.9	0.041	0.20	5
10726	Benzo(b)fluoranthene	205-99-2	12	0.041	0.20	5
10726	Benzo(g,h,i)perylene	191-24-2	4.7	0.008	0.041	1
10726	Benzo(k)fluoranthene	207-08-9	4.5	0.008	0.041	1
10726	1,1'-Biphenyl	92-52-4	0.76	0.041	0.089	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.16	0.41	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.16	0.41	1
10726	Caprolactam	105-60-2	N.D.	0.081	0.41	1
10726	Carbazole	86-74-8	3.7	0.041	0.089	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.057	0.12	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.049	0.11	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.016	0.081	1
10726	2-Chlorophenol	95-57-8	N.D.	0.041	0.089	1
10726	Chrysene	218-01-9	11	0.041	0.20	5
10726	Dibenz(a,h)anthracene	53-70-3	1.7	0.016	0.041	1
10726	Dibenzofuran	132-64-9	3.6	0.041	0.089	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.041	0.12	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13N_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310912
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 10:30
SDG#: CMS02-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.041	0.089	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.041	0.089	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.24	0.81	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.049	0.11	1
10726	Diethylphthalate	84-66-2	N.D.	0.16	0.41	1
10726	2,4-Dimethylphenol	105-67-9	0.55	0.073	0.16	1
10726	Dimethylphthalate	131-11-3	N.D.	0.16	0.41	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.57	1.2	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.81	2.4	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.16	0.41	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.057	0.12	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.057	0.12	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.049	0.11	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.16	0.41	1
10726	Fluoranthene	206-44-0	25	0.041	0.20	5
10726	Fluorene	86-73-7	5.4	0.008	0.041	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.016	0.041	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.089	0.19	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.49	1.2	1
10726	Hexachloroethane	67-72-1	N.D.	0.081	0.41	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	4.4	0.008	0.041	1
10726	Isophorone	78-59-1	N.D.	0.041	0.089	1
10726	2-Methylnaphthalene	91-57-6	4.3	0.008	0.081	1
10726	2-Methylphenol	95-48-7	0.57	0.041	0.16	1
10726	4-Methylphenol	106-44-5	1.3	0.041	0.12	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	12	0.081	0.20	5
10726	2-Nitroaniline	88-74-4	N.D.	0.041	0.12	1
10726	Nitrobenzene	98-95-3	N.D.	0.065	0.16	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.16	0.41	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.057	0.12	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.041	0.089	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.16	0.41	1
10726	Pentachlorophenol	87-86-5	N.D.	0.16	0.41	1
10726	Phenanthrene	85-01-8	29	0.041	0.20	5

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB13N_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310912
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 10:30
SDG#: CMS02-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Phenol	108-95-2	0.76	0.041	0.089	1
10726	Pyrene	129-00-0	22	0.041	0.20	5
10726	Pyridine	110-86-1	N.D.	0.16	0.41	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.057	0.12	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.073	0.16	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.065	0.14	1

Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	18.8	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201311AA	05/10/2020 21:35	Joel Trout	0.76
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012856765	05/07/2020 22:12	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012856765	05/07/2020 22:12	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012856765	05/07/2020 10:30	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 05:30	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 20:13	William H Saadeh	5
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20129SLA026	05/09/2020 09:20	Joseph Underdonk	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820001A	05/11/2020 09:28	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13W_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310913
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 11:55
SDG#: CMS02-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.045	0.007	0.023	0.93
11995	Acrolein	107-02-8	N.D.	0.006	0.11	0.93
11995	Acrylonitrile	107-13-1	N.D.	0.0009	0.023	0.93
11995	Benzene	71-43-2	N.D.	0.0006	0.006	0.93
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.006	0.93
11995	Bromoform	75-25-2	N.D.	0.006	0.011	0.93
11995	Bromomethane	74-83-9	N.D.	0.0008	0.006	0.93
11995	2-Butanone	78-93-3	0.005 J	0.002	0.011	0.93
11995	t-Butyl alcohol	75-65-0	N.D.	0.017	0.11	0.93
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.009	0.93
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.006	0.93
11995	tert-Butylbenzene	98-06-6	N.D.	0.0009	0.006	0.93
11995	Carbon Disulfide	75-15-0	0.001 J	0.0007	0.006	0.93
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.006	0.93
11995	Chlorobenzene	108-90-7	N.D.	0.0006	0.006	0.93
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	0.93
11995	Chloroform	67-66-3	N.D.	0.0007	0.006	0.93
11995	Chloromethane	74-87-3	N.D.	0.0007	0.006	0.93
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.006	0.93
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.006	0.93
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.006	0.93
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0006	0.006	0.93
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0006	0.006	0.93
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.006	0.93
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0007	0.006	0.93
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0006	0.006	0.93
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	0.006	0.93
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0006	0.006	0.93
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0006	0.006	0.93
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0006	0.006	0.93
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.011	0.93
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0006	0.006	0.93
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.006	0.93
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0006	0.006	0.93
11995	1,4-Dioxane	123-91-1	N.D.	0.043	0.086	0.93
11995	Ethylbenzene	100-41-4	0.0007 J	0.0005	0.006	0.93
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.006	0.93
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.006	0.93
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.006	0.93
11995	n-Propylbenzene	103-65-1	0.002 J	0.0005	0.006	0.93
11995	Styrene	100-42-5	N.D.	0.0005	0.006	0.93

*=This limit was used in the evaluation of the final result

Sample Description: LB13W_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310913
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 11:55
SDG#: CMS02-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.006	0.93
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.006	0.93
11995	Toluene	108-88-3	0.0009 J	0.0007	0.006	0.93
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0007	0.006	0.93
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0006	0.006	0.93
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.006	0.93
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0008	0.006	0.93
11995	1,2,4-Trimethylbenzene	95-63-6	0.003 J	0.0006	0.006	0.93
11995	1,3,5-Trimethylbenzene	108-67-8	0.001 J	0.0006	0.006	0.93
11995	Vinyl Chloride	75-01-4	N.D.	0.0007	0.006	0.93
11995	Xylene (Total)	1330-20-7	0.005 J	0.002	0.011	0.93
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	12	0.081	0.41	10
10726	Acenaphthylene	208-96-8	0.97	0.008	0.041	1
10726	Acetophenone	98-86-2	N.D.	0.041	0.12	1
10726	Anthracene	120-12-7	15	0.081	0.41	10
10726	Atrazine	1912-24-9	N.D.	0.49	1.1	1
10726	Benzaldehyde	100-52-7	N.D.	0.16	0.41	1
10726	Benzidine	92-87-5	N.D.	0.81	2.4	1
10726	Benzo(a)anthracene	56-55-3	19	0.16	0.41	10
10726	Benzo(a)pyrene	50-32-8	16	0.081	0.41	10
10726	Benzo(b)fluoranthene	205-99-2	19	0.081	0.41	10
10726	Benzo(g,h,i)perylene	191-24-2	8.2	0.008	0.041	1
10726	Benzo(k)fluoranthene	207-08-9	6.2	0.008	0.041	1
10726	1,1'-Biphenyl	92-52-4	0.67	0.041	0.090	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.16	0.41	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.16	0.41	1
10726	Caprolactam	105-60-2	N.D.	0.081	0.41	1
10726	Carbazole	86-74-8	11	0.41	0.90	10
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.057	0.12	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.049	0.11	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.016	0.081	1
10726	2-Chlorophenol	95-57-8	N.D.	0.041	0.090	1
10726	Chrysene	218-01-9	17	0.081	0.41	10
10726	Dibenz(a,h)anthracene	53-70-3	2.5	0.016	0.041	1
10726	Dibenzofuran	132-64-9	11	0.41	0.90	10
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.041	0.12	1

*=This limit was used in the evaluation of the final result

Sample Description: LB13W_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310913
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 11:55
SDG#: CMS02-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.041	0.090	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.041	0.090	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.24	0.81	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.049	0.11	1
10726	Diethylphthalate	84-66-2	N.D.	0.16	0.41	1
10726	2,4-Dimethylphenol	105-67-9	0.77	0.073	0.16	1
10726	Dimethylphthalate	131-11-3	N.D.	0.16	0.41	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.57	1.2	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.81	2.4	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.16	0.41	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.057	0.12	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.057	0.12	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.049	0.11	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.16	0.41	1
10726	Fluoranthene	206-44-0	47	0.081	0.41	10
10726	Fluorene	86-73-7	14	0.081	0.41	10
10726	Hexachlorobenzene	118-74-1	N.D.	0.016	0.041	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.090	0.19	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.49	1.2	1
10726	Hexachloroethane	67-72-1	N.D.	0.081	0.41	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	7.7	0.008	0.041	1
10726	Isophorone	78-59-1	N.D.	0.041	0.090	1
10726	2-Methylnaphthalene	91-57-6	5.6	0.008	0.081	1
10726	2-Methylphenol	95-48-7	0.50	0.041	0.16	1
10726	4-Methylphenol	106-44-5	1.2	0.041	0.12	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	16	0.16	0.41	10
10726	2-Nitroaniline	88-74-4	N.D.	0.041	0.12	1
10726	Nitrobenzene	98-95-3	N.D.	0.065	0.16	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.16	0.41	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.057	0.12	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.041	0.090	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.16	0.41	1
10726	Pentachlorophenol	87-86-5	N.D.	0.16	0.41	1
10726	Phenanthrene	85-01-8	73	0.081	0.41	10

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB13W_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310913
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 11:55
SDG#: CMS02-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Phenol	108-95-2	0.70	0.041	0.090	1
10726	Pyrene	129-00-0	39	0.081	0.41	10
10726	Pyridine	110-86-1	N.D.	0.16	0.41	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.057	0.12	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.073	0.16	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.065	0.14	1

Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	18.7	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201311AA	05/10/2020 21:57	Joel Trout	0.93
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012856765	05/07/2020 22:12	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012856765	05/07/2020 22:13	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012856765	05/07/2020 11:55	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 05:53	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 20:36	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20129SLA026	05/09/2020 09:20	Joseph Underdonk	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820001A	05/11/2020 09:28	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
		SW-846 8260C				
11995	Acetone	67-64-1	0.014 J	0.005	0.018	0.8
11995	Acrolein	107-02-8	N.D.	0.005	0.091	0.8
11995	Acrylonitrile	107-13-1	N.D.	0.0007	0.018	0.8
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.8
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.8
11995	Bromoform	75-25-2	N.D.	0.005	0.009	0.8
11995	Bromomethane	74-83-9	N.D.	0.0006	0.005	0.8
11995	2-Butanone	78-93-3	N.D.	0.002	0.009	0.8
11995	t-Butyl alcohol	75-65-0	N.D.	0.014	0.091	0.8
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.007	0.8
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.8
11995	tert-Butylbenzene	98-06-6	N.D.	0.0007	0.005	0.8
11995	Carbon Disulfide	75-15-0	N.D.	0.0005	0.005	0.8
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.8
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.8
11995	Chloroethane	75-00-3	N.D.	0.0009	0.005	0.8
11995	Chloroform	67-66-3	N.D.	0.0005	0.005	0.8
11995	Chloromethane	74-87-3	N.D.	0.0005	0.005	0.8
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.8
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.8
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.8
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.8
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.8
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.8
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.005	0.8
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.8
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.005	0.8
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.8
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.8
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.8
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0009	0.009	0.8
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.8
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.8
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.8
11995	1,4-Dioxane	123-91-1	N.D.	0.034	0.069	0.8
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.8
11995	Methyl Acetate	79-20-9	N.D.	0.0009	0.005	0.8
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.8
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.8
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.8
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.8

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.8
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.8
11995	Toluene	108-88-3	N.D.	0.0005	0.005	0.8
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.005	0.8
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.8
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.8
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0006	0.005	0.8
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.8
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.8
11995	Vinyl Chloride	75-01-4	N.D.	0.0005	0.005	0.8
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.009	0.8
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	9.9	0.076	0.38	20
10726	Acenaphthylene	208-96-8	0.23	0.004	0.019	1
10726	Acetophenone	98-86-2	N.D.	0.019	0.057	1
10726	Anthracene	120-12-7	19	0.076	0.38	20
10726	Atrazine	1912-24-9	N.D.	0.23	0.49	1
10726	Benzaldehyde	100-52-7	N.D.	0.076	0.19	1
10726	Benzidine	92-87-5	N.D.	0.38	1.1	1
10726	Benzo(a)anthracene	56-55-3	30	0.15	0.38	20
10726	Benzo(a)pyrene	50-32-8	27	0.076	0.38	20
10726	Benzo(b)fluoranthene	205-99-2	33	0.076	0.38	20
10726	Benzo(g,h,i)perylene	191-24-2	16	0.076	0.38	20
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.004	0.019	1
10726	1,1'-Biphenyl	92-52-4	0.72	0.019	0.042	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.076	0.19	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.076	0.19	1
10726	Caprolactam	105-60-2	N.D.	0.038	0.19	1
10726	Carbazole	86-74-8	5.6	0.38	0.83	20
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.027	0.057	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.023	0.049	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.038	1
10726	2-Chlorophenol	95-57-8	N.D.	0.019	0.042	1
10726	Chrysene	218-01-9	27	0.076	0.38	20
10726	Dibenz(a,h)anthracene	53-70-3	3.2	0.15	0.38	20
10726	Dibenzofuran	132-64-9	5.2	0.38	0.83	20
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.019	0.057	1

*=This limit was used in the evaluation of the final result

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.019	0.042	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.019	0.042	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.38	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.023	0.049	1
10726	Diethylphthalate	84-66-2	N.D.	0.076	0.19	1
10726	2,4-Dimethylphenol	105-67-9	0.039 J	0.034	0.076	1
10726	Dimethylphthalate	131-11-3	N.D.	0.076	0.19	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.27	0.57	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.38	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.076	0.19	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.027	0.057	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.027	0.057	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.023	0.049	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.076	0.19	1
10726	Fluoranthene	206-44-0	75	0.076	0.38	20
10726	Fluorene	86-73-7	9.5	0.076	0.38	20
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.019	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.042	0.087	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.23	0.57	1
10726	Hexachloroethane	67-72-1	N.D.	0.038	0.19	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	15	0.076	0.38	20
10726	Isophorone	78-59-1	N.D.	0.019	0.042	1
10726	2-Methylnaphthalene	91-57-6	2.2	0.004	0.038	1
10726	2-Methylphenol	95-48-7	0.021 J	0.019	0.076	1
10726	4-Methylphenol	106-44-5	0.074	0.019	0.057	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	2.7	0.008	0.019	1
10726	2-Nitroaniline	88-74-4	N.D.	0.019	0.057	1
10726	Nitrobenzene	98-95-3	N.D.	0.030	0.076	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.076	0.19	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.027	0.057	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.019	0.042	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.076	0.19	1
10726	Pentachlorophenol	87-86-5	N.D.	0.076	0.19	1
10726	Phenanthrene	85-01-8	80	0.076	0.38	20

*=This limit was used in the evaluation of the final result

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Phenol	108-95-2	0.040 J	0.019	0.042	1
10726	Pyrene	129-00-0	63	0.076	0.38	20
10726	Pyridine	110-86-1	N.D.	0.076	0.19	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.027	0.057	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.034	0.076	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.030	0.064	1

Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

GC/MS Semivolatiles	SW-846 8270D SIM	ug/kg	ug/kg	ug/kg		
12969	1,4-Dioxane	123-91-1	N.D.	7	19	10

Reporting limits were raised due to interference from the sample matrix.

Herbicides	SW-846 8151A	mg/kg	mg/kg	mg/kg		
10401	2,4-D	94-75-7	N.D. D2	0.014	0.041	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00093	0.0019	1
10401	2,4,5-TP	93-72-1	N.D. D1	0.00085	0.0019	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

PCBs	SW-846 8082A Feb 2007 Rev 1	mg/kg	mg/kg	mg/kg		
10885	PCB-1016	12674-11-2	N.D. D1	0.0041	0.019	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0052	0.019	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0091	0.019	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0038	0.019	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0038	0.019	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0038	0.019	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0056	0.019	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0038	0.019	1

Pesticides	SW-846 8081B	mg/kg	mg/kg	mg/kg		
10590	Aldrin	309-00-2	N.D. VD1	0.00021	0.00095	1
10590	Alpha BHC	319-84-6	N.D. D1	0.00019	0.00095	1
10590	Beta BHC	319-85-7	N.D. D1	0.00050	0.0017	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00024	0.00095	1
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.00019	0.00095	1
10590	4,4'-Ddd	72-54-8	N.D. D2	0.00038	0.0023	1

*=This limit was used in the evaluation of the final result

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	4,4'-Dde	72-55-9	N.D. D2	0.00038	0.0023	1
10590	4,4'-Ddt	50-29-3	N.D. D2	0.00090	0.0023	1
10590	Delta BHC	319-86-8	N.D. D1	0.00051	0.0017	1
10590	Dieldrin	60-57-1	N.D. D2	0.00038	0.0023	1
10590	Endosulfan I	959-98-8	N.D. D2	0.00025	0.00095	1
10590	Endosulfan II	33213-65-9	N.D. D1	0.0013	0.0023	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.00038	0.0023	1
10590	Endrin	72-20-8	N.D. D1	0.00077	0.0023	1
10590	Heptachlor	76-44-8	N.D. D2	0.00035	0.00095	1
LC/MS/MS Miscellaneous			EPA 537 Version 1.1 Modified	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.62	2.1	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.62	3.1	1
14027	NETFOSAA ¹	2991-50-6	N.D.	0.21	2.1	1
	NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.21	2.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.42	2.1	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.83	2.1	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.21	0.62	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.21	0.62	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.21	0.62	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.21	0.62	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.21	0.62	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.21	0.62	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.21	0.62	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.21	0.62	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.21	0.62	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	0.49 J	0.21	0.62	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.21	0.62	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.21	0.62	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.21	0.62	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.21	0.62	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.21	0.62	1
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	7.05	0.118	0.354	2
06126	Barium	7440-39-3	76.9	0.162	0.354	2
06127	Beryllium	7440-41-7	0.416	0.0211	0.0531	2

*=This limit was used in the evaluation of the final result

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06128	Cadmium	7440-43-9	0.334	0.0446	0.0885	2
06131	Chromium	7440-47-3	17.1	0.136	0.354	2
02829	Trivalent Chromium soils ¹	16065-83-1	15.6	0.16	0.48	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	114	0.388	0.885	5
06135	Lead	7439-92-1	141	0.112	0.442	5
06137	Manganese	7439-96-5	379	0.947	1.77	10
06139	Nickel	7440-02-0	19.2	0.144	0.354	2
06141	Selenium	7782-49-2	0.441	0.115	0.354	2
06142	Silver	7440-22-4	0.109	0.0359	0.0885	2
06149	Zinc	7440-66-6	194	1.19	4.42	5
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.733	0.0168	0.0736	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	0.39 J	0.21	0.58	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	1.5	0.16	0.48	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	12.4	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
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ELLE Group #: 2098762
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Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
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Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201311AA	05/10/2020 20:51	Joel Trout	0.8
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012856765	05/07/2020 22:13	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012856765	05/07/2020 22:13	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012856765	05/07/2020 13:45	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 06:17	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 20:59	William H Saadeh	20
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 10:13	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20129SLA026	05/09/2020 09:20	Joseph Underdonk	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201290011A	05/11/2020 18:41	Richard A Shober	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201290009A	05/11/2020 08:24	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201290008A	05/11/2020 15:34	Lisa A Reinert	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201290009A	05/09/2020 09:10	Joseph Underdonk	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201290008A	05/09/2020 09:15	Joseph Underdonk	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201290011A	05/10/2020 20:05	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20129002	05/08/2020 21:47	Anthony C Polaski	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20129002	05/08/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201340282901	05/13/2020 15:00	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:43	Janeyah Rivers-Hamilton	5
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:43	Janeyah Rivers-Hamilton	5
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:51	Janeyah Rivers-Hamilton	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:39	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:19	Janeyah Rivers-Hamilton	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB21_1-3 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310914
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 13:45
SDG#: CMS02-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:43	Janeyah Rivers-Hamilton	5
00159	Mercury	SW-846 7471B	1	201281063802	05/11/2020 09:13	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201281404904	05/08/2020 04:40	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201281063802	05/08/2020 05:50	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20133102201A	05/13/2020 11:58	Jonathan Saul	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20133102201A	05/12/2020 17:30	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20129042501A	05/09/2020 06:55	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20129042501A	05/08/2020 09:37	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820001A	05/11/2020 09:28	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.071	0.01	0.033	0.97
11995	Acrolein	107-02-8	N.D.	0.008	0.17	0.97
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.033	0.97
11995	Benzene	71-43-2	N.D.	0.0008	0.008	0.97
11995	Bromodichloromethane	75-27-4	N.D.	0.0007	0.008	0.97
11995	Bromoform	75-25-2	N.D.	0.008	0.017	0.97
11995	Bromomethane	74-83-9	N.D.	0.001	0.008	0.97
11995	2-Butanone	78-93-3	0.013 J	0.003	0.017	0.97
11995	t-Butyl alcohol	75-65-0	N.D.	0.025	0.17	0.97
11995	n-Butylbenzene	104-51-8	N.D.	0.005	0.013	0.97
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.008	0.97
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.008	0.97
11995	Carbon Disulfide	75-15-0	0.004 J	0.001	0.008	0.97
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0008	0.008	0.97
11995	Chlorobenzene	108-90-7	N.D.	0.0008	0.008	0.97
11995	Chloroethane	75-00-3	N.D.	0.002	0.008	0.97
11995	Chloroform	67-66-3	N.D.	0.001	0.008	0.97
11995	Chloromethane	74-87-3	N.D.	0.001	0.008	0.97
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0008	0.008	0.97
11995	Dibromochloromethane	124-48-1	N.D.	0.0008	0.008	0.97
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0007	0.008	0.97
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0008	0.008	0.97
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0008	0.008	0.97
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0007	0.008	0.97
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.001	0.008	0.97
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0008	0.008	0.97
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.008	0.97
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0008	0.008	0.97
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	0.008	0.97
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	0.008	0.97
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.002	0.017	0.97
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0008	0.008	0.97
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0007	0.008	0.97
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0008	0.008	0.97
11995	1,4-Dioxane	123-91-1	N.D.	0.062	0.12	0.97
11995	Ethylbenzene	100-41-4	N.D.	0.0007	0.008	0.97
11995	Methyl Acetate	79-20-9	N.D.	0.002	0.008	0.97
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0008	0.008	0.97
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.008	0.97
11995	n-Propylbenzene	103-65-1	N.D.	0.0007	0.008	0.97
11995	Styrene	100-42-5	N.D.	0.0007	0.008	0.97

*=This limit was used in the evaluation of the final result

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0007	0.008	0.97
11995	Tetrachloroethene	127-18-4	N.D.	0.0008	0.008	0.97
11995	Toluene	108-88-3	N.D.	0.001	0.008	0.97
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.008	0.97
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	0.008	0.97
11995	Trichloroethene	79-01-6	N.D.	0.0008	0.008	0.97
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.008	0.97
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0008	0.008	0.97
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0008	0.008	0.97
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.008	0.97
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.017	0.97
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	0.072	0.006	0.029	1
10726	Acenaphthylene	208-96-8	0.026 J	0.006	0.029	1
10726	Acetophenone	98-86-2	N.D.	0.029	0.086	1
10726	Anthracene	120-12-7	0.17	0.006	0.029	1
10726	Atrazine	1912-24-9	N.D.	0.34	0.75	1
10726	Benzaldehyde	100-52-7	N.D.	0.11	0.29	1
10726	Benzidine	92-87-5	N.D.	0.57	1.7	1
10726	Benzo(a)anthracene	56-55-3	0.34	0.011	0.029	1
10726	Benzo(a)pyrene	50-32-8	0.30	0.006	0.029	1
10726	Benzo(b)fluoranthene	205-99-2	0.39	0.006	0.029	1
10726	Benzo(g,h,i)perylene	191-24-2	0.20	0.006	0.029	1
10726	Benzo(k)fluoranthene	207-08-9	0.12	0.006	0.029	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.029	0.063	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.11	0.29	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.11	0.29	1
10726	Caprolactam	105-60-2	N.D.	0.057	0.29	1
10726	Carbazole	86-74-8	0.061 J	0.029	0.063	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.040	0.086	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.034	0.075	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.011	0.057	1
10726	2-Chlorophenol	95-57-8	N.D.	0.029	0.063	1
10726	Chrysene	218-01-9	0.30	0.006	0.029	1
10726	Dibenz(a,h)anthracene	53-70-3	0.061	0.011	0.029	1
10726	Dibenzofuran	132-64-9	0.077	0.029	0.063	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.029	0.086	1

*=This limit was used in the evaluation of the final result

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.029	0.063	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.029	0.063	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.17	0.57	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.034	0.075	1
10726	Diethylphthalate	84-66-2	N.D.	0.11	0.29	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.052	0.11	1
10726	Dimethylphthalate	131-11-3	N.D.	0.11	0.29	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.40	0.86	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.57	1.7	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.11	0.29	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.040	0.086	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.040	0.086	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.034	0.075	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.11	0.29	1
10726	Fluoranthene	206-44-0	0.73	0.006	0.029	1
10726	Fluorene	86-73-7	0.093	0.006	0.029	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.011	0.029	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.063	0.13	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.34	0.86	1
10726	Hexachloroethane	67-72-1	N.D.	0.057	0.29	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.17	0.006	0.029	1
10726	Isophorone	78-59-1	N.D.	0.029	0.063	1
10726	2-Methylnaphthalene	91-57-6	0.062	0.006	0.057	1
10726	2-Methylphenol	95-48-7	N.D.	0.029	0.11	1
10726	4-Methylphenol	106-44-5	0.15	0.029	0.086	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.14	0.011	0.029	1
10726	2-Nitroaniline	88-74-4	N.D.	0.029	0.086	1
10726	Nitrobenzene	98-95-3	N.D.	0.046	0.11	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.11	0.29	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.040	0.086	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.029	0.063	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.11	0.29	1
10726	Pentachlorophenol	87-86-5	N.D.	0.11	0.29	1
10726	Phenanthrene	85-01-8	0.49	0.006	0.029	1

*=This limit was used in the evaluation of the final result

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	0.035 J	0.029	0.063	1
10726	Pyrene	129-00-0	0.54	0.006	0.029	1
10726	Pyridine	110-86-1	N.D.	0.11	0.29	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.040	0.086	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.052	0.11	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.046	0.097	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	11	28	10

Reporting limits were raised due to interference from the sample matrix.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D2	0.020	0.061	1
10401	2,4,5-T	93-76-5	N.D. D2	0.0014	0.0029	1
10401	2,4,5-TP	93-72-1	N.D. VD2	0.0019	0.0029	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0062	0.029	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0079	0.029	1
10885	PCB-1232	11141-16-5	N.D. D1	0.014	0.029	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0057	0.029	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0057	0.029	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0057	0.029	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0084	0.029	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0057	0.029	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D2	0.029	0.14	100
10590	Alpha BHC	319-84-6	N.D. D1	0.029	0.14	100
10590	Beta BHC	319-85-7	N.D. D1	0.076	0.26	100
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.036	0.14	100
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.029	0.14	100
10590	4,4'-Ddd	72-54-8	N.D. D2	0.057	0.34	100
10590	4,4'-Dde	72-55-9	N.D. D2	0.057	0.34	100
10590	4,4'-Ddt	50-29-3	N.D. D2	0.14	0.34	100

*=This limit was used in the evaluation of the final result

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Delta BHC	319-86-8	N.D. D1	0.077	0.26	100
10590	Dieldrin	60-57-1	N.D. D1	0.057	0.34	100
10590	Endosulfan I	959-98-8	N.D. D2	0.038	0.14	100
10590	Endosulfan II	33213-65-9	N.D. D2	0.19	0.34	100
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.057	0.34	100
10590	Endrin	72-20-8	N.D. D1	0.12	0.34	100
10590	Heptachlor	76-44-8	N.D. D1	0.053	0.14	100

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.0	3.4	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.0	5.1	1
14027	NETFOSAA ¹	2991-50-6	N.D.	0.34	3.4	1
NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.34	3.4	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.68	3.4	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	1.4	3.4	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.34	1.0	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.34	1.0	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.34	1.0	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.34	1.0	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.34	1.0	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.34	1.0	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.34	1.0	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.34	1.0	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.34	1.0	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.34	1.0	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.34	1.0	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.34	1.0	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.34	1.0	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.34	1.0	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.34	1.0	1

Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	13.9	0.191	0.570	2
06126	Barium	7440-39-3	82.8	0.261	0.570	2
06127	Beryllium	7440-41-7	0.738	0.0339	0.0855	2
06128	Cadmium	7440-43-9	0.187	0.0718	0.142	2
06131	Chromium	7440-47-3	27.0	0.219	0.570	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
02829	Trivalent Chromium soils ¹ The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.	16065-83-1	27.0	0.24	0.72	1
06133	Copper	7440-50-8	50.0	0.250	0.570	2
06135	Lead	7439-92-1	154	0.180	0.712	5
06137	Manganese	7439-96-5	250	0.762	1.42	5
06139	Nickel	7440-02-0	32.8	0.232	0.570	2
06141	Selenium	7782-49-2	0.491 J	0.186	0.570	2
06142	Silver	7440-22-4	0.193	0.0579	0.142	2
06149	Zinc	7440-66-6	115	0.764	2.85	2
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.398	0.0261	0.115	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.31	0.87	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.24	0.72	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹ Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	42.0	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201311AA	05/10/2020 21:13	Joel Trout	0.97
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012856765	05/07/2020 22:13	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012856765	05/07/2020 22:13	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012856765	05/07/2020 14:15	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20129SLA026	05/11/2020 06:40	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 10:44	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20129SLA026	05/09/2020 09:20	Joseph Underdonk	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201290011A	05/11/2020 19:14	Richard A Shober	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201290009A	05/11/2020 08:56	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201290008A	05/11/2020 15:46	Lisa A Reinert	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201290009A	05/09/2020 09:10	Joseph Underdonk	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201290008A	05/09/2020 09:15	Joseph Underdonk	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201290011A	05/10/2020 20:05	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20129002	05/08/2020 21:56	Anthony C Polaski	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20129002	05/08/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201340282901	05/13/2020 15:00	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:46	Janeyah Rivers-Hamilton	5
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:46	Janeyah Rivers-Hamilton	5
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/13/2020 10:41	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201281404904A	05/12/2020 10:27	Janeyah Rivers-Hamilton	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB21_15-17 Soil
35 Commercial Street / 170229024

Langan Eng & Env Services
ELLE Sample #: SW 1310915
ELLE Group #: 2098762
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/07/2020 19:45
Collection Date/Time: 05/07/2020 14:15
SDG#: CMS02-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	201281063802	05/11/2020 09:20	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201281404904	05/08/2020 04:40	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201281063802	05/08/2020 05:50	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20133102201A	05/13/2020 12:02	Jonathan Saul	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20133102201A	05/12/2020 17:30	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20129042501A	05/09/2020 06:55	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20129042501A	05/08/2020 09:37	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820001A	05/11/2020 09:28	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: B201311AA	Sample number(s): 1310911-1310915		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
1,4-Dioxane	N.D.	0.037	0.075
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
n-Propylbenzene	N.D.	0.0004	0.005
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
	mg/l	mg/l	mg/l
Batch number: Y201332AA	Sample number(s): 1310907,1310909		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
1,4-Dioxane	N.D.	0.029	0.075
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
	mg/kg	mg/kg	mg/kg
Batch number: 20129SLA026	Sample number(s): 1310911-1310915		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17
Benidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4, 2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2,4,6-Trichlorophenol	N.D.	0.027	0.057
	mg/l	mg/l	mg/l
Batch number: 20129WAC026	Sample number(s): 1310907		
Acenaphthene	N.D.	0.0001	0.0005
Acenaphthylene	N.D.	0.0001	0.0005
Acetophenone	N.D.	0.004	0.010
Anthracene	N.D.	0.0001	0.0005
Atrazine	N.D.	0.002	0.005
Benzaldehyde	N.D.	0.003	0.010
Benidine	N.D.	0.020	0.060
Benzo(a)anthracene	N.D.	0.0001	0.0005
Benzo(a)pyrene	N.D.	0.0001	0.0005
Benzo(b)fluoranthene	N.D.	0.0001	0.0005
Benzo(g,h,i)perylene	N.D.	0.0001	0.0005
Benzo(k)fluoranthene	N.D.	0.0001	0.0005
1,1'-Biphenyl	N.D.	0.003	0.010
Butylbenzylphthalate	N.D.	0.002	0.005
Di-n-butylphthalate	N.D.	0.002	0.005
Caprolactam	N.D.	0.005	0.011
Carbazole	N.D.	0.0005	0.002
bis(2-Chloroethyl)ether	N.D.	0.0005	0.002
bis(2-Chloroisopropyl)ether	N.D.	0.0005	0.002
2-Chloronaphthalene	N.D.	0.0004	0.001
2-Chlorophenol	N.D.	0.0005	0.002
Chrysene	N.D.	0.0001	0.0005
Dibenz(a,h)anthracene	N.D.	0.0001	0.0005
Dibenzofuran	N.D.	0.0005	0.002
1,2-Dichlorobenzene	N.D.	0.0005	0.002
1,3-Dichlorobenzene	N.D.	0.0005	0.002
1,4-Dichlorobenzene	N.D.	0.0005	0.002
3,3'-Dichlorobenzidine	N.D.	0.003	0.010
2,4-Dichlorophenol	N.D.	0.0005	0.002
Diethylphthalate	N.D.	0.002	0.005
2,4-Dimethylphenol	N.D.	0.003	0.010
Dimethylphthalate	N.D.	0.002	0.005
4,6-Dinitro-2-methylphenol	N.D.	0.008	0.021
2,4-Dinitrophenol	N.D.	0.014	0.030
2,4-Dinitrotoluene	N.D.	0.001	0.005
2,6-Dinitrotoluene	N.D.	0.0005	0.002
2,4_2,6-Dinitrotoluenes	N.D.	0.001	0.005
1,2-Diphenylhydrazine	N.D.	0.0005	0.002
bis(2-Ethylhexyl)phthalate	N.D.	0.005	0.011
Fluoranthene	N.D.	0.0001	0.0005
Fluorene	N.D.	0.0001	0.0005

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Hexachlorobenzene	N.D.	0.0001	0.0005
Hexachlorobutadiene	N.D.	0.0005	0.002
Hexachlorocyclopentadiene	N.D.	0.005	0.011
Hexachloroethane	N.D.	0.001	0.005
Indeno(1,2,3-cd)pyrene	N.D.	0.0001	0.0005
Isophorone	N.D.	0.0005	0.002
2-Methylnaphthalene	N.D.	0.0001	0.0005
2-Methylphenol	N.D.	0.0005	0.002
4-Methylphenol	N.D.	0.0005	0.002
Naphthalene	N.D.	0.0001	0.0005
2-Nitroaniline	N.D.	0.002	0.007
Nitrobenzene	N.D.	0.0005	0.002
N-Nitrosodimethylamine	N.D.	0.002	0.005
N-Nitroso-di-n-propylamine	N.D.	0.0007	0.003
N-Nitrosodiphenylamine	N.D.	0.0007	0.003
Di-n-octylphthalate	N.D.	0.005	0.011
Pentachlorophenol	N.D.	0.001	0.005
Phenanthrene	N.D.	0.0001	0.0005
Phenol	N.D.	0.0005	0.002
Pyrene	N.D.	0.0001	0.0005
Pyridine	N.D.	0.002	0.005
1,2,4-Trichlorobenzene	N.D.	0.0005	0.002
2,4,5-Trichlorophenol	N.D.	0.0005	0.002
2,4,6-Trichlorophenol	N.D.	0.0005	0.002
	ug/kg	ug/kg	ug/kg
Batch number: 20136SLB026	Sample number(s): 1310911,1310914-1310915		
1,4-Dioxane	N.D.	0.7	2
	ug/l	ug/l	ug/l
Batch number: 20136WAB026	Sample number(s): 1310907		
1,4-Dioxane	N.D.	0.1	0.3
	mg/kg	mg/kg	mg/kg
Batch number: 201290011A	Sample number(s): 1310911,1310914-1310915		
2,4-D	N.D.	0.012	0.036
2,4,5-T	N.D.	0.00082	0.0017
2,4,5-TP	N.D.	0.00075	0.0017
	mg/l	mg/l	mg/l
Batch number: 201290002A	Sample number(s): 1310907		
2,4-D	N.D.	0.00025	0.00060
2,4,5-T	N.D.	0.000065	0.00015
2,4,5-TP	N.D.	0.000010	0.000050
	mg/kg	mg/kg	mg/kg

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: 201290009A	Sample number(s): 1310911,1310914-1310915		
PCB-1016	N.D.	0.0036	0.017
PCB-1221	N.D.	0.0046	0.017
PCB-1232	N.D.	0.0080	0.017
PCB-1242	N.D.	0.0033	0.017
PCB-1248	N.D.	0.0033	0.017
PCB-1254	N.D.	0.0033	0.017
PCB-1260	N.D.	0.0049	0.017
Total PCBs	N.D.	0.0033	0.017
	mg/l	mg/l	mg/l
Batch number: 201290014A	Sample number(s): 1310907		
PCB-1016	N.D.	0.00010	0.00050
PCB-1221	N.D.	0.00010	0.00050
PCB-1232	N.D.	0.00020	0.00050
PCB-1242	N.D.	0.00010	0.00050
PCB-1248	N.D.	0.00010	0.00050
PCB-1254	N.D.	0.00010	0.00050
PCB-1260	N.D.	0.00015	0.00050
Total PCBs	N.D.	0.00010	0.00050
	mg/kg	mg/kg	mg/kg
Batch number: 201290008A	Sample number(s): 1310911,1310914-1310915		
Aldrin	N.D.	0.00017	0.00083
Alpha BHC	N.D.	0.00017	0.00083
Beta BHC	N.D.	0.00044	0.0015
Gamma BHC - Lindane	N.D.	0.00021	0.00083
Alpha Chlordane	N.D.	0.00017	0.00083
4,4'-Ddd	N.D.	0.00033	0.0020
4,4'-Dde	N.D.	0.00033	0.0020
4,4'-Ddt	N.D.	0.00079	0.0020
Delta BHC	N.D.	0.00045	0.0015
Dieldrin	N.D.	0.00033	0.0020
Endosulfan I	N.D.	0.00022	0.00083
Endosulfan II	N.D.	0.0011	0.0020
Endosulfan Sulfate	N.D.	0.00033	0.0020
Endrin	N.D.	0.00068	0.0020
Heptachlor	N.D.	0.00031	0.00083
	mg/l	mg/l	mg/l
Batch number: 201290013A	Sample number(s): 1310907		
Aldrin	N.D.	0.0000020	0.000010
Alpha BHC	N.D.	0.0000030	0.000010
Beta BHC	N.D.	0.0000034	0.000010
Gamma BHC - Lindane	N.D.	0.0000020	0.000010
Alpha Chlordane	N.D.	0.0000030	0.000010

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
4,4'-Ddd	N.D.	0.0000050	0.000020
4,4'-Dde	N.D.	0.0000050	0.000020
4,4'-Ddt	N.D.	0.0000052	0.000020
Delta BHC	N.D.	0.0000034	0.000010
Dieldrin	N.D.	0.0000053	0.000020
Endosulfan I	N.D.	0.0000043	0.000010
Endosulfan II	N.D.	0.000015	0.000040
Endosulfan Sulfate	N.D.	0.0000058	0.000020
Endrin	N.D.	0.0000081	0.000030
Heptachlor	N.D.	0.0000020	0.000010
	ng/g	ng/g	ng/g
Batch number: 20129002	Sample number(s): 1310911,1310914-1310915		
6:2-Fluorotelomersulfonic acid	N.D.	0.60	2.0
8:2-Fluorotelomersulfonic acid	N.D.	0.60	3.0
NEtFOSAA	N.D.	0.20	2.0
NMeFOSAA	N.D.	0.20	2.0
Perfluorobutanesulfonic acid	N.D.	0.40	2.0
Perfluorobutanoic acid	N.D.	0.80	2.0
Perfluorodecanesulfonic acid	N.D.	0.20	0.60
Perfluorodecanoic acid	N.D.	0.20	0.60
Perfluorododecanoic acid	N.D.	0.20	0.60
Perfluoroheptanesulfonic acid	N.D.	0.20	0.60
Perfluoroheptanoic acid	N.D.	0.20	0.60
Perfluorohexanesulfonic acid	N.D.	0.20	0.60
Perfluorohexanoic acid	N.D.	0.20	0.60
Perfluorononanoic acid	N.D.	0.20	0.60
Perfluorooctanesulfonamide	N.D.	0.20	0.60
Perfluorooctanesulfonic acid	N.D.	0.20	0.60
Perfluorooctanoic acid	N.D.	0.20	0.60
Perfluoropentanoic acid	N.D.	0.20	0.60
Perfluorotetradecanoic acid	N.D.	0.20	0.60
Perfluorotridecanoic acid	N.D.	0.20	0.60
Perfluoroundecanoic acid	N.D.	0.20	0.60
	ng/l	ng/l	ng/l
Batch number: 20132008	Sample number(s): 1310907		
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
	mg/kg	mg/kg	mg/kg
Batch number: 201281063802	Sample number(s): 1310910-1310911,1310914-1310915		
Mercury	N.D.	0.0152	0.0667
Batch number: 201281404904A	Sample number(s): 1310910-1310911,1310914-1310915		
Arsenic	N.D.	0.134	0.400
Barium	N.D.	0.183	0.400
Beryllium	N.D.	0.0238	0.0600
Cadmium	N.D.	0.0504	0.100
Chromium	N.D.	0.154	0.400
Copper	N.D.	0.176	0.400
Lead	N.D.	0.0504	0.200
Manganese	N.D.	0.214	0.400
Nickel	N.D.	0.163	0.400
Selenium	N.D.	0.130	0.400
Silver	N.D.	0.0406	0.100
Zinc	N.D.	0.536	2.00
	mg/l	mg/l	mg/l
Batch number: 201250571307	Sample number(s): 1310907		
Mercury	N.D.	0.000050	0.00020
Batch number: 201291404401	Sample number(s): 1310907		
Silver	N.D.	0.0050	0.0100
Batch number: 201291404701A	Sample number(s): 1310907		
Arsenic	N.D.	0.00068	0.0020
Barium	N.D.	0.00075	0.0020
Beryllium	N.D.	0.00012	0.00050
Cadmium	N.D.	0.00015	0.00050
Chromium	N.D.	0.00033	0.0020
Copper	N.D.	0.00036	0.0010
Lead	N.D.	0.000071	0.00050

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Manganese	N.D.	0.00063	0.0020
Nickel	N.D.	0.00060	0.0010
Selenium	N.D.	0.00028	0.0010
Zinc	N.D.	0.0062	0.0100
Batch number: 201321404503	Sample number(s): 1310908		
Arsenic	N.D.	0.0160	0.0300
	mg/kg	mg/kg	mg/kg
Batch number: 20133102201A	Sample number(s): 1310911,1310914-1310915		
Total Cyanide (solid)	N.D.	0.18	0.50
	mg/l	mg/l	mg/l
Batch number: 20134117101B	Sample number(s): 1310907		
Total Cyanide (water)	N.D.	0.0050	0.010
	mg/kg	mg/kg	mg/kg
Batch number: 20129042501A	Sample number(s): 1310911,1310914-1310915		
Hexavalent Chromium (SOLIDS)	N.D.	0.14	0.42
	mg/l	mg/l	mg/l
Batch number: 20129027601A	Sample number(s): 1310907		
Hexavalent Chromium	N.D.	0.010	0.030

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: B201311AA	Sample number(s): 1310911-1310915								
Acetone	0.150	0.173	0.150	0.188	116	125	41-150	8	30
Acrolein	0.150	0.116	0.150	0.123	77	82	57-131	6	30
Acrylonitrile	0.100	0.0848	0.100	0.0872	85	87	66-120	3	30
Benzene	0.0200	0.0177	0.0200	0.0181	88	91	80-120	3	30
Bromodichloromethane	0.0200	0.0179	0.0200	0.0182	89	91	70-120	2	30
Bromoform	0.0200	0.0167	0.0200	0.0174	84	87	51-127	4	30
Bromomethane	0.0200	0.0156	0.0200	0.0158	78	79	45-140	1	30
2-Butanone	0.150	0.137	0.150	0.148	91	99	57-128	8	30
t-Butyl alcohol	0.200	0.169	0.200	0.178	84	89	74-121	5	30
n-Butylbenzene	0.0200	0.0172	0.0200	0.0178	86	89	71-121	4	30
sec-Butylbenzene	0.0200	0.0177	0.0200	0.0183	89	91	72-120	3	30
tert-Butylbenzene	0.0200	0.0168	0.0200	0.0174	84	87	68-120	3	30
Carbon Disulfide	0.0200	0.0172	0.0200	0.0179	86	90	64-133	4	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Tetrachloride	0.0200	0.0176	0.0200	0.0179	88	90	64-134	2	30
Chlorobenzene	0.0200	0.0175	0.0200	0.0181	88	91	80-120	3	30
Chloroethane	0.0200	0.0150	0.0200	0.0151	75	75	43-135	0	30
Chloroform	0.0200	0.0181	0.0200	0.0183	91	91	80-120	1	30
Chloromethane	0.0200	0.0159	0.0200	0.0159	80	79	56-120	0	30
1,2-Dibromo-3-chloropropane	0.0200	0.0165	0.0200	0.0175	83	88	48-134	6	30
Dibromochloromethane	0.0200	0.0184	0.0200	0.0190	92	95	69-125	3	30
1,2-Dibromoethane	0.0200	0.0177	0.0200	0.0184	89	92	76-120	4	30
1,2-Dichlorobenzene	0.0200	0.0174	0.0200	0.0176	87	88	76-120	1	30
1,3-Dichlorobenzene	0.0200	0.0170	0.0200	0.0179	85	89	75-120	5	30
1,4-Dichlorobenzene	0.0200	0.0173	0.0200	0.0178	87	89	80-120	3	30
Dichlorodifluoromethane	0.0200	0.0150	0.0200	0.0156	75	78	21-127	4	30
1,1-Dichloroethane	0.0200	0.0177	0.0200	0.0177	89	89	79-120	0	30
1,2-Dichloroethane	0.0200	0.0174	0.0200	0.0178	87	89	71-128	2	30
1,1-Dichloroethene	0.0200	0.0177	0.0200	0.0185	88	92	73-129	4	30
cis-1,2-Dichloroethene	0.0200	0.0191	0.0200	0.0197	95	99	80-125	3	30
trans-1,2-Dichloroethene	0.0200	0.0178	0.0200	0.0184	89	92	80-126	3	30
1,2-Dichloroethene (Total)	0.0400	0.0369	0.0400	0.0382	92	95	80-126	3	30
1,2-Dichloropropane	0.0200	0.0178	0.0200	0.0185	89	92	80-120	4	30
cis-1,3-Dichloropropene	0.0200	0.0178	0.0200	0.0183	89	91	66-120	2	30
trans-1,3-Dichloropropene	0.0200	0.0173	0.0200	0.0180	86	90	68-122	4	30
1,4-Dioxane	0.500	0.440	0.500	0.496	88	99	62-131	12	30
Ethylbenzene	0.0200	0.0176	0.0200	0.0182	88	91	78-120	3	30
Methyl Acetate	0.0200	0.0167	0.0200	0.0171	83	86	67-128	3	30
Methyl Tertiary Butyl Ether	0.0200	0.0172	0.0200	0.0177	86	89	72-120	3	30
Methylene Chloride	0.0200	0.0175	0.0200	0.0180	88	90	76-122	2	30
n-Propylbenzene	0.0200	0.0180	0.0200	0.0187	90	93	72-123	4	30
Styrene	0.0200	0.0169	0.0200	0.0176	85	88	76-120	4	30
1,1,2,2-Tetrachloroethane	0.0200	0.0180	0.0200	0.0182	90	91	69-125	1	30
Tetrachloroethene	0.0200	0.0173	0.0200	0.0178	87	89	73-120	2	30
Toluene	0.0200	0.0172	0.0200	0.0175	86	88	80-120	2	30
1,1,1-Trichloroethane	0.0200	0.0171	0.0200	0.0176	85	88	69-123	3	30
1,1,2-Trichloroethane	0.0200	0.0186	0.0200	0.0189	93	94	80-120	2	30
Trichloroethene	0.0200	0.0177	0.0200	0.0182	88	91	80-120	3	30
Trichlorofluoromethane	0.0200	0.0167	0.0200	0.0173	83	86	55-134	4	30
1,2,4-Trimethylbenzene	0.0200	0.0173	0.0200	0.0177	86	88	73-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0174	0.0200	0.0181	87	90	73-120	4	30
Vinyl Chloride	0.0200	0.0154	0.0200	0.0158	77	79	52-120	2	30
Xylene (Total)	0.0600	0.0523	0.0600	0.0541	87	90	75-120	3	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: Y201332AA	Sample number(s): 1310907,1310909								
Acetone	0.150	0.136	0.150	0.134	91	90	54-157	1	30
Acrolein	0.150	0.122	0.150	0.120	81	80	47-136	2	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Acrylonitrile	0.100	0.0919	0.100	0.0917	92	92	60-129	0	30
Benzene	0.0200	0.0183	0.0200	0.0180	92	90	80-120	2	30
Bromodichloromethane	0.0200	0.0189	0.0200	0.0188	95	94	71-120	1	30
Bromoform	0.0200	0.0193	0.0200	0.0189	96	95	51-120	2	30
Bromomethane	0.0200	0.0167	0.0200	0.0167	84	83	53-128	0	30
2-Butanone	0.150	0.138	0.150	0.139	92	93	59-135	0	30
t-Butyl alcohol	0.200	0.193	0.200	0.192	96	96	60-130	0	30
n-Butylbenzene	0.0200	0.0172	0.0200	0.0168	86	84	76-120	2	30
sec-Butylbenzene	0.0200	0.0180	0.0200	0.0177	90	88	77-120	2	30
tert-Butylbenzene	0.0200	0.0181	0.0200	0.0176	91	88	78-120	3	30
Carbon Disulfide	0.0200	0.0172	0.0200	0.0168	86	84	65-128	2	30
Carbon Tetrachloride	0.0200	0.0188	0.0200	0.0187	94	93	64-134	1	30
Chlorobenzene	0.0200	0.0188	0.0200	0.0186	94	93	80-120	1	30
Chloroethane	0.0200	0.0158	0.0200	0.0155	79	78	55-123	2	30
Chloroform	0.0200	0.0187	0.0200	0.0186	93	93	80-120	1	30
Chloromethane	0.0200	0.0149	0.0200	0.0146	74	73	56-121	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0183	0.0200	0.0183	91	91	47-131	0	30
Dibromochloromethane	0.0200	0.0194	0.0200	0.0192	97	96	71-120	1	30
1,2-Dibromoethane	0.0200	0.0190	0.0200	0.0189	95	94	77-120	1	30
1,2-Dichlorobenzene	0.0200	0.0189	0.0200	0.0188	95	94	80-120	1	30
1,3-Dichlorobenzene	0.0200	0.0190	0.0200	0.0188	95	94	80-120	1	30
1,4-Dichlorobenzene	0.0200	0.0192	0.0200	0.0188	96	94	80-120	2	30
Dichlorodifluoromethane	0.0200	0.0132	0.0200	0.0133	66	67	41-127	1	30
1,1-Dichloroethane	0.0200	0.0182	0.0200	0.0178	91	89	80-120	2	30
1,2-Dichloroethane	0.0200	0.0192	0.0200	0.0191	96	95	73-124	0	30
1,1-Dichloroethene	0.0200	0.0175	0.0200	0.0173	87	86	80-131	1	30
cis-1,2-Dichloroethene	0.0200	0.0195	0.0200	0.0190	97	95	80-125	2	30
trans-1,2-Dichloroethene	0.0200	0.0184	0.0200	0.0181	92	90	80-126	2	30
1,2-Dichloroethene (Total)	0.0400	0.0379	0.0400	0.0371	95	93	80-125	2	30
1,2-Dichloropropane	0.0200	0.0181	0.0200	0.0180	91	90	80-120	1	30
cis-1,3-Dichloropropene	0.0200	0.0186	0.0200	0.0184	93	92	75-120	1	30
trans-1,3-Dichloropropene	0.0200	0.0182	0.0200	0.0183	91	91	67-120	0	30
1,4-Dioxane	0.500	0.475	0.500	0.465	95	93	63-146	2	30
Ethylbenzene	0.0200	0.0183	0.0200	0.0183	92	91	80-120	0	30
Methyl Acetate	0.0200	0.0185	0.0200	0.0187	93	93	54-136	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0180	0.0200	0.0179	90	89	69-122	0	30
Methylene Chloride	0.0200	0.0195	0.0200	0.0190	97	95	80-120	2	30
n-Propylbenzene	0.0200	0.0183	0.0200	0.0179	91	90	79-121	2	30
Styrene	0.0200	0.0192	0.0200	0.0192	96	96	80-120	0	30
1,1,2,2-Tetrachloroethane	0.0200	0.0178	0.0200	0.0178	89	89	72-120	0	30
Tetrachloroethene	0.0200	0.0196	0.0200	0.0196	98	98	80-120	0	30
Toluene	0.0200	0.0183	0.0200	0.0183	92	91	80-120	0	30
1,1,1-Trichloroethane	0.0200	0.0185	0.0200	0.0184	93	92	67-126	1	30
1,1,2-Trichloroethane	0.0200	0.0193	0.0200	0.0193	96	97	80-120	0	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichloroethene	0.0200	0.0187	0.0200	0.0185	94	93	80-120	1	30
Trichlorofluoromethane	0.0200	0.0189	0.0200	0.0187	95	93	55-135	1	30
1,2,4-Trimethylbenzene	0.0200	0.0181	0.0200	0.0178	91	89	75-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0183	0.0200	0.0180	91	90	75-120	1	30
Vinyl Chloride	0.0200	0.0157	0.0200	0.0152	78	76	56-120	3	30
Xylene (Total)	0.0600	0.0567	0.0600	0.0561	94	94	80-120	1	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20129SLA026	Sample number(s): 1310911-1310915								
Acenaphthene	1.67	1.40			84		61-112		
Acenaphthylene	1.67	1.38			83		60-124		
Acetophenone	1.67	1.18			71		48-109		
Anthracene	1.67	1.53			92		67-120		
Atrazine	1.67	1.71			103		70-129		
Benzaldehyde	1.67	1.03			62		20-101		
Benidine	8.33	4.34			52		18-105		
Benzo(a)anthracene	1.67	1.65			99		68-120		
Benzo(a)pyrene	1.67	1.68			101		68-119		
Benzo(b)fluoranthene	1.67	1.85			111		67-125		
Benzo(g,h,i)perylene	1.67	1.76			106		68-125		
Benzo(k)fluoranthene	1.67	1.53			92		66-122		
1,1'-Biphenyl	1.67	1.45			87		59-106		
Butylbenzylphthalate	1.67	1.45			87		69-125		
Di-n-butylphthalate	1.67	1.54			93		70-126		
Caprolactam	1.67	1.50			90		62-119		
Carbazole	1.67	1.56			94		69-125		
bis(2-Chloroethyl)ether	1.67	1.19			71		44-104		
bis(2-Chloroisopropyl)ether	1.67	1.06			64		40-112		
2-Chloronaphthalene	1.67	1.28			77		48-123		
2-Chlorophenol	1.67	1.32			79		51-109		
Chrysene	1.67	1.47			88		66-111		
Dibenz(a,h)anthracene	1.67	1.81			108		69-135		
Dibenzofuran	1.67	1.40			84		62-113		
1,2-Dichlorobenzene	1.67	1.21			73		38-106		
1,3-Dichlorobenzene	1.67	1.16			70		36-103		
1,4-Dichlorobenzene	1.67	1.20			72		25-127		
3,3'-Dichlorobenzidine	1.67	1.01			61		18-114		
2,4-Dichlorophenol	1.67	1.46			88		57-115		
Diethylphthalate	1.67	1.43			86		68-116		
2,4-Dimethylphenol	1.67	1.09			65		47-95		
Dimethylphthalate	1.67	1.41			85		66-113		
4,6-Dinitro-2-methylphenol	1.67	1.64			98		56-135		
2,4-Dinitrophenol	3.33	2.76			83		34-136		
2,4-Dinitrotoluene	1.67	1.46			87		61-121		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,6-Dinitrotoluene	1.67	1.53			92		66-122		
1,2-Diphenylhydrazine	1.67	1.50			90		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.48			89		65-132		
Fluoranthene	1.67	1.60			96		65-114		
Fluorene	1.67	1.48			89		62-110		
Hexachlorobenzene	1.67	1.64			98		62-124		
Hexachlorobutadiene	1.67	1.33			80		39-120		
Hexachlorocyclopentadiene	3.33	1.72			52		13-115		
Hexachloroethane	1.67	1.26			75		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.76			106		64-130		
Isophorone	1.67	1.29			78		51-113		
2-Methylnaphthalene	1.67	1.40			84		52-104		
2-Methylphenol	1.67	1.30			78		52-116		
4-Methylphenol	1.67	1.24			74		52-121		
Naphthalene	1.67	1.28			77		49-104		
2-Nitroaniline	1.67	1.52			91		65-132		
Nitrobenzene	1.67	1.26			76		41-118		
N-Nitrosodimethylamine	1.67	1.15			69		31-107		
N-Nitroso-di-n-propylamine	1.67	1.27			76		49-108		
N-Nitrosodiphenylamine	1.67	1.60			96		64-127		
Di-n-octylphthalate	1.67	1.46			88		65-139		
Pentachlorophenol	1.67	1.19			71		40-131		
Phenanthrene	1.67	1.55			93		67-116		
Phenol	1.67	1.27			76		57-107		
Pyrene	1.67	1.47			88		67-109		
Pyridine	1.67	0.803			48		10-117		
1,2,4-Trichlorobenzene	1.67	1.35			81		46-109		
2,4,5-Trichlorophenol	1.67	1.52			91		62-121		
2,4,6-Trichlorophenol	1.67	1.59			96		60-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20129WAC026	Sample number(s): 1310907								
Acenaphthene	0.0500	0.0388	0.0500	0.0384	78	77	52-114	1	30
Acenaphthylene	0.0500	0.0383	0.0500	0.0385	77	77	56-127	0	30
Acetophenone	0.0500	0.0390	0.0500	0.0389	78	78	61-114	0	30
Anthracene	0.0500	0.0398	0.0500	0.0402	80	80	67-116	1	30
Atrazine	0.0500	0.0439	0.0500	0.0451	88	90	71-133	3	30
Benzaldehyde	0.0500	0.0415	0.0500	0.0411	83	82	55-116	1	30
Benzidine	0.250	0.0413	0.250	0.0474	17*	19*	25-77	14	30
Benzo(a)anthracene	0.0500	0.0433	0.0500	0.0429	87	86	68-123	1	30
Benzo(a)pyrene	0.0500	0.0421	0.0500	0.0413	84	83	71-117	2	30
Benzo(b)fluoranthene	0.0500	0.0425	0.0500	0.0418	85	84	69-121	2	30
Benzo(g,h,i)perylene	0.0500	0.0397	0.0500	0.0395	79	79	60-119	0	30
Benzo(k)fluoranthene	0.0500	0.0432	0.0500	0.0427	86	85	69-122	1	30

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1'-Biphenyl	0.0500	0.0376	0.0500	0.0374	75	75	56-109	1	30
Butylbenzylphthalate	0.0500	0.0341	0.0500	0.0324	68	65	40-133	5	30
Di-n-butylphthalate	0.0500	0.0393	0.0500	0.0387	79	77	58-125	2	30
Caprolactam	0.0500	0.0102	0.0500	0.0109	20	22	10-57	6	30
Carbazole	0.0500	0.0418	0.0500	0.0426	84	85	64-127	2	30
bis(2-Chloroethyl)ether	0.0500	0.0367	0.0500	0.0369	73	74	58-108	0	30
bis(2-Chloroisopropyl)ether	0.0500	0.0424	0.0500	0.0421	85	84	44-108	1	30
2-Chloronaphthalene	0.0500	0.0366	0.0500	0.0365	73	73	51-107	1	30
2-Chlorophenol	0.0500	0.0337	0.0500	0.0322	67	64	57-105	5	30
Chrysene	0.0500	0.0399	0.0500	0.0395	80	79	65-121	1	30
Dibenz(a,h)anthracene	0.0500	0.0419	0.0500	0.0409	84	82	63-128	3	30
Dibenzofuran	0.0500	0.0395	0.0500	0.0396	79	79	60-112	0	30
1,2-Dichlorobenzene	0.0500	0.0324	0.0500	0.0318	65	64	35-104	2	30
1,3-Dichlorobenzene	0.0500	0.0305	0.0500	0.0302	61	60	28-103	1	30
1,4-Dichlorobenzene	0.0500	0.0315	0.0500	0.0306	63	61	34-97	3	30
3,3'-Dichlorobenzidine	0.0500	0.0236	0.0500	0.0248	47	50	42-107	5	30
2,4-Dichlorophenol	0.0500	0.0373	0.0500	0.0362	75	72	65-110	3	30
Diethylphthalate	0.0500	0.0358	0.0500	0.0340	72	68	42-126	5	30
2,4-Dimethylphenol	0.0500	0.0322	0.0500	0.0320	64	64	53-93	1	30
Dimethylphthalate	0.0500	0.0260	0.0500	0.0226	52	45	10-134	14	30
4,6-Dinitro-2-methylphenol	0.0500	0.0374	0.0500	0.0368	75	74	63-129	2	30
2,4-Dinitrophenol	0.100	0.0755	0.100	0.0718	76	72	44-134	5	30
2,4-Dinitrotoluene	0.0500	0.0415	0.0500	0.0423	83	85	66-122	2	30
2,6-Dinitrotoluene	0.0500	0.0418	0.0500	0.0409	84	82	71-120	2	30
1,2-Diphenylhydrazine	0.0500	0.0427	0.0500	0.0435	85	87	64-120	2	30
bis(2-Ethylhexyl)phthalate	0.0500	0.0423	0.0500	0.0414	85	83	61-129	2	30
Fluoranthene	0.0500	0.0422	0.0500	0.0426	84	85	63-122	1	30
Fluorene	0.0500	0.0410	0.0500	0.0415	82	83	56-115	1	30
Hexachlorobenzene	0.0500	0.0388	0.0500	0.0387	78	77	60-117	0	30
Hexachlorobutadiene	0.0500	0.0341	0.0500	0.0335	68	67	20-108	2	30
Hexachlorocyclopentadiene	0.100	0.0267	0.100	0.0247	27	25	10-91	8	30
Hexachloroethane	0.0500	0.0302	0.0500	0.0293	60	59	23-95	3	30
Indeno(1,2,3-cd)pyrene	0.0500	0.0396	0.0500	0.0395	79	79	59-123	0	30
Isophorone	0.0500	0.0410	0.0500	0.0414	82	83	63-120	1	30
2-Methylnaphthalene	0.0500	0.0373	0.0500	0.0364	75	73	51-107	3	30
2-Methylphenol	0.0500	0.0328	0.0500	0.0320	66	64	53-107	2	30
4-Methylphenol	0.0500	0.0331	0.0500	0.0325	66	65	49-108	2	30
Naphthalene	0.0500	0.0366	0.0500	0.0364	73	73	51-102	1	30
2-Nitroaniline	0.0500	0.0400	0.0500	0.0406	80	81	66-126	2	30
Nitrobenzene	0.0500	0.0409	0.0500	0.0407	82	81	59-109	0	30
N-Nitrosodimethylamine	0.0500	0.0233	0.0500	0.0236	47	47	17-101	1	30
N-Nitroso-di-n-propylamine	0.0500	0.0410	0.0500	0.0413	82	83	58-120	1	30
N-Nitrosodiphenylamine	0.0500	0.0393	0.0500	0.0401	79	80	60-126	2	30
Di-n-octylphthalate	0.0500	0.0430	0.0500	0.0423	86	85	60-136	2	30

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Pentachlorophenol	0.0500	0.0393	0.0500	0.0380	79	76	54-131	3	30
Phenanthrene	0.0500	0.0403	0.0500	0.0407	81	81	65-113	1	30
Phenol	0.0500	0.0210	0.0500	0.0206	42	41	19-79	2	30
Pyrene	0.0500	0.0399	0.0500	0.0393	80	79	65-115	1	30
Pyridine	0.0500	0.0157	0.0500	0.0163	31	33	23-64	4	30
1,2,4-Trichlorobenzene	0.0500	0.0349	0.0500	0.0338	70	68	34-106	3	30
2,4,5-Trichlorophenol	0.0500	0.0397	0.0500	0.0390	79	78	66-118	2	30
2,4,6-Trichlorophenol	0.0500	0.0397	0.0500	0.0385	79	77	69-117	3	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 20136SLB026	Sample number(s): 1310911,1310914-1310915								
1,4-Dioxane	33.33	12.52			38		21-79		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 20136WAB026	Sample number(s): 1310907								
1,4-Dioxane	1.00	0.432	1.00	0.443	43	44	18-91	3	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201290011A	Sample number(s): 1310911,1310914-1310915								
2,4-D	0.0834	0.149			179*		57-142		
2,4,5-T	0.00833	0.0167			200*		59-137		
2,4,5-TP	0.00833	0.0154			185*		70-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201290002A	Sample number(s): 1310907								
2,4-D	0.00250	0.00363	0.00250	0.00369	145*	147*	70-134	2	30
2,4,5-T	0.000250	0.000395	0.000250	0.000399	158	160	69-164	1	30
2,4,5-TP	0.000250	0.000369	0.000250	0.000370	148*	148*	81-137	0	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201290009A	Sample number(s): 1310911,1310914-1310915								
PCB-1016	0.167	0.146			87		76-121		
PCB-1260	0.167	0.173			104		79-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201290014A	Sample number(s): 1310907								
PCB-1016	0.00501	0.00418	0.00501	0.00413	84	82	60-117	1	30
PCB-1260	0.00501	0.00458	0.00501	0.00453	91	90	57-134	1	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201290008A	Sample number(s): 1310911,1310914-1310915								
Aldrin	0.00333	0.00325			98		60-117		
Alpha BHC	0.00338	0.00327			97		65-124		
Beta BHC	0.00333	0.00315			95		68-129		

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Gamma BHC - Lindane	0.00333	0.00313			94		68-133		
Alpha Chlordane	0.00333	0.00341			102		73-131		
4,4'-Ddd	0.00671	0.00655			98		69-138		
4,4'-Dde	0.00667	0.00650			97		68-146		
4,4'-Ddt	0.00671	0.00640			95		67-135		
Delta BHC	0.00333	0.00331			99		45-151		
Dieldrin	0.00667	0.00703			105		63-126		
Endosulfan I	0.00333	0.00322			97		62-119		
Endosulfan II	0.00667	0.00661			99		65-126		
Endosulfan Sulfate	0.00667	0.00683			102		71-132		
Endrin	0.00667	0.00685			103		86-135		
Heptachlor	0.00333	0.00301			90		66-118		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201290013A	Sample number(s): 1310907								
Aldrin	0.000100	0.0000494	0.000100	0.0000509	49	51	28-119	3	30
Alpha BHC	0.000101	0.0000782	0.000101	0.0000982	77	97	47-132	23	30
Beta BHC	0.000100	0.0000802	0.000100	0.000103	80	103	27-143	25	30
Gamma BHC - Lindane	0.000100	0.0000769	0.000100	0.0000998	77	100	29-136	26	30
Alpha Chlordane	0.000100	0.0000679	0.000100	0.0000857	68	86	28-136	23	30
4,4'-Ddd	0.000201	0.000155	0.000201	0.000192	77	96	42-148	21	30
4,4'-Dde	0.000200	0.000126	0.000200	0.000149	63	74	22-138	17	30
4,4'-Ddt	0.000201	0.000155	0.000201	0.000192	77	95	40-145	21	30
Delta BHC	0.000100	0.0000791	0.000100	0.000102	79	102	28-141	25	30
Dieldrin	0.000200	0.000153	0.000200	0.000195	77	97	31-145	24	30
Endosulfan I	0.000100	0.0000748	0.000100	0.0000914	75	91	40-138	20	30
Endosulfan II	0.000200	0.000148	0.000200	0.000187	74	93	27-138	23	30
Endosulfan Sulfate	0.000200	0.000164	0.000200	0.000202	82	101	41-133	21	30
Endrin	0.000200	0.000157	0.000200	0.000199	79	100	35-143	24	30
Heptachlor	0.000100	0.0000529	0.000100	0.0000586	53	59	38-135	10	30
	ng/g	ng/g	ng/g	ng/g					
Batch number: 20129002	Sample number(s): 1310911,1310914-1310915								
6:2-Fluorotelomersulfonic acid	23.7	21.92			92		51-144		
8:2-Fluorotelomersulfonic acid	23.94	23.04			96		54-152		
NEtFOSAA	25	28.19			113		51-145		
NMeFOSAA	25	30.81			123		55-152		
Perfluorobutanesulfonic acid	22.12	22.61			102		63-139		
Perfluorobutanoic acid	25	22.49			90		56-188		
Perfluorodecanesulfonic acid	24.08	22.45			93		60-142		
Perfluorodecanoic acid	25	25.32			101		65-144		
Perfluorododecanoic acid	25	24.49			98		62-150		
Perfluoroheptanesulfonic acid	23.78	23.86			100		67-139		
Perfluoroheptanoic acid	25	27.46			110		65-153		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorohexanesulfonic acid	23.64	25.53			108		59-139		
Perfluorohexanoic acid	25	25.87			103		64-149		
Perfluorononanoic acid	25	25.99			104		64-151		
Perfluorooctanesulfonamide	25	25.45			102		61-133		
Perfluorooctanesulfonic acid	23.9	21.12			88		54-132		
Perfluorooctanoic acid	25	24.37			97		65-147		
Perfluoropentanoic acid	25	22.36			89		71-139		
Perfluorotetradecanoic acid	25	26.29			105		66-147		
Perfluorotridecanoic acid	25	24.79			99		63-152		
Perfluoroundecanoic acid	25	24.63			99		65-146		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 20132008	Sample number(s): 1310907								
6:2-Fluorotelomersulfonic acid	24.28	21.51	24.28	22.79	89	94	56-140	6	30
8:2-Fluorotelomersulfonic acid	24.52	22.44	24.52	22.07	92	90	58-143	2	30
NEtFOSAA	25.6	26.3	25.6	25.63	103	100	53-140	3	30
NMeFOSAA	25.6	27.42	25.6	26.64	107	104	59-141	3	30
Perfluorobutanesulfonic acid	22.64	21.26	22.64	20.67	94	91	67-135	3	30
Perfluorobutanoic acid	25.6	20.06	25.6	20.05	78	78	63-160	0	30
Perfluorodecanesulfonic acid	24.64	21.06	24.64	21.27	85	86	62-135	1	30
Perfluorodecanoic acid	25.6	23.76	25.6	24.02	93	94	66-141	1	30
Perfluorododecanoic acid	25.6	25.95	25.6	23.69	101	93	65-143	9	30
Perfluoroheptanesulfonic acid	24.36	21.64	24.36	21.39	89	88	67-138	1	30
Perfluoroheptanoic acid	25.6	23.13	25.6	23.45	90	92	69-144	1	30
Perfluorohexanesulfonic acid	24.2	20.93	24.2	21.91	86	91	63-132	5	30
Perfluorohexanoic acid	25.6	21.01	25.6	23.26	82	91	69-139	10	30
Perfluorononanoic acid	25.6	23.75	25.6	23.74	93	93	66-144	0	30
Perfluorooctanesulfonamide	25.6	24.23	25.6	24.98	95	98	67-126	3	30
Perfluorooctanesulfonic acid	24.48	20.08	24.48	19.79	82	81	53-129	1	30
Perfluorooctanoic acid	25.6	23.91	25.6	23.11	93	90	67-139	3	30
Perfluoropentanoic acid	25.6	23.04	25.6	23.07	90	90	73-135	0	30
Perfluorotetradecanoic acid	25.6	23.67	25.6	23.81	92	93	69-141	1	30
Perfluorotridecanoic acid	25.6	25.2	25.6	23.91	98	93	66-146	5	30
Perfluoroundecanoic acid	25.6	22.7	25.6	24.71	89	97	66-140	8	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201281063802	Sample number(s): 1310910-1310911,1310914-1310915								
Mercury	0.100	0.0947			95		80-115		
Batch number: 201281404904A	Sample number(s): 1310910-1310911,1310914-1310915								
Arsenic	1.00	1.10			110		80-120		
Barium	5.00	5.62			112		80-120		
Beryllium	0.400	0.398			100		80-120		
Cadmium	0.500	0.459			92		80-120		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chromium	5.00	5.19			104		86-120		
Copper	5.00	5.27			105		85-120		
Lead	0.500	0.527			105		80-120		
Manganese	5.00	4.69			94		80-120		
Nickel	5.00	5.61			112		86-120		
Selenium	1.00	0.970			97		85-120		
Silver	5.00	5.10			102		84-120		
Zinc	50	51.05			102		85-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201250571307	Sample number(s): 1310907								
Mercury	0.00100	0.000852			85		80-110		
Batch number: 201291404401	Sample number(s): 1310907								
Silver	0.0200	0.0197	0.0200	0.0201	98	101	80-120	2	20
Batch number: 201291404701A	Sample number(s): 1310907								
Arsenic	0.0100	0.0109			109		85-120		
Barium	0.0500	0.0506			101		80-120		
Beryllium	0.00400	0.00418			105		90-112		
Cadmium	0.00500	0.00574			115		84-120		
Chromium	0.0500	0.0545			109		90-115		
Copper	0.0500	0.0562			112		89-120		
Lead	0.00500	0.00546			109		90-110		
Manganese	0.0500	0.0572			114		89-120		
Nickel	0.0500	0.0557			111		90-114		
Selenium	0.0100	0.0113			113		90-113		
Zinc	0.500	0.519			104		90-115		
Batch number: 201321404503	Sample number(s): 1310908								
Arsenic	0.0600	0.0576	0.0600	0.0637	96	106	80-120	10	20
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20133102201A	Sample number(s): 1310911,1310914-1310915								
Total Cyanide (solid)	10	10.07			101		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20134117101B	Sample number(s): 1310907								
Total Cyanide (water)	0.200	0.198			99		90-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20129042501A	Sample number(s): 1310911,1310914-1310915								
Hexavalent Chromium (SOLIDS)	5.00	4.78			96		80-120		
	mg/l	mg/l	mg/l	mg/l					

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20129027601A Hexavalent Chromium	0.200	0.207	0.200	0.207	103	103	90-110	0	4
	%	%	%	%					
Batch number: 20131820001A Moisture	89.5	89.34			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 201290011A 2,4-D	N.D.	0.0831	0.136	0.0831	0.118	164*	142	57-142	14	50
2,4,5-T	N.D.	0.00831	0.00984	0.00831	0.00905	119	109	59-137	8	50
2,4,5-TP	N.D.	0.00831	0.00977	0.00831	0.00934	118	112	70-130	4	50
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201290009A PCB-1016	N.D.	0.166	0.0847	0.166	0.0863	51*	52*	76-121	2	50
PCB-1260	N.D.	0.166	0.128	0.166	0.128	77*	77*	79-130	0	50
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201290008A Aldrin	N.D.	0.00658	0.00595	0.00649	N.D.	90	0*	60-117	200*	50
Alpha BHC	0.00752	0.00666	0.00771	0.00657	0.0118	3*	66	65-124	42	50
Beta BHC	N.D.	0.00658	N.D.	0.00649	N.D.	0*	0*	68-129	0	50
Gamma BHC - Lindane	N.D.	0.00658	0.00550	0.00649	N.D.	84	0*	68-133	200*	50
Alpha Chlordane	0.0415	0.00658	0.00646	0.00649	0.0486	-531 (2)	111 (2)	73-131	153*	50
4,4'-Ddd	N.D.	0.0132	0.0132	0.0131	0.0106	99	81	69-138	22	50
4,4'-Dde	N.D.	0.0132	0.0127	0.0130	0.0116	96	90	68-146	9	50
4,4'-Ddt	N.D.	0.0132	N.D.	0.0131	N.D.	0*	0*	67-135	0	50
Delta BHC	N.D.	0.00658	N.D.	0.00649	N.D.	0*	0*	45-151	0	50
Dieldrin	N.D.	0.0132	0.0121	0.0130	0.00994	92	77	63-126	20	50
Endosulfan I	N.D.	0.00658	0.00662	0.00649	0.0107	101	165*	62-119	47	50
Endosulfan II	N.D.	0.0132	N.D.	0.0130	N.D.	0*	0*	65-126	0	50
Endosulfan Sulfate	N.D.	0.0132	0.0125	0.0130	N.D.	95	0*	71-132	200*	50
Endrin	N.D.	0.0132	N.D.	0.0130	N.D.	0*	0*	86-135	0	50
Heptachlor	N.D.	0.00658	N.D.	0.00649	N.D.	0*	0*	66-118	0	50

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ng/g	ng/g	ng/g	ng/g	ng/g					
Batch number: 20129002	Sample number(s): 1310911,1310914-1310915 UNSPK: 1310911									
6:2-Fluorotelomersulfonic acid	N.D.	21.94	21.25	21.55	23.43	97	109	51-144	10	30
8:2-Fluorotelomersulfonic acid	N.D.	22.17	22.46	21.76	22.54	101	104	54-152	0	30
NETFOSAA	N.D.	23.15	26.32	22.73	27.82	114	122	51-145	6	30
NMeFOSAA	N.D.	23.15	28.02	22.73	29.34	121	129	55-152	5	30
Perfluorobutanesulfonic acid	N.D.	20.48	22.29	20.11	22.25	109	111	63-139	0	30
Perfluorobutanoic acid	N.D.	23.15	20.94	22.73	22.11	90	97	56-188	5	30
Perfluorodecanesulfonic acid	N.D.	22.3	20.95	21.89	23.38	94	107	60-142	11	30
Perfluorodecanoic acid	N.D.	23.15	23.69	22.73	24.23	102	107	65-144	2	30
Perfluorododecanoic acid	N.D.	23.15	25.19	22.73	24.14	109	106	62-150	4	30
Perfluoroheptanesulfonic acid	N.D.	22.02	23.39	21.62	23.29	106	108	67-139	0	30
Perfluoroheptanoic acid	N.D.	23.15	24.43	22.73	25.78	106	113	65-153	5	30
Perfluorohexanesulfonic acid	N.D.	21.89	21.79	21.49	22.76	100	106	59-139	4	30
Perfluorohexanoic acid	N.D.	23.15	22.44	22.73	24.02	97	106	64-149	7	30
Perfluorononanoic acid	N.D.	23.15	24.51	22.73	28.36	106	125	64-151	15	30
Perfluorooctanesulfonamide	N.D.	23.15	25.3	22.73	26.02	109	114	61-133	3	30
Perfluorooctanesulfonic acid	N.D.	22.13	19.75	21.73	21.88	89	101	54-132	10	30
Perfluorooctanoic acid	N.D.	23.15	24.33	22.73	25.56	105	112	65-147	5	30
Perfluoropentanoic acid	N.D.	23.15	23.79	22.73	22.78	103	100	71-139	4	30
Perfluorotetradecanoic acid	N.D.	23.15	23.59	22.73	24.67	102	109	66-147	4	30
Perfluorotridecanoic acid	N.D.	23.15	25.46	22.73	23.97	110	105	63-152	6	30
Perfluoroundecanoic acid	N.D.	23.15	23.61	22.73	23.88	102	105	65-146	1	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201281063802	Sample number(s): 1310910-1310911,1310914-1310915 UNSPK: 1310910									
Mercury	3.53	0.164	2.45	0.161	2.36	-659 (2)	-728 (2)	80-120	4	20
Batch number: 201281404904A	Sample number(s): 1310910-1310911,1310914-1310915 UNSPK: 1310911									
Arsenic	8.57	1.82	8.05	1.65	7.01	-28 (2)	-94 (2)	75-125	14	20
Barium	50.83	9.09	98.89	8.26	49.66	529 (2)	-14 (2)	75-125	66*	20
Beryllium	0.389	0.727	0.985	0.661	0.828	82	66*	75-125	17	20
Cadmium	0.230	0.909	1.26	0.826	1.19	113	116	75-125	6	20
Chromium	13.88	9.09	20.12	8.26	17.47	69*	43*	75-125	14	20
Copper	55.89	9.09	108.64	8.26	123.74	580 (2)	821 (2)	75-125	13	20
Lead	1222.08	0.909	1039.75	0.826	367.95	-20056 (2)	-103350 (2)	75-125	95*	20
Manganese	196.02	9.09	192.87	8.26	174.25	-35 (2)	-263 (2)	75-118	10	20
Nickel	27.89	9.09	25.81	8.26	23.58	-23*	-52*	75-125	9	20
Selenium	0.394	1.82	1.82	1.65	1.61	79	74*	75-125	12	20
Silver	0.200	9.09	9.58	8.26	8.32	103	98	75-125	14	20
Zinc	435.85	90.91	793.31	82.64	934.08	393 (2)	603 (2)	75-125	16	20

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20133102201A Total Cyanide (solid)	0.338	5.24	4.64			82		41-145		
Batch number: 20129042501A Hexavalent Chromium (SOLIDS)	N.D.	40.7	N.D.			0*		75-125		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 201281063802 Mercury	3.53	2.19	47* (1)	20
Batch number: 201281404904A				
Arsenic	8.57	7.09	19	20
Barium	50.83	39.88	24*	20
Beryllium	0.389	0.288	30*	20
Cadmium	0.230	0.267	15 (1)	20
Chromium	13.88	10.78	25*	20
Copper	55.89	134.51	83*	20
Lead	1222.08	1006.9	19	20
Manganese	196.02	173.76	12	20
Nickel	27.89	12.62	75*	20
Selenium	0.394	0.302	26* (1)	20
Silver	0.200	0.118	51* (1)	20
Zinc	435.85	1114.75	88*	20
Batch number: 20133102201A Total Cyanide (solid)	0.338	N.D.	200* (1)	20
Batch number: 20129042501A Hexavalent Chromium (SOLIDS)	N.D.	N.D.	0 (1)	20

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NYSDEC/NJDEP VOCs 8260C Soil
Batch number: B201311AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1310911	99	98	112	99
1310912	100	100	100	101
1310913	101	99	103	101
1310914	102	105	100	98
1310915	102	107	100	98
Blank	100	100	98	98
LCS	101	106	99	101
LCSD	101	105	99	101
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs
Batch number: Y201332AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1310907	101	103	97	95
1310909	102	102	97	95
Blank	101	103	97	95
LCS	100	105	98	97
LCSD	100	101	98	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20129SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1310911	74	69	89	69	85	96
1310912	60	59	74	56	63	80
1310913	79	73	90	73	89	98
1310914	70	65	81	67	77	82
1310915	76	72	88	68	83	110
Blank	85	83	112	78	96	125
LCS	83	80	105	77	89	113
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

Analysis Name: TCL SW846 8270D MINI
Batch number: 20129WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1310907	30	39	75	80	73	97

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 8270D MINI
Batch number: 20129WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
Blank	22	28	60	57	52	82
LCS	35	45	79	79	71	88
LCSD	34	43	76	78	72	86
Limits:	10-67	10-84	18-141	38-113	44-102	34-128

Analysis Name: 1,4-Dioxane 8270D SIM
Batch number: 20136SLB026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1310911	163*	76	73
1310914	218*	114*	79
1310915	103	69	76
Blank	93	98	81
LCS	94	84	83
Limits:	21-120	17-112	27-107

Analysis Name: 1,4-Dioxane 8270D SIM
Batch number: 20136WAB026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1310907	100	84	94
Blank	93	83	89
LCS	89	93	89
LCSD	90	89	86
Limits:	34-125	10-138	15-121

Analysis Name: Herbicides in Water 8151A
Batch number: 201290002A

	2,4-DCAA-D1	2,4-DCAA-D2
1310907	121	126
Blank	117	123
LCS	128	132
LCSD	125	130
Limits:	34-142	34-142

Analysis Name: NY Part 375 Pests Soil
Batch number: 201290008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310911	160*	99	58	96

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NY Part 375 Pests Soil
Batch number: 201290008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310914	42	56	28	47
1310915	82	200*	158*	109
Blank	67	102	64	97
LCS	63	97	60	93
MS	79	100	77	101
MSD	159*	84	71	82
Limits:	19-136	46-152	19-136	46-152

Analysis Name: 7 PCBs + Total Soil
Batch number: 201290009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310911	69	91	58	97
1310914	51*	62	39*	62
1310915	70	74	60	75
Blank	101	107	94	104
LCS	102	107	95	107
MS	59	72	44*	74
MSD	58	73	43*	74
Limits:	53-140	45-143	53-140	45-143

Analysis Name: 2,4,5-T, 2,4-D, 2,4,5-TP 8151A
Batch number: 201290011A

	2,4-DCAA-D1	2,4-DCAA-D2
1310911	132	116
1310914	136	121
1310915	129	92
Blank	145*	148*
LCS	165*	159*
MS	108	97
MSD	95	73
Limits:	27-136	27-136

Analysis Name: NY Part 375 Pests Water
Batch number: 201290013A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310907	54	45	55	44
Blank	45	44	48	45
LCS	53	54	54	54
LCSD	39	40	42	41

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NY Part 375 Pests Water
Batch number: 201290013A

Limits: 29-129 32-149 29-129 32-149

Analysis Name: 7 PCBs + Total Water
Batch number: 201290014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1310907	46	41	50	40
Blank	39	44	43	43
LCS	21*	73	23*	75
LCSD	23*	66	25*	70
Limits:	33-137	10-148	33-137	10-148

Analysis Name: NY 21 PFAS Soil
Batch number: 20129002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1310911	81	79	79	79	79	78
1310914	78	75	77	77	83	80
1310915	72	70	72	69	72	67
Blank	81	79	81	79	80	77
LCS	83	81	80	83	80	78
MS	81	77	74	77	74	74
MSD	75	71	72	70	74	72
Limits:	40-117	38-118	38-120	36-120	38-124	39-120
	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1310911	88	85	82	86	88	97
1310914	96	83	83	90	80	120
1310915	75	74	75	75	75	97
Blank	79	82	82	82	89	93
LCS	80	86	80	79	86	86
MS	80	78	83	85	83	92
MSD	79	78	76	81	79	88
Limits:	25-154	44-115	45-118	39-123	43-118	26-155
	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1310911	86	89	88	87	80	81
1310914	54	80	57	83	76	39
1310915	24	73	27	68	69	75
Blank	88	91	96	87	84	83
LCS	89	90	94	87	85	83

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/20/2020 10:31

Group Number: 2098762

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Soil
Batch number: 20129002

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
MS	82	83	84	82	82	77
MSD	76	81	78	81	75	69
Limits:	10-152	34-124	10-156	28-126	26-125	31-127

Analysis Name: NY 21 PFAS Water
Batch number: 20132008

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1310907	105	100	101	107	107	105
Blank	92	85	85	94	92	88
LCS	104	94	95	109	110	103
LCSD	109	101	104	107	110	107
Limits:	43-130	38-150	23-175	36-137	35-143	33-140

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1310907	114	107	99	95	103	111
Blank	92	93	88	91	92	99
LCS	107	105	103	101	102	105
LCSD	109	110	108	111	105	114
Limits:	29-182	52-124	52-121	48-130	50-124	37-169

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1310907	124	117	136	109	97	96
Blank	109	97	112	90	92	80
LCS	125	111	124	101	98	81
LCSD	132	113	142	119	107	93
Limits:	36-143	44-128	42-149	36-127	21-134	10-134

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

222

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4520B Group # 209076Z Sample # 1310907-15

COC # 606110

Client Information				Matrix			Analysis Requested										For Lab Use Only						
Client: <u>LANGAN, DPC</u>		Acct. #:		<input type="checkbox"/> Tissue	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation and Filtration Codes										FSC: <u>258860</u>	SCR# <u>258860</u>					
Project Name/ID: <u>35 COMMERCIAL Siter/170229024</u>		PWSID #:		<input type="checkbox"/> Sediment	<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	Total # of Containers	TCL	VOLs	TCL	SUGs	TCLP	ARSENIC	TOTAL LEAD, MERCURY	PESTICIDES/HERBICIDES	PCBs	TOTAL METALS (Pb, Hg, Cr, Ni, Cu, Zn, Cd, Mn)	CYANIDE	PFAS	1,1 DICHORO	TOTAL ARSENIC	Preservation Codes	
Project Manager: <u>GREG WAKA</u>		P.O. #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other:																H=HCl	
Sampler: <u>REID BALKIND</u>		Quote #:		Grab		Composite		Remarks															
State where samples were collected: <u>NEW YORK</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Sample Identification		Collected																	
				Date	Time																		
				<u>5/7/20</u>	<u>14:20</u>																		
				<u>5/7/20</u>	<u>---</u>																		
					<u>8:45</u>																		
					<u>9:15</u>																		
					<u>10:30</u>																		
					<u>11:55</u>																		
					<u>13:45</u>																		
					<u>14:15</u>																		
					<u>14:20</u>																		
Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by		Date	Time												
Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				<u>[Signature]</u>		<u>5/5/20</u>	<u>0715</u>	<u>[Signature]</u>		<u>5/7/20</u>	<u>1520</u>												
(Rush TAT is subject to laboratory approval and surcharge.)				<u>[Signature]</u>		<u>5/7/20</u>	<u>1520</u>	<u>[Signature]</u>		<u>7/16/20</u>	<u>1720</u>												
Requested TAT in business days:				<u>[Signature]</u>		<u>7/16/20</u>	<u>1940</u>	<u>[Signature]</u>															
E-mail address: <u>GWAKA@LANGAN.COM</u> <u>JLEUNG@LANGAN.COM</u>				<u>[Signature]</u>				<u>[Signature]</u>		<u>5/7/20</u>	<u>1945</u>												
Data Package Options (circle if required)				Relinquished by		Date	Time	Received by		Date	Time												
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)				<u>[Signature]</u>				<u>[Signature]</u>		<u>5/7/20</u>	<u>1945</u>												
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13																							
NYSDEC Category A or B MA MCP CT RCP																							
				EDD Required? <u>Yes</u> No				Relinquished by Commercial Carrier:															
				If yes, format: <u>EQUS</u>				UPS FedEx Other															
				Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No				Temperature upon receipt <u>0.2-7.9°C</u>															
				(If yes, indicate QC sample and submit triplicate sample volume.)																			



Group Number(s):

Client: Langan, DPC

2090742

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/07/2020
 Number of Packages: 2 Number of Projects: 1
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples
									Collected Same Day as Receipt?
1	Water	46730061WS	7.9	IR	Wet	Y	Bagged	Y	Y
1	Soil	46730061WS	6.9	IR	Wet	Y	Bagged	Y	Y
2	Water	46730061WS	-0.2	IR	Wet	Y	Loose	N	Y
2	Soil	46730061WS	1.7	IR	Wet	Y	Loose	N	Y

Sample ID Discrepancy Details

<u>Sample ID on COC</u>	<u>Sample ID on Label</u>	<u>Comments</u>
LB13W_15-17	LB13W_15-16	

General Comments: Samples not frozen.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: May 13, 2020 11:07

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2098965
SDG: CMS03
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

Previous versions of this report were generated on:
05/13/2020 09:22
05/13/2020 11:03

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
SV05_050820 Air	05/08/2020 09:35 - 05/08/2020 11:35	1311677
SV04_050820 Air	05/08/2020 09:52 - 05/08/2020 11:52	1311678
SV02_050820 Air	05/08/2020 10:10 - 05/08/2020 11:50	1311679
SVDUP01_050820 Air	05/08/2020 10:37 - 05/08/2020 11:55	1311680
AA01_050820 Air	05/08/2020 10:26 - 05/08/2020 12:15	1311681
SV03_050820 Air	05/08/2020 09:52 - 05/08/2020 11:52	1311682
SV01_050820 Air	05/08/2020 10:13 - 05/08/2020 12:13	1311683

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

REVISED

Sample Description: SV05_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311677
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 09:35 through 05/08/2020 11:35
SDG#: CMS03-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	610	25	240	20
05298	Benzene	71-43-2	3.4	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	59	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	13	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	N.D.	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	N.D.	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	5.9 J	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	1.9 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	5.5	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	N.D.	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	31	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	180	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV05_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311677
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 09:35 through 05/08/2020 11:35
SDG#: CMS03-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15	ug/m3	ug/m3	ug/m3	
05298	Isooctane	540-84-1	8.2	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	2.0 J	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	2.3 J	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	20	1.9	9.3	1
05298	Pentane ¹	109-66-0	470	7.7	59	20
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	1.8 J	1.7	14	1
05298	Toluene	108-88-3	11	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	N.D.	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	1.7 J	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	14	1.1	8.7	1
05298	o-Xylene	95-47-6	6.9	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 11:01	Jacob E Bailey	1
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 11:32	Jacob E Bailey	20

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV04_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311678
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 09:52 through 05/08/2020 11:52
SDG#: CMS03-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	860	25	240	20
05298	Benzene	71-43-2	6.9	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	81	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	37	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	N.D.	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	N.D.	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	4.3 J	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	2.6 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	8.6	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	1.8 J	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	11	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	N.D.	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV04_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311678
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 09:52 through 05/08/2020 11:52
SDG#: CMS03-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15		ug/m3	ug/m3	
05298	Isooctane	540-84-1	2.1 J	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	1.8 J	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	11	1.9	9.3	1
05298	Pentane ¹	109-66-0	14	0.38	3.0	1
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	N.D.	1.7	14	1
05298	Toluene	108-88-3	31	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	1.9 J	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	4.4 J	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	32	1.1	8.7	1
05298	o-Xylene	95-47-6	9.1	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 12:02	Jacob E Bailey	1
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 12:33	Jacob E Bailey	20

*=This limit was used in the evaluation of the final result

Sample Description: SV02_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311679
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:10 through 05/08/2020 11:50
SDG#: CMS03-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	360	25	240	20
05298	Benzene	71-43-2	3.3	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	30	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	1.4 J	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	N.D.	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	0.95 J	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	6.2	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	2.9 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	3.4 J	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	0.92 J	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	4.4	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	N.D.	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV02_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311679
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:10 through 05/08/2020 11:50
SDG#: CMS03-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15	ug/m3	ug/m3	ug/m3	
05298	Isooctane	540-84-1	1.8 J	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	1.8 J	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	12	1.9	9.3	1
05298	Pentane ¹	109-66-0	4.9	0.38	3.0	1
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	N.D.	1.7	14	1
05298	Toluene	108-88-3	16	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	2.2 J	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	3.0 J	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	11	1.1	8.7	1
05298	o-Xylene	95-47-6	3.4 J	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 13:03	Jacob E Bailey	1
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 14:04	Jacob E Bailey	20

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SVDUP01_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311680
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:37 through 05/08/2020 11:55
SDG#: CMS03-04FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	570	25	240	20
05298	Benzene	71-43-2	5.8	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	64	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	32	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	N.D.	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	N.D.	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	9.8	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	1.7 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	2.0 J	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	N.D.	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	13	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	82	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SVDUP01_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311680
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:37 through 05/08/2020 11:55
SDG#: CMS03-04FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15	ug/m3	ug/m3	ug/m3	
05298	Isooctane	540-84-1	22	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	24	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	N.D.	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	12	1.9	9.3	1
05298	Pentane ¹	109-66-0	260	7.7	59	20
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	N.D.	1.7	14	1
05298	Toluene	108-88-3	14	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	N.D.	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	1.8 J	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	6.0 J	1.1	8.7	1
05298	o-Xylene	95-47-6	2.0 J	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 14:35	Jacob E Bailey	1
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 15:05	Jacob E Bailey	20

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: AA01_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311681
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:26 through 05/08/2020 12:15
SDG#: CMS03-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	750	25	240	20
05298	Benzene	71-43-2	4.0	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	69	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	16	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	N.D.	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	N.D.	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	N.D.	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	7.3	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	2.5 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	3.5 J	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	N.D.	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	9.1	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	N.D.	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: AA01_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311681
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:26 through 05/08/2020 12:15
SDG#: CMS03-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15		ug/m3	ug/m3	
05298	Isooctane	540-84-1	3.9 J	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	4.8	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	2.1 J	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	11	1.9	9.3	1
05298	Pentane ¹	109-66-0	120	0.38	3.0	1
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	N.D.	1.7	14	1
05298	Toluene	108-88-3	19	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	N.D.	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	1.6 J	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	11	1.1	8.7	1
05298	o-Xylene	95-47-6	3.1 J	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 15:36	Jacob E Bailey	1
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 16:06	Jacob E Bailey	20

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV03_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311682
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 09:52 through 05/08/2020 11:52
SDG#: CMS03-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	550	25	240	20
05298	Benzene	71-43-2	7.4	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	40	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	64	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	3.5 J	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	N.D.	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	12	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	6.8	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	2.5 J	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	3.0 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	5.1	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	0.90 J	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	6.9	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	N.D.	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV03_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311682
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 09:52 through 05/08/2020 11:52
SDG#: CMS03-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15	ug/m3	ug/m3	ug/m3	
05298	Isooctane	540-84-1	2.4 J	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	2.1 J	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	9.3 J	1.9	9.3	1
05298	Pentane ¹	109-66-0	13	0.38	3.0	1
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	N.D.	1.7	14	1
05298	Toluene	108-88-3	20	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	2.0 J	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	2.5 J	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	20	1.1	8.7	1
05298	o-Xylene	95-47-6	6.8	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 16:37	Jacob E Bailey	1
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 17:07	Jacob E Bailey	20

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV01_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311683
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:13 through 05/08/2020 12:13
SDG#: CMS03-07

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air			EPA TO-15	ug/m3	ug/m3	
05298	Acetone	67-64-1	26	1.3	12	1
05298	Benzene	71-43-2	1.3 J	0.35	3.2	1
05298	Bromobenzene ¹	108-86-1	N.D.	0.64	6.4	1
05298	Bromodichloromethane	75-27-4	N.D.	0.80	6.7	1
05298	Bromoform	75-25-2	N.D.	1.8	10	1
05298	Bromomethane	74-83-9	N.D.	0.70	3.9	1
05298	1,3-Butadiene	106-99-0	N.D.	0.38	2.2	1
05298	2-Butanone	78-93-3	6.0	0.62	2.9	1
05298	Carbon Disulfide	75-15-0	N.D.	0.40	3.1	1
05298	Carbon Tetrachloride	56-23-5	N.D.	0.88	6.3	1
05298	Chlorobenzene	108-90-7	2.5 J	0.60	4.6	1
05298	Chlorodifluoromethane ¹	75-45-6	N.D.	0.53	3.5	1
05298	Chloroethane	75-00-3	N.D.	0.50	2.6	1
05298	Chloroform	67-66-3	N.D.	0.45	4.9	1
05298	Chloromethane	74-87-3	N.D.	0.50	2.1	1
05298	3-Chloropropene	107-05-1	N.D.	0.47	3.1	1
05298	Cumene	98-82-8	N.D.	1.2	4.9	1
05298	Dibromochloromethane	124-48-1	N.D.	1.1	8.5	1
05298	1,2-Dibromoethane	106-93-4	N.D.	1.0	7.7	1
05298	Dibromomethane ¹	74-95-3	N.D.	1.0	7.1	1
05298	1,2-Dichlorobenzene	95-50-1	1.3 J	1.2	6.0	1
05298	1,3-Dichlorobenzene	541-73-1	N.D.	1.1	6.0	1
05298	1,4-Dichlorobenzene	106-46-7	N.D.	1.0	6.0	1
05298	Dichlorodifluoromethane	75-71-8	2.7 J	0.64	4.9	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.36	4.0	1
05298	1,2-Dichloroethane	107-06-2	N.D.	0.32	4.0	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.56	4.0	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.48	4.0	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.34	4.0	1
05298	Dichlorofluoromethane ¹	75-43-4	N.D.	0.46	4.2	1
05298	1,2-Dichloropropane	78-87-5	N.D.	0.60	4.6	1
05298	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.45	4.5	1
05298	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.54	4.5	1
05298	Ethylbenzene	100-41-4	0.95 J	0.83	4.3	1
05298	4-Ethyltoluene ¹	622-96-8	N.D.	0.88	4.9	1
05298	Freon 113	76-13-1	N.D.	0.84	7.7	1
05298	Freon 114	76-14-2	N.D.	0.84	7.0	1
05298	Heptane	142-82-5	1.2 J	0.94	4.1	1
05298	Hexachloroethane	67-72-1	N.D.	2.6	19	1
05298	Hexane	110-54-3	2.5 J	0.46	3.5	1
05298	2-Hexanone ¹	591-78-6	N.D.	0.74	4.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SV01_050820 Air
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: AQ 1311683
ELLE Group #: 2098965
Matrix: Air

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 10:13 through 05/08/2020 12:13
SDG#: CMS03-07

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Volatiles in Air		EPA TO-15	ug/m3	ug/m3	ug/m3	
05298	Isooctane	540-84-1	0.86 J	0.61	4.7	1
05298	Methyl t-Butyl Ether	1634-04-4	N.D.	0.54	3.6	1
05298	4-Methyl-2-pentanone	108-10-1	N.D.	0.61	4.1	1
05298	Methylene Chloride	75-09-2	N.D.	0.87	6.9	1
05298	Octane ¹	111-65-9	N.D.	1.9	9.3	1
05298	Pentane ¹	109-66-0	1.7 J	0.38	3.0	1
05298	Styrene	100-42-5	N.D.	0.85	4.3	1
05298	1,1,1,2-Tetrachloroethane ¹	630-20-6	N.D.	1.0	6.9	1
05298	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	6.9	1
05298	Tetrachloroethene	127-18-4	N.D.	1.7	14	1
05298	Toluene	108-88-3	2.3 J	0.45	3.8	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.65	5.5	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.65	5.5	1
05298	Trichloroethene	79-01-6	N.D.	0.97	5.4	1
05298	Trichlorofluoromethane	75-69-4	2.0 J	0.84	5.6	1
05298	1,2,3-Trichloropropane ¹	96-18-4	N.D.	0.84	6.0	1
05298	1,2,4-Trimethylbenzene	95-63-6	N.D.	1.4	9.8	1
05298	1,3,5-Trimethylbenzene	108-67-8	N.D.	1.6	9.8	1
05298	Vinyl Chloride	75-01-4	N.D.	0.31	2.6	1
05298	m/p-Xylene	179601-23-1	2.0 J	1.1	8.7	1
05298	o-Xylene	95-47-6	0.86 J	0.83	4.3	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	VOC EPA TO-15 Air	EPA TO-15	1	F2013030AA	05/09/2020 17:37	Jacob E Bailey	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/13/2020 11:07

Group Number: 2098965

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/m3	ug/m3	ug/m3
Batch number: F2013030AA	Sample number(s): 1311677-1311683		
Acetone	N.D.	1.3	12
Benzene	N.D.	0.35	3.2
Bromobenzene	N.D.	0.64	6.4
Bromodichloromethane	N.D.	0.80	6.7
Bromoform	N.D.	1.8	10
Bromomethane	N.D.	0.70	3.9
1,3-Butadiene	N.D.	0.38	2.2
2-Butanone	N.D.	0.62	2.9
Carbon Disulfide	N.D.	0.40	3.1
Carbon Tetrachloride	N.D.	0.88	6.3
Chlorobenzene	N.D.	0.60	4.6
Chlorodifluoromethane	N.D.	0.53	3.5
Chloroethane	N.D.	0.50	2.6
Chloroform	N.D.	0.45	4.9
Chloromethane	N.D.	0.50	2.1
3-Chloropropene	N.D.	0.47	3.1
Cumene	N.D.	1.2	4.9
Dibromochloromethane	N.D.	1.1	8.5
1,2-Dibromoethane	N.D.	1.0	7.7
Dibromomethane	N.D.	1.0	7.1
1,2-Dichlorobenzene	N.D.	1.2	6.0
1,3-Dichlorobenzene	N.D.	1.1	6.0
1,4-Dichlorobenzene	N.D.	1.0	6.0
Dichlorodifluoromethane	N.D.	0.64	4.9
1,1-Dichloroethane	N.D.	0.36	4.0
1,2-Dichloroethane	N.D.	0.32	4.0
1,1-Dichloroethene	N.D.	0.56	4.0
cis-1,2-Dichloroethene	N.D.	0.48	4.0
trans-1,2-Dichloroethene	N.D.	0.34	4.0
Dichlorofluoromethane	N.D.	0.46	4.2
1,2-Dichloropropane	N.D.	0.60	4.6
cis-1,3-Dichloropropene	N.D.	0.45	4.5
trans-1,3-Dichloropropene	N.D.	0.54	4.5
Ethylbenzene	N.D.	0.83	4.3
4-Ethyltoluene	N.D.	0.88	4.9
Freon 113	N.D.	0.84	7.7
Freon 114	N.D.	0.84	7.0
Heptane	N.D.	0.94	4.1
Hexachloroethane	N.D.	2.6	19

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/13/2020 11:07

Group Number: 2098965

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/m3	ug/m3	ug/m3
Hexane	N.D.	0.46	3.5
2-Hexanone	N.D.	0.74	4.1
Isooctane	N.D.	0.61	4.7
Methyl t-Butyl Ether	N.D.	0.54	3.6
4-Methyl-2-pentanone	N.D.	0.61	4.1
Methylene Chloride	N.D.	0.87	6.9
Octane	N.D.	1.9	9.3
Pentane	N.D.	0.38	3.0
Styrene	N.D.	0.85	4.3
1,1,1,2-Tetrachloroethane	N.D.	1.0	6.9
1,1,2,2-Tetrachloroethane	N.D.	1.0	6.9
Tetrachloroethene	N.D.	1.7	14
Toluene	N.D.	0.45	3.8
1,1,1-Trichloroethane	N.D.	0.65	5.5
1,1,2-Trichloroethane	N.D.	0.65	5.5
Trichloroethene	N.D.	0.97	5.4
Trichlorofluoromethane	N.D.	0.84	5.6
1,2,3-Trichloropropane	N.D.	0.84	6.0
1,2,4-Trimethylbenzene	N.D.	1.4	9.8
1,3,5-Trimethylbenzene	N.D.	1.6	9.8
Vinyl Chloride	N.D.	0.31	2.6
m/p-Xylene	N.D.	1.1	8.7
o-Xylene	N.D.	0.83	4.3

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/m3	ug/m3	ug/m3	ug/m3					
Batch number: F2013030AA	Sample number(s): 1311677-1311683								
Acetone	23.76	26.29	23.76	24.63	111	104	70-137	7	25
Benzene	31.95	35.91	31.95	35.14	112	110	70-130	2	25
Bromobenzene	64.22	58.78	64.22	57.63	92	90	70-130	2	25
Bromodichloromethane	67.01	73.67	67.01	71.52	110	107	75-134	3	25
Bromoform	103.37	88.65	103.37	81.65	86	79	60-139	8	25
Bromomethane	38.83	42.52	38.83	43.67	110	112	70-134	3	25
1,3-Butadiene	22.12	17.92	22.12	17.18	81	78	70-131	4	25
2-Butanone	29.49	29.94	29.49	29.99	102	102	70-130	0	25
Carbon Disulfide	31.14	34.11	31.14	33.31	110	107	70-130	2	25
Carbon Tetrachloride	62.91	61.34	62.91	58.56	98	93	70-130	5	25
Chlorobenzene	46.04	45.57	46.04	45.05	99	98	76-117	1	25
Chlorodifluoromethane	35.37	41.38	35.37	40.5	117	115	70-141	2	25

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/13/2020 11:07

Group Number: 2098965

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/m3	LCS Conc ug/m3	LCSD Spike Added ug/m3	LCSD Conc ug/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroethane	26.38	28.81	26.38	28.73	109	109	70-131	0	25
Chloroform	48.83	51.11	48.83	49.54	105	101	70-130	3	25
Chloromethane	20.65	22.39	20.65	22.24	108	108	70-138	1	25
3-Chloropropene	31.3	39.22	31.3	37.57	125	120	70-156	4	25
Cumene	49.16	42.07	49.16	42.08	86	86	70-131	0	25
Dibromochloromethane	85.19	85.55	85.19	79.67	100	94	74-131	7	25
1,2-Dibromoethane	76.83	78.19	76.83	77.17	102	100	70-130	1	25
Dibromomethane	71.1	74.62	71.1	71.82	105	101	70-131	4	25
1,2-Dichlorobenzene	60.12	54.95	60.12	56.32	91	94	61-139	2	25
1,3-Dichlorobenzene	60.12	56.26	60.12	57.07	94	95	64-140	1	25
1,4-Dichlorobenzene	60.12	56.16	60.12	54.76	93	91	64-137	3	25
Dichlorodifluoromethane	49.45	55.96	49.45	53.67	113	109	70-131	4	25
1,1-Dichloroethane	40.47	45.65	40.47	43.22	113	107	70-130	5	25
1,2-Dichloroethane	40.47	49.66	40.47	47.07	123	116	70-142	5	25
1,1-Dichloroethene	39.65	42.43	39.65	41.24	107	104	70-131	3	25
cis-1,2-Dichloroethene	39.65	40.7	39.65	39.93	103	101	70-130	2	25
trans-1,2-Dichloroethene	39.65	42.15	39.65	41.21	106	104	70-130	2	25
Dichlorofluoromethane	42.09	50.54	42.09	49.03	120	116	70-136	3	25
1,2-Dichloropropane	46.21	52.38	46.21	51.53	113	112	70-130	2	25
cis-1,3-Dichloropropene	45.39	46.89	45.39	43.64	103	96	70-130	7	25
trans-1,3-Dichloropropene	45.39	45.25	45.39	43.9	100	97	70-130	3	25
Ethylbenzene	43.42	40.68	43.42	40.78	94	94	70-130	0	25
4-Ethyltoluene	49.16	42.68	49.16	42.52	87	87	69-139	0	25
Freon 113	76.64	79.17	76.64	75.08	103	98	70-130	5	25
Freon 114	69.91	76.59	69.91	74.17	110	106	70-130	3	25
Heptane	40.98	39.86	40.98	38.46	97	94	70-130	4	25
Hexachloroethane	96.83	90.39	96.83	85.04	93	88	38-163	6	25
Hexane	35.25	34.27	35.25	34.34	97	97	70-130	0	25
2-Hexanone	40.97	41.71	40.97	41.46	102	101	63-144	1	25
Isooctane	46.72	49.92	46.72	48.66	107	104	70-130	3	25
Methyl t-Butyl Ether	36.05	32.98	36.05	31.69	91	88	70-130	4	25
4-Methyl-2-pentanone	40.97	41.5	40.97	40.61	101	99	68-133	2	25
Methylene Chloride	34.74	40.98	34.74	39.92	118	115	70-139	3	25
Octane	46.72	44.69	46.72	45.57	96	98	70-130	2	25
Pentane	29.51	29.15	29.51	28.13	99	95	70-130	4	25
Styrene	42.6	38.16	42.6	35.88	90	84	70-133	6	25
1,1,1,2-Tetrachloroethane	68.65	67.86	68.65	65.56	99	95	73-124	3	25
1,1,2,2-Tetrachloroethane	68.65	65.28	68.65	64.97	95	95	68-138	0	25
Tetrachloroethene	67.82	68.05	67.82	67.02	100	99	70-130	2	25
Toluene	37.69	38.29	37.69	37.99	102	101	70-130	1	25
1,1,1-Trichloroethane	54.56	52.76	54.56	51.99	97	95	70-130	1	25
1,1,2-Trichloroethane	54.56	57.96	54.56	56.81	106	104	76-127	2	25
Trichloroethene	53.74	59.87	53.74	58.35	111	109	70-130	3	25
Trichlorofluoromethane	56.18	58.62	56.18	57.18	104	102	70-130	2	25

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/13/2020 11:07

Group Number: 2098965

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/m3	LCS Conc ug/m3	LCSD Spike Added ug/m3	LCSD Conc ug/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2,3-Trichloropropane	60.3	58.45	60.3	58.66	97	97	70-136	0	25
1,2,4-Trimethylbenzene	49.16	46.17	49.16	46.35	94	94	65-146	0	25
1,3,5-Trimethylbenzene	49.16	44.64	49.16	44.6	91	91	69-141	0	25
Vinyl Chloride	25.56	25.18	25.56	25.35	99	99	70-135	1	25
m/p-Xylene	43.42	38.62	43.42	38.33	89	88	78-119	1	25
o-Xylene	43.42	37.74	43.42	37.69	87	87	70-130	0	25

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Summa Canister Field Test Data/Chain of Custody



Lancaster Laboratories Environmental

Accl. # 45208 Group # 2098905 For Eurofins Lancaster Laboratories Environmental use only Sample # 131107105

Bottle Order (SCR) # 258847

Client Information					Turnaround Time Requested (TAT) (circle one)				Analyses Requested							
Client: <u>LANGAN, DPC</u> Account # _____					<input checked="" type="radio"/> Standard <input type="radio"/> Rush (specify) _____				<input type="checkbox"/> EPA 18 <input type="checkbox"/> MTBE <input type="checkbox"/> EPA 25 (select range below) <input type="checkbox"/> Helium as tracer <input type="checkbox"/> O2/CO2 <input type="checkbox"/> Library Search							
Project Name/#: <u>35 COMMERCIAL STREET 170229024</u>					Data Package Required? <input checked="" type="radio"/> Yes <input type="radio"/> No		EDD Required? <input checked="" type="radio"/> Yes <input type="radio"/> No									
Project Manager: <u>GREG WYKA</u> P.O. # _____					Temperature (F)		Pressure (H _g)									
Sampler: <u>KEID BARKIND</u> Quote # _____					Start	Stop	Start	Stop								
Name of state where samples were collected: <u>NY</u>					Ambient		Maximum		Minimum							
Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field (H _g) (Start)	Canister Pressure in Field (H _g) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO-15	EPA 18	EPA 25	Helium as tracer	O2/CO2	Library Search
<u>SV01-050820</u>	<u>9:35</u>	<u>11:35</u>	<u>-29.5</u>	<u>-16.0</u>			<u>507743</u>	<u>970</u>	<u>1</u>	<u>7.0</u>	<input checked="" type="checkbox"/>					
<u>SV02-050820</u>	<u>9:52</u>	<u>11:52</u>	<u>-30.0</u>	<u>-7.0</u>			<u>301068</u>	<u>2004</u>	<u>1</u>	<u>6.2</u>	<input checked="" type="checkbox"/>					
<u>SV03-050820</u>	<u>10:10</u>	<u>11:50</u>	<u>-30.0</u>	<u>-2.0</u>			<u>507749</u>	<u>2038</u>	<u>1</u>	<u>7.1</u>	<input checked="" type="checkbox"/>					
<u>SV04-050820</u>	<u>10:37</u>	<u>11:55</u>	<u>-30.0</u>	<u>-0.0</u>			<u>415305</u>	<u>2060</u>	<u>1</u>	<u>7.0</u>	<input checked="" type="checkbox"/>					
<u>SV05-050820</u>	<u>10:26</u>	<u>12:15</u>	<u>-30.0</u>	<u>-5.0</u>			<u>210568</u>	<u>961</u>	<u>1</u>	<u>7.3</u>	<input checked="" type="checkbox"/>					
<u>SV0001-050820</u>	<u>9:52</u>	<u>11:52</u>	<u>-29.0</u>	<u>-8.0</u>			<u>710623</u>	<u>962</u>	<u>1</u>	<u>6.9</u>	<input checked="" type="checkbox"/>					
<u>AA01-050820</u>	<u>10:13</u>	<u>12:13</u>	<u>-30.0</u>	<u>-7.0</u>			<u>824855</u>	<u>1325</u>	<u>1</u>	<u>7.0</u>	<input checked="" type="checkbox"/>					
Instructions/QC Requirements & Comments: <u>EMAIL: GWYKA@LANGAN.COM</u> <u>WKIM@LANGAN.COM</u> <u>JLEUNG@LANGAN.COM</u>					EPA 25 (check one)					<input type="checkbox"/> C1 - C4 <input type="checkbox"/> C2 - C10 <input type="checkbox"/> C1 - C10 <input type="checkbox"/> C4 - C10 (GRO) <input type="checkbox"/> C2 - C4						
Canisters Shipped by: <u>Greg Wyka 5/4/20</u>	Date/Time: <u>10:23</u>	Canisters Received by: <u>Keid Barkind</u>	Date/Time: <u>5/12/20</u>	Relinquished by: <u>Keid Barkind</u>	Date/Time: <u>5/12/20 15:30</u>	Received by: <u>WYKA</u>	Date/Time: <u>5/20 15:30</u>									
Relinquished by: <u>WYKA</u>	Date/Time: <u>17:00</u>	Received by: <u>WYKA</u>	Date/Time: <u>18:00</u>	Relinquished by: <u>WYKA</u>	Date/Time: <u>8/24/20</u>	Received by: _____	Date/Time: _____									
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Relinquished by: _____	Date/Time: _____	Received by: <u>WYKA</u>	Date/Time: <u>5/8/20 20:50</u>									

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717 656 2300
The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

20-45
20-50
7056
APR 30 2020
5/10/20



Group Number(s):

Client: Langan, DPC

2090965

Delivery and Receipt Information

Delivery Method:	<u>ELLE Courier</u>	Arrival Date:	<u>05/08/2020</u>
Number of Packages:	<u>4</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>NY</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	Yes
Samples Intact:	Yes	Air Quality Flow Controllers Present:	Yes
Missing Samples:	No	Flow Controller Quantity:	7
Extra Samples:	No	Air Quality Returns:	No
Discrepancy in Container Qty on COC:	No		

Unpacked by Ann-Marie Phillips

Sample ID Discrepancy Details

<u>Sample ID on COC</u>	<u>Sample ID on Label</u>	<u>Comments</u>
SV01_050820 (Summa Can 970)	SV01_050820 (Summa Can 1325)	
SV02_050820 (Summa Can Z024)	SV02_050820 (Summa Can Z038)	
SV03_050820 (Summa Can Z038)	SV03_050820 (Summa Can 962)	
SV04_050820 (Summa Can Z060)	SV04_050820 (Summa Can Z024)	
SV05_050820 (Summa Can 961)	SV05_050820 (Summa Can 970)	
SVDUP01_050820 (Summa Can 962)	SVDUP01_050820 (Summa Can Z060)	
SV01_050820 (Summa Can 1325)	SV01_050820 (Summa Can 961)	

General Comments: Bag of summa parts

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: June 04, 2020 19:05

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2098966
SDG: CMS04
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

A previous version of this report was generated on 05/20/2020 13:16.

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
SOFB03_050820 Water	05/08/2020 14:30	1311684
SOTB03_050820 Water	05/08/2020	1311685
LB18_2-4 TCLP NVE Grab Soil	05/08/2020 13:55	1311686
LB18_6-8 TCLP NVE Grab Soil	05/08/2020 14:00	1311687
LB18_4-6 Grab Soil	05/08/2020 14:05	1311688
LB18_10-12 Grab Soil	05/08/2020 14:10	1311689
LB18_18-20 Grab Soil	05/08/2020 14:15	1311690
LB22_2-4 Grab Soil	05/08/2020 13:10	1311691
LB22_4-6 TCLP NVE Grab Soil	05/08/2020 11:50	1311692
LB22_12-14 Grab Soil	05/08/2020 13:15	1311693
LB22_18-20 Grab Soil	05/08/2020 13:25	1311694
LB18_2-4 Grab Soil	05/08/2020 13:55	1312694
LB18_6-8 Grab Soil	05/08/2020 14:00	1312695
LB22_4-6 Grab Soil	05/08/2020 11:50	1312696

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2098966

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260C, GC/MS Volatiles**

Batch #: 5201333AA (Sample number(s): 1311685)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Acetone

SW-846 8270D, GC/MS Semivolatiles

Batch #: 20132SLA026 (Sample number(s): 1311688-1311691, 1311693-1311694 UNSPK: 1311690)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Pyrene, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Hexachlorocyclopentadiene, Fluoranthene, Benzo(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, 2,4-Dinitrotoluene, Phenanthrene, Anthracene, Di-n-butylphthalate, Benzidine, Butylbenzylphthalate, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Atrazine

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Benzidine

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 1311688, 1311690, 1311691, 1311693, 1311694

Reporting limits were raised due to interference from the sample matrix.

Batch #: 20136SLB026 (Sample number(s): 1311688, 1311690-1311691, 1311693-1311694)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1311688

SW-846 8081B, Pesticides

Sample #s: 1311688

Reporting limits were raised due to interference from the sample matrix.
The LCS and/or LCSD recoveries are outside the stated QC window but within

the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Endrin

Sample #s: 1311690, 1311693, 1311694

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Endrin

Sample #s: 1311691

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram. The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance:

Batch #: 201320001A (Sample number(s): 1311688, 1311690-1311691, 1311693-1311694)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Endrin

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1311688, 1311691, 1311694

SW-846 8082A Feb 2007 Rev 1, PCBs

Batch #: 201320002A (Sample number(s): 1311691, 1311693-1311694)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1311691, 1311693

Batch #: 201330012A (Sample number(s): 1311688, 1311690)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1311688, 1311690

SW-846 8151A, Herbicides

Sample #s: 1311688

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 201320018A (Sample number(s): 1311688, 1311690-1311691, 1311693-1311694)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4,5-TP, 2,4,5-T

EPA 537 Version 1.1 Modified, LC/MS/MS Miscellaneous

Sample #s: 1311688, 1311690, 1311691

The recovery for extraction standard d3-NMeFOSAA is outside the QC acceptance limits in the continuing opening calibration verification standard.

Sample #s: 1311693, 1311694

The recovery for extraction standard d5-NEtFOSAA is outside the QC acceptance limits in the continuing closing calibration verification

standard.

SW-846 7471B, Metals

Batch #: 201331063801 (Sample number(s): 1312695 UNSPK: 1312695 BKG: 1312695)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

Batch #: 201341063801 (Sample number(s): 1312694, 1312696 UNSPK: 1312696 BKG: 1312696)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Mercury

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

SW-846 9012B, Wet Chemistry

Batch #: 20134102201A (Sample number(s): 1311690-1311691, 1311693-1311694 UNSPK: 1311691 BKG: 1311691)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Total Cyanide (solid)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Total Cyanide (solid)

Batch #: 20135102201A (Sample number(s): 1311688 UNSPK: 1311688 BKG: 1311688)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Total Cyanide (solid)

REVISED

Sample Description: SOFB03_050820 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1311684
ELLE Group #: 2098966
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:30
SDG#: CMS04-01FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.7	4.3	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.87	2.6	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.43	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.52	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.43	1.7	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	1.7	4.3	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.43	1.7	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.43	1.7	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.43	1.7	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.43	1.7	1
14473	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.43	1.7	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.43	1.7	1
14473	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.43	1.7	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	0.43	1.7	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.43	1.7	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.43	1.7	1
14473	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.43	1.7	1
14473	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.43	1.7	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.43	1.7	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.43	1.7	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.43	1.7	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20131006	05/12/2020 17:59	Marissa C Drexinger	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20131006	05/11/2020 07:27	Carmen Rodriguez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB03_050820 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1311685
ELLE Group #: 2098966
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020
SDG#: CMS04-02TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	1,4-Dioxane	123-91-1	N.D.	0.029	0.075	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB03_050820 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1311685
ELLE Group #: 2098966
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020
SDG#: CMS04-02TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	PPL/TCL VOCs	SW-846 8260C	1	5201333AA	05/12/2020 22:45	Laura Green	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201333AA	05/12/2020 22:44	Laura Green	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_2-4 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1311686
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:55
SDG#: CMS04-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	8.17	0.0071	0.0150	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201341404502	05/13/2020 23:16	Lisa J Cooke	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201341404502	05/13/2020 23:16	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:09	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201341404502	05/13/2020 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20132-9169-947	05/11/2020 13:11	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_6-8 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1311687
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:00
SDG#: CMS04-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	0.0083 J	0.0071	0.0150	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201341404502	05/13/2020 23:05	Lisa J Cooke	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201341404502	05/13/2020 23:05	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:15	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201341404502	05/13/2020 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20132-9169-947	05/11/2020 13:11	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.086	0.009	0.028	1.21
11995	Acrolein	107-02-8	N.D.	0.007	0.14	1.21
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.028	1.21
11995	Benzene	71-43-2	N.D.	0.0007	0.007	1.21
11995	Bromodichloromethane	75-27-4	N.D.	0.0006	0.007	1.21
11995	Bromoform	75-25-2	N.D.	0.007	0.014	1.21
11995	Bromomethane	74-83-9	N.D.	0.001	0.007	1.21
11995	2-Butanone	78-93-3	N.D.	0.003	0.014	1.21
11995	t-Butyl alcohol	75-65-0	0.021 J	0.021	0.14	1.21
11995	n-Butylbenzene	104-51-8	N.D.	0.004	0.011	1.21
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.007	1.21
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.007	1.21
11995	Carbon Disulfide	75-15-0	N.D.	0.0009	0.007	1.21
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0007	0.007	1.21
11995	Chlorobenzene	108-90-7	N.D.	0.0007	0.007	1.21
11995	Chloroethane	75-00-3	N.D.	0.001	0.007	1.21
11995	Chloroform	67-66-3	N.D.	0.0009	0.007	1.21
11995	Chloromethane	74-87-3	N.D.	0.0009	0.007	1.21
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0007	0.007	1.21
11995	Dibromochloromethane	124-48-1	N.D.	0.0007	0.007	1.21
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0006	0.007	1.21
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0007	0.007	1.21
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0007	0.007	1.21
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0006	0.007	1.21
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0009	0.007	1.21
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0007	0.007	1.21
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.007	1.21
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0007	0.007	1.21
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0007	0.007	1.21
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0007	0.007	1.21
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.014	1.21
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0007	0.007	1.21
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0006	0.007	1.21
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0007	0.007	1.21
11995	1,4-Dioxane	123-91-1	N.D.	0.053	0.11	1.21
11995	Ethylbenzene	100-41-4	N.D.	0.0006	0.007	1.21
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.007	1.21
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0007	0.007	1.21
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.007	1.21
11995	n-Propylbenzene	103-65-1	N.D.	0.0006	0.007	1.21
11995	Styrene	100-42-5	N.D.	0.0006	0.007	1.21

*=This limit was used in the evaluation of the final result

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0006	0.007	1.21
11995	Tetrachloroethene	127-18-4	N.D.	0.0007	0.007	1.21
11995	Toluene	108-88-3	N.D.	0.0009	0.007	1.21
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0009	0.007	1.21
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0007	0.007	1.21
11995	Trichloroethene	79-01-6	N.D.	0.0007	0.007	1.21
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.007	1.21
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0007	0.007	1.21
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0007	0.007	1.21
11995	Vinyl Chloride	75-01-4	N.D.	0.0009	0.007	1.21
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.014	1.21
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	3.9	0.004	0.019	1
10726	Acenaphthylene	208-96-8	0.27	0.004	0.019	1
10726	Acetophenone	98-86-2	0.046 J	0.019	0.058	1
10726	Anthracene	120-12-7	7.4	0.039	0.19	10
10726	Atrazine	1912-24-9	N.D.	0.23	0.51	1
10726	Benzaldehyde	100-52-7	N.D.	0.078	0.19	1
10726	Benzidine	92-87-5	N.D.	0.39	1.2	1
10726	Benzo(a)anthracene	56-55-3	18	0.078	0.19	10
10726	Benzo(a)pyrene	50-32-8	15	0.039	0.19	10
10726	Benzo(b)fluoranthene	205-99-2	20	0.039	0.19	10
10726	Benzo(g,h,i)perylene	191-24-2	10	0.039	0.19	10
10726	Benzo(k)fluoranthene	207-08-9	4.5	0.004	0.019	1
10726	1,1'-Biphenyl	92-52-4	0.45	0.019	0.043	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.078	0.19	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.078	0.19	1
10726	Caprolactam	105-60-2	N.D.	0.039	0.19	1
10726	Carbazole	86-74-8	5.6	0.19	0.43	10
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.027	0.058	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.023	0.051	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.039	1
10726	2-Chlorophenol	95-57-8	N.D.	0.019	0.043	1
10726	Chrysene	218-01-9	18	0.039	0.19	10
10726	Dibenz(a,h)anthracene	53-70-3	3.1	0.008	0.019	1
10726	Dibenzofuran	132-64-9	3.3	0.019	0.043	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.019	0.058	1

*=This limit was used in the evaluation of the final result

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.019	0.043	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.019	0.043	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.39	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.023	0.051	1
10726	Diethylphthalate	84-66-2	N.D.	0.078	0.19	1
10726	2,4-Dimethylphenol	105-67-9	0.035 J	0.035	0.078	1
10726	Dimethylphthalate	131-11-3	N.D.	0.078	0.19	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.27	0.58	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.39	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.078	0.19	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.027	0.058	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.027	0.058	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.023	0.051	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.078	0.19	1
10726	Fluoranthene	206-44-0	49	0.19	0.97	50
10726	Fluorene	86-73-7	4.0	0.004	0.019	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.019	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.043	0.090	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.23	0.58	1
10726	Hexachloroethane	67-72-1	N.D.	0.039	0.19	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	9.2	0.039	0.19	10
10726	Isophorone	78-59-1	N.D.	0.019	0.043	1
10726	2-Methylnaphthalene	91-57-6	1.5	0.004	0.039	1
10726	2-Methylphenol	95-48-7	0.021 J	0.019	0.078	1
10726	4-Methylphenol	106-44-5	0.062	0.019	0.058	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	3.0	0.008	0.019	1
10726	2-Nitroaniline	88-74-4	N.D.	0.019	0.058	1
10726	Nitrobenzene	98-95-3	N.D.	0.031	0.078	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.078	0.19	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.027	0.058	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.019	0.043	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.078	0.19	1
10726	Pentachlorophenol	87-86-5	N.D.	0.078	0.19	1
10726	Phenanthrene	85-01-8	54	0.19	0.97	50

*=This limit was used in the evaluation of the final result

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.019	0.043	1
10726	Pyrene	129-00-0	40	0.039	0.19	10
10726	Pyridine	110-86-1	N.D.	0.078	0.19	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.027	0.058	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.035	0.078	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.031	0.066	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	8	19	10

Reporting limits were raised due to interference from the sample matrix.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D2	0.014	0.042	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00096	0.0020	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00088	0.0020	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0042	0.020	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0054	0.020	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0094	0.020	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0039	0.020	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0039	0.020	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0039	0.020	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0058	0.020	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0039	0.020	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D1	0.040	0.19	200
10590	Alpha BHC	319-84-6	N.D. D1	0.040	0.19	200
10590	Beta BHC	319-85-7	N.D. D1	0.10	0.35	200
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.049	0.19	200
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.040	0.19	200
10590	4,4'-Ddd	72-54-8	N.D. D1	0.077	0.47	200
10590	4,4'-Dde	72-55-9	N.D. D1	0.077	0.47	200
10590	4,4'-Ddt	50-29-3	N.D. D1	0.19	0.47	200
10590	Delta BHC	319-86-8	N.D. D1	0.11	0.35	200
10590	Dieldrin	60-57-1	N.D. D1	0.077	0.47	200
10590	Endosulfan I	959-98-8	N.D. D1	0.052	0.19	200

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			mg/kg	mg/kg	mg/kg	
10590	Endosulfan II	33213-65-9	N.D. D2	0.26	0.47	200
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.077	0.47	200
10590	Endrin	72-20-8	N.D. D1	0.16	0.47	200
10590	Heptachlor	76-44-8	N.D. D1	0.073	0.19	200

Reporting limits were raised due to interference from the sample matrix.
The LCS and/or LCS/D recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Endrin

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.66	2.2	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.66	3.3	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.22	2.2	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.22	2.2	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.44	2.2	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.88	2.2	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.22	0.66	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.22	0.66	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.22	0.66	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.22	0.66	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.22	0.66	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.22	0.66	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.22	0.66	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.22	0.66	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.22	0.66	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.22	0.66	1
14027	Perfluorooctanoic acid ¹	335-67-1	1.7	0.22	0.66	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.22	0.66	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.22	0.66	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.22	0.66	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.22	0.66	1

The recovery for extraction standard d3-NMeFOSAA is outside the QC acceptance limits in the continuing opening calibration verification standard.

Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	16.5	0.142	0.424	2
06126	Barium	7440-39-3	484	1.94	4.24	20

*=This limit was used in the evaluation of the final result

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06127	Beryllium	7440-41-7	0.325	0.0253	0.0637	2
06128	Cadmium	7440-43-9	0.185	0.0535	0.106	2
06131	Chromium	7440-47-3	25.0	0.163	0.424	2
02829	Trivalent Chromium soils ¹	16065-83-1	24.1	0.16	0.49	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	54.9	0.186	0.424	2
06135	Lead	7439-92-1	591	0.535	2.12	20
06137	Manganese	7439-96-5	206	1.14	2.12	10
06139	Nickel	7440-02-0	20.0	0.173	0.424	2
06141	Selenium	7782-49-2	1.39	0.138	0.424	2
06142	Silver	7440-22-4	0.130	0.0431	0.106	2
06149	Zinc	7440-66-6	152	2.84	10.6	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.15	0.0447	0.196	2.5
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	0.43 J	0.21	0.59	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	0.85	0.16	0.49	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	15.1	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201321AA	05/12/2020 01:18	Joel Trout	1.21
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012956771	05/08/2020 22:51	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012956771	05/08/2020 22:51	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012956771	05/08/2020 14:05	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/13/2020 22:14	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/14/2020 13:19	William H Saadeh	10
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/14/2020 14:05	William H Saadeh	50
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 11:15	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20132SLA026	05/11/2020 17:00	Scott Crawford	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201320018A	05/12/2020 13:10	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201330012A	05/13/2020 08:41	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201320001A	05/12/2020 14:57	Lisa A Reinert	200
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201330012A	05/12/2020 17:20	Scott Crawford	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201320001A	05/11/2020 17:00	Scott Crawford	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201320018A	05/11/2020 20:33	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20134016	05/13/2020 20:32	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	20134016	05/13/2020 15:30	Isaac Phillips-Cary	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:52	Janeyah Rivers-Hamilton	20
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201350282901	05/14/2020 16:36	Tshina Alamos	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:52	Janeyah Rivers-Hamilton	20
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:36	Janeyah Rivers-Hamilton	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:22	Janeyah Rivers-Hamilton	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311688
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:05
SDG#: CMS04-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:06	Janeyah Rivers-Hamilton	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:36	Janeyah Rivers-Hamilton	10
00159	Mercury	SW-846 7471B	1	201311063801	05/11/2020 10:27	Damary Valentin	2.5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201311404902	05/11/2020 04:35	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201311063801	05/11/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20135102201A	05/14/2020 12:25	Jonathan Saul	1
05896	Cyanide Solid Distillation	SW-846 9012B	2	20135102201A	05/14/2020 08:10	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20132042501A	05/11/2020 21:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20132042501A	05/11/2020 09:40	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820002A	05/11/2020 09:59	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311689
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:10
SDG#: CMS04-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
	SW-846 8270D					
10726	Acenaphthene	83-32-9	0.065	0.004	0.020	1
10726	Acenaphthylene	208-96-8	0.038	0.004	0.020	1
10726	Acetophenone	98-86-2	N.D.	0.020	0.059	1
10726	Anthracene	120-12-7	0.20	0.004	0.020	1
10726	Atrazine	1912-24-9	N.D.	0.24	0.51	1
10726	Benzaldehyde	100-52-7	N.D.	0.079	0.20	1
10726	Benzidine	92-87-5	N.D.	0.39	1.2	1
10726	Benzo(a)anthracene	56-55-3	0.47	0.008	0.020	1
10726	Benzo(a)pyrene	50-32-8	0.41	0.004	0.020	1
10726	Benzo(b)fluoranthene	205-99-2	0.52	0.004	0.020	1
10726	Benzo(g,h,i)perylene	191-24-2	0.26	0.004	0.020	1
10726	Benzo(k)fluoranthene	207-08-9	0.19	0.004	0.020	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.020	0.043	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.079	0.20	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.079	0.20	1
10726	Caprolactam	105-60-2	N.D.	0.039	0.20	1
10726	Carbazole	86-74-8	0.080	0.020	0.043	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.028	0.059	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.024	0.051	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.039	1
10726	2-Chlorophenol	95-57-8	N.D.	0.020	0.043	1
10726	Chrysene	218-01-9	0.47	0.004	0.020	1
10726	Dibenz(a,h)anthracene	53-70-3	0.075	0.008	0.020	1
10726	Dibenzofuran	132-64-9	0.045	0.020	0.043	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.020	0.059	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.020	0.043	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.020	0.043	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.39	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.024	0.051	1
10726	Diethylphthalate	84-66-2	N.D.	0.079	0.20	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.035	0.079	1
10726	Dimethylphthalate	131-11-3	N.D.	0.079	0.20	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.28	0.59	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.39	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.079	0.20	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.028	0.059	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.028	0.059	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.024	0.051	1

*=This limit was used in the evaluation of the final result

Sample Description: LB18_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311689
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:10
SDG#: CMS04-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.079	0.20	1
10726	Fluoranthene	206-44-0	0.98	0.004	0.020	1
10726	Fluorene	86-73-7	0.073	0.004	0.020	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.020	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.043	0.091	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.24	0.59	1
10726	Hexachloroethane	67-72-1	N.D.	0.039	0.20	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.23	0.004	0.020	1
10726	Isophorone	78-59-1	N.D.	0.020	0.043	1
10726	2-Methylnaphthalene	91-57-6	0.023 J	0.004	0.039	1
10726	2-Methylphenol	95-48-7	N.D.	0.020	0.079	1
10726	4-Methylphenol	106-44-5	N.D.	0.020	0.059	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.049	0.008	0.020	1
10726	2-Nitroaniline	88-74-4	N.D.	0.020	0.059	1
10726	Nitrobenzene	98-95-3	N.D.	0.032	0.079	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.079	0.20	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.028	0.059	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.020	0.043	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.079	0.20	1
10726	Pentachlorophenol	87-86-5	N.D.	0.079	0.20	1
10726	Phenanthrene	85-01-8	0.99	0.004	0.020	1
10726	Phenol	108-95-2	N.D.	0.020	0.043	1
10726	Pyrene	129-00-0	1.0	0.004	0.020	1
10726	Pyridine	110-86-1	N.D.	0.079	0.20	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.028	0.059	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.035	0.079	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.032	0.067	1
Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	15.9	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311689
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:10
SDG#: CMS04-06

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/13/2020 22:37	William H Saadeh	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20132SLA026	05/11/2020 17:00	Scott Crawford	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820002A	05/11/2020 09:59	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.057	0.006	0.019	0.76
11995	Acrolein	107-02-8	N.D.	0.005	0.095	0.76
11995	Acrylonitrile	107-13-1	N.D.	0.0008	0.019	0.76
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.76
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.76
11995	Bromoform	75-25-2	N.D.	0.005	0.009	0.76
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.76
11995	2-Butanone	78-93-3	0.004 J	0.002	0.009	0.76
11995	t-Butyl alcohol	75-65-0	N.D.	0.014	0.095	0.76
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.008	0.76
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.76
11995	tert-Butylbenzene	98-06-6	N.D.	0.0008	0.005	0.76
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.76
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.76
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.76
11995	Chloroethane	75-00-3	N.D.	0.0009	0.005	0.76
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.76
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.76
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.76
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.76
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.76
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.76
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.76
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.76
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.76
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.76
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.76
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.76
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0009	0.009	0.76
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.76
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.76
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.76
11995	1,4-Dioxane	123-91-1	N.D.	0.035	0.071	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.76
11995	Methyl Acetate	79-20-9	N.D.	0.0009	0.005	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	0.0007 J	0.0005	0.005	0.76
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.76
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.76
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.76

*=This limit was used in the evaluation of the final result

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.76
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.76
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.76
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.76
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.76
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.76
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.76
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.76
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.76
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.009	0.76
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	N.D.	0.004	0.021	1
10726	Acenaphthylene	208-96-8	0.005 J	0.004	0.021	1
10726	Acetophenone	98-86-2	N.D.	0.021	0.062	1
10726	Anthracene	120-12-7	0.01 J	0.004	0.021	1
10726	Atrazine	1912-24-9	N.D.	0.25	0.54	1
10726	Benzaldehyde	100-52-7	N.D.	0.082	0.21	1
10726	Benzidine	92-87-5	N.D.	0.41	1.2	1
10726	Benzo(a)anthracene	56-55-3	0.026	0.008	0.021	1
10726	Benzo(a)pyrene	50-32-8	0.015 J	0.004	0.021	1
10726	Benzo(b)fluoranthene	205-99-2	0.017 J	0.004	0.021	1
10726	Benzo(g,h,i)perylene	191-24-2	0.007 J	0.004	0.021	1
10726	Benzo(k)fluoranthene	207-08-9	0.009 J	0.004	0.021	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.021	0.045	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.082	0.21	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.082	0.21	1
10726	Caprolactam	105-60-2	N.D.	0.041	0.21	1
10726	Carbazole	86-74-8	N.D.	0.021	0.045	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.029	0.062	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.025	0.054	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.041	1
10726	2-Chlorophenol	95-57-8	N.D.	0.021	0.045	1
10726	Chrysene	218-01-9	0.025	0.004	0.021	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.008	0.021	1
10726	Dibenzofuran	132-64-9	N.D.	0.021	0.045	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.021	0.062	1

*=This limit was used in the evaluation of the final result

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.021	0.045	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.021	0.045	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.41	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.025	0.054	1
10726	Diethylphthalate	84-66-2	N.D.	0.082	0.21	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.037	0.082	1
10726	Dimethylphthalate	131-11-3	N.D.	0.082	0.21	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.29	0.62	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.41	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.082	0.21	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.029	0.062	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.029	0.062	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.025	0.054	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.082	0.21	1
10726	Fluoranthene	206-44-0	0.053	0.004	0.021	1
10726	Fluorene	86-73-7	0.006 J	0.004	0.021	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.021	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.045	0.095	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.25	0.62	1
10726	Hexachloroethane	67-72-1	N.D.	0.041	0.21	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.008 J	0.004	0.021	1
10726	Isophorone	78-59-1	N.D.	0.021	0.045	1
10726	2-Methylnaphthalene	91-57-6	N.D.	0.004	0.041	1
10726	2-Methylphenol	95-48-7	N.D.	0.021	0.082	1
10726	4-Methylphenol	106-44-5	N.D.	0.021	0.062	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	N.D.	0.008	0.021	1
10726	2-Nitroaniline	88-74-4	N.D.	0.021	0.062	1
10726	Nitrobenzene	98-95-3	N.D.	0.033	0.082	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.082	0.21	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.029	0.062	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.021	0.045	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.082	0.21	1
10726	Pentachlorophenol	87-86-5	N.D.	0.082	0.21	1
10726	Phenanthrene	85-01-8	0.034	0.004	0.021	1

*=This limit was used in the evaluation of the final result

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.021	0.045	1
10726	Pyrene	129-00-0	0.056	0.004	0.021	1
10726	Pyridine	110-86-1	N.D.	0.082	0.21	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.029	0.062	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.037	0.082	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.033	0.070	1
GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	8	21	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D1	0.015	0.044	1
10401	2,4,5-T	93-76-5	N.D. D2	0.0010	0.0021	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00093	0.0021	1
PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0044	0.021	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0057	0.021	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0099	0.021	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0041	0.021	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0041	0.021	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0041	0.021	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0061	0.021	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0041	0.021	1
Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D1	0.00021	0.0010	1
10590	Alpha BHC	319-84-6	0.0011 PD1	0.00021	0.0010	1
10590	Beta BHC	319-85-7	N.D. D1	0.00054	0.0019	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.00026	0.0010	1
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.00021	0.0010	1
10590	4,4'-Ddd	72-54-8	N.D. D1	0.00041	0.0025	1
10590	4,4'-Dde	72-55-9	N.D. D1	0.00041	0.0025	1
10590	4,4'-Ddt	50-29-3	N.D. D1	0.00098	0.0025	1
10590	Delta BHC	319-86-8	N.D. D1	0.00056	0.0019	1
10590	Dieldrin	60-57-1	N.D. D1	0.00041	0.0025	1
10590	Endosulfan I	959-98-8	N.D. D1	0.00027	0.0010	1
10590	Endosulfan II	33213-65-9	N.D. D2	0.0014	0.0025	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.00041	0.0025	1
10590	Endrin	72-20-8	N.D. D1	0.00084	0.0025	1

*=This limit was used in the evaluation of the final result

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides						
	SW-846 8081B		mg/kg	mg/kg	mg/kg	
10590	Heptachlor	76-44-8	N.D. D1	0.00038	0.0010	1
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Endrin						
LC/MS/MS Miscellaneous						
	EPA 537 Version 1.1 Modified		ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.70	2.3	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.70	3.5	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.23	2.3	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.23	2.3	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.47	2.3	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.94	2.3	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.23	0.70	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.23	0.70	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.23	0.70	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.23	0.70	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.23	0.70	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.23	0.70	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.23	0.70	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.23	0.70	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.23	0.70	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.23	0.70	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.23	0.70	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.23	0.70	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.23	0.70	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.23	0.70	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.23	0.70	1

The recovery for extraction standard d3-NMeFOSAA is outside the QC acceptance limits in the continuing opening calibration verification standard.

Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	5.37	0.154	0.459	2
06126	Barium	7440-39-3	30.3	0.210	0.459	2
06127	Beryllium	7440-41-7	0.426	0.0273	0.0689	2
06128	Cadmium	7440-43-9	0.361	0.0579	0.115	2
06131	Chromium	7440-47-3	14.0	0.177	0.459	2
02829	Trivalent Chromium soils ¹	16065-83-1	11.5	0.18	0.53	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	14.7	0.202	0.459	2
06135	Lead	7439-92-1	10.9	0.0579	0.230	2
06137	Manganese	7439-96-5	207	0.614	1.15	5
06139	Nickel	7440-02-0	16.1	0.187	0.459	2
06141	Selenium	7782-49-2	0.156 J	0.150	0.459	2
06142	Silver	7440-22-4	N.D.	0.0466	0.115	2
06149	Zinc	7440-66-6	167	1.54	5.74	5
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0679 J	0.0175	0.0770	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.23	0.65	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	2.4	0.18	0.53	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	20.1	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:15
SDG#: CMS04-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201321AA	05/11/2020 23:27	Joel Trout	0.76
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012956771	05/08/2020 22:51	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012956771	05/08/2020 22:51	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012956771	05/08/2020 14:15	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/13/2020 23:00	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 11:47	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20132SLA026	05/11/2020 17:00	Scott Crawford	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201320018A	05/12/2020 13:43	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201330012A	05/13/2020 08:52	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201320001A	05/12/2020 15:11	Lisa A Reinert	1
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201330012A	05/12/2020 17:20	Scott Crawford	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201320001A	05/11/2020 17:00	Scott Crawford	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201320018A	05/11/2020 20:33	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20134016	05/13/2020 20:59	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	20134016	05/13/2020 15:30	Isaac Phillips-Cary	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201350282901	05/14/2020 16:37	Tshina Alamos	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:17	Janeyah Rivers-Hamilton	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:24	Janeyah Rivers-Hamilton	5
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:39	Janeyah Rivers-Hamilton	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:17	Janeyah Rivers-Hamilton	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:24	Janeyah Rivers-Hamilton	5

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311690
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50

Collection Date/Time: 05/08/2020 14:15

SDG#: CMS04-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	201311063801	05/11/2020 10:24	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201311404902	05/11/2020 04:35	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201311063801	05/11/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20134102201A	05/13/2020 22:55	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20134102201A	05/13/2020 16:45	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20132042501A	05/11/2020 21:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20132042501A	05/11/2020 09:40	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820002A	05/11/2020 09:59	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
		SW-846 8260C				
11995	Acetone	67-64-1	0.090	0.008	0.025	1.13
11995	Acrolein	107-02-8	N.D.	0.006	0.13	1.13
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.025	1.13
11995	Benzene	71-43-2	N.D.	0.0006	0.006	1.13
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.006	1.13
11995	Bromoform	75-25-2	N.D.	0.006	0.013	1.13
11995	Bromomethane	74-83-9	N.D.	0.0009	0.006	1.13
11995	2-Butanone	78-93-3	0.005 J	0.003	0.013	1.13
11995	t-Butyl alcohol	75-65-0	N.D.	0.019	0.13	1.13
11995	n-Butylbenzene	104-51-8	N.D.	0.004	0.010	1.13
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.006	1.13
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.006	1.13
11995	Carbon Disulfide	75-15-0	N.D.	0.0008	0.006	1.13
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.006	1.13
11995	Chlorobenzene	108-90-7	N.D.	0.0006	0.006	1.13
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	1.13
11995	Chloroform	67-66-3	N.D.	0.0008	0.006	1.13
11995	Chloromethane	74-87-3	N.D.	0.0008	0.006	1.13
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.006	1.13
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.006	1.13
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.006	1.13
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0006	0.006	1.13
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0006	0.006	1.13
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.006	1.13
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0008	0.006	1.13
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0006	0.006	1.13
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0008	0.006	1.13
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0006	0.006	1.13
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0006	0.006	1.13
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0006	0.006	1.13
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.013	1.13
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0006	0.006	1.13
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.006	1.13
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0006	0.006	1.13
11995	1,4-Dioxane	123-91-1	N.D.	0.047	0.095	1.13
11995	Ethylbenzene	100-41-4	N.D.	0.0005	0.006	1.13
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.006	1.13
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.006	1.13
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.006	1.13
11995	n-Propylbenzene	103-65-1	N.D.	0.0005	0.006	1.13
11995	Styrene	100-42-5	N.D.	0.0005	0.006	1.13

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.006	1.13
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.006	1.13
11995	Toluene	108-88-3	N.D.	0.0008	0.006	1.13
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	0.006	1.13
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0006	0.006	1.13
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.006	1.13
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0009	0.006	1.13
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0006	0.006	1.13
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0006	0.006	1.13
11995	Vinyl Chloride	75-01-4	N.D.	0.0008	0.006	1.13
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.013	1.13
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.36	0.004	0.019	1
10726	Acenaphthylene	208-96-8	0.10	0.004	0.019	1
10726	Acetophenone	98-86-2	N.D.	0.019	0.056	1
10726	Anthracene	120-12-7	0.82	0.004	0.019	1
10726	Atrazine	1912-24-9	N.D.	0.22	0.48	1
10726	Benzaldehyde	100-52-7	N.D.	0.074	0.19	1
10726	Benzidine	92-87-5	N.D.	0.37	1.1	1
10726	Benzo(a)anthracene	56-55-3	2.5	0.007	0.019	1
10726	Benzo(a)pyrene	50-32-8	2.8	0.004	0.019	1
10726	Benzo(b)fluoranthene	205-99-2	3.1	0.004	0.019	1
10726	Benzo(g,h,i)perylene	191-24-2	2.0	0.004	0.019	1
10726	Benzo(k)fluoranthene	207-08-9	1.3	0.004	0.019	1
10726	1,1'-Biphenyl	92-52-4	0.047	0.019	0.041	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.074	0.19	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.074	0.19	1
10726	Caprolactam	105-60-2	N.D.	0.037	0.19	1
10726	Carbazole	86-74-8	0.36	0.019	0.041	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.026	0.056	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.022	0.048	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.007	0.037	1
10726	2-Chlorophenol	95-57-8	N.D.	0.019	0.041	1
10726	Chrysene	218-01-9	2.4	0.004	0.019	1
10726	Dibenz(a,h)anthracene	53-70-3	0.56	0.007	0.019	1
10726	Dibenzofuran	132-64-9	0.24	0.019	0.041	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.019	0.056	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.019	0.041	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.019	0.041	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.37	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.022	0.048	1
10726	Diethylphthalate	84-66-2	N.D.	0.074	0.19	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.033	0.074	1
10726	Dimethylphthalate	131-11-3	N.D.	0.074	0.19	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.26	0.56	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.37	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.074	0.19	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.026	0.056	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.026	0.056	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.022	0.048	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.074	0.19	1
10726	Fluoranthene	206-44-0	5.5	0.037	0.19	10
10726	Fluorene	86-73-7	0.30	0.004	0.019	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.007	0.019	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.041	0.086	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.22	0.56	1
10726	Hexachloroethane	67-72-1	N.D.	0.037	0.19	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1.8	0.004	0.019	1
10726	Isophorone	78-59-1	N.D.	0.019	0.041	1
10726	2-Methylnaphthalene	91-57-6	0.099	0.004	0.037	1
10726	2-Methylphenol	95-48-7	N.D.	0.019	0.074	1
10726	4-Methylphenol	106-44-5	N.D.	0.019	0.056	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.21	0.007	0.019	1
10726	2-Nitroaniline	88-74-4	N.D.	0.019	0.056	1
10726	Nitrobenzene	98-95-3	N.D.	0.030	0.074	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.074	0.19	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.026	0.056	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.019	0.041	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.074	0.19	1
10726	Pentachlorophenol	87-86-5	N.D.	0.074	0.19	1
10726	Phenanthrene	85-01-8	3.1	0.004	0.019	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.019	0.041	1
10726	Pyrene	129-00-0	4.4	0.004	0.019	1
10726	Pyridine	110-86-1	N.D.	0.074	0.19	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.026	0.056	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.033	0.074	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.030	0.063	1
GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	7	18	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D1	0.013	0.040	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00091	0.0019	1
10401	2,4,5-TP	93-72-1	N.D. D1	0.00083	0.0019	1
PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0040	0.019	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0051	0.019	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0088	0.019	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0036	0.019	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0036	0.019	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0036	0.019	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0054	0.019	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0036	0.019	1
Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	0.0014 D1	0.00019	0.00092	1
10590	Alpha BHC	319-84-6	0.013 D2	0.00094	0.0046	5
10590	Beta BHC	319-85-7	N.D. D1	0.00049	0.0017	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.00023	0.00092	1
10590	Alpha Chlordane	5103-71-9	N.D. VD1	0.0020	0.0020	1
10590	4,4'-Ddd	72-54-8	N.D. VD1	0.00050	0.0022	1
10590	4,4'-Dde	72-55-9	N.D. D1	0.00036	0.0022	1
10590	4,4'-Ddt	50-29-3	N.D. D1	0.00087	0.0022	1
10590	Delta BHC	319-86-8	N.D. D1	0.00050	0.0017	1
10590	Dieldrin	60-57-1	N.D. D1	0.00036	0.0022	1
10590	Endosulfan I	959-98-8	N.D. D1	0.00024	0.00092	1
10590	Endosulfan II	33213-65-9	N.D. D2	0.0012	0.0022	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.00036	0.0022	1
10590	Endrin	72-20-8	N.D. D1	0.00075	0.0022	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Heptachlor	76-44-8	N.D. D1	0.00034	0.00092	1

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram. The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance:

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.67	2.2	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.67	3.4	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.22	2.2	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.22	2.2	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.45	2.2	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.89	2.2	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.22	0.67	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.22	0.67	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.22	0.67	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.22	0.67	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.22	0.67	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.22	0.67	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.22	0.67	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.22	0.67	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.22	0.67	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.22	0.67	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.22	0.67	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.22	0.67	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.22	0.67	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.22	0.67	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.22	0.67	1

The recovery for extraction standard d3-NMeFOSAA is outside the QC acceptance limits in the continuing opening calibration verification standard.

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	14.3	0.147	0.439	2
06126	Barium	7440-39-3	136	1.00	2.19	10
06127	Beryllium	7440-41-7	0.507	0.0261	0.0658	2
06128	Cadmium	7440-43-9	0.739	0.0553	0.110	2

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06131	Chromium	7440-47-3	25.7	0.169	0.439	2
02829	Trivalent Chromium soils ¹	16065-83-1	25.7	0.17	0.47	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	108	0.963	2.19	10
06135	Lead	7439-92-1	325	0.276	1.10	10
06137	Manganese	7439-96-5	305	1.17	2.19	10
06139	Nickel	7440-02-0	21.3	0.179	0.439	2
06141	Selenium	7782-49-2	0.672	0.143	0.439	2
06142	Silver	7440-22-4	0.249	0.0445	0.110	2
06149	Zinc	7440-66-6	275	2.94	11.0	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.588	0.0170	0.0746	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	0.24 J	0.21	0.58	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.16	0.47	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	10.6	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201321AA	05/11/2020 23:49	Joel Trout	1.13
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012956771	05/08/2020 22:51	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012956771	05/08/2020 22:51	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012956771	05/08/2020 13:10	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/14/2020 00:08	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/14/2020 13:42	William H Saadeh	10
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 12:17	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20132SLA026	05/11/2020 17:00	Scott Crawford	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201320018A	05/12/2020 14:16	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201320002A	05/12/2020 08:33	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201320001A	05/12/2020 15:25	Lisa A Reinert	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201320001A	05/13/2020 22:32	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201320002A	05/11/2020 17:00	Scott Crawford	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201320001A	05/11/2020 17:00	Scott Crawford	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201320018A	05/11/2020 20:33	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20134016	05/13/2020 21:08	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	20134016	05/13/2020 15:30	Isaac Phillips-Cary	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:34	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:40	Janeyah Rivers-Hamilton	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:34	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:34	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:34	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201350282901	05/14/2020 16:38	Tshina Alamos	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:40	Janeyah Rivers-Hamilton	10
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:40	Janeyah Rivers-Hamilton	10
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:40	Janeyah Rivers-Hamilton	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:34	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:34	Janeyah Rivers-Hamilton	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311691
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:10
SDG#: CMS04-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:11	Janeyah Rivers-Hamilton	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:40	Janeyah Rivers-Hamilton	10
00159	Mercury	SW-846 7471B	1	201311063801	05/11/2020 10:15	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201311404902	05/11/2020 04:35	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201311063801	05/11/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20134102201A	05/13/2020 22:57	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20134102201A	05/13/2020 16:45	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20132042501A	05/11/2020 21:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20132042501A	05/11/2020 09:40	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820002A	05/11/2020 09:59	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_4-6 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1311692
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 11:50
SDG#: CMS04-09

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	9.01	0.0071	0.0150	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201341404502	05/13/2020 23:12	Lisa J Cooke	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201341404502	05/13/2020 23:12	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:17	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201341404502	05/13/2020 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20132-9169-947	05/11/2020 13:11	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
		SW-846 8260C				
11995	Acetone	67-64-1	0.18	0.008	0.028	1.11
11995	Acrolein	107-02-8	N.D.	0.007	0.14	1.11
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.028	1.11
11995	Benzene	71-43-2	N.D.	0.0007	0.007	1.11
11995	Bromodichloromethane	75-27-4	N.D.	0.0006	0.007	1.11
11995	Bromoform	75-25-2	N.D.	0.007	0.014	1.11
11995	Bromomethane	74-83-9	N.D.	0.001	0.007	1.11
11995	2-Butanone	78-93-3	N.D.	0.003	0.014	1.11
11995	t-Butyl alcohol	75-65-0	0.051 J	0.021	0.14	1.11
11995	n-Butylbenzene	104-51-8	N.D.	0.004	0.011	1.11
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.007	1.11
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.007	1.11
11995	Carbon Disulfide	75-15-0	N.D.	0.0008	0.007	1.11
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0007	0.007	1.11
11995	Chlorobenzene	108-90-7	N.D.	0.0007	0.007	1.11
11995	Chloroethane	75-00-3	N.D.	0.001	0.007	1.11
11995	Chloroform	67-66-3	N.D.	0.0008	0.007	1.11
11995	Chloromethane	74-87-3	N.D.	0.0008	0.007	1.11
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0007	0.007	1.11
11995	Dibromochloromethane	124-48-1	N.D.	0.0007	0.007	1.11
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0006	0.007	1.11
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0007	0.007	1.11
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0007	0.007	1.11
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0006	0.007	1.11
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0008	0.007	1.11
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0007	0.007	1.11
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0008	0.007	1.11
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0007	0.007	1.11
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0007	0.007	1.11
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0007	0.007	1.11
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.014	1.11
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0007	0.007	1.11
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0006	0.007	1.11
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0007	0.007	1.11
11995	1,4-Dioxane	123-91-1	N.D.	0.051	0.10	1.11
11995	Ethylbenzene	100-41-4	N.D.	0.0006	0.007	1.11
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.007	1.11
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0007	0.007	1.11
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.007	1.11
11995	n-Propylbenzene	103-65-1	N.D.	0.0006	0.007	1.11
11995	Styrene	100-42-5	N.D.	0.0006	0.007	1.11

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0006	0.007	1.11
11995	Tetrachloroethene	127-18-4	N.D.	0.0007	0.007	1.11
11995	Toluene	108-88-3	N.D.	0.0008	0.007	1.11
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	0.007	1.11
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0007	0.007	1.11
11995	Trichloroethene	79-01-6	N.D.	0.0007	0.007	1.11
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.007	1.11
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0007	0.007	1.11
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0007	0.007	1.11
11995	Vinyl Chloride	75-01-4	N.D.	0.0008	0.007	1.11
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.014	1.11
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	0.005 J	0.004	0.020	1
10726	Acenaphthylene	208-96-8	0.005 J	0.004	0.020	1
10726	Acetophenone	98-86-2	N.D.	0.020	0.061	1
10726	Anthracene	120-12-7	0.006 J	0.004	0.020	1
10726	Atrazine	1912-24-9	N.D.	0.25	0.53	1
10726	Benzaldehyde	100-52-7	N.D.	0.082	0.20	1
10726	Benzidine	92-87-5	N.D.	0.41	1.2	1
10726	Benzo(a)anthracene	56-55-3	0.012 J	0.008	0.020	1
10726	Benzo(a)pyrene	50-32-8	0.009 J	0.004	0.020	1
10726	Benzo(b)fluoranthene	205-99-2	0.012 J	0.004	0.020	1
10726	Benzo(g,h,i)perylene	191-24-2	0.005 J	0.004	0.020	1
10726	Benzo(k)fluoranthene	207-08-9	0.006 J	0.004	0.020	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.020	0.045	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.082	0.20	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.082	0.20	1
10726	Caprolactam	105-60-2	N.D.	0.041	0.20	1
10726	Carbazole	86-74-8	N.D.	0.020	0.045	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.029	0.061	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.025	0.053	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.041	1
10726	2-Chlorophenol	95-57-8	N.D.	0.020	0.045	1
10726	Chrysene	218-01-9	0.013 J	0.004	0.020	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.008	0.020	1
10726	Dibenzofuran	132-64-9	N.D.	0.020	0.045	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.020	0.061	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.020	0.045	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.020	0.045	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.41	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.025	0.053	1
10726	Diethylphthalate	84-66-2	N.D.	0.082	0.20	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.037	0.082	1
10726	Dimethylphthalate	131-11-3	N.D.	0.082	0.20	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.29	0.61	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.41	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.082	0.20	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.029	0.061	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.029	0.061	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.025	0.053	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.082	0.20	1
10726	Fluoranthene	206-44-0	0.022	0.004	0.020	1
10726	Fluorene	86-73-7	0.006 J	0.004	0.020	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.020	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.045	0.094	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.25	0.61	1
10726	Hexachloroethane	67-72-1	N.D.	0.041	0.20	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.004 J	0.004	0.020	1
10726	Isophorone	78-59-1	N.D.	0.020	0.045	1
10726	2-Methylnaphthalene	91-57-6	0.012 J	0.004	0.041	1
10726	2-Methylphenol	95-48-7	N.D.	0.020	0.082	1
10726	4-Methylphenol	106-44-5	N.D.	0.020	0.061	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.016 J	0.008	0.020	1
10726	2-Nitroaniline	88-74-4	N.D.	0.020	0.061	1
10726	Nitrobenzene	98-95-3	N.D.	0.033	0.082	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.082	0.20	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.029	0.061	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.020	0.045	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.082	0.20	1
10726	Pentachlorophenol	87-86-5	N.D.	0.082	0.20	1
10726	Phenanthrene	85-01-8	0.017 J	0.004	0.020	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.020	0.045	1
10726	Pyrene	129-00-0	0.022	0.004	0.020	1
10726	Pyridine	110-86-1	N.D.	0.082	0.20	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.029	0.061	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.037	0.082	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.033	0.070	1

GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	8	20	10

Reporting limits were raised due to interference from the sample matrix.

Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D2	0.015	0.044	1
10401	2,4,5-T	93-76-5	N.D. D2	0.0010	0.0021	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00093	0.0021	1

PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0044	0.021	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0056	0.021	1
10885	PCB-1232	11141-16-5	N.D. D1	0.0098	0.021	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0040	0.021	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0040	0.021	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0040	0.021	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0060	0.021	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0040	0.021	1

Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D1	0.0010	0.0051	5
10590	Alpha BHC	319-84-6	N.D. VD1	0.0016	0.0051	5
10590	Beta BHC	319-85-7	N.D. D1	0.0027	0.0092	5
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0013	0.0051	5
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.0010	0.0051	5
10590	4,4'-Ddd	72-54-8	N.D. D1	0.0020	0.012	5
10590	4,4'-Dde	72-55-9	N.D. D1	0.0020	0.012	5
10590	4,4'-Ddt	50-29-3	N.D. D1	0.0048	0.012	5
10590	Delta BHC	319-86-8	N.D. D1	0.0028	0.0092	5
10590	Dieldrin	60-57-1	N.D. D1	0.0020	0.012	5
10590	Endosulfan I	959-98-8	N.D. D1	0.0013	0.0051	5
10590	Endosulfan II	33213-65-9	N.D. D2	0.0067	0.012	5
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0020	0.012	5
10590	Endrin	72-20-8	N.D. D1	0.0042	0.012	5

*=This limit was used in the evaluation of the final result

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Heptachlor	76-44-8	N.D. D1	0.0019	0.0051	5

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Endrin

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.72	2.4	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.72	3.6	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.24	2.4	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.24	2.4	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.48	2.4	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.96	2.4	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.24	0.72	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.24	0.72	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.24	0.72	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.24	0.72	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.24	0.72	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.24	0.72	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.24	0.72	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.24	0.72	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.24	0.72	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.24	0.72	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.24	0.72	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.24	0.72	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.24	0.72	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.24	0.72	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.24	0.72	1

The recovery for extraction standard d5-NEtFOSAA is outside the QC acceptance limits in the continuing closing calibration verification standard.

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	9.55	0.166	0.497	2
06126	Barium	7440-39-3	28.3	0.227	0.497	2
06127	Beryllium	7440-41-7	0.253	0.0296	0.0745	2
06128	Cadmium	7440-43-9	0.223	0.0626	0.124	2
06131	Chromium	7440-47-3	7.52	0.191	0.497	2
02829	Trivalent Chromium soils ¹	16065-83-1	7.5	0.19	0.52	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	35.9	0.218	0.497	2
06135	Lead	7439-92-1	155	0.157	0.621	5
06137	Manganese	7439-96-5	60.4	0.266	0.497	2
06139	Nickel	7440-02-0	29.4	0.202	0.497	2
06141	Selenium	7782-49-2	4.27	0.162	0.497	2
06142	Silver	7440-22-4	0.0882 J	0.0504	0.124	2
06149	Zinc	7440-66-6	180	1.66	6.21	5
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.147	0.0182	0.0801	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.24	0.66	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.17	0.52	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	19.5	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201321AA	05/12/2020 00:11	Joel Trout	1.11
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012956771	05/08/2020 22:51	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012956771	05/08/2020 22:51	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012956771	05/08/2020 13:15	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/14/2020 00:31	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 12:48	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20132SLA026	05/11/2020 17:00	Scott Crawford	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201320018A	05/12/2020 14:50	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201320002A	05/12/2020 08:44	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201320001A	05/12/2020 15:54	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201320002A	05/11/2020 17:00	Scott Crawford	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201320001A	05/11/2020 17:00	Scott Crawford	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201320018A	05/11/2020 20:33	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20134016	05/13/2020 21:26	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	20134016	05/13/2020 15:30	Isaac Phillips-Cary	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201350282901	05/14/2020 16:39	Tshina Alamos	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:22	Janeyah Rivers-Hamilton	5
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:05	Janeyah Rivers-Hamilton	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:19	Janeyah Rivers-Hamilton	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:05	Janeyah Rivers-Hamilton	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:22	Janeyah Rivers-Hamilton	5

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_12-14 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311693
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:15
SDG#: CMS04-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	201311063801	05/11/2020 10:07	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201311404902	05/11/2020 04:35	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201311063801	05/11/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20134102201A	05/13/2020 23:03	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20134102201A	05/13/2020 16:45	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20132042501A	05/11/2020 21:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20132042501A	05/11/2020 09:40	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820002A	05/11/2020 09:59	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.039	0.007	0.022	0.82
11995	Acrolein	107-02-8	N.D.	0.005	0.11	0.82
11995	Acrylonitrile	107-13-1	N.D.	0.0009	0.022	0.82
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.82
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.82
11995	Bromoform	75-25-2	N.D.	0.005	0.011	0.82
11995	Bromomethane	74-83-9	N.D.	0.0008	0.005	0.82
11995	2-Butanone	78-93-3	0.004 J	0.002	0.011	0.82
11995	t-Butyl alcohol	75-65-0	N.D.	0.016	0.11	0.82
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.009	0.82
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.82
11995	tert-Butylbenzene	98-06-6	N.D.	0.0009	0.005	0.82
11995	Carbon Disulfide	75-15-0	N.D.	0.0007	0.005	0.82
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.82
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.82
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.82
11995	Chloroform	67-66-3	N.D.	0.0007	0.005	0.82
11995	Chloromethane	74-87-3	N.D.	0.0007	0.005	0.82
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.82
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.82
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.82
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.82
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.82
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.82
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0007	0.005	0.82
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.82
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	0.005	0.82
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.82
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.82
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.82
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.011	0.82
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.82
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.82
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.82
11995	1,4-Dioxane	123-91-1	N.D.	0.040	0.082	0.82
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.82
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.005	0.82
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.82
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.82
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.82
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.82

*=This limit was used in the evaluation of the final result

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.82
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.82
11995	Toluene	108-88-3	N.D.	0.0007	0.005	0.82
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0007	0.005	0.82
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.82
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.82
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0008	0.005	0.82
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.82
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.82
11995	Vinyl Chloride	75-01-4	N.D.	0.0007	0.005	0.82
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.011	0.82
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	N.D.	0.004	0.022	1
10726	Acenaphthylene	208-96-8	N.D.	0.004	0.022	1
10726	Acetophenone	98-86-2	N.D.	0.022	0.066	1
10726	Anthracene	120-12-7	N.D.	0.004	0.022	1
10726	Atrazine	1912-24-9	N.D.	0.26	0.57	1
10726	Benzaldehyde	100-52-7	N.D.	0.088	0.22	1
10726	Benzidine	92-87-5	N.D.	0.44	1.3	1
10726	Benzo(a)anthracene	56-55-3	0.015 J	0.009	0.022	1
10726	Benzo(a)pyrene	50-32-8	0.012 J	0.004	0.022	1
10726	Benzo(b)fluoranthene	205-99-2	0.016 J	0.004	0.022	1
10726	Benzo(g,h,i)perylene	191-24-2	0.008 J	0.004	0.022	1
10726	Benzo(k)fluoranthene	207-08-9	0.008 J	0.004	0.022	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.022	0.048	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.088	0.22	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.088	0.22	1
10726	Caprolactam	105-60-2	N.D.	0.044	0.22	1
10726	Carbazole	86-74-8	N.D.	0.022	0.048	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.031	0.066	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.026	0.057	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.044	1
10726	2-Chlorophenol	95-57-8	N.D.	0.022	0.048	1
10726	Chrysene	218-01-9	0.016 J	0.004	0.022	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.009	0.022	1
10726	Dibenzofuran	132-64-9	N.D.	0.022	0.048	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.022	0.066	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.022	0.048	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.022	0.048	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.13	0.44	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.026	0.057	1
10726	Diethylphthalate	84-66-2	N.D.	0.088	0.22	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.040	0.088	1
10726	Dimethylphthalate	131-11-3	N.D.	0.088	0.22	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.31	0.66	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.44	1.3	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.088	0.22	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.031	0.066	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.031	0.066	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.026	0.057	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.088	0.22	1
10726	Fluoranthene	206-44-0	0.020 J	0.004	0.022	1
10726	Fluorene	86-73-7	N.D.	0.004	0.022	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.009	0.022	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.048	0.10	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.26	0.66	1
10726	Hexachloroethane	67-72-1	N.D.	0.044	0.22	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.008 J	0.004	0.022	1
10726	Isophorone	78-59-1	N.D.	0.022	0.048	1
10726	2-Methylnaphthalene	91-57-6	N.D.	0.004	0.044	1
10726	2-Methylphenol	95-48-7	N.D.	0.022	0.088	1
10726	4-Methylphenol	106-44-5	N.D.	0.022	0.066	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	N.D.	0.009	0.022	1
10726	2-Nitroaniline	88-74-4	N.D.	0.022	0.066	1
10726	Nitrobenzene	98-95-3	N.D.	0.035	0.088	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.088	0.22	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.031	0.066	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.022	0.048	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.088	0.22	1
10726	Pentachlorophenol	87-86-5	N.D.	0.088	0.22	1
10726	Phenanthrene	85-01-8	0.009 J	0.004	0.022	1

*=This limit was used in the evaluation of the final result

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/kg	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.022	0.048	1
10726	Pyrene	129-00-0	0.021 J	0.004	0.022	1
10726	Pyridine	110-86-1	N.D.	0.088	0.22	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.031	0.066	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.040	0.088	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.035	0.075	1
GC/MS Semivolatiles SW-846 8270D SIM			ug/kg	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	9	22	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A			mg/kg	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D1	0.016	0.047	1
10401	2,4,5-T	93-76-5	N.D. D2	0.0011	0.0022	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00099	0.0022	1
PCBs SW-846 8082A Feb 2007 Rev 1			mg/kg	mg/kg	mg/kg	
10885	PCB-1016	12674-11-2	N.D. D1	0.0047	0.022	1
10885	PCB-1221	11104-28-2	N.D. D1	0.0060	0.022	1
10885	PCB-1232	11141-16-5	N.D. D1	0.011	0.022	1
10885	PCB-1242	53469-21-9	N.D. D1	0.0043	0.022	1
10885	PCB-1248	12672-29-6	N.D. D1	0.0043	0.022	1
10885	PCB-1254	11097-69-1	N.D. D1	0.0043	0.022	1
10885	PCB-1260	11096-82-5	N.D. D1	0.0064	0.022	1
10885	Total PCBs ¹	1336-36-3	N.D.	0.0043	0.022	1
Pesticides SW-846 8081B			mg/kg	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D1	0.0011	0.0055	5
10590	Alpha BHC	319-84-6	N.D. D1	0.0011	0.0055	5
10590	Beta BHC	319-85-7	N.D. D1	0.0029	0.0099	5
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0014	0.0055	5
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.0011	0.0055	5
10590	4,4'-Ddd	72-54-8	N.D. D1	0.0022	0.013	5
10590	4,4'-Dde	72-55-9	N.D. D1	0.0022	0.013	5
10590	4,4'-Ddt	50-29-3	N.D. D1	0.0052	0.013	5
10590	Delta BHC	319-86-8	N.D. D1	0.0030	0.0099	5
10590	Dieldrin	60-57-1	N.D. D1	0.0022	0.013	5
10590	Endosulfan I	959-98-8	N.D. D1	0.0014	0.0055	5
10590	Endosulfan II	33213-65-9	N.D. D2	0.0072	0.013	5
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0022	0.013	5
10590	Endrin	72-20-8	N.D. D1	0.0045	0.013	5

*=This limit was used in the evaluation of the final result

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Heptachlor	76-44-8	N.D. D1	0.0020	0.0055	5

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Endrin

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.77	2.6	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.77	3.8	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.26	2.6	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.26	2.6	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.51	2.6	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	1.0	2.6	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.26	0.77	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.26	0.77	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.26	0.77	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.26	0.77	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.26	0.77	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.26	0.77	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.26	0.77	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.26	0.77	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.26	0.77	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.26	0.77	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.26	0.77	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.26	0.77	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.26	0.77	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.26	0.77	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.26	0.77	1

The recovery for extraction standard d5-NEtFOSAA is outside the QC acceptance limits in the continuing closing calibration verification standard.

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	7.27	0.138	0.413	2
06126	Barium	7440-39-3	32.7	0.189	0.413	2
06127	Beryllium	7440-41-7	0.574	0.0246	0.0620	2
06128	Cadmium	7440-43-9	0.0748 J	0.0521	0.103	2
06131	Chromium	7440-47-3	22.4	0.159	0.413	2
02829	Trivalent Chromium soils ¹	16065-83-1	22.4	0.19	0.56	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	10.0	0.181	0.413	2
06135	Lead	7439-92-1	7.91	0.0521	0.207	2
06137	Manganese	7439-96-5	307	1.11	2.07	10
06139	Nickel	7440-02-0	20.5	0.168	0.413	2
06141	Selenium	7782-49-2	0.239 J	0.135	0.413	2
06142	Silver	7440-22-4	N.D.	0.0420	0.103	2
06149	Zinc	7440-66-6	61.1	0.554	2.07	2
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0647 J	0.0202	0.0889	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.24	0.67	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.19	0.56	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	25.0	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201321AA	05/12/2020 00:33	Joel Trout	0.82
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202012956771	05/08/2020 22:52	Lois E Hiltz	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202012956771	05/08/2020 22:52	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202012956771	05/08/2020 13:25	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20132SLA026	05/14/2020 00:54	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136SLB026	05/19/2020 13:19	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20132SLA026	05/11/2020 17:00	Scott Crawford	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20136SLB026	05/18/2020 08:45	Joshua S Ruth	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201320018A	05/12/2020 15:23	Lisa A Reinert	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201320002A	05/12/2020 08:54	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201320001A	05/12/2020 16:08	Lisa A Reinert	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201320002A	05/11/2020 17:00	Scott Crawford	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201320001A	05/11/2020 17:00	Scott Crawford	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201320018A	05/11/2020 20:33	Karen L Beyer	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20134016	05/13/2020 21:35	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	20134016	05/11/2020 07:00	Isaac Phillips-Cary	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201350282901	05/14/2020 16:40	Tshina Alamos	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:12	Janeyah Rivers-Hamilton	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:41	Janeyah Rivers-Hamilton	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/14/2020 15:12	Janeyah Rivers-Hamilton	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201311404902A	05/13/2020 19:36	Janeyah Rivers-Hamilton	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1311694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:25
SDG#: CMS04-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	201311063801	05/11/2020 10:22	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201311404902	05/11/2020 04:35	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201311063801	05/11/2020 06:40	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20134102201A	05/13/2020 23:05	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20134102201A	05/13/2020 16:45	Barbara A Washington	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20132042501A	05/11/2020 21:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20132042501A	05/11/2020 09:40	Reece Himmelreich	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20131820002A	05/11/2020 09:59	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_2-4 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312694
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 13:55
SDG#: CMS04-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	10,900	10.4	41.2	500
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.373	0.0166	0.0731	1
Wet Chemistry			SM 2540 G-2011 %Moisture Calc	%	%	
00111	Moisture ¹	n.a.	14.5	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201321404901A	05/14/2020 13:43	Janeyah Rivers-Hamilton	500
00159	Mercury	SW-846 7471B	1	201341063801	05/13/2020 09:54	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201321404901	05/12/2020 02:20	James L Mertz	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201341063801	05/13/2020 07:35	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20133820004B	05/12/2020 12:47	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB18_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312695
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 14:00
SDG#: CMS04-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	75.2	0.0532	0.211	2
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0217 J	0.0165	0.0723	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	12.2	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201321404901A	05/13/2020 17:44	Janeyah Rivers-Hamilton	2
00159	Mercury	SW-846 7471B	1	201331063801	05/12/2020 08:26	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201321404901	05/12/2020 02:20	James L Mertz	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201331063801	05/12/2020 05:39	James L Mertz	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20133820004B	05/12/2020 12:47	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB22_4-6 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312696
ELLE Group #: 2098966
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/08/2020 20:50
Collection Date/Time: 05/08/2020 11:50
SDG#: CMS04-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	409	0.266	1.05	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.91	0.0800	0.352	5
Wet Chemistry			SM 2540 G-2011 %Moisture Calc	%	%	
00111	Moisture ¹	n.a.	9.7	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201321404901A	05/13/2020 17:52	Janeyah Rivers-Hamilton	10
00159	Mercury	SW-846 7471B	1	201341063801	05/13/2020 09:44	Damary Valentin	5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201321404901	05/12/2020 02:20	James L Mertz	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201341063801	05/13/2020 07:35	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20133820004B	05/12/2020 12:47	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: B201321AA	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
1,4-Dioxane	N.D.	0.037	0.075
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
n-Propylbenzene	N.D.	0.0004	0.005
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
	mg/l	mg/l	mg/l
Batch number: 5201333AA	Sample number(s): 1311685		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
1,4-Dioxane	N.D.	0.029	0.075
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
	mg/kg	mg/kg	mg/kg
Batch number: 20132SLA026	Sample number(s): 1311688-1311691,1311693-1311694		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17
Benidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4, 2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2,4,6-Trichlorophenol	N.D.	0.027	0.057
	ug/kg	ug/kg	ug/kg
Batch number: 20136SLB026	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
1,4-Dioxane	N.D.	0.7	2
	mg/kg	mg/kg	mg/kg
Batch number: 201320018A	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
2,4-D	N.D.	0.012	0.036
2,4,5-T	N.D.	0.00082	0.0017
2,4,5-TP	N.D.	0.00075	0.0017
Batch number: 201320002A	Sample number(s): 1311691,1311693-1311694		
PCB-1016	N.D.	0.0036	0.017
PCB-1221	N.D.	0.0046	0.017
PCB-1232	N.D.	0.0080	0.017
PCB-1242	N.D.	0.0033	0.017
PCB-1248	N.D.	0.0033	0.017
PCB-1254	N.D.	0.0033	0.017
PCB-1260	N.D.	0.0049	0.017
Total PCBs	N.D.	0.0033	0.017
Batch number: 201330012A	Sample number(s): 1311688,1311690		
PCB-1016	N.D.	0.0036	0.017
PCB-1221	N.D.	0.0046	0.017
PCB-1232	N.D.	0.0080	0.017
PCB-1242	N.D.	0.0033	0.017
PCB-1248	N.D.	0.0033	0.017
PCB-1254	N.D.	0.0033	0.017
PCB-1260	N.D.	0.0049	0.017
Total PCBs	N.D.	0.0033	0.017
Batch number: 201320001A	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
Aldrin	N.D.	0.00017	0.00083
Alpha BHC	N.D.	0.00017	0.00083
Beta BHC	N.D.	0.00044	0.0015
Gamma BHC - Lindane	N.D.	0.00021	0.00083
Alpha Chlordane	N.D.	0.00017	0.00083
4,4'-Ddd	N.D.	0.00033	0.0020
4,4'-Dde	N.D.	0.00033	0.0020
4,4'-Ddt	N.D.	0.00079	0.0020
Delta BHC	N.D.	0.00045	0.0015
Dieldrin	N.D.	0.00033	0.0020
Endosulfan I	N.D.	0.00022	0.00083
Endosulfan II	N.D.	0.0011	0.0020
Endosulfan Sulfate	N.D.	0.00033	0.0020
Endrin	N.D.	0.00068	0.0020

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Heptachlor	N.D.	0.00031	0.00083
	ng/g	ng/g	ng/g
Batch number: 20134016	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
6:2-Fluorotelomersulfonic acid	N.D.	0.60	2.0
8:2-Fluorotelomersulfonic acid	N.D.	0.60	3.0
NEtFOSAA	N.D.	0.20	2.0
NMeFOSAA	N.D.	0.20	2.0
Perfluorobutanesulfonic acid	N.D.	0.40	2.0
Perfluorobutanoic acid	N.D.	0.80	2.0
Perfluorodecanesulfonic acid	N.D.	0.20	0.60
Perfluorodecanoic acid	N.D.	0.20	0.60
Perfluorododecanoic acid	N.D.	0.20	0.60
Perfluoroheptanesulfonic acid	N.D.	0.20	0.60
Perfluoroheptanoic acid	N.D.	0.20	0.60
Perfluorohexanesulfonic acid	N.D.	0.20	0.60
Perfluorohexanoic acid	N.D.	0.20	0.60
Perfluorononanoic acid	N.D.	0.20	0.60
Perfluorooctanesulfonamide	N.D.	0.20	0.60
Perfluorooctanesulfonic acid	N.D.	0.20	0.60
Perfluorooctanoic acid	N.D.	0.20	0.60
Perfluoropentanoic acid	N.D.	0.20	0.60
Perfluorotetradecanoic acid	N.D.	0.20	0.60
Perfluorotridecanoic acid	N.D.	0.20	0.60
Perfluoroundecanoic acid	N.D.	0.20	0.60
	ng/l	ng/l	ng/l
Batch number: 20131006	Sample number(s): 1311684		
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
	mg/kg	mg/kg	mg/kg
Batch number: 201311063801	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
Mercury	0.0266 J	0.0152	0.0667
Batch number: 201311404902A	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
Arsenic	N.D.	0.134	0.400
Barium	0.193 J	0.183	0.400
Beryllium	N.D.	0.0238	0.0600
Cadmium	N.D.	0.0504	0.100
Chromium	N.D.	0.154	0.400
Copper	N.D.	0.176	0.400
Lead	N.D.	0.0504	0.200
Manganese	N.D.	0.214	0.400
Nickel	N.D.	0.163	0.400
Selenium	N.D.	0.130	0.400
Silver	N.D.	0.0406	0.100
Zinc	N.D.	0.536	2.00
Batch number: 201321404901A	Sample number(s): 1312694-1312696		
Lead	N.D.	0.0504	0.200
Batch number: 201331063801	Sample number(s): 1312695		
Mercury	N.D.	0.0152	0.0667
Batch number: 201341063801	Sample number(s): 1312694,1312696		
Mercury	N.D.	0.0152	0.0667
	mg/l	mg/l	mg/l
Batch number: 201341404502	Sample number(s): 1311686-1311687,1311692		
Arsenic	N.D.	0.0160	0.0300
Lead	N.D.	0.0071	0.0150
Batch number: 201550571305	Sample number(s): 1311686-1311687,1311692		
Mercury	N.D.	0.000079	0.00020
	mg/kg	mg/kg	mg/kg
Batch number: 20134102201A	Sample number(s): 1311690-1311691,1311693-1311694		
Total Cyanide (solid)	N.D.	0.18	0.50
Batch number: 20135102201A	Sample number(s): 1311688		
Total Cyanide (solid)	N.D.	0.18	0.50
Batch number: 20132042501A	Sample number(s): 1311688,1311690-1311691,1311693-1311694		
Hexavalent Chromium (SOLIDS)	N.D.	0.14	0.42

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Method Blank (continued)

Analysis Name	Result mg/kg	MDL** mg/kg	LOQ mg/kg
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LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B201321AA	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
Acetone	0.150	0.145	0.150	0.141	96	94	41-150	2	30
Acrolein	0.150	0.123	0.150	0.121	82	81	57-131	1	30
Acrylonitrile	0.100	0.0896	0.100	0.0846	90	85	66-120	6	30
Benzene	0.0200	0.0175	0.0200	0.0180	87	90	80-120	3	30
Bromodichloromethane	0.0200	0.0175	0.0200	0.0176	87	88	70-120	1	30
Bromoform	0.0200	0.0170	0.0200	0.0169	85	85	51-127	0	30
Bromomethane	0.0200	0.0154	0.0200	0.0161	77	80	45-140	4	30
2-Butanone	0.150	0.125	0.150	0.123	83	82	57-128	2	30
t-Butyl alcohol	0.200	0.177	0.200	0.167	88	84	74-121	6	30
n-Butylbenzene	0.0200	0.0171	0.0200	0.0173	86	87	71-121	1	30
sec-Butylbenzene	0.0200	0.0178	0.0200	0.0183	89	92	72-120	3	30
tert-Butylbenzene	0.0200	0.0169	0.0200	0.0172	84	86	68-120	2	30
Carbon Disulfide	0.0200	0.0181	0.0200	0.0186	90	93	64-133	3	30
Carbon Tetrachloride	0.0200	0.0177	0.0200	0.0182	88	91	64-134	3	30
Chlorobenzene	0.0200	0.0177	0.0200	0.0181	88	90	80-120	2	30
Chloroethane	0.0200	0.0150	0.0200	0.0153	75	77	43-135	2	30
Chloroform	0.0200	0.0176	0.0200	0.0180	88	90	80-120	2	30
Chloromethane	0.0200	0.0154	0.0200	0.0160	77	80	56-120	4	30
1,2-Dibromo-3-chloropropane	0.0200	0.0178	0.0200	0.0166	89	83	48-134	7	30
Dibromochloromethane	0.0200	0.0185	0.0200	0.0185	93	92	69-125	0	30
1,2-Dibromoethane	0.0200	0.0178	0.0200	0.0179	89	90	76-120	1	30
1,2-Dichlorobenzene	0.0200	0.0171	0.0200	0.0174	86	87	76-120	2	30
1,3-Dichlorobenzene	0.0200	0.0172	0.0200	0.0175	86	88	75-120	2	30
1,4-Dichlorobenzene	0.0200	0.0173	0.0200	0.0176	87	88	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0157	0.0200	0.0164	79	82	21-127	4	30
1,1-Dichloroethane	0.0200	0.0176	0.0200	0.0176	88	88	79-120	0	30
1,2-Dichloroethane	0.0200	0.0169	0.0200	0.0170	85	85	71-128	1	30
1,1-Dichloroethene	0.0200	0.0185	0.0200	0.0189	93	95	73-129	2	30
cis-1,2-Dichloroethene	0.0200	0.0190	0.0200	0.0195	95	97	80-125	3	30
trans-1,2-Dichloroethene	0.0200	0.0182	0.0200	0.0184	91	92	80-126	1	30
1,2-Dichloroethene (Total)	0.0400	0.0371	0.0400	0.0379	93	95	80-126	2	30
1,2-Dichloropropane	0.0200	0.0176	0.0200	0.0180	88	90	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0173	0.0200	0.0176	86	88	66-120	2	30
trans-1,3-Dichloropropene	0.0200	0.0170	0.0200	0.0172	85	86	68-122	1	30
1,4-Dioxane	0.500	0.507	0.500	0.468	101	94	62-131	8	30

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ethylbenzene	0.0200	0.0177	0.0200	0.0180	89	90	78-120	1	30
Methyl Acetate	0.0200	0.0171	0.0200	0.0163	86	81	67-128	5	30
Methyl Tertiary Butyl Ether	0.0200	0.0172	0.0200	0.0173	86	87	72-120	1	30
Methylene Chloride	0.0200	0.0177	0.0200	0.0179	88	89	76-122	1	30
n-Propylbenzene	0.0200	0.0180	0.0200	0.0184	90	92	72-123	2	30
Styrene	0.0200	0.0170	0.0200	0.0173	85	87	76-120	2	30
1,1,2,2-Tetrachloroethane	0.0200	0.0179	0.0200	0.0175	90	88	69-125	2	30
Tetrachloroethene	0.0200	0.0178	0.0200	0.0181	89	90	73-120	1	30
Toluene	0.0200	0.0172	0.0200	0.0175	86	88	80-120	2	30
1,1,1-Trichloroethane	0.0200	0.0170	0.0200	0.0176	85	88	69-123	4	30
1,1,2-Trichloroethane	0.0200	0.0189	0.0200	0.0189	95	95	80-120	0	30
Trichloroethene	0.0200	0.0176	0.0200	0.0180	88	90	80-120	2	30
Trichlorofluoromethane	0.0200	0.0169	0.0200	0.0170	85	85	55-134	0	30
1,2,4-Trimethylbenzene	0.0200	0.0172	0.0200	0.0176	86	88	73-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0175	0.0200	0.0179	87	89	73-120	2	30
Vinyl Chloride	0.0200	0.0159	0.0200	0.0162	79	81	52-120	2	30
Xylene (Total)	0.0600	0.0527	0.0600	0.0541	88	90	75-120	3	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 5201333AA	Sample number(s): 1311685								
Acetone	0.150	0.240	0.150	0.261	160*	174*	54-157	8	30
Acrolein	0.150	0.148	0.150	0.144	99	96	47-136	3	30
Acrylonitrile	0.100	0.0974	0.100	0.0957	97	96	60-129	2	30
Benzene	0.0200	0.0207	0.0200	0.0194	103	97	80-120	6	30
Bromodichloromethane	0.0200	0.0193	0.0200	0.0183	96	92	71-120	5	30
Bromoform	0.0200	0.0185	0.0200	0.0179	92	90	51-120	3	30
Bromomethane	0.0200	0.0172	0.0200	0.0184	86	92	53-128	7	30
2-Butanone	0.150	0.163	0.150	0.167	109	112	59-135	3	30
t-Butyl alcohol	0.200	0.224	0.200	0.216	112	108	60-130	4	30
n-Butylbenzene	0.0200	0.0215	0.0200	0.0204	108	102	76-120	6	30
sec-Butylbenzene	0.0200	0.0215	0.0200	0.0202	107	101	77-120	6	30
tert-Butylbenzene	0.0200	0.0228	0.0200	0.0216	114	108	78-120	6	30
Carbon Disulfide	0.0200	0.0191	0.0200	0.0177	96	88	65-128	8	30
Carbon Tetrachloride	0.0200	0.0199	0.0200	0.0184	100	92	64-134	8	30
Chlorobenzene	0.0200	0.0220	0.0200	0.0209	110	104	80-120	5	30
Chloroethane	0.0200	0.0204	0.0200	0.0186	102	93	55-123	9	30
Chloroform	0.0200	0.0207	0.0200	0.0196	104	98	80-120	6	30
Chloromethane	0.0200	0.0200	0.0200	0.0184	100	92	56-121	8	30
1,2-Dibromo-3-chloropropane	0.0200	0.0195	0.0200	0.0191	98	96	47-131	2	30
Dibromochloromethane	0.0200	0.0199	0.0200	0.0190	99	95	71-120	4	30
1,2-Dibromoethane	0.0200	0.0212	0.0200	0.0205	106	102	77-120	4	30
1,2-Dichlorobenzene	0.0200	0.0217	0.0200	0.0211	109	105	80-120	3	30
1,3-Dichlorobenzene	0.0200	0.0215	0.0200	0.0206	108	103	80-120	4	30
1,4-Dichlorobenzene	0.0200	0.0219	0.0200	0.0210	110	105	80-120	4	30

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dichlorodifluoromethane	0.0200	0.0176	0.0200	0.0161	88	80	41-127	9	30
1,1-Dichloroethane	0.0200	0.0206	0.0200	0.0192	103	96	80-120	7	30
1,2-Dichloroethane	0.0200	0.0206	0.0200	0.0196	103	98	73-124	5	30
1,1-Dichloroethene	0.0200	0.0207	0.0200	0.0193	104	96	80-131	7	30
cis-1,2-Dichloroethene	0.0200	0.0219	0.0200	0.0206	110	103	80-125	6	30
trans-1,2-Dichloroethene	0.0200	0.0212	0.0200	0.0197	106	98	80-126	7	30
1,2-Dichloroethene (Total)	0.0400	0.0431	0.0400	0.0403	108	101	80-125	7	30
1,2-Dichloropropane	0.0200	0.0206	0.0200	0.0196	103	98	80-120	5	30
cis-1,3-Dichloropropene	0.0200	0.0187	0.0200	0.0181	94	91	75-120	3	30
trans-1,3-Dichloropropene	0.0200	0.0190	0.0200	0.0183	95	91	67-120	4	30
1,4-Dioxane	0.500	0.662	0.500	0.643	132	129	63-146	3	30
Ethylbenzene	0.0200	0.0218	0.0200	0.0205	109	102	80-120	6	30
Methyl Acetate	0.0200	0.0204	0.0200	0.0199	102	100	54-136	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0195	0.0200	0.0189	97	95	69-122	3	30
Methylene Chloride	0.0200	0.0211	0.0200	0.0203	106	101	80-120	4	30
n-Propylbenzene	0.0200	0.0221	0.0200	0.0210	111	105	79-121	5	30
Styrene	0.0200	0.0216	0.0200	0.0204	108	102	80-120	6	30
1,1,2,2-Tetrachloroethane	0.0200	0.0212	0.0200	0.0214	106	107	72-120	1	30
Tetrachloroethene	0.0200	0.0221	0.0200	0.0207	111	103	80-120	7	30
Toluene	0.0200	0.0215	0.0200	0.0202	107	101	80-120	6	30
1,1,1-Trichloroethane	0.0200	0.0200	0.0200	0.0185	100	93	67-126	8	30
1,1,2-Trichloroethane	0.0200	0.0219	0.0200	0.0213	109	107	80-120	3	30
Trichloroethene	0.0200	0.0210	0.0200	0.0194	105	97	80-120	8	30
Trichlorofluoromethane	0.0200	0.0212	0.0200	0.0196	106	98	55-135	8	30
1,2,4-Trimethylbenzene	0.0200	0.0213	0.0200	0.0201	107	101	75-120	6	30
1,3,5-Trimethylbenzene	0.0200	0.0213	0.0200	0.0202	107	101	75-120	5	30
Vinyl Chloride	0.0200	0.0212	0.0200	0.0194	106	97	56-120	9	30
Xylene (Total)	0.0600	0.0659	0.0600	0.0622	110	104	80-120	6	30

mg/kg mg/kg mg/kg mg/kg

Batch number: 20132SLA026

Sample number(s): 1311688-1311691,1311693-1311694

Acenaphthene	1.67	1.41	84	61-112
Acenaphthylene	1.67	1.43	86	60-124
Acetophenone	1.67	1.20	72	48-109
Anthracene	1.67	1.46	87	67-120
Atrazine	1.67	1.55	93	70-129
Benzaldehyde	1.67	0.984	59	20-101
Benidine	8.33	4.64	56	18-105
Benzo(a)anthracene	1.67	1.51	90	68-120
Benzo(a)pyrene	1.67	1.61	97	68-119
Benzo(b)fluoranthene	1.67	1.67	100	67-125
Benzo(g,h,i)perylene	1.67	1.63	98	68-125
Benzo(k)fluoranthene	1.67	1.50	90	66-122
1,1'-Biphenyl	1.67	1.41	84	59-106

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Butylbenzylphthalate	1.67	1.63			98		69-125		
Di-n-butylphthalate	1.67	1.51			91		70-126		
Caprolactam	1.67	1.35			81		62-119		
Carbazole	1.67	1.53			92		69-125		
bis(2-Chloroethyl)ether	1.67	1.28			77		44-104		
bis(2-Chloroisopropyl)ether	1.67	0.921			55		40-112		
2-Chloronaphthalene	1.67	1.77			106		48-123		
2-Chlorophenol	1.67	1.31			78		51-109		
Chrysene	1.67	1.37			82		66-111		
Dibenz(a,h)anthracene	1.67	1.68			101		69-135		
Dibenzofuran	1.67	1.35			81		62-113		
1,2-Dichlorobenzene	1.67	1.21			73		38-106		
1,3-Dichlorobenzene	1.67	1.18			71		36-103		
1,4-Dichlorobenzene	1.67	1.19			71		25-127		
3,3'-Dichlorobenzidine	1.67	0.950			57		18-114		
2,4-Dichlorophenol	1.67	1.24			74		57-115		
Diethylphthalate	1.67	1.38			83		68-116		
2,4-Dimethylphenol	1.67	1.08			65		47-95		
Dimethylphthalate	1.67	1.36			82		66-113		
4,6-Dinitro-2-methylphenol	1.67	1.46			88		56-135		
2,4-Dinitrophenol	3.33	2.47			74		34-136		
2,4-Dinitrotoluene	1.67	1.43			86		61-121		
2,6-Dinitrotoluene	1.67	1.49			90		66-122		
1,2-Diphenylhydrazine	1.67	1.67			100		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.66			100		65-132		
Fluoranthene	1.67	1.41			84		65-114		
Fluorene	1.67	1.39			83		62-110		
Hexachlorobenzene	1.67	1.43			86		62-124		
Hexachlorobutadiene	1.67	1.12			67		39-120		
Hexachlorocyclopentadiene	3.33	1.46			44		13-115		
Hexachloroethane	1.67	1.24			75		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.62			97		64-130		
Isophorone	1.67	1.27			76		51-113		
2-Methylnaphthalene	1.67	1.30			78		52-104		
2-Methylphenol	1.67	1.28			77		52-116		
4-Methylphenol	1.67	1.18			71		52-121		
Naphthalene	1.67	1.25			75		49-104		
2-Nitroaniline	1.67	1.59			96		65-132		
Nitrobenzene	1.67	1.26			76		41-118		
N-Nitrosodimethylamine	1.67	1.27			76		31-107		
N-Nitroso-di-n-propylamine	1.67	1.23			74		49-108		
N-Nitrosodiphenylamine	1.67	1.54			92		64-127		
Di-n-octylphthalate	1.67	1.77			106		65-139		
Pentachlorophenol	1.67	1.06			64		40-131		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Phenanthrene	1.67	1.45			87		67-116		
Phenol	1.67	1.23			74		57-107		
Pyrene	1.67	1.42			85		67-109		
Pyridine	1.67	0.895			54		10-117		
1,2,4-Trichlorobenzene	1.67	1.21			73		46-109		
2,4,5-Trichlorophenol	1.67	1.35			81		62-121		
2,4,6-Trichlorophenol	1.67	1.40			84		60-120		
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 20136SLB026	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
1,4-Dioxane	33.33	12.52			38		21-79		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201320018A	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
2,4-D	0.0834	0.106			128		57-142		
2,4,5-T	0.00833	0.0125			150*		59-137		
2,4,5-TP	0.00833	0.0113			135*		70-130		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201320002A	Sample number(s): 1311691,1311693-1311694								
PCB-1016	0.167	0.163			97		76-121		
PCB-1260	0.167	0.176			105		79-130		
Batch number: 201330012A	Sample number(s): 1311688,1311690								
PCB-1016	0.167	0.168			101		76-121		
PCB-1260	0.167	0.173			104		79-130		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201320001A	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
Aldrin	0.00333	0.00307			92		60-117		
Alpha BHC	0.00338	0.00302			89		65-124		
Beta BHC	0.00333	0.00290			87		68-129		
Gamma BHC - Lindane	0.00333	0.00296			89		68-133		
Alpha Chlordane	0.00333	0.00332			100		73-131		
4,4'-Ddd	0.00671	0.00656			98		69-138		
4,4'-Dde	0.00667	0.00723			109		68-146		
4,4'-Ddt	0.00671	0.00726			108		67-135		
Delta BHC	0.00333	0.00308			92		45-151		
Dieldrin	0.00667	0.00655			98		63-126		
Endosulfan I	0.00333	0.00304			91		62-119		
Endosulfan II	0.00667	0.00634			95		65-126		
Endosulfan Sulfate	0.00667	0.00686			103		71-132		
Endrin	0.00667	0.00522			78*		86-135		
Heptachlor	0.00333	0.00315			95		66-118		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ng/g	ng/g	ng/g	ng/g					
Batch number: 20134016	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
6:2-Fluorotelomersulfonic acid	23.7	20.19			85		51-144		
8:2-Fluorotelomersulfonic acid	23.94	21.13			88		54-152		
NETFOSAA	25	24.25			97		51-145		
NMeFOSAA	25	24.57			98		55-152		
Perfluorobutanesulfonic acid	22.12	17.6			80		63-139		
Perfluorobutanoic acid	25	18.05			72		56-188		
Perfluorodecanesulfonic acid	24.08	19.09			79		60-142		
Perfluorodecanoic acid	25	20.7			83		65-144		
Perfluorododecanoic acid	25	21.49			86		62-150		
Perfluoroheptanesulfonic acid	23.78	19.48			82		67-139		
Perfluoroheptanoic acid	25	20.57			82		65-153		
Perfluorohexanesulfonic acid	23.64	18.73			79		59-139		
Perfluorohexanoic acid	25	20.88			84		64-149		
Perfluorononanoic acid	25	20.94			84		64-151		
Perfluorooctanesulfonamide	25	22.73			91		61-133		
Perfluorooctanesulfonic acid	23.9	17.54			73		54-132		
Perfluorooctanoic acid	25	21.07			84		65-147		
Perfluoropentanoic acid	25	19.45			78		71-139		
Perfluorotetradecanoic acid	25	20.44			82		66-147		
Perfluorotridecanoic acid	25	21.99			88		63-152		
Perfluoroundecanoic acid	25	22.47			90		65-146		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 20131006	Sample number(s): 1311684								
6:2-Fluorotelomersulfonic acid	24.28	25.18	24.28	24.87	104	102	56-140	1	30
8:2-Fluorotelomersulfonic acid	24.52	25.52	24.52	25.63	104	105	58-143	0	30
NETFOSAA	25.6	27.65	25.6	26.71	108	104	53-140	3	30
NMeFOSAA	25.6	28.63	25.6	30.97	112	121	59-141	8	30
Perfluorobutanesulfonic acid	22.64	21.88	22.64	21.92	97	97	67-135	0	30
Perfluorobutanoic acid	25.6	22.78	25.6	23.1	89	90	63-160	1	30
Perfluorodecanesulfonic acid	24.64	22.21	24.64	22.72	90	92	62-135	2	30
Perfluorodecanoic acid	25.6	24.84	25.6	26.08	97	102	66-141	5	30
Perfluorododecanoic acid	25.6	24.33	25.6	25.44	95	99	65-143	4	30
Perfluoroheptanesulfonic acid	24.36	25.01	24.36	24.32	103	100	67-138	3	30
Perfluoroheptanoic acid	25.6	27.92	25.6	26.81	109	105	69-144	4	30
Perfluorohexanesulfonic acid	24.2	24.61	24.2	23.5	102	97	63-132	5	30
Perfluorohexanoic acid	25.6	25.35	25.6	24.05	99	94	69-139	5	30
Perfluorononanoic acid	25.6	27.24	25.6	27.15	106	106	66-144	0	30
Perfluorooctanesulfonamide	25.6	26.51	25.6	25.75	104	101	67-126	3	30
Perfluorooctanesulfonic acid	24.48	21.7	24.48	22.39	89	91	53-129	3	30
Perfluorooctanoic acid	25.6	24.71	25.6	26.45	97	103	67-139	7	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluoropentanoic acid	25.6	25.41	25.6	26.19	99	102	73-135	3	30
Perfluorotetradecanoic acid	25.6	26.35	25.6	25.55	103	100	69-141	3	30
Perfluorotridecanoic acid	25.6	26.09	25.6	25.65	102	100	66-146	2	30
Perfluoroundecanoic acid	25.6	27.13	25.6	26.25	106	103	66-140	3	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201311063801	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
Mercury	0.100	0.106			106		80-115		
Batch number: 201311404902A	Sample number(s): 1311688,1311690-1311691,1311693-1311694								
Arsenic	1.00	1.05			105		80-120		
Barium	5.00	5.62			112		80-120		
Beryllium	0.400	0.393			98		80-120		
Cadmium	0.500	0.531			106		80-120		
Chromium	5.00	5.37			107		86-120		
Copper	5.00	5.65			113		85-120		
Lead	0.500	0.527			105		80-120		
Manganese	5.00	5.09			102		80-120		
Nickel	5.00	5.57			111		86-120		
Selenium	1.00	0.969			97		85-120		
Silver	5.00	4.92			98		84-120		
Zinc	50	54.01			108		85-120		
Batch number: 201321404901A	Sample number(s): 1312694-1312696								
Lead	0.500	0.524			105		80-120		
Batch number: 201331063801	Sample number(s): 1312695								
Mercury	0.100	0.104			104		80-115		
Batch number: 201341063801	Sample number(s): 1312694,1312696								
Mercury	0.100	0.100			100		80-115		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201341404502	Sample number(s): 1311686-1311687,1311692								
Arsenic	0.0600	0.0699			116		80-120		
Lead	0.0300	0.0300			100		80-120		
Batch number: 201550571305	Sample number(s): 1311686-1311687,1311692								
Mercury	0.00100	0.000971			97		80-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20134102201A	Sample number(s): 1311690-1311691,1311693-1311694								
Total Cyanide (solid)	10	11.43			114*		90-110		
Batch number: 20135102201A	Sample number(s): 1311688								
Total Cyanide (solid)	10	9.63			96		90-110		

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20132042501A Hexavalent Chromium (SOLIDS)	5.00	4.83			97		80-120		
	%	%	%	%					
Batch number: 20131820002A Moisture	89.5	88.96			99		99-101		
Batch number: 20133820004B Moisture	89.5	89.33			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20132SLA026										
Acenaphthene	N.D.	1.67	1.20	1.66	1.26	72	76	61-112	5	30
Acenaphthylene	0.00412	1.67	1.18	1.66	1.25	71	75	60-124	6	30
Acetophenone	N.D.	1.67	1.11	1.66	1.13	67	68	48-109	1	30
Anthracene	0.00767	1.67	1.10	1.66	1.19	66*	71	67-120	8	30
Atrazine	N.D.	1.67	1.06	1.66	1.21	64*	73	70-129	13	30
Benzaldehyde	N.D.	1.67	1.06	1.66	1.07	63	64	20-101	1	30
Benidine	N.D.	8.33	1.32	8.31	2.04	16*	25	18-105	43*	30
Benzo(a)anthracene	0.0206	1.67	0.997	1.66	1.08	59*	64*	68-120	8	30
Benzo(a)pyrene	0.0121	1.67	0.959	1.66	1.10	57*	65*	68-119	13	30
Benzo(b)fluoranthene	0.0136	1.67	1.04	1.66	1.16	62*	69	67-125	11	30
Benzo(g,h,i)perylene	0.00585	1.67	0.990	1.66	1.12	59*	67*	68-125	12	30
Benzo(k)fluoranthene	0.00702	1.67	0.847	1.66	0.968	50*	58*	66-122	13	30
1,1'-Biphenyl	N.D.	1.67	1.22	1.66	1.25	73	75	59-106	2	30
Butylbenzylphthalate	N.D.	1.67	1.08	1.66	1.16	65*	70	69-125	7	30
Di-n-butylphthalate	N.D.	1.67	1.09	1.66	1.22	65*	73	70-126	11	30
Caprolactam	N.D.	1.67	1.15	1.66	1.23	69	74	62-119	7	30
Carbazole	N.D.	1.67	1.15	1.66	1.22	69	74	69-125	6	30
bis(2-Chloroethyl)ether	N.D.	1.67	1.18	1.66	1.15	71	69	44-104	2	30
bis(2-Chloroisopropyl)ether	N.D.	1.67	0.875	1.66	0.880	53	53	40-112	1	30
2-Chloronaphthalene	N.D.	1.67	1.50	1.66	1.55	90	93	48-123	4	30
2-Chlorophenol	N.D.	1.67	1.20	1.66	1.23	72	74	51-109	3	30
Chrysene	0.0199	1.67	0.890	1.66	0.975	52*	57*	66-111	9	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Dibenz(a,h)anthracene	N.D.	1.67	1.02	1.66	1.17	61*	71	69-135	14	30
Dibenzofuran	N.D.	1.67	1.14	1.66	1.19	68	71	62-113	4	30
1,2-Dichlorobenzene	N.D.	1.67	1.12	1.66	1.12	67	68	38-106	0	30
1,3-Dichlorobenzene	N.D.	1.67	1.08	1.66	1.08	65	65	36-103	0	30
1,4-Dichlorobenzene	N.D.	1.67	1.09	1.66	1.09	65	66	25-127	0	30
3,3'-Dichlorobenzidine	N.D.	1.67	0.850	1.66	1.01	51	61	18-114	17	30
2,4-Dichlorophenol	N.D.	1.67	1.10	1.66	1.14	66	69	57-115	3	30
Diethylphthalate	N.D.	1.67	1.16	1.66	1.21	69	73	68-116	5	30
2,4-Dimethylphenol	N.D.	1.67	0.951	1.66	1.00	57	60	47-95	6	30
Dimethylphthalate	N.D.	1.67	1.17	1.66	1.22	70	73	66-113	4	30
4,6-Dinitro-2-methylphenol	N.D.	1.67	N.D.	1.66	N.D.	0*	0*	56-135	0	30
2,4-Dinitrophenol	N.D.	3.33	N.D.	3.32	N.D.	0*	0*	34-136	0	30
2,4-Dinitrotoluene	N.D.	1.67	0.994	1.66	1.07	60*	64	61-121	7	30
2,6-Dinitrotoluene	N.D.	1.67	1.17	1.66	1.21	70	73	66-122	4	30
1,2-Diphenylhydrazine	N.D.	1.67	1.32	1.66	1.41	79	85	74-117	7	30
bis(2-Ethylhexyl)phthalate	N.D.	1.67	1.10	1.66	1.25	66	75	65-132	12	30
Fluoranthene	0.0420	1.67	1.01	1.66	1.10	58*	63*	65-114	8	30
Fluorene	0.00467	1.67	1.16	1.66	1.21	69	72	62-110	4	30
Hexachlorobenzene	N.D.	1.67	1.11	1.66	1.25	67	75	62-124	12	30
Hexachlorobutadiene	N.D.	1.67	1.05	1.66	1.06	63	64	39-120	1	30
Hexachlorocyclopentadiene	N.D.	3.33	N.D.	3.32	N.D.	0*	0*	13-115	0	30
Hexachloroethane	N.D.	1.67	0.932	1.66	1.04	56	63	30-112	11	30
Indeno(1,2,3-cd)pyrene	0.00600	1.67	0.992	1.66	1.13	59*	68	64-130	13	30
Isophorone	N.D.	1.67	1.15	1.66	1.20	69	72	51-113	4	30
2-Methylnaphthalene	N.D.	1.67	1.15	1.66	1.19	69	72	52-104	3	30
2-Methylphenol	N.D.	1.67	1.16	1.66	1.27	70	77	52-116	9	30
4-Methylphenol	N.D.	1.67	1.07	1.66	1.10	64	66	52-121	2	30
Naphthalene	N.D.	1.67	1.13	1.66	1.16	68	70	49-104	2	30
2-Nitroaniline	N.D.	1.67	1.70	1.66	1.74	102	105	65-132	2	30
Nitrobenzene	N.D.	1.67	1.13	1.66	1.18	68	71	41-118	4	30
N-Nitrosodimethylamine	N.D.	1.67	1.13	1.66	1.12	68	67	31-107	1	30
N-Nitroso-di-n-propylamine	N.D.	1.67	1.14	1.66	1.16	68	70	49-108	2	30
N-Nitrosodiphenylamine	N.D.	1.67	1.24	1.66	1.33	75	80	64-127	7	30
Di-n-octylphthalate	N.D.	1.67	1.10	1.66	1.26	66	76	65-139	14	30
Pentachlorophenol	N.D.	1.67	0.853	1.66	0.927	51	56	40-131	8	30
Phenanthrene	0.0272	1.67	1.13	1.66	1.21	66*	71	67-116	7	30
Phenol	N.D.	1.67	1.11	1.66	1.13	67	68	51-107	1	30
Pyrene	0.0446	1.67	1.03	1.66	1.08	59*	62*	67-109	4	30
Pyridine	N.D.	1.67	0.768	1.66	0.770	46	46	10-117	0	30
1,2,4-Trichlorobenzene	N.D.	1.67	1.09	1.66	1.11	65	67	46-109	2	30
2,4,5-Trichlorophenol	N.D.	1.67	1.14	1.66	1.20	68	72	62-121	6	30
2,4,6-Trichlorophenol	N.D.	1.67	1.22	1.66	1.29	73	77	60-120	5	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20134016	Sample number(s): 1311688,1311690-1311691,1311693-1311694 UNSPK: 1311688									
6:2-Fluorotelomersulfonic acid	N.D.	23.7	21.44	23.24	21.43	90	92	51-144	0	30
8:2-Fluorotelomersulfonic acid	N.D.	23.94	19.63	23.47	23.89	82	102	54-152	20	30
NEtFOSAA	N.D.	25	23.73	24.51	24.6	95	100	51-145	4	30
NMeFOSAA	N.D.	25	24.25	24.51	27.96	97	114	55-152	14	30
Perfluorobutanesulfonic acid	N.D.	22.12	19.37	21.69	18.54	88	86	63-139	4	30
Perfluorobutanoic acid	N.D.	25	19.58	24.51	19.29	78	79	56-188	2	30
Perfluorodecanesulfonic acid	N.D.	24.08	18.42	23.61	18.7	77	79	60-142	2	30
Perfluorodecanoic acid	N.D.	25	22.04	24.51	22.76	88	93	65-144	3	30
Perfluorododecanoic acid	N.D.	25	22.07	24.51	21.45	88	88	62-150	3	30
Perfluoroheptanesulfonic acid	N.D.	23.78	19.43	23.31	20.27	82	87	67-139	4	30
Perfluoroheptanoic acid	N.D.	25	20.77	24.51	22.08	83	90	65-153	6	30
Perfluorohexanesulfonic acid	N.D.	23.64	19.22	23.18	20.27	81	87	59-139	5	30
Perfluorohexanoic acid	N.D.	25	22.05	24.51	19.91	88	81	64-149	10	30
Perfluorononanoic acid	N.D.	25	22.19	24.51	22	89	90	64-151	1	30
Perfluorooctanesulfonamide	N.D.	25	22.35	24.51	23.68	89	97	61-133	6	30
Perfluorooctanesulfonic acid	N.D.	23.9	17.81	23.43	17.73	75	76	54-132	0	30
Perfluorooctanoic acid	1.41	25	24.54	24.51	24.1	93	93	65-147	2	30
Perfluoropentanoic acid	N.D.	25	20.68	24.51	20.95	83	85	71-139	1	30
Perfluorotetradecanoic acid	N.D.	25	22.25	24.51	21.15	89	86	66-147	5	30
Perfluorotridecanoic acid	N.D.	25	23.19	24.51	22.13	93	90	63-152	5	30
Perfluoroundecanoic acid	N.D.	25	22.65	24.51	22.58	91	92	65-146	0	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201331063801	Sample number(s): 1312695 UNSPK: 1312695									
Mercury	0.0190	0.154	0.201	0.159	0.207	118	119	80-120	3	20
Batch number: 201341063801	Sample number(s): 1312694,1312696 UNSPK: 1312696									
Mercury	1.72	0.156	0.990	0.154	0.875	-468 (2)	-551 (2)	80-120	12	20
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20134102201A	Sample number(s): 1311690-1311691,1311693-1311694 UNSPK: 1311691									
Total Cyanide (solid)	0.216	4.72	4.80			97		41-145		
Batch number: 20135102201A	Sample number(s): 1311688 UNSPK: 1311688									
Total Cyanide (solid)	0.365	4.93	4.94			93		41-145		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20132042501A	Sample number(s): 1311688,1311690-1311691,1311693-1311694 UNSPK: 1311688									
Hexavalent Chromium (SOLIDS)	0.720	40	31.84			78		75-125		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 201331063801 Mercury	Sample number(s): 1312695 BKG: 1312695 0.0190	0.0149	25* (1)	20
Batch number: 201341063801 Mercury	Sample number(s): 1312694,1312696 BKG: 1312696 1.72	0.638	92* (1)	20
	mg/kg	mg/kg		
Batch number: 20134102201A Total Cyanide (solid)	Sample number(s): 1311690-1311691,1311693-1311694 BKG: 1311691 0.216	N.D.	200* (1)	20
Batch number: 20135102201A Total Cyanide (solid)	Sample number(s): 1311688 BKG: 1311688 0.365	0.928	87* (1)	20
	mg/kg	mg/kg		
Batch number: 20132042501A Hexavalent Chromium (SOLIDS)	Sample number(s): 1311688,1311690-1311691,1311693-1311694 BKG: 1311688 0.720	0.591	20 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PPL/TCL VOCs
Batch number: 5201333AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1311685	100	103	99	93
Blank	97	103	100	95
LCS	99	102	102	99
LCSD	99	102	101	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: NYSDEC/NJDEP VOCs 8260C Soil
Batch number: B201321AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1311688	103	105	105	90
1311690	102	105	100	97
1311691	101	102	99	97
1311693	101	100	102	93
1311694	102	109	99	96

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NYSDEC/NJDEP VOCs 8260C Soil
Batch number: B201321AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	99	102	99	97
LCS	100	101	99	100
LCSD	101	105	100	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20132SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1311688	66	67	61	66	72	84
1311689	40	40	42	40	46	71
1311690	72	78	67	74	74	67
1311691	62	65	57	64	68	74
1311693	67	71	64	67	72	86
1311694	74	78	84	77	82	102
Blank	79	84	79	80	86	104
LCS	72	77	76	74	80	95
MS	65	71	63	69	71	68
MSD	66	72	68	70	72	73
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

Analysis Name: 1,4-Dioxane 8270D SIM
Batch number: 20136SLB026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1311688	229*	98	90
1311690	95	84	78
1311691	117	74	79
1311693	103	41	70
1311694	83	61	74
Blank	93	98	81
LCS	94	84	83
Limits:	21-120	17-112	27-107

Analysis Name: NY Part 375 Pests Soil
Batch number: 201320001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1311688	169*	232*	77	136
1311690	63	58	64	66
1311691	617*	90	67	105
1311693	113	109	92	145

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NY Part 375 Pests Soil
Batch number: 201320001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1311694	110	106	176*	136
Blank	62	97	73	111
LCS	72	105	81	117
Limits:	19-136	46-152	19-136	46-152

Analysis Name: 7 PCBs + Total Soil
Batch number: 201320002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1311691	61	55	39*	52
1311693	59	68	40*	59
1311694	65	66	70	69
Blank	92	102	99	111
LCS	88	105	96	105
Limits:	53-140	45-143	53-140	45-143

Analysis Name: 2,4,5-T, 2,4-D, 2,4,5-TP 8151A
Batch number: 201320018A

	2,4-DCAA-D1	2,4-DCAA-D2
1311688	101	83
1311690	107	98
1311691	125	114
1311693	119	115
1311694	119	113
Blank	116	118
LCS	117	116
Limits:	27-136	27-136

Analysis Name: 7 PCBs + Total Soil
Batch number: 201330012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1311688	77	67	43*	52
1311690	54	38*	54	38*
Blank	87	89	93	97
LCS	87	90	92	94
Limits:	53-140	45-143	53-140	45-143

Analysis Name: NY 21 PFAS Water
Batch number: 20131006

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Water
Batch number: 20131006

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1311684	93	89	89	88	91	89
Blank	89	89	84	96	92	90
LCS	88	89	90	87	83	84
LCSD	98	90	90	95	94	92

Limits: 43-130 38-150 23-175 36-137 35-143 33-140

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1311684	103	92	88	89	88	95
Blank	96	91	90	96	90	97
LCS	93	90	90	92	89	87
LCSD	105	97	93	97	90	98

Limits: 29-182 52-124 52-121 48-130 50-124 37-169

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1311684	106	98	110	95	88	84
Blank	96	99	105	92	83	80
LCS	108	95	109	98	87	85
LCSD	105	96	111	94	87	87

Limits: 36-143 44-128 42-149 36-127 21-134 10-134

Analysis Name: NY 21 PFAS Soil
Batch number: 20134016

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1311688	73	65	68	72	81	71
1311690	66	67	67	66	72	65
1311691	64	63	69	67	80	69
1311693	81	73	75	77	81	73
1311694	77	72	77	79	83	78
Blank	85	77	76	80	85	81
LCS	81	75	75	79	85	82
MS	72	68	69	65	73	69
MSD	68	65	68	71	72	69

Limits: 40-117 38-118 38-120 36-120 38-124 39-120

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1311688	83	78	72	71	77	95
1311690	68	67	68	69	70	79
1311691	68	66	76	69	66	74

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:05

Group Number: 2098966

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Soil
Batch number: 20134016

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1311693	83	81	81	80	79	89
1311694	80	84	81	82	81	83
Blank	84	85	81	81	82	82
LCS	83	81	81	78	84	82
MS	76	64	71	67	68	92
MSD	79	71	69	71	67	85
Limits:	25-154	44-115	45-118	39-123	43-118	26-155
	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDODA	13C2-PFTeDA	13C8-PFOSA
1311688	26	80	38	81	76	49
1311690	16	74	21	75	68	72
1311691	28	71	34	67	70	70
1311693	56	86	67	81	80	82
1311694	89	91	106	83	80	61
Blank	92	85	103	83	81	79
LCS	105	88	110	92	82	84
MS	47	72	54	73	69	49
MSD	53	73	68	77	71	46
Limits:	10-152	34-124	10-156	28-126	26-125	31-127

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45206 Group # 20909166 Sample # 13116BA-94

COC #606123

Client Information				Matrix			Analysis Requested										For Lab Use Only																																											
Client: <u>LANCAN, DPL</u>		Acct. #:		<input type="checkbox"/> Tissue	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface	<table border="1"> <tr> <th colspan="10">Preservation and Filtration Codes</th> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										Preservation and Filtration Codes																																										FSC: _____	
Preservation and Filtration Codes																																																												
Project Name/ #: <u>35 COMMERCIAL STREET / 170229024</u>		PWSID #:		<input type="checkbox"/> Sediment	<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES											SCR#: _____																																											
Project Manager: <u>G066 WYKA</u>		P.O. #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other:											Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other																																											
Samples: <u>Reid Barkins</u>		Quote #:															Remarks																																											
State where samples were collected: <u>New York</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																																										
Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	TLL VOLs	TLL SUOLs	TLL ARSENIC / TOTAL LEAD	PESTS / PCBs	PCBs	TAL METALS (incl. Hex / Total Lead)	CYANIDE	TFAS + 1-4 Decane																																											
		Date	Time																																																									
<u>SOFB03_050820</u>		<u>5/8/20</u>																																																										
<u>SOFB03_050820</u>										X																																																		
<u>LB18-2-4</u>		<u>5/8/20</u>	<u>1355</u>	X								X																																																
<u>LB18-6-8</u>			<u>14:00</u>	X								X																																																
<u>LB18-4-6</u>			<u>14:08</u>	X						X	X		X	X	X	X	X																																											
<u>LB18-10-12</u>			<u>14:10</u>	X						X	X		X	X	X	X	X																																											
<u>LB18-18-20</u>			<u>14:15</u>	X						X	X		X	X	X	X	X																																											
<u>LB22-2-4</u>			<u>1310</u>	X						X	X		X	X	X	X	X																																											
<u>LB22-4-6</u>			<u>11:50</u>	X						X	X		X	X	X	X	X																																											
<u>LB22-18-14</u>			<u>1315</u>	X						X	X		X	X	X	X	X																																											

Turnaround Time (TAT) Requested (please circle)

Standard Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: G066@LANCAN.COM WYKA@LANCAN.COM

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by: <u>[Signature]</u>	Date: <u>5/8/20</u>	Time: <u>15:30</u>	Received by: <u>[Signature]</u>	Date: <u>5/8/20</u>	Time: <u>15:30</u>
Relinquished by: <u>[Signature]</u>	Date: <u>5/8/20</u>	Time: <u>14:00</u>	Received by: <u>[Signature]</u>	Date: <u>8/24/20</u>	Time: <u>18:00</u>
Relinquished by: <u>[Signature]</u>	Date: <u>8/24/20</u>	Time: <u>20:35</u>	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: <u>5-8-20</u>	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: <u>[Signature]</u>	Date: <u>5/8/20</u>	Time: <u>20:58</u>

EDD Required? Yes No
If yes, format: EQUI

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt: 1.4 °C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # AS208 Group # 2090960 Sample # 1311684-94

COC # **606122**

Client Information				Matrix				Analysis Requested								For Lab Use Only																									
Client: <u>LANGAN, DPL</u>				Acct. #:				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="8">Preservation and Filtration Codes</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>								Preservation and Filtration Codes																								FSC: _____	
Preservation and Filtration Codes																																									
Project Name/#: <u>35 COMMERCIAL STAIR / 17029024</u>				PWSID #:												SCR#: _____																									
Project Manager: <u>GREG WYKA</u>				P.O. #:												Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other																									
Sampler: <u>REID BARKINO</u>				Quote #:																																					
State where samples were collected: <u>NEW YORK</u>			For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Soil <input checked="" type="checkbox"/>	Sediment <input type="checkbox"/>	Tissue <input type="checkbox"/>	Potable Water <input type="checkbox"/>	Ground NPDES <input type="checkbox"/>	Surface <input type="checkbox"/>	Other: _____	Total # of Containers	Remarks																											
Sample Identification		Collected		Grab	Composite																																				
Date	Time	Grab	Composite	Soil <input checked="" type="checkbox"/>	Sediment <input type="checkbox"/>	Tissue <input type="checkbox"/>	Potable Water <input type="checkbox"/>	Ground NPDES <input type="checkbox"/>	Surface <input type="checkbox"/>	Other: _____	Total # of Containers	TOL VOLs	TZL SUCE	PARS/HEADS	PBS	TAL METALS (incl HCV TALUM)	CYANIDE	TPAS + 1,4-Dioxane																							
<u>LB22-18-20</u>	<u>5/18/20</u>	<u>1525</u>	<input checked="" type="checkbox"/>									X	X	X	X	X	X	X																							

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: _____

E-mail address: _____

Relinquished by: <u>[Signature]</u>	Date: <u>5/18/20</u>	Time: <u>1530</u>	Received by: <u>[Signature]</u>	Date: <u>5/18/20</u>	Time: <u>1530</u>
Relinquished by: <u>[Signature]</u>	Date: <u>5/18/20</u>	Time: <u>1900</u>	Received by: <u>[Signature]</u>	Date: <u>5/18/20</u>	Time: <u>1800</u>
Relinquished by: <u>[Signature]</u>	Date: <u>5/18/20</u>	Time: <u>2035</u>	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: <u>[Signature]</u>	Date: <u>5/18/20</u>	Time: <u>1530</u>

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

EDD Required? Yes No
 If yes, format: EQUS

Site-Specific QC (MS/MSD/Dup)? Yes No
 (If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
 UPS _____ FedEx _____ Other _____

Temperature upon receipt 1.4 °C



Group Number(s):

Client: Langan, DPC

2098966

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/08/2020
 Number of Packages: 2 Number of Projects: 1
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	Water	46730061WS	9.5	IR	Wet	Y	Bagged	Y	Y
1	Soil	46730061WS	9.3	IR	Wet	Y	Bagged	Y	Y
2	Soil	46730061WS	1.4	IR	Wet	Y	Bagged	N	Y

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
SOFB03_050820	5/08/2020 14:30	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: May 18, 2020 15:43

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2099141
SDG: CMS05
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
LB26_12-13 Grab Soil	05/11/2020 10:20	1312796
SOTB04_051120 Water	05/11/2020	1312797

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2099141

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: LB26_12-13 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312796
ELLE Group #: 2099141
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/11/2020 21:19
Collection Date/Time: 05/11/2020 10:20
SDG#: CMS05-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
		SW-846 8260C				
11995	Acetone	67-64-1	0.035 J	0.011	0.037	1.19
11995	Acrolein	107-02-8	N.D.	0.009	0.19	1.19
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.037	1.19
11995	Benzene	71-43-2	N.D.	0.0009	0.009	1.19
11995	Bromodichloromethane	75-27-4	N.D.	0.0007	0.009	1.19
11995	Bromoform	75-25-2	N.D.	0.009	0.019	1.19
11995	Bromomethane	74-83-9	N.D.	0.001	0.009	1.19
11995	2-Butanone	78-93-3	N.D.	0.004	0.019	1.19
11995	t-Butyl alcohol	75-65-0	N.D.	0.028	0.19	1.19
11995	n-Butylbenzene	104-51-8	N.D.	0.006	0.015	1.19
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.009	1.19
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.009	1.19
11995	Carbon Disulfide	75-15-0	N.D.	0.001	0.009	1.19
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0009	0.009	1.19
11995	Chlorobenzene	108-90-7	N.D.	0.0009	0.009	1.19
11995	Chloroethane	75-00-3	N.D.	0.002	0.009	1.19
11995	Chloroform	67-66-3	N.D.	0.001	0.009	1.19
11995	Chloromethane	74-87-3	N.D.	0.001	0.009	1.19
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0009	0.009	1.19
11995	Dibromochloromethane	124-48-1	N.D.	0.0009	0.009	1.19
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0007	0.009	1.19
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0009	0.009	1.19
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0009	0.009	1.19
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0007	0.009	1.19
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.001	0.009	1.19
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0009	0.009	1.19
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.009	1.19
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0009	0.009	1.19
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0009	0.009	1.19
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0009	0.009	1.19
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.002	0.019	1.19
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0009	0.009	1.19
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0007	0.009	1.19
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0009	0.009	1.19
11995	1,4-Dioxane	123-91-1	N.D.	0.069	0.14	1.19
11995	Ethylbenzene	100-41-4	N.D.	0.0007	0.009	1.19
11995	Methyl Acetate	79-20-9	N.D.	0.002	0.009	1.19
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0009	0.009	1.19
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.009	1.19
11995	n-Propylbenzene	103-65-1	N.D.	0.0007	0.009	1.19
11995	Styrene	100-42-5	N.D.	0.0007	0.009	1.19

*=This limit was used in the evaluation of the final result

Sample Description: LB26_12-13 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312796
ELLE Group #: 2099141
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/11/2020 21:19
Collection Date/Time: 05/11/2020 10:20
SDG#: CMS05-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0007	0.009	1.19
11995	Tetrachloroethene	127-18-4	N.D.	0.0009	0.009	1.19
11995	Toluene	108-88-3	N.D.	0.001	0.009	1.19
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.009	1.19
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0009	0.009	1.19
11995	Trichloroethene	79-01-6	N.D.	0.0009	0.009	1.19
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.009	1.19
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0009	0.009	1.19
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0009	0.009	1.19
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.009	1.19
11995	Xylene (Total)	1330-20-7	N.D.	0.003	0.019	1.19
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	N.D.	0.005	0.026	1
10726	Acenaphthylene	208-96-8	N.D.	0.005	0.026	1
10726	Acetophenone	98-86-2	N.D.	0.026	0.078	1
10726	Anthracene	120-12-7	0.012 J	0.005	0.026	1
10726	Atrazine	1912-24-9	N.D.	0.31	0.68	1
10726	Benzaldehyde	100-52-7	N.D.	0.10	0.26	1
10726	Benzidine	92-87-5	N.D.	0.52	1.6	1
10726	Benzo(a)anthracene	56-55-3	0.035	0.010	0.026	1
10726	Benzo(a)pyrene	50-32-8	0.034	0.005	0.026	1
10726	Benzo(b)fluoranthene	205-99-2	0.052	0.005	0.026	1
10726	Benzo(g,h,i)perylene	191-24-2	0.027	0.005	0.026	1
10726	Benzo(k)fluoranthene	207-08-9	0.020 J	0.005	0.026	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.026	0.057	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.10	0.26	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.10	0.26	1
10726	Caprolactam	105-60-2	N.D.	0.052	0.26	1
10726	Carbazole	86-74-8	N.D.	0.026	0.057	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.036	0.078	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.031	0.068	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.010	0.052	1
10726	2-Chlorophenol	95-57-8	N.D.	0.026	0.057	1
10726	Chrysene	218-01-9	0.048	0.005	0.026	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	0.026	1
10726	Dibenzofuran	132-64-9	N.D.	0.026	0.057	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.026	0.078	1

*=This limit was used in the evaluation of the final result

Sample Description: LB26_12-13 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312796
ELLE Group #: 2099141
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/11/2020 21:19
Collection Date/Time: 05/11/2020 10:20
SDG#: CMS05-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.026	0.057	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.026	0.057	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.16	0.52	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.031	0.068	1
10726	Diethylphthalate	84-66-2	N.D.	0.10	0.26	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.047	0.10	1
10726	Dimethylphthalate	131-11-3	N.D.	0.10	0.26	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.36	0.78	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.52	1.6	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.10	0.26	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.036	0.078	1
10726	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.036	0.078	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.031	0.068	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.10	0.26	1
10726	Fluoranthene	206-44-0	0.066	0.005	0.026	1
10726	Fluorene	86-73-7	0.007 J	0.005	0.026	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.010	0.026	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.057	0.12	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.31	0.78	1
10726	Hexachloroethane	67-72-1	N.D.	0.052	0.26	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.025 J	0.005	0.026	1
10726	Isophorone	78-59-1	N.D.	0.026	0.057	1
10726	2-Methylnaphthalene	91-57-6	0.007 J	0.005	0.052	1
10726	2-Methylphenol	95-48-7	N.D.	0.026	0.10	1
10726	4-Methylphenol	106-44-5	N.D.	0.026	0.078	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.016 J	0.010	0.026	1
10726	2-Nitroaniline	88-74-4	N.D.	0.026	0.078	1
10726	Nitrobenzene	98-95-3	N.D.	0.042	0.10	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.10	0.26	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.036	0.078	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.026	0.057	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.10	0.26	1
10726	Pentachlorophenol	87-86-5	N.D.	0.10	0.26	1
10726	Phenanthrene	85-01-8	0.040	0.005	0.026	1

*=This limit was used in the evaluation of the final result

Sample Description: LB26_12-13 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1312796
ELLE Group #: 2099141
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/11/2020 21:19
Collection Date/Time: 05/11/2020 10:20
SDG#: CMS05-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Phenol	108-95-2	N.D.	0.026	0.057	1
10726	Pyrene	129-00-0	0.054	0.005	0.026	1
10726	Pyridine	110-86-1	N.D.	0.10	0.26	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.036	0.078	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.047	0.10	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.042	0.088	1

Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	36.1	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	NYSDEC/NJDEP VOCs 8260C Soil	SW-846 8260C	1	B201331AA	05/12/2020 23:51	Joel Trout	1.19
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013356776	05/12/2020 11:07	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013356776	05/12/2020 11:07	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013356776	05/11/2020 10:20	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20133SLA026	05/15/2020 13:51	William H Saadeh	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20133SLA026	05/12/2020 23:55	Laura Duquette	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20133820004B	05/12/2020 12:47	Stephanie A Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: SOTB04_051120 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1312797
ELLE Group #: 2099141
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/11/2020 21:19
Collection Date/Time: 05/11/2020
SDG#: CMS05-02TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
		SW-846 8260C				
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	1,4-Dioxane	123-91-1	N.D.	0.029	0.075	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1

*=This limit was used in the evaluation of the final result

Sample Description: SOTB04_051120 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1312797
ELLE Group #: 2099141
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/11/2020 21:19
Collection Date/Time: 05/11/2020
SDG#: CMS05-02TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	PPL/TCL VOCs	SW-846 8260C	1	N201352AA	05/14/2020 19:36	Laura Green	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	N201352AA	05/14/2020 19:35	Laura Green	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: B201331AA	Sample number(s): 1312796		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
1,4-Dioxane	N.D.	0.037	0.075
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
n-Propylbenzene	N.D.	0.0004	0.005
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
	mg/l	mg/l	mg/l
Batch number: N201352AA	Sample number(s): 1312797		
Acetone	0.0009 J	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
1,4-Dioxane	N.D.	0.029	0.075
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
	mg/kg	mg/kg	mg/kg
Batch number: 20133SLA026	Sample number(s): 1312796		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17
Benidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4, 2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2,4,6-Trichlorophenol	N.D.	0.027	0.057

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B201331AA	Sample number(s): 1312796								
Acetone	0.150	0.164	0.150	0.165	109	110	41-150	0	30
Acrolein	0.150	0.125	0.150	0.130	84	87	57-131	4	30
Acrylonitrile	0.100	0.0862	0.100	0.0856	86	86	66-120	1	30
Benzene	0.0200	0.0180	0.0200	0.0180	90	90	80-120	0	30
Bromodichloromethane	0.0200	0.0176	0.0200	0.0180	88	90	70-120	2	30
Bromoform	0.0200	0.0163	0.0200	0.0160	81	80	51-127	2	30
Bromomethane	0.0200	0.0156	0.0200	0.0159	78	79	45-140	2	30
2-Butanone	0.150	0.134	0.150	0.136	90	91	57-128	1	30
t-Butyl alcohol	0.200	0.173	0.200	0.177	86	88	74-121	2	30
n-Butylbenzene	0.0200	0.0173	0.0200	0.0173	86	87	71-121	0	30
sec-Butylbenzene	0.0200	0.0180	0.0200	0.0178	90	89	72-120	1	30
tert-Butylbenzene	0.0200	0.0170	0.0200	0.0169	85	85	68-120	0	30
Carbon Disulfide	0.0200	0.0177	0.0200	0.0178	88	89	64-133	1	30
Carbon Tetrachloride	0.0200	0.0175	0.0200	0.0174	88	87	64-134	1	30
Chlorobenzene	0.0200	0.0179	0.0200	0.0177	89	89	80-120	1	30
Chloroethane	0.0200	0.0148	0.0200	0.0148	74	74	43-135	0	30
Chloroform	0.0200	0.0179	0.0200	0.0181	89	90	80-120	1	30
Chloromethane	0.0200	0.0156	0.0200	0.0160	78	80	56-120	2	30
1,2-Dibromo-3-chloropropane	0.0200	0.0166	0.0200	0.0163	83	82	48-134	2	30
Dibromochloromethane	0.0200	0.0183	0.0200	0.0185	92	92	69-125	1	30
1,2-Dibromoethane	0.0200	0.0177	0.0200	0.0177	88	89	76-120	0	30
1,2-Dichlorobenzene	0.0200	0.0173	0.0200	0.0172	87	86	76-120	1	30
1,3-Dichlorobenzene	0.0200	0.0173	0.0200	0.0172	86	86	75-120	1	30
1,4-Dichlorobenzene	0.0200	0.0173	0.0200	0.0174	86	87	80-120	0	30
Dichlorodifluoromethane	0.0200	0.0141	0.0200	0.0143	71	72	21-127	2	30
1,1-Dichloroethane	0.0200	0.0177	0.0200	0.0180	88	90	79-120	2	30
1,2-Dichloroethane	0.0200	0.0173	0.0200	0.0175	87	88	71-128	1	30
1,1-Dichloroethene	0.0200	0.0183	0.0200	0.0185	92	93	73-129	1	30
cis-1,2-Dichloroethene	0.0200	0.0193	0.0200	0.0193	96	96	80-125	0	30
trans-1,2-Dichloroethene	0.0200	0.0180	0.0200	0.0182	90	91	80-126	1	30
1,2-Dichloroethene (Total)	0.0400	0.0373	0.0400	0.0375	93	94	80-126	1	30
1,2-Dichloropropane	0.0200	0.0182	0.0200	0.0183	91	91	80-120	0	30
cis-1,3-Dichloropropene	0.0200	0.0180	0.0200	0.0177	90	88	66-120	2	30
trans-1,3-Dichloropropene	0.0200	0.0172	0.0200	0.0174	86	87	68-122	1	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,4-Dioxane	0.500	0.474	0.500	0.495	95	99	62-131	4	30
Ethylbenzene	0.0200	0.0178	0.0200	0.0176	89	88	78-120	1	30
Methyl Acetate	0.0200	0.0166	0.0200	0.0163	83	82	67-128	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0172	0.0200	0.0176	86	88	72-120	2	30
Methylene Chloride	0.0200	0.0178	0.0200	0.0179	89	90	76-122	1	30
n-Propylbenzene	0.0200	0.0183	0.0200	0.0182	91	91	72-123	0	30
Styrene	0.0200	0.0171	0.0200	0.0168	85	84	76-120	1	30
1,1,2,2-Tetrachloroethane	0.0200	0.0176	0.0200	0.0178	88	89	69-125	1	30
Tetrachloroethene	0.0200	0.0174	0.0200	0.0174	87	87	73-120	0	30
Toluene	0.0200	0.0174	0.0200	0.0174	87	87	80-120	0	30
1,1,1-Trichloroethane	0.0200	0.0172	0.0200	0.0173	86	87	69-123	1	30
1,1,2-Trichloroethane	0.0200	0.0193	0.0200	0.0186	96	93	80-120	4	30
Trichloroethene	0.0200	0.0177	0.0200	0.0178	89	89	80-120	0	30
Trichlorofluoromethane	0.0200	0.0161	0.0200	0.0162	80	81	55-134	1	30
1,2,4-Trimethylbenzene	0.0200	0.0175	0.0200	0.0175	88	88	73-120	0	30
1,3,5-Trimethylbenzene	0.0200	0.0176	0.0200	0.0177	88	88	73-120	1	30
Vinyl Chloride	0.0200	0.0158	0.0200	0.0159	79	80	52-120	1	30
Xylene (Total)	0.0600	0.0532	0.0600	0.0527	89	88	75-120	1	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: N201352AA	Sample number(s): 1312797								
Acetone	0.150	0.207	0.150	0.199	138	132	54-157	4	30
Acrolein	0.150	0.137	0.150	0.149	91	99	47-136	8	30
Acrylonitrile	0.100	0.101	0.100	0.100	101	100	60-129	1	30
Benzene	0.0200	0.0199	0.0200	0.0206	100	103	80-120	4	30
Bromodichloromethane	0.0200	0.0187	0.0200	0.0191	94	95	71-120	2	30
Bromoform	0.0200	0.0196	0.0200	0.0190	98	95	51-120	3	30
Bromomethane	0.0200	0.0167	0.0200	0.0169	84	84	53-128	1	30
2-Butanone	0.150	0.152	0.150	0.150	102	100	59-135	1	30
t-Butyl alcohol	0.200	0.243	0.200	0.243	121	121	60-130	0	30
n-Butylbenzene	0.0200	0.0194	0.0200	0.0206	97	103	76-120	6	30
sec-Butylbenzene	0.0200	0.0200	0.0200	0.0211	100	105	77-120	5	30
tert-Butylbenzene	0.0200	0.0197	0.0200	0.0202	99	101	78-120	2	30
Carbon Disulfide	0.0200	0.0198	0.0200	0.0214	99	107	65-128	8	30
Carbon Tetrachloride	0.0200	0.0178	0.0200	0.0188	89	94	64-134	5	30
Chlorobenzene	0.0200	0.0201	0.0200	0.0206	100	103	80-120	2	30
Chloroethane	0.0200	0.0165	0.0200	0.0175	83	87	55-123	6	30
Chloroform	0.0200	0.0192	0.0200	0.0197	96	98	80-120	2	30
Chloromethane	0.0200	0.0153	0.0200	0.0163	77	82	56-121	6	30
1,2-Dibromo-3-chloropropane	0.0200	0.0190	0.0200	0.0182	95	91	47-131	4	30
Dibromochloromethane	0.0200	0.0198	0.0200	0.0199	99	99	71-120	1	30
1,2-Dibromoethane	0.0200	0.0196	0.0200	0.0196	98	98	77-120	0	30
1,2-Dichlorobenzene	0.0200	0.0208	0.0200	0.0207	104	103	80-120	1	30
1,3-Dichlorobenzene	0.0200	0.0203	0.0200	0.0210	101	105	80-120	3	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,4-Dichlorobenzene	0.0200	0.0203	0.0200	0.0210	102	105	80-120	3	30
Dichlorodifluoromethane	0.0200	0.0135	0.0200	0.0141	68	71	41-127	4	30
1,1-Dichloroethane	0.0200	0.0200	0.0200	0.0210	100	105	80-120	5	30
1,2-Dichloroethane	0.0200	0.0176	0.0200	0.0177	88	88	73-124	0	30
1,1-Dichloroethene	0.0200	0.0186	0.0200	0.0206	93	103	80-131	10	30
cis-1,2-Dichloroethene	0.0200	0.0204	0.0200	0.0214	102	107	80-125	5	30
trans-1,2-Dichloroethene	0.0200	0.0192	0.0200	0.0204	96	102	80-126	6	30
1,2-Dichloroethene (Total)	0.0400	0.0396	0.0400	0.0418	99	104	80-125	5	30
1,2-Dichloropropane	0.0200	0.0212	0.0200	0.0216	106	108	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0194	0.0200	0.0196	97	98	75-120	1	30
trans-1,3-Dichloropropene	0.0200	0.0190	0.0200	0.0188	95	94	67-120	1	30
1,4-Dioxane	0.500	0.489	0.500	0.477	98	95	63-146	3	30
Ethylbenzene	0.0200	0.0197	0.0200	0.0205	98	103	80-120	4	30
Methyl Acetate	0.0200	0.0216	0.0200	0.0208	108	104	54-136	3	30
Methyl Tertiary Butyl Ether	0.0200	0.0189	0.0200	0.0186	94	93	69-122	1	30
Methylene Chloride	0.0200	0.0201	0.0200	0.0204	101	102	80-120	1	30
n-Propylbenzene	0.0200	0.0207	0.0200	0.0216	104	108	79-121	4	30
Styrene	0.0200	0.0200	0.0200	0.0205	100	103	80-120	3	30
1,1,2,2-Tetrachloroethane	0.0200	0.0218	0.0200	0.0213	109	107	72-120	2	30
Tetrachloroethene	0.0200	0.0193	0.0200	0.0201	96	101	80-120	4	30
Toluene	0.0200	0.0198	0.0200	0.0208	99	104	80-120	5	30
1,1,1-Trichloroethane	0.0200	0.0176	0.0200	0.0184	88	92	67-126	5	30
1,1,2-Trichloroethane	0.0200	0.0214	0.0200	0.0209	107	105	80-120	2	30
Trichloroethene	0.0200	0.0185	0.0200	0.0193	93	97	80-120	4	30
Trichlorofluoromethane	0.0200	0.0165	0.0200	0.0179	83	90	55-135	8	30
1,2,4-Trimethylbenzene	0.0200	0.0194	0.0200	0.0200	97	100	75-120	3	30
1,3,5-Trimethylbenzene	0.0200	0.0195	0.0200	0.0206	98	103	75-120	6	30
Vinyl Chloride	0.0200	0.0158	0.0200	0.0169	79	84	56-120	6	30
Xylene (Total)	0.0600	0.0608	0.0600	0.0628	101	105	80-120	3	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20133SLA026	Sample number(s): 1312796								
Acenaphthene	1.67	1.50			90		61-112		
Acenaphthylene	1.67	1.53			92		60-124		
Acetophenone	1.67	1.36			82		48-109		
Anthracene	1.67	1.57			94		67-120		
Atrazine	1.67	1.69			101		70-129		
Benzaldehyde	1.67	1.11			67		20-101		
Benzidine	8.33	5.11			61		18-105		
Benzo(a)anthracene	1.67	1.67			100		68-120		
Benzo(a)pyrene	1.67	1.75			105		68-119		
Benzo(b)fluoranthene	1.67	1.68			101		67-125		
Benzo(g,h,i)perylene	1.67	1.83			110		68-125		
Benzo(k)fluoranthene	1.67	1.69			101		66-122		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1'-Biphenyl	1.67	1.46			88		59-106		
Butylbenzylphthalate	1.67	1.78			107		69-125		
Di-n-butylphthalate	1.67	1.68			101		70-126		
Caprolactam	1.67	1.57			94		62-119		
Carbazole	1.67	1.67			100		69-125		
bis(2-Chloroethyl)ether	1.67	1.42			85		44-104		
bis(2-Chloroisopropyl)ether	1.67	1.05			63		40-112		
2-Chloronaphthalene	1.67	1.81			109		48-123		
2-Chlorophenol	1.67	1.49			89		51-109		
Chrysene	1.67	1.58			95		66-111		
Dibenz(a,h)anthracene	1.67	1.89			114		69-135		
Dibenzofuran	1.67	1.48			89		62-113		
1,2-Dichlorobenzene	1.67	1.30			78		38-106		
1,3-Dichlorobenzene	1.67	1.24			74		36-103		
1,4-Dichlorobenzene	1.67	1.25			75		25-127		
3,3'-Dichlorobenzidine	1.67	1.21			73		18-114		
2,4-Dichlorophenol	1.67	1.40			84		57-115		
Diethylphthalate	1.67	1.58			95		68-116		
2,4-Dimethylphenol	1.67	1.25			75		47-95		
Dimethylphthalate	1.67	1.51			91		66-113		
4,6-Dinitro-2-methylphenol	1.67	1.69			102		56-135		
2,4-Dinitrophenol	3.33	2.91			87		34-136		
2,4-Dinitrotoluene	1.67	1.65			99		61-121		
2,6-Dinitrotoluene	1.67	1.68			101		66-122		
1,2-Diphenylhydrazine	1.67	1.73			104		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.84			110		65-132		
Fluoranthene	1.67	1.57			94		65-114		
Fluorene	1.67	1.57			94		62-110		
Hexachlorobenzene	1.67	1.62			97		62-124		
Hexachlorobutadiene	1.67	1.20			72		39-120		
Hexachlorocyclopentadiene	3.33	1.44			43		13-115		
Hexachloroethane	1.67	1.31			78		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.83			110		64-130		
Isophorone	1.67	1.42			85		51-113		
2-Methylnaphthalene	1.67	1.43			86		52-104		
2-Methylphenol	1.67	1.50			90		52-116		
4-Methylphenol	1.67	1.42			85		52-121		
Naphthalene	1.67	1.36			81		49-104		
2-Nitroaniline	1.67	1.79			108		65-132		
Nitrobenzene	1.67	1.39			83		41-118		
N-Nitrosodimethylamine	1.67	1.37			82		31-107		
N-Nitroso-di-n-propylamine	1.67	1.48			89		49-108		
N-Nitrosodiphenylamine	1.67	1.65			99		64-127		
Di-n-octylphthalate	1.67	1.76			105		65-139		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Pentachlorophenol	1.67	1.22			73		40-131		
Phenanthrene	1.67	1.57			94		67-116		
Phenol	1.67	1.42			85		57-107		
Pyrene	1.67	1.54			92		67-109		
Pyridine	1.67	0.908			54		10-117		
1,2,4-Trichlorobenzene	1.67	1.28			77		46-109		
2,4,5-Trichlorophenol	1.67	1.52			91		62-121		
2,4,6-Trichlorophenol	1.67	1.54			92		60-120		
	%	%	%	%					
Batch number: 20133820004B	Sample number(s): 1312796								
Moisture	89.5	89.33			100		99-101		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NYSDEC/NJDEP VOCs 8260C Soil
Batch number: B201331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1312796	98	99	100	96
Blank	100	104	98	97
LCS	100	106	99	100
LCSD	102	106	98	100
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs
Batch number: N201352AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1312797	93	95	98	89
Blank	92	97	97	89
LCS	94	99	99	89
LCSD	93	96	98	90
Limits:	80-120	80-120	80-120	80-120

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20133SLA026

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/18/2020 15:43

Group Number: 2099141

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20133SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1312796	80	80	79	74	79	106
Blank	84	86	94	81	86	111
LCS	83	86	96	81	84	105
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45208 Group # 2099141 Sample # 1312796-97

COC # 606106

Client Information				Matrix				Analysis Requested								For Lab Use Only											
Client: <u>LANAM, DPL</u>		Acct. #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/>		Other: _____		Total # of Containers		Preservation and Filtration Codes								FSC: _____ SCR#: <u>258201</u>					
Project Name/#: <u>36 COMMERCIAL STABLES</u>		PWSID #: <u>170229824</u>		Project Manager: <u>BALES WMA</u>		P.O. #:		Quote #:		State where samples were collected: <u>NY</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Preservation Codes								Remarks					
Sampler: <u>KEVIN BARKIN</u>		Sample Identification		Collected		Grab		Composite		Soil <input type="checkbox"/>		Water <input type="checkbox"/>		Other: _____		Total # of Containers		H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other									
		Date		Time		Grab		Composite		Soil <input type="checkbox"/>		Water <input type="checkbox"/>		Other: _____		Total # of Containers											
		<u>LB27-12-13</u>		<u>12-13</u>		<u>5/1/20</u>		<u>10:20</u>		<input checked="" type="checkbox"/>						<u>1312796/97</u>											
		<u>SOT804_051120</u>														<u>1312796/97</u>											

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45208 Group # 2099141 Sample # 1312796-97

COC # 606106

Client Information				Matrix				Analysis Requested										For Lab Use Only							
Client: <u>LANBAN, DPL</u>		Acct. #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/>		Other: _____		Total # of Containers		Preservation and Filtration Codes										FSC: _____	
Project Name/#: <u>36 COMMERCIAL STREETS 170227024</u>		PWSID #:		Grab <input type="checkbox"/>		Composite <input type="checkbox"/>																			
Project Manager: <u>BRUCE WYKA</u>		P.O. #:																							
Sampler: <u>REID BALKING</u>		Quote #:																							
State where samples were collected: <u>NY</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																							
Sample Identification			Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	TCL 5005 / VOCs	TCL VOCs	Preservation Codes										Remarks		
Date	Time																								
<u>1/27-12-13</u>	<u>5/11/20</u>	<u>10:20</u>	<u>X</u>																						
<u>SOTB04_051120</u>																									

Turnaround Time (TAT) Requested (please circle) Standard <u>Standard</u> Rush (Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by <u>Reid Balking</u> Date <u>5/11/20</u> Time <u>15:05</u>		Received by <u>[Signature]</u> Date <u>5/12/20</u> Time <u>15:45</u>	
Requested TAT in business days: _____				Relinquished by <u>[Signature]</u> Date <u>5/11/20</u> Time <u>15:00</u>		Received by <u>[Signature]</u> Date <u>5-11-20</u> Time <u>19:05</u>	
E-mail address: _____				Relinquished by <u>[Signature]</u> Date <u>5-11-20</u> Time <u>2119</u>		Received by _____ Date _____ Time _____	
Data Package Options (circle if required) Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) NJ DKQP TX TRRP-13 <u>NYSDEC</u> Category A or <u>B</u> MA MCP CT RCP				Relinquished by _____ Date _____ Time _____		Received by <u>[Signature]</u> Date <u>5/11/20</u> Time <u>2119</u>	
				EDD Required? <u>Yes</u> No If yes, format: <u>EQUIS</u>		Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____	
				Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt <u>0.5 - 0.9°C</u>	



Client: Langan

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/11/2020
 Number of Packages: 2 Number of Projects: 3
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Katherine Metzger

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	Soil	46730060WS	0.5	IR	Wet	Y	Loose	N
2	Soil	46730060WS	0.9	IR	Wet	Y	Loose	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: June 04, 2020 19:14

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2099431
SDG: CMS08
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

A previous version of this report was generated on 05/20/2020 13:22.

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
LB16_6-8 Grab Soil	05/13/2020 08:45	1314141
LB16_6-8 TCLP NVE Grab Soil	05/13/2020 08:45	1314142
LB16_8-10 Grab Soil	05/13/2020 08:50	1314143
LB16_3-5 Grab Soil	05/13/2020 08:55	1314144
LB16_15-17 Grab Soil	05/13/2020 09:00	1314145
LB16_18-20 Grab Soil	05/13/2020 09:05	1314146
LB19_0.5-2.5 Grab Soil	05/13/2020 15:20	1314147
LB19_0.5-2.5 TCLP NVE Grab Soil	05/13/2020 15:20	1314148
LB19_6-8 Grab Soil	05/13/2020 15:25	1314149
LB19_14-16 Grab Soil	05/13/2020 15:30	1314150
LB20_1-3 Grab Soil	05/13/2020 11:50	1314151
LB20_1-3 TCLP NVE Grab Soil	05/13/2020 11:50	1314152
LB20_6-8 Grab Soil	05/13/2020 11:55	1314153
LB20_6-8 TCLP NVE Grab Soil	05/13/2020 11:55	1314154
LB20_3-5 Grab Soil	05/13/2020 12:00	1314155
LB20_3-5 SS Grab Soil	05/13/2020 12:00	1314156
LB20_3-5 IS Grab Soil	05/13/2020 12:00	1314157
LB20_3-5 PDS Grab Soil	05/13/2020 12:00	1314158
LB20_3-5 MS Grab Soil	05/13/2020 12:00	1314159
LB20_3-5 MSD Grab Soil	05/13/2020 12:00	1314160
LB20_3-5 DUP Grab Soil	05/13/2020 12:00	1314161
LB20_14-16 Grab Soil	05/13/2020 12:05	1314162
LB23_10-12 Grab Soil	05/13/2020 10:45	1314163
LB24_10-12 Grab Soil	05/13/2020 14:45	1314164
SOTB05_051320 Water	05/13/2020	1314165
SOFB05_051320 Water	05/13/2020 13:30	1314166

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2099431

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Preservation requirements were not met.

Sample #: 1314166

Preservation requirements were not met. The pH preservation of all non-volatile containers was checked upon receipt at the laboratory. The container for the following analysis was not within the specification and was adjusted accordingly by the laboratory: Total Cyanide (water)

Analysis Specific Comments:**SW-846 8260C, GC/MS Volatiles****Sample #s: 1314165**

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

Batch #: B201361AA (Sample number(s): 1314144-1314146, 1314149)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dichlorodifluoromethane

Batch #: B201381AA (Sample number(s): 1314143, 1314150, 1314155, 1314159-1314160 UNSPK: 1314155)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Dichlorodifluoromethane, 1,1,2,2-Tetrachloroethane, Acetone, 2-Butanone, t-Butyl alcohol

Batch #: R201362AA (Sample number(s): 1314162)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Bromomethane

SW-846 8270D, GC/MS Semivolatiles**Sample #s: 1314144**

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 1314145, 1314146, 1314162, 1314163

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 20135SLA026 (Sample number(s): 1314143-1314144)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1314144

Batch #: 20135SLB026 (Sample number(s): 1314149-1314150, 1314155, 1314159-1314160, 1314164 UNSPK: 1314155)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Acenaphthene, Pyrene, Hexachlorocyclopentadiene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene, Carbazole, Benzidine

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Benzidine

Batch #: 20139SLA026 (Sample number(s): 1314145-1314146, 1314162-1314163)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1314145

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 1314143, 1314144, 1314145, 1314146, 1314149, 1314150, 1314155, 1314159, 1314160

Reporting limits were raised due to interference from the sample matrix.

Batch #: 20135SLC026 (Sample number(s): 1314143-1314144, 1314146)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1314144

Batch #: 20135SLD026 (Sample number(s): 1314149-1314150, 1314155, 1314159-1314160, 1314162 UNSPK: 1314155)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1314149

SW-846 8081B, Pesticides

Sample #s: 1314143, 1314144, 1314146, 1314149, 1314150, 1314155, 1314159, 1314160, 1314162

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 1314145

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Batch #: 201350016A (Sample number(s): 1314143-1314146, 1314149-1314150, 1314155, 1314159-1314160, 1314162 UNSPK: 1314155)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Endrin

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Alpha Chlordane, Alpha BHC, Beta BHC, Heptachlor, Aldrin, 4,4'-Dde, 4,4'-Ddd, 4,4'-Ddt, Dieldrin, Endrin, Endosulfan I, Endosulfan Sulfate

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Gamma BHC - Lindane, Delta BHC, Endosulfan II

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1314143, 1314144, 1314149, 1314150, 1314155, 1314159, 1314160, 1314162, MS, MSD

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1314145

SW-846 8082A Feb 2007 Rev 1, PCBs

Sample #s: 1314149, 1314150, 1314155

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

Sample #s: 1314159, 1314160

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary.

Batch #: 201350022A (Sample number(s): 1314149-1314150, 1314155, 1314159-1314160 UNSPK: 1314155)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: PCB-1016, PCB-1260

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1314155, 1314160, MSD

Batch #: 201390026A (Sample number(s): 1314143-1314146, 1314162)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1314143, 1314144, 1314145, 1314162

SW-846 8151A, Herbicides

Sample #s: 1314160

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Sample #s: 1314159

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

Sample #s: 1314143, 1314144, 1314145, 1314146, 1314149, 1314150, 1314155, 1314162

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 201350020A (Sample number(s): 1314143-1314146, 1314149-1314150, 1314155, 1314159-1314160, 1314162 UNSPK: 1314155)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4,5-TP

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1314143, 1314159, MS

EPA 537 Version 1.1 Modified, LC/MS/MS Miscellaneous

Sample #s: 1314166

Reporting limits were raised due to limited sample volume.

The recovery for the extraction standard(s) in the method blank are outside the QC acceptance limits as noted on the QC Summary.

Sample #s: 1314144, 1314150

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary.

Batch #: 20135005 (Sample number(s): 1314143-1314146, 1314149-1314150, 1314155, 1314159-1314160, 1314162 UNSPK: 1314155)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1314144, 1314150, Blank

Batch #: 20139002 (Sample number(s): 1314166)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) Blank

SW-846 6020B Rev.2, July 2014, Metals

Batch #: 201351404903A (Sample number(s): 1314155, 1314159-1314162 UNSPK: 1314155 BKG: 1314155)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Arsenic, Barium, Beryllium, Chromium, Copper, Nickel, Selenium, Zinc

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Lead, Manganese

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Arsenic, Barium, Copper

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Beryllium, Cadmium, Lead

SW-846 7471B, Metals

Batch #: 201351063802 (Sample number(s): 1314155, 1314159-1314162 UNSPK: 1314155 BKG: 1314155)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Mercury

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Mercury

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

REVISED

Sample Description: LB16_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314141
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:45
SDG#: CMS08-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06135	Lead	7439-92-1	269	0.275	1.09	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.282	0.0160	0.0703	1
Wet Chemistry			SM 2540 G-2011 %Moisture Calc	%	%	
00111	Moisture ¹	n.a.	11.1	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:01	Patrick J Engle	10
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:10	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_6-8 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1314142
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:45
SDG#: CMS08-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	1.15	0.0071	0.0150	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201391404501	05/18/2020 23:26	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201391404501	05/18/2020 23:26	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 06:55	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201391404501	05/18/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20135-9169-947	05/14/2020 12:53	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.077	0.006	0.021	0.91
11995	Acrolein	107-02-8	N.D.	0.005	0.10	0.91
11995	Acrylonitrile	107-13-1	N.D.	0.0008	0.021	0.91
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.91
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.91
11995	Bromoform	75-25-2	N.D.	0.005	0.010	0.91
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.91
11995	2-Butanone	78-93-3	N.D.	0.002	0.010	0.91
11995	t-Butyl alcohol	75-65-0	0.030 J	0.015	0.10	0.91
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.008	0.91
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.91
11995	tert-Butylbenzene	98-06-6	N.D.	0.0008	0.005	0.91
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.91
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.91
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.91
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.91
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.91
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.91
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.91
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.91
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.91
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.91
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.91
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.91
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.91
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.91
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.91
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.91
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.91
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.91
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.010	0.91
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.91
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.91
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.91
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.91
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.005	0.91
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.91
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.91
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.91
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.91
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.91

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.91
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.91
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.91
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.91
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.91
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.91
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.91
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.91
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.91
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.010	0.91
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.46	0.004	0.019	1
10726	Acenaphthylene	208-96-8	0.14	0.004	0.019	1
10726	Acetophenone	98-86-2	N.D.	0.019	0.056	1
10726	Anthracene	120-12-7	0.97	0.004	0.019	1
10726	Atrazine	1912-24-9	N.D.	0.22	0.49	1
10726	Benzaldehyde	100-52-7	N.D.	0.075	0.19	1
10726	Benzidine	92-87-5	N.D.	0.37	1.1	1
10726	Benzo(a)anthracene	56-55-3	1.9	0.007	0.019	1
10726	Benzo(a)pyrene	50-32-8	1.7	0.004	0.019	1
10726	Benzo(b)fluoranthene	205-99-2	2.5	0.004	0.019	1
10726	Benzo(g,h,i)perylene	191-24-2	1.2	0.004	0.019	1
10726	Benzo(k)fluoranthene	207-08-9	0.86	0.004	0.019	1
10726	1,1'-Biphenyl	92-52-4	0.10	0.019	0.041	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.075	0.19	1
10726	Di-n-butylphthalate	84-74-2	0.078 J	0.075	0.19	1
10726	Caprolactam	105-60-2	N.D.	0.037	0.19	1
10726	Carbazole	86-74-8	0.45	0.019	0.041	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.026	0.056	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.022	0.049	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.007	0.037	1
10726	2-Chlorophenol	95-57-8	N.D.	0.019	0.041	1
10726	Chrysene	218-01-9	1.8	0.004	0.019	1
10726	Dibenz(a,h)anthracene	53-70-3	0.33	0.007	0.019	1
10726	Dibenzofuran	132-64-9	0.46	0.019	0.041	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.019	0.056	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.019	0.041	1

*=This limit was used in the evaluation of the final result

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	0.034 J	0.019	0.041	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.37	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.022	0.049	1
10726	Diethylphthalate	84-66-2	N.D.	0.075	0.19	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.034	0.075	1
10726	Dimethylphthalate	131-11-3	N.D.	0.075	0.19	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.26	0.56	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.37	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.075	0.19	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.026	0.056	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.026	0.056	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.022	0.049	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.55	0.075	0.19	1
10726	Fluoranthene	206-44-0	4.3	0.004	0.019	1
10726	Fluorene	86-73-7	0.59	0.004	0.019	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.007	0.019	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.041	0.086	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.22	0.56	1
10726	Hexachloroethane	67-72-1	N.D.	0.037	0.19	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1.1	0.004	0.019	1
10726	Isophorone	78-59-1	N.D.	0.019	0.041	1
10726	2-Methylnaphthalene	91-57-6	0.43	0.004	0.037	1
10726	2-Methylphenol	95-48-7	N.D.	0.019	0.075	1
10726	4-Methylphenol	106-44-5	N.D.	0.019	0.056	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.63	0.007	0.019	1
10726	2-Nitroaniline	88-74-4	N.D.	0.019	0.056	1
10726	Nitrobenzene	98-95-3	N.D.	0.030	0.075	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.075	0.19	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.026	0.056	1
10726	N-Nitrosodiphenylamine	86-30-6	0.075	0.019	0.041	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.075	0.19	1
10726	Pentachlorophenol	87-86-5	N.D.	0.075	0.19	1
10726	Phenanthrene	85-01-8	4.2	0.004	0.019	1
10726	Phenol	108-95-2	N.D.	0.019	0.041	1

*=This limit was used in the evaluation of the final result

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
10726	Pyrene	129-00-0	3.3	0.004	0.019	1
10726	Pyridine	110-86-1	N.D.	0.075	0.19	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.026	0.056	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.034	0.075	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.030	0.064	1
GC/MS Semivolatiles SW-846 8270D SIM						
12969	1,4-Dioxane	123-91-1	N.D.	7	19	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A						
10401	2,4-D	94-75-7	N.D. D1	0.013	0.040	1
10401	2,4,5-T	93-76-5	N.D. D1	0.00092	0.0019	1
10401	2,4,5-TP	93-72-1	N.D. D1	0.00084	0.0019	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A Feb 2007 Rev 1						
10885	PCB-1016	12674-11-2	N.D. D1	4.0	19	1
10885	PCB-1221	11104-28-2	N.D. D1	5.2	19	1
10885	PCB-1232	11141-16-5	N.D. D1	9.0	19	1
10885	PCB-1242	53469-21-9	N.D. D1	3.7	19	1
10885	PCB-1248	12672-29-6	N.D. D1	3.7	19	1
10885	PCB-1254	11097-69-1	N.D. D1	3.7	19	1
10885	PCB-1260	11096-82-5	17 JPD2	5.5	19	1
10885	Total PCBs ¹	1336-36-3	17 J	3.7	19	1
Pesticides SW-846 8081B						
10590	Aldrin	309-00-2	N.D. D1	0.0095	0.046	50
10590	Alpha BHC	319-84-6	N.D. D2	0.0095	0.046	50
10590	Beta BHC	319-85-7	N.D. D2	0.025	0.084	50
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.012	0.046	50
10590	Alpha Chlordane	5103-71-9	N.D. VD1	0.021	0.046	50
10590	4,4'-Ddd	72-54-8	0.028 JD1	0.018	0.11	50
10590	4,4'-Dde	72-55-9	N.D. D2	0.018	0.11	50
10590	4,4'-Ddt	50-29-3	N.D. D2	0.044	0.11	50
10590	Delta BHC	319-86-8	N.D. D1	0.025	0.084	50
10590	Dieldrin	60-57-1	N.D. D2	0.018	0.11	50
10590	Endosulfan I	959-98-8	N.D. D2	0.012	0.046	50
10590	Endosulfan II	33213-65-9	N.D. D1	0.061	0.11	50

*=This limit was used in the evaluation of the final result

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.018	0.11	50
10590	Endrin	72-20-8	N.D. D1	0.038	0.11	50
10590	Heptachlor	76-44-8	N.D. D2	0.017	0.046	50

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g		
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.62	2.1	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.62	3.1	1
14027	NETFOSAA ¹	2991-50-6	N.D.	0.21	2.1	1
NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.21	2.1	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.42	2.1	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.83	2.1	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.21	0.62	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.21	0.62	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.21	0.62	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.21	0.62	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.21	0.62	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.21	0.62	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.21	0.62	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.21	0.62	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.21	0.62	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	0.59 J	0.21	0.62	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.21	0.62	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.21	0.62	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.21	0.62	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.21	0.62	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.21	0.62	1

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	8.26	0.151	0.452	2
06126	Barium	7440-39-3	180	0.518	1.13	5
06127	Beryllium	7440-41-7	0.564	0.0269	0.0679	2
06128	Cadmium	7440-43-9	0.332	0.0570	0.113	2

*=This limit was used in the evaluation of the final result

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06131	Chromium	7440-47-3	28.9	0.174	0.452	2
02829	Trivalent Chromium soils ¹	16065-83-1	26.5	0.17	0.48	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	136	0.993	2.26	10
06135	Lead	7439-92-1	232	0.285	1.13	10
06137	Manganese	7439-96-5	340	1.21	2.26	10
06139	Nickel	7440-02-0	16.3	0.184	0.452	2
06141	Selenium	7782-49-2	0.456	0.148	0.452	2
06142	Silver	7440-22-4	0.115	0.0459	0.113	2
06149	Zinc	7440-66-6	502	3.03	11.3	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.171	0.0172	0.0754	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.20	0.54	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	2.4	0.16	0.48	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	11.6	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201381AA	05/17/2020 21:15	Joel Trout	0.91
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:39	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:39	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 08:50	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLA026	05/18/2020 17:47	Edward C Monborne	1
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLC026	05/18/2020 15:31	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLA026	05/15/2020 00:08	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLC026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 03:13	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201390026A	05/19/2020 14:54	Elizabeth E Donovan	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 07:37	Dylan Schreiner	50
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201390026A	05/18/2020 19:40	Bradley W VanLeuven	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 15:15	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:13	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 10:52	Bradley M Berlot	5
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:03	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:13	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:13	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:06	Patrick J Engle	10
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:06	Patrick J Engle	10
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:06	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:03	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:03	Patrick J Engle	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:13	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_8-10 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314143
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:50
SDG#: CMS08-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:06	Patrick J Engle	10
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:12	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:37	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.046	0.005	0.018	0.81
11995	Acrolein	107-02-8	N.D.	0.005	0.091	0.81
11995	Acrylonitrile	107-13-1	N.D.	0.0007	0.018	0.81
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.81
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.81
11995	Bromoform	75-25-2	N.D.	0.005	0.009	0.81
11995	Bromomethane	74-83-9	N.D.	0.0006	0.005	0.81
11995	2-Butanone	78-93-3	0.005 J	0.002	0.009	0.81
11995	t-Butyl alcohol	75-65-0	0.015 J	0.014	0.091	0.81
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.007	0.81
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.81
11995	tert-Butylbenzene	98-06-6	N.D.	0.0007	0.005	0.81
11995	Carbon Disulfide	75-15-0	0.001 J	0.0005	0.005	0.81
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.81
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.81
11995	Chloroethane	75-00-3	N.D.	0.0009	0.005	0.81
11995	Chloroform	67-66-3	N.D.	0.0005	0.005	0.81
11995	Chloromethane	74-87-3	N.D.	0.0005	0.005	0.81
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.81
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.81
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.81
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.81
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.81
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.81
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.005	0.81
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.81
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.005	0.81
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.81
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.81
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.81
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0009	0.009	0.81
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.81
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.81
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.81
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.81
11995	Methyl Acetate	79-20-9	N.D.	0.0009	0.005	0.81
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.81
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.81
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.81
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.81
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.81

*=This limit was used in the evaluation of the final result

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.81
11995	Toluene	108-88-3	N.D.	0.0005	0.005	0.81
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.005	0.81
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.81
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.81
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0006	0.005	0.81
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.81
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.81
11995	Vinyl Chloride	75-01-4	N.D.	0.0005	0.005	0.81
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.009	0.81
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	15	0.075	0.37	20
10726	Acenaphthylene	208-96-8	0.56	0.075	0.37	20
10726	Acetophenone	98-86-2	N.D.	0.37	1.1	20
10726	Anthracene	120-12-7	29	0.075	0.37	20
10726	Atrazine	1912-24-9	N.D.	4.5	9.7	20
10726	Benzaldehyde	100-52-7	N.D.	1.5	3.7	20
10726	Benzidine	92-87-5	N.D.	7.5	22	20
10726	Benzo(a)anthracene	56-55-3	45	0.15	0.37	20
10726	Benzo(a)pyrene	50-32-8	45	0.075	0.37	20
10726	Benzo(b)fluoranthene	205-99-2	53	0.075	0.37	20
10726	Benzo(g,h,i)perylene	191-24-2	28	0.075	0.37	20
10726	Benzo(k)fluoranthene	207-08-9	23	0.075	0.37	20
10726	1,1'-Biphenyl	92-52-4	1.6	0.37	0.82	20
10726	Butylbenzylphthalate	85-68-7	N.D.	1.5	3.7	20
10726	Di-n-butylphthalate	84-74-2	N.D.	1.5	3.7	20
10726	Caprolactam	105-60-2	N.D.	0.75	3.7	20
10726	Carbazole	86-74-8	22	0.37	0.82	20
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.52	1.1	20
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.45	0.97	20
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.15	0.75	20
10726	2-Chlorophenol	95-57-8	N.D.	0.37	0.82	20
10726	Chrysene	218-01-9	43	0.075	0.37	20
10726	Dibenz(a,h)anthracene	53-70-3	7.5	0.15	0.37	20
10726	Dibenzofuran	132-64-9	14	0.37	0.82	20
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.37	1.1	20
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.37	0.82	20

*=This limit was used in the evaluation of the final result

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.37	0.82	20
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.2	7.5	20
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.45	0.97	20
10726	Diethylphthalate	84-66-2	N.D.	1.5	3.7	20
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.67	1.5	20
10726	Dimethylphthalate	131-11-3	N.D.	1.5	3.7	20
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.2	11	20
10726	2,4-Dinitrophenol	51-28-5	N.D.	7.5	22	20
10726	2,4-Dinitrotoluene	121-14-2	N.D.	1.5	3.7	20
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.52	1.1	20
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.52	1.1	20
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.45	0.97	20
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	3.7	20
10726	Fluoranthene	206-44-0	140	0.75	3.7	200
10726	Fluorene	86-73-7	20	0.075	0.37	20
10726	Hexachlorobenzene	118-74-1	N.D.	0.15	0.37	20
10726	Hexachlorobutadiene	87-68-3	N.D.	0.82	1.7	20
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	4.5	11	20
10726	Hexachloroethane	67-72-1	N.D.	0.75	3.7	20
10726	Indeno(1,2,3-cd)pyrene	193-39-5	26	0.075	0.37	20
10726	Isophorone	78-59-1	N.D.	0.37	0.82	20
10726	2-Methylnaphthalene	91-57-6	5.3	0.075	0.75	20
10726	2-Methylphenol	95-48-7	N.D.	0.37	1.5	20
10726	4-Methylphenol	106-44-5	N.D.	0.37	1.1	20
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	11	0.15	0.37	20
10726	2-Nitroaniline	88-74-4	N.D.	0.37	1.1	20
10726	Nitrobenzene	98-95-3	N.D.	0.60	1.5	20
10726	N-Nitrosodimethylamine	62-75-9	N.D.	1.5	3.7	20
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.52	1.1	20
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.37	0.82	20
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	1.5	3.7	20
10726	Pentachlorophenol	87-86-5	N.D.	1.5	3.7	20
10726	Phenanthrene	85-01-8	160	0.75	3.7	200
10726	Phenol	108-95-2	N.D.	0.37	0.82	20

*=This limit was used in the evaluation of the final result

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Pyrene	129-00-0	100	0.75	3.7	200
10726	Pyridine	110-86-1	N.D.	1.5	3.7	20
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.52	1.1	20
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.67	1.5	20
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.60	1.3	20
Reporting limits were raised due to interference from the sample matrix.						
GC/MS Semivolatiles			SW-846 8270D SIM	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	7	19	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides			SW-846 8151A	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D2	0.013	0.040	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00091	0.0019	1
10401	2,4,5-TP	93-72-1	N.D. D1	0.00083	0.0019	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs			SW-846 8082A Feb 2007 Rev 1	ug/kg	ug/kg	
10885	PCB-1016	12674-11-2	N.D. D1	4.0	19	1
10885	PCB-1221	11104-28-2	N.D. D1	5.1	19	1
10885	PCB-1232	11141-16-5	N.D. D1	8.9	19	1
10885	PCB-1242	53469-21-9	N.D. D1	3.7	19	1
10885	PCB-1248	12672-29-6	N.D. D1	3.7	19	1
10885	PCB-1254	11097-69-1	N.D. D1	3.7	19	1
10885	PCB-1260	11096-82-5	20 PD1	5.4	19	1
10885	Total PCBs ¹	1336-36-3	20	3.7	19	1
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D1	0.0038	0.018	20
10590	Alpha BHC	319-84-6	N.D. D2	0.0038	0.018	20
10590	Beta BHC	319-85-7	N.D. D2	0.0098	0.033	20
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0047	0.018	20
10590	Alpha Chlordane	5103-71-9	N.D. VD1	0.0052	0.018	20
10590	4,4'-Ddd	72-54-8	N.D. D1	0.0073	0.044	20
10590	4,4'-Dde	72-55-9	N.D. D2	0.0073	0.044	20
10590	4,4'-Ddt	50-29-3	N.D. D2	0.018	0.044	20
10590	Delta BHC	319-86-8	N.D. D1	0.010	0.033	20
10590	Dieldrin	60-57-1	N.D. D2	0.0073	0.044	20
10590	Endosulfan I	959-98-8	N.D. D2	0.0049	0.018	20

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			mg/kg	mg/kg	mg/kg	
10590	Endosulfan II	33213-65-9	N.D. D2	0.024	0.044	20
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0073	0.044	20
10590	Endrin	72-20-8	N.D. D1	0.015	0.044	20
10590	Heptachlor	76-44-8	N.D. D2	0.0069	0.018	20

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g		
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.64	2.1	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.64	3.2	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.21	2.1	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.21	2.1	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.42	2.1	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.85	2.1	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.21	0.64	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.21	0.64	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.21	0.64	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.21	0.64	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.21	0.64	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.21	0.64	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.21	0.64	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.21	0.64	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.21	0.64	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.21	0.64	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.21	0.64	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.21	0.64	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.21	0.64	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.21	0.64	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.21	0.64	1

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary.

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	6.28	0.135	0.404	2

*=This limit was used in the evaluation of the final result

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals						
SW-846 6020B Rev.2, July 2014			mg/kg	mg/kg	mg/kg	
06126	Barium	7440-39-3	44.6	0.185	0.404	2
06127	Beryllium	7440-41-7	0.824	0.0241	0.0607	2
06128	Cadmium	7440-43-9	0.475	0.0510	0.101	2
06131	Chromium	7440-47-3	11.5	0.156	0.404	2
02829	Trivalent Chromium soils ¹	16065-83-1	10.4	0.16	0.47	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	25.9	0.178	0.404	2
06135	Lead	7439-92-1	41.5	0.0510	0.202	2
06137	Manganese	7439-96-5	116	1.08	2.02	10
06139	Nickel	7440-02-0	15.0	0.165	0.404	2
06141	Selenium	7782-49-2	0.311 J	0.132	0.404	2
06142	Silver	7440-22-4	N.D.	0.0411	0.101	2
06149	Zinc	7440-66-6	65.1	0.542	2.02	2
SW-846 7471B			mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0504 J	0.0160	0.0701	1
Wet Chemistry						
SW-846 9012B			mg/kg	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.20	0.55	1
SW-846 7196A			mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	1.1	0.16	0.47	1
Wet Chemistry						
SM 2540 G-2011			%	%	%	
%Moisture Calc						
00111	Moisture ¹	n.a.	10.9	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201361AA	05/15/2020 18:06	Linda C Pape	0.81
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:39	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:39	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 08:55	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLA026	05/18/2020 18:11	Edward C Monborne	20
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLA026	05/18/2020 18:35	Edward C Monborne	200
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLC026	05/18/2020 16:02	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLA026	05/15/2020 00:08	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLC026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 05:26	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201390026A	05/19/2020 15:05	Elizabeth E Donovan	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 08:06	Dylan Schreiner	20
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201390026A	05/18/2020 19:40	Bradley W VanLeuven	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 15:24	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:08	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:15	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:08	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:08	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314144
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 08:55
SDG#: CMS08-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:15	Patrick J Engle	2
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:18	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:38	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.084	0.007	0.024	1
11995	Acrolein	107-02-8	N.D.	0.006	0.12	1
11995	Acrylonitrile	107-13-1	N.D.	0.0009	0.024	1
11995	Benzene	71-43-2	N.D.	0.0006	0.006	1
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.006	1
11995	Bromoform	75-25-2	N.D.	0.006	0.012	1
11995	Bromomethane	74-83-9	N.D.	0.0008	0.006	1
11995	2-Butanone	78-93-3	0.006 J	0.002	0.012	1
11995	t-Butyl alcohol	75-65-0	N.D.	0.018	0.12	1
11995	n-Butylbenzene	104-51-8	N.D.	0.004	0.009	1
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.006	1
11995	tert-Butylbenzene	98-06-6	N.D.	0.0009	0.006	1
11995	Carbon Disulfide	75-15-0	0.004 J	0.0007	0.006	1
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0006	0.006	1
11995	Chlorobenzene	108-90-7	N.D.	0.0006	0.006	1
11995	Chloroethane	75-00-3	N.D.	0.001	0.006	1
11995	Chloroform	67-66-3	N.D.	0.0007	0.006	1
11995	Chloromethane	74-87-3	N.D.	0.0007	0.006	1
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0006	0.006	1
11995	Dibromochloromethane	124-48-1	N.D.	0.0006	0.006	1
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.006	1
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0006	0.006	1
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0006	0.006	1
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.006	1
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0007	0.006	1
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0006	0.006	1
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	0.006	1
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0006	0.006	1
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0006	0.006	1
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0006	0.006	1
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.012	1
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0006	0.006	1
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.006	1
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0006	0.006	1
11995	Ethylbenzene	100-41-4	N.D.	0.0005	0.006	1
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.006	1
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.006	1
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.006	1
11995	n-Propylbenzene	103-65-1	N.D.	0.0005	0.006	1
11995	Styrene	100-42-5	N.D.	0.0005	0.006	1
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.006	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0006	0.006	1
11995	Toluene	108-88-3	N.D.	0.0007	0.006	1
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0007	0.006	1
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0006	0.006	1
11995	Trichloroethene	79-01-6	N.D.	0.0006	0.006	1
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0008	0.006	1
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0006	0.006	1
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0006	0.006	1
11995	Vinyl Chloride	75-01-4	N.D.	0.0007	0.006	1
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.012	1
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.017 J	0.004	0.020	1
10726	Acenaphthylene	208-96-8	0.005 J	0.004	0.020	1
10726	Acetophenone	98-86-2	0.082	0.020	0.059	1
10726	Anthracene	120-12-7	0.030	0.004	0.020	1
10726	Atrazine	1912-24-9	N.D.	0.23	0.51	1
10726	Benzaldehyde	100-52-7	0.68	0.078	0.20	1
10726	Benzidine	92-87-5	N.D.	0.39	1.2	1
10726	Benzo(a)anthracene	56-55-3	0.062	0.008	0.020	1
10726	Benzo(a)pyrene	50-32-8	0.059	0.004	0.020	1
10726	Benzo(b)fluoranthene	205-99-2	0.066	0.004	0.020	1
10726	Benzo(g,h,i)perylene	191-24-2	0.047	0.004	0.020	1
10726	Benzo(k)fluoranthene	207-08-9	0.034	0.004	0.020	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.020	0.043	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.078	0.20	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.078	0.20	1
10726	Caprolactam	105-60-2	N.D.	0.039	0.20	1
10726	Carbazole	86-74-8	N.D.	0.020	0.043	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.027	0.059	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.023	0.051	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.039	1
10726	2-Chlorophenol	95-57-8	N.D.	0.020	0.043	1
10726	Chrysene	218-01-9	0.065	0.004	0.020	1
10726	Dibenz(a,h)anthracene	53-70-3	0.011 J	0.008	0.020	1
10726	Dibenzofuran	132-64-9	0.020 J	0.020	0.043	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.020	0.059	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.020	0.043	1

*=This limit was used in the evaluation of the final result

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.020	0.043	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.39	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.023	0.051	1
10726	Diethylphthalate	84-66-2	N.D.	0.078	0.20	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.035	0.078	1
10726	Dimethylphthalate	131-11-3	N.D.	0.078	0.20	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.27	0.59	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.39	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.078	0.20	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.027	0.059	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.027	0.059	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.023	0.051	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.078	0.20	1
10726	Fluoranthene	206-44-0	0.12	0.004	0.020	1
10726	Fluorene	86-73-7	0.020	0.004	0.020	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.020	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.043	0.090	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.23	0.59	1
10726	Hexachloroethane	67-72-1	N.D.	0.039	0.20	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.040	0.004	0.020	1
10726	Isophorone	78-59-1	N.D.	0.020	0.043	1
10726	2-Methylnaphthalene	91-57-6	0.007 J	0.004	0.039	1
10726	2-Methylphenol	95-48-7	N.D.	0.020	0.078	1
10726	4-Methylphenol	106-44-5	N.D.	0.020	0.059	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.018 J	0.008	0.020	1
10726	2-Nitroaniline	88-74-4	N.D.	0.020	0.059	1
10726	Nitrobenzene	98-95-3	N.D.	0.031	0.078	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.078	0.20	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.027	0.059	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.020	0.043	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.078	0.20	1
10726	Pentachlorophenol	87-86-5	N.D.	0.078	0.20	1
10726	Phenanthrene	85-01-8	0.12	0.004	0.020	1
10726	Phenol	108-95-2	N.D.	0.020	0.043	1

*=This limit was used in the evaluation of the final result

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Pyrene	129-00-0	0.10	0.004	0.020	1
10726	Pyridine	110-86-1	N.D.	0.078	0.20	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.027	0.059	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.035	0.078	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.031	0.067	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

GC/MS Semivolatiles	SW-846 8270D SIM	ug/kg	ug/kg	ug/kg		
12969	1,4-Dioxane	123-91-1	11 J	8	20	10

Reporting limits were raised due to interference from the sample matrix.

Herbicides	SW-846 8151A	mg/kg	mg/kg	mg/kg		
10401	2,4-D	94-75-7	N.D. D2	0.014	0.042	1
10401	2,4,5-T	93-76-5	N.D. D1	0.00097	0.0020	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00088	0.0020	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

PCBs	SW-846 8082A Feb 2007 Rev 1	ug/kg	ug/kg	ug/kg		
10885	PCB-1016	12674-11-2	N.D. D1	4.2	20	1
10885	PCB-1221	11104-28-2	N.D. D1	5.4	20	1
10885	PCB-1232	11141-16-5	N.D. D1	9.4	20	1
10885	PCB-1242	53469-21-9	N.D. D1	3.9	20	1
10885	PCB-1248	12672-29-6	N.D. D1	3.9	20	1
10885	PCB-1254	11097-69-1	N.D. D1	3.9	20	1
10885	PCB-1260	11096-82-5	N.D. D1	5.8	20	1
10885	Total PCBs ¹	1336-36-3	N.D.	3.9	20	1

Pesticides	SW-846 8081B	mg/kg	mg/kg	mg/kg		
10590	Aldrin	309-00-2	N.D. D2	0.0010	0.0049	5
10590	Alpha BHC	319-84-6	N.D. D1	0.0010	0.0049	5
10590	Beta BHC	319-85-7	N.D. D1	0.0026	0.0089	5
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0012	0.0049	5
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.0010	0.0049	5
10590	4,4'-Ddd	72-54-8	N.D. D2	0.0019	0.012	5
10590	4,4'-Dde	72-55-9	N.D. D1	0.0019	0.012	5
10590	4,4'-Ddt	50-29-3	N.D. D2	0.0047	0.012	5
10590	Delta BHC	319-86-8	N.D. D1	0.0027	0.0089	5

*=This limit was used in the evaluation of the final result

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			mg/kg	mg/kg	mg/kg	
SW-846 8081B						
10590	Dieldrin	60-57-1	N.D. D2	0.0019	0.012	5
10590	Endosulfan I	959-98-8	N.D. D2	0.0013	0.0049	5
10590	Endosulfan II	33213-65-9	N.D. D2	0.0065	0.012	5
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	0.0019	0.012	5
10590	Endrin	72-20-8	N.D. D1	0.0040	0.012	5
10590	Heptachlor	76-44-8	N.D. D2	0.0018	0.0049	5

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g		
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.70	2.3	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.70	3.5	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.23	2.3	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.23	2.3	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.46	2.3	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.93	2.3	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.23	0.70	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.23	0.70	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.23	0.70	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.23	0.70	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.23	0.70	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.23	0.70	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.23	0.70	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.23	0.70	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.23	0.70	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.23	0.70	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.23	0.70	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.23	0.70	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.23	0.70	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.23	0.70	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.23	0.70	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

CAT No.	Analysis Name	CAS Number	Dry Result mg/kg	Dry Method Detection Limit* mg/kg	Dry Limit of Quantitation mg/kg	Dilution Factor
Metals						
SW-846 6020B Rev.2, July 2014						
06125	Arsenic	7440-38-2	8.23	0.141	0.422	2
06126	Barium	7440-39-3	34.8	0.193	0.422	2
06127	Beryllium	7440-41-7	0.408	0.0251	0.0633	2
06128	Cadmium	7440-43-9	0.118	0.0532	0.106	2
06131	Chromium	7440-47-3	6.31	0.162	0.422	2
02829	Trivalent Chromium soils ¹	16065-83-1	6.3	0.17	0.50	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	24.2	0.185	0.422	2
06135	Lead	7439-92-1	51.3	0.0532	0.211	2
06137	Manganese	7439-96-5	83.7	0.226	0.422	2
06139	Nickel	7440-02-0	43.8	0.172	0.422	2
06141	Selenium	7782-49-2	0.649	0.138	0.422	2
06142	Silver	7440-22-4	0.0557 J	0.0428	0.106	2
06149	Zinc	7440-66-6	173	2.83	10.6	10
SW-846 7471B			mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.99	0.0882	0.388	5
Wet Chemistry						
SW-846 9012B			mg/kg	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.21	0.59	1
SW-846 7196A			mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.17	0.50	1
Wet Chemistry						
SM 2540 G-2011			%	%	%	
%Moisture Calc						
00111	Moisture ¹	n.a.	15.4	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201361AA	05/15/2020 18:28	Linda C Pape	1
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 09:00	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 13:27	Edward C Monborne	1
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139SLD026	05/19/2020 14:58	Joseph M Gambler	10
10813	BNA Soil Microwave APP IX	SW-846 3546	2	20139SLA026	05/19/2020 00:42	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	20139SLD026	05/19/2020 00:42	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 05:59	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201390026A	05/19/2020 15:15	Elizabeth E Donovan	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 08:34	Dylan Schreiner	5
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201390026A	05/18/2020 19:40	Bradley W VanLeuven	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 15:33	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:18	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:12	Bradley M Berlot	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:12	Bradley M Berlot	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:16	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_15-17 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314145
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:00
SDG#: CMS08-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:20	Patrick J Engle	10
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:34	Damary Valentin	5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:40	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.072	0.006	0.021	0.8
11995	Acrolein	107-02-8	N.D.	0.005	0.11	0.8
11995	Acrylonitrile	107-13-1	N.D.	0.0008	0.021	0.8
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.8
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.8
11995	Bromoform	75-25-2	N.D.	0.005	0.011	0.8
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.8
11995	2-Butanone	78-93-3	0.007 J	0.002	0.011	0.8
11995	t-Butyl alcohol	75-65-0	0.044 J	0.016	0.11	0.8
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.008	0.8
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.8
11995	tert-Butylbenzene	98-06-6	N.D.	0.0008	0.005	0.8
11995	Carbon Disulfide	75-15-0	0.002 J	0.0006	0.005	0.8
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.8
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.8
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.8
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.8
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.8
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.8
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.8
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.8
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.8
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.8
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.8
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.8
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.8
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.8
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.8
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.8
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.8
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.011	0.8
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.8
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.8
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.8
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.8
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.005	0.8
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.8
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.8
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.8
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.8
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.8

*=This limit was used in the evaluation of the final result

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.8
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.8
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.8
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.8
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.8
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.8
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.8
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.8
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.8
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.011	0.8
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	N.D.	0.004	0.022	1
10726	Acenaphthylene	208-96-8	N.D.	0.004	0.022	1
10726	Acetophenone	98-86-2	N.D.	0.022	0.066	1
10726	Anthracene	120-12-7	0.006 J	0.004	0.022	1
10726	Atrazine	1912-24-9	N.D.	0.26	0.57	1
10726	Benzaldehyde	100-52-7	N.D.	0.087	0.22	1
10726	Benzidine	92-87-5	N.D.	0.44	1.3	1
10726	Benzo(a)anthracene	56-55-3	N.D.	0.009	0.022	1
10726	Benzo(a)pyrene	50-32-8	0.006 J	0.004	0.022	1
10726	Benzo(b)fluoranthene	205-99-2	0.009 J	0.004	0.022	1
10726	Benzo(g,h,i)perylene	191-24-2	0.007 J	0.004	0.022	1
10726	Benzo(k)fluoranthene	207-08-9	0.005 J	0.004	0.022	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.022	0.048	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.087	0.22	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.087	0.22	1
10726	Caprolactam	105-60-2	N.D.	0.044	0.22	1
10726	Carbazole	86-74-8	N.D.	0.022	0.048	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.031	0.066	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.026	0.057	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.044	1
10726	2-Chlorophenol	95-57-8	N.D.	0.022	0.048	1
10726	Chrysene	218-01-9	0.008 J	0.004	0.022	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.009	0.022	1
10726	Dibenzofuran	132-64-9	N.D.	0.022	0.048	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.022	0.066	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.022	0.048	1

*=This limit was used in the evaluation of the final result

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.022	0.048	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.13	0.44	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.026	0.057	1
10726	Diethylphthalate	84-66-2	N.D.	0.087	0.22	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.039	0.087	1
10726	Dimethylphthalate	131-11-3	N.D.	0.087	0.22	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.31	0.66	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.44	1.3	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.087	0.22	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.031	0.066	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.031	0.066	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.026	0.057	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.087	0.22	1
10726	Fluoranthene	206-44-0	0.017 J	0.004	0.022	1
10726	Fluorene	86-73-7	N.D.	0.004	0.022	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.009	0.022	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.048	0.10	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.26	0.66	1
10726	Hexachloroethane	67-72-1	N.D.	0.044	0.22	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.007 J	0.004	0.022	1
10726	Isophorone	78-59-1	N.D.	0.022	0.048	1
10726	2-Methylnaphthalene	91-57-6	N.D.	0.004	0.044	1
10726	2-Methylphenol	95-48-7	N.D.	0.022	0.087	1
10726	4-Methylphenol	106-44-5	N.D.	0.022	0.066	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	N.D.	0.009	0.022	1
10726	2-Nitroaniline	88-74-4	N.D.	0.022	0.066	1
10726	Nitrobenzene	98-95-3	N.D.	0.035	0.087	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.087	0.22	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.031	0.066	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.022	0.048	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.087	0.22	1
10726	Pentachlorophenol	87-86-5	N.D.	0.087	0.22	1
10726	Phenanthrene	85-01-8	0.013 J	0.004	0.022	1
10726	Phenol	108-95-2	N.D.	0.022	0.048	1

*=This limit was used in the evaluation of the final result

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Pyrene	129-00-0	0.017 J	0.004	0.022	1
10726	Pyridine	110-86-1	N.D.	0.087	0.22	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.031	0.066	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.039	0.087	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.035	0.074	1
<p>The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.</p>						

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D SIM	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	9	22	10
<p>Reporting limits were raised due to interference from the sample matrix.</p>						

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Herbicides			SW-846 8151A	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D1	0.016	0.047	1
10401	2,4,5-T	93-76-5	N.D. D2	0.0011	0.0022	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00098	0.0022	1
<p>The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.</p>						

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs			SW-846 8082A Feb 2007 Rev 1	ug/kg	ug/kg	
10885	PCB-1016	12674-11-2	N.D. D1	4.7	22	1
10885	PCB-1221	11104-28-2	N.D. D1	6.0	22	1
10885	PCB-1232	11141-16-5	N.D. D1	10	22	1
10885	PCB-1242	53469-21-9	N.D. D1	4.3	22	1
10885	PCB-1248	12672-29-6	N.D. D1	4.3	22	1
10885	PCB-1254	11097-69-1	N.D. D1	4.3	22	1
10885	PCB-1260	11096-82-5	N.D. D2	6.4	22	1
10885	Total PCBs ¹	1336-36-3	N.D.	4.3	22	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D2	0.0011	0.0054	5
10590	Alpha BHC	319-84-6	N.D. D1	0.0011	0.0054	5
10590	Beta BHC	319-85-7	N.D. D1	0.0029	0.0098	5
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0014	0.0054	5
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.0011	0.0054	5
10590	4,4'-Ddd	72-54-8	N.D. D2	0.0022	0.013	5
10590	4,4'-Dde	72-55-9	N.D. D1	0.0022	0.013	5
10590	4,4'-Ddt	50-29-3	N.D. D2	0.0052	0.013	5
10590	Delta BHC	319-86-8	N.D. D1	0.0030	0.0098	5

*=This limit was used in the evaluation of the final result

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Dieldrin	60-57-1	N.D. D2	0.0022	0.013	5
10590	Endosulfan I	959-98-8	N.D. D2	0.0014	0.0054	5
10590	Endosulfan II	33213-65-9	N.D. D2	0.0072	0.013	5
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	0.0022	0.013	5
10590	Endrin	72-20-8	N.D. D1	0.0045	0.013	5
10590	Heptachlor	76-44-8	N.D. VD2	0.0038	0.0054	5

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.74	2.5	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.74	3.7	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.25	2.5	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.25	2.5	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.50	2.5	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.99	2.5	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.25	0.74	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.25	0.74	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.25	0.74	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.25	0.74	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.25	0.74	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.25	0.74	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.25	0.74	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.25	0.74	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.25	0.74	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.25	0.74	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.25	0.74	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.25	0.74	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.25	0.74	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.25	0.74	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.25	0.74	1

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	7.59	0.130	0.390	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06126	Barium	7440-39-3	37.5	0.178	0.390	2
06127	Beryllium	7440-41-7	0.793	0.0232	0.0585	2
06128	Cadmium	7440-43-9	0.0812 J	0.0491	0.0975	2
06131	Chromium	7440-47-3	28.8	0.150	0.390	2
02829	Trivalent Chromium soils ¹	16065-83-1	28.8	0.18	0.55	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	10.4	0.171	0.390	2
06135	Lead	7439-92-1	9.81	0.0491	0.195	2
06137	Manganese	7439-96-5	387	1.04	1.95	10
06139	Nickel	7440-02-0	25.0	0.159	0.390	2
06141	Selenium	7782-49-2	0.436	0.127	0.390	2
06142	Silver	7440-22-4	0.331	0.0396	0.0975	2
06149	Zinc	7440-66-6	62.6	0.522	1.95	2
SW-846 7471B			mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	N.D.	0.0187	0.0822	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.23	0.64	1
SW-846 7196A			mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.18	0.55	1
Wet Chemistry			SM 2540 G-2011	%	%	
%Moisture Calc						
00111	Moisture ¹	n.a.	24.0	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201361AA	05/15/2020 18:50	Linda C Pape	0.8
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 09:05	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 13:51	Edward C Monborne	1
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLC026	05/18/2020 17:04	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	2	20139SLA026	05/19/2020 00:42	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLC026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 06:33	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201390026A	05/19/2020 15:26	Elizabeth E Donovan	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 09:02	Dylan Schreiner	5
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201390026A	05/18/2020 19:40	Bradley W VanLeuven	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 15:43	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:23	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:25	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:15	Bradley M Berlot	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:15	Bradley M Berlot	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB16_18-20 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314146
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 09:05
SDG#: CMS08-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:18	Patrick J Engle	2
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:22	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:41	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_0.5-2.5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314147
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:20
SDG#: CMS08-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06135	Lead	7439-92-1	21.0	0.0526	0.209	2
		SW-846 7471B	mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0517 J	0.0171	0.0752	1
Wet Chemistry		SM 2540 G-2011 %Moisture Calc	%	%	%	
00111	Moisture ¹	n.a.	11.3	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:19	Patrick J Engle	2
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:24	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_0.5-2.5 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1314148
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:20
SDG#: CMS08-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	0.473	0.0071	0.0150	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201391404501	05/19/2020 00:00	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201391404501	05/19/2020 00:00	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:03	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201391404501	05/18/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20135-9169-947	05/14/2020 12:53	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	N.D.	0.011	0.035	1.66
11995	Acrolein	107-02-8	N.D.	0.009	0.18	1.66
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.035	1.66
11995	Benzene	71-43-2	N.D.	0.0009	0.009	1.66
11995	Bromodichloromethane	75-27-4	N.D.	0.0007	0.009	1.66
11995	Bromoform	75-25-2	N.D.	0.009	0.018	1.66
11995	Bromomethane	74-83-9	N.D.	0.001	0.009	1.66
11995	2-Butanone	78-93-3	N.D.	0.004	0.018	1.66
11995	t-Butyl alcohol	75-65-0	N.D.	0.026	0.18	1.66
11995	n-Butylbenzene	104-51-8	N.D.	0.005	0.014	1.66
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.009	1.66
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.009	1.66
11995	Carbon Disulfide	75-15-0	N.D.	0.001	0.009	1.66
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0009	0.009	1.66
11995	Chlorobenzene	108-90-7	N.D.	0.0009	0.009	1.66
11995	Chloroethane	75-00-3	N.D.	0.002	0.009	1.66
11995	Chloroform	67-66-3	N.D.	0.001	0.009	1.66
11995	Chloromethane	74-87-3	N.D.	0.001	0.009	1.66
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0009	0.009	1.66
11995	Dibromochloromethane	124-48-1	N.D.	0.0009	0.009	1.66
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0007	0.009	1.66
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0009	0.009	1.66
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0009	0.009	1.66
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0007	0.009	1.66
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.001	0.009	1.66
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0009	0.009	1.66
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.009	1.66
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0009	0.009	1.66
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0009	0.009	1.66
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0009	0.009	1.66
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.002	0.018	1.66
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0009	0.009	1.66
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0007	0.009	1.66
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0009	0.009	1.66
11995	Ethylbenzene	100-41-4	N.D.	0.0007	0.009	1.66
11995	Methyl Acetate	79-20-9	N.D.	0.002	0.009	1.66
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0009	0.009	1.66
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.009	1.66
11995	n-Propylbenzene	103-65-1	N.D.	0.0007	0.009	1.66
11995	Styrene	100-42-5	N.D.	0.0007	0.009	1.66
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0007	0.009	1.66

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0009	0.009	1.66
11995	Toluene	108-88-3	N.D.	0.001	0.009	1.66
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.009	1.66
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0009	0.009	1.66
11995	Trichloroethene	79-01-6	N.D.	0.0009	0.009	1.66
11995	Trichlorofluoromethane	75-69-4	N.D.	0.001	0.009	1.66
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0009	0.009	1.66
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0009	0.009	1.66
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.009	1.66
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.018	1.66
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.67	0.004	0.018	1
10726	Acenaphthylene	208-96-8	1.4	0.004	0.018	1
10726	Acetophenone	98-86-2	N.D.	0.018	0.053	1
10726	Anthracene	120-12-7	6.3	0.035	0.18	10
10726	Atrazine	1912-24-9	N.D.	0.21	0.46	1
10726	Benzaldehyde	100-52-7	N.D.	0.070	0.18	1
10726	Benzidine	92-87-5	N.D.	0.35	1.1	1
10726	Benzo(a)anthracene	56-55-3	14	0.070	0.18	10
10726	Benzo(a)pyrene	50-32-8	9.6	0.035	0.18	10
10726	Benzo(b)fluoranthene	205-99-2	12	0.035	0.18	10
10726	Benzo(g,h,i)perylene	191-24-2	2.8	0.004	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	2.8	0.004	0.018	1
10726	1,1'-Biphenyl	92-52-4	0.14	0.018	0.039	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.070	0.18	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.070	0.18	1
10726	Caprolactam	105-60-2	N.D.	0.035	0.18	1
10726	Carbazole	86-74-8	0.38	0.018	0.039	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.025	0.053	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.021	0.046	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	0.019 J	0.007	0.035	1
10726	2-Chlorophenol	95-57-8	N.D.	0.018	0.039	1
10726	Chrysene	218-01-9	12	0.035	0.18	10
10726	Dibenz(a,h)anthracene	53-70-3	0.99	0.007	0.018	1
10726	Dibenzofuran	132-64-9	0.60	0.018	0.039	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.018	0.053	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.018	0.039	1

*=This limit was used in the evaluation of the final result

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.018	0.039	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.35	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.021	0.046	1
10726	Diethylphthalate	84-66-2	N.D.	0.070	0.18	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.032	0.070	1
10726	Dimethylphthalate	131-11-3	N.D.	0.070	0.18	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.25	0.53	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.35	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.070	0.18	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.025	0.053	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.025	0.053	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.021	0.046	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.070	0.18	1
10726	Fluoranthene	206-44-0	30	0.035	0.18	10
10726	Fluorene	86-73-7	1.0	0.004	0.018	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.007	0.018	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.039	0.081	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.21	0.53	1
10726	Hexachloroethane	67-72-1	N.D.	0.035	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	3.1	0.004	0.018	1
10726	Isophorone	78-59-1	N.D.	0.018	0.039	1
10726	2-Methylnaphthalene	91-57-6	0.25	0.004	0.035	1
10726	2-Methylphenol	95-48-7	0.025 J	0.018	0.070	1
10726	4-Methylphenol	106-44-5	0.069	0.018	0.053	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.62	0.007	0.018	1
10726	2-Nitroaniline	88-74-4	N.D.	0.018	0.053	1
10726	Nitrobenzene	98-95-3	N.D.	0.028	0.070	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.070	0.18	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.025	0.053	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.018	0.039	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.070	0.18	1
10726	Pentachlorophenol	87-86-5	N.D.	0.070	0.18	1
10726	Phenanthrene	85-01-8	21	0.035	0.18	10
10726	Phenol	108-95-2	N.D.	0.018	0.039	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Pyrene	129-00-0	24	0.035	0.18	10
10726	Pyridine	110-86-1	N.D.	0.070	0.18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.025	0.053	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.032	0.070	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.028	0.060	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D SIM	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	N.D.	7	18	10

Reporting limits were raised due to interference from the sample matrix.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Herbicides			SW-846 8151A	mg/kg	mg/kg	
10401	2,4-D	94-75-7	N.D. D2	0.013	0.038	1
10401	2,4,5-T	93-76-5	N.D. D1	0.00087	0.0018	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00080	0.0018	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs			SW-846 8082A Feb 2007 Rev 1	ug/kg	ug/kg	
10885	PCB-1016	12674-11-2	N.D. D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.5	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	N.D. D1	3.5	18	1
10885	PCB-1260	11096-82-5	N.D. D1	5.2	18	1
10885	Total PCBs ¹	1336-36-3	N.D.	3.5	18	1

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Aldrin	309-00-2	N.D. D2	0.0018	0.0088	10
10590	Alpha BHC	319-84-6	N.D. D1	0.0018	0.0088	10
10590	Beta BHC	319-85-7	N.D. D1	0.0047	0.016	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0022	0.0088	10
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.0018	0.0088	10
10590	4,4'-Ddd	72-54-8	N.D. D1	0.0035	0.021	10
10590	4,4'-Dde	72-55-9	N.D. D1	0.0035	0.021	10
10590	4,4'-Ddt	50-29-3	N.D. D2	0.0084	0.021	10
10590	Delta BHC	319-86-8	N.D. D2	0.0048	0.016	10
10590	Dieldrin	60-57-1	N.D. D2	0.0035	0.021	10

*=This limit was used in the evaluation of the final result

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Endosulfan I	959-98-8	N.D. D2	0.0023	0.0088	10
10590	Endosulfan II	33213-65-9	N.D. D1	0.012	0.021	10
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	0.0035	0.021	10
10590	Endrin	72-20-8	N.D. D1	0.0072	0.021	10
10590	Heptachlor	76-44-8	N.D. D2	0.0033	0.0088	10

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g		
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.62	2.1	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.62	3.1	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.21	2.1	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.21	2.1	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.41	2.1	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.83	2.1	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.21	0.62	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.21	0.62	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.21	0.62	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.21	0.62	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.21	0.62	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.21	0.62	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.21	0.62	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.21	0.62	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.21	0.62	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.21	0.62	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.21	0.62	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.21	0.62	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.21	0.62	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.21	0.62	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.21	0.62	1

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	4.64	0.140	0.418	2
06126	Barium	7440-39-3	37.6	0.191	0.418	2

*=This limit was used in the evaluation of the final result

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06127	Beryllium	7440-41-7	0.545	0.0249	0.0627	2
06128	Cadmium	7440-43-9	0.263	0.0527	0.105	2
06131	Chromium	7440-47-3	7.83	0.161	0.418	2
02829	Trivalent Chromium soils ¹	16065-83-1	7.5	0.16	0.45	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	50.7	0.184	0.418	2
06135	Lead	7439-92-1	71.5	0.0527	0.209	2
06137	Manganese	7439-96-5	65.2	0.224	0.418	2
06139	Nickel	7440-02-0	10.3	0.170	0.418	2
06141	Selenium	7782-49-2	1.36	0.136	0.418	2
06142	Silver	7440-22-4	0.0519 J	0.0424	0.105	2
06149	Zinc	7440-66-6	45.5	0.560	2.09	2
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.141	0.0154	0.0677	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.19	0.53	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	0.28 J	0.15	0.45	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	6.2	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201361AA	05/15/2020 19:13	Linda C Pape	1.66
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 15:25	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/15/2020 19:22	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/19/2020 13:03	Edward C Monborne	10
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLD026	05/18/2020 19:37	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLB026	05/15/2020 00:08	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLD026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 07:06	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201350022A	05/15/2020 15:01	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 09:31	Dylan Schreiner	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201350022A	05/14/2020 23:55	Laura Duquette	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 15:52	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:27	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:17	Bradley M Berlot	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:17	Bradley M Berlot	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314149
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:25
SDG#: CMS08-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:21	Patrick J Engle	2
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:26	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:42	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.079	0.008	0.026	1.08
11995	Acrolein	107-02-8	N.D.	0.007	0.13	1.08
11995	Acrylonitrile	107-13-1	N.D.	0.001	0.026	1.08
11995	Benzene	71-43-2	N.D.	0.0007	0.007	1.08
11995	Bromodichloromethane	75-27-4	N.D.	0.0005	0.007	1.08
11995	Bromoform	75-25-2	N.D.	0.007	0.013	1.08
11995	Bromomethane	74-83-9	N.D.	0.0009	0.007	1.08
11995	2-Butanone	78-93-3	0.009 J	0.003	0.013	1.08
11995	t-Butyl alcohol	75-65-0	N.D.	0.020	0.13	1.08
11995	n-Butylbenzene	104-51-8	N.D.	0.004	0.010	1.08
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.007	1.08
11995	tert-Butylbenzene	98-06-6	N.D.	0.001	0.007	1.08
11995	Carbon Disulfide	75-15-0	N.D.	0.0008	0.007	1.08
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0007	0.007	1.08
11995	Chlorobenzene	108-90-7	N.D.	0.0007	0.007	1.08
11995	Chloroethane	75-00-3	N.D.	0.001	0.007	1.08
11995	Chloroform	67-66-3	N.D.	0.0008	0.007	1.08
11995	Chloromethane	74-87-3	N.D.	0.0008	0.007	1.08
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0007	0.007	1.08
11995	Dibromochloromethane	124-48-1	N.D.	0.0007	0.007	1.08
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.007	1.08
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0007	0.007	1.08
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0007	0.007	1.08
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.007	1.08
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0008	0.007	1.08
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0007	0.007	1.08
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0008	0.007	1.08
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0007	0.007	1.08
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0007	0.007	1.08
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0007	0.007	1.08
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.013	1.08
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0007	0.007	1.08
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.007	1.08
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0007	0.007	1.08
11995	Ethylbenzene	100-41-4	N.D.	0.0005	0.007	1.08
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.007	1.08
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0007	0.007	1.08
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.007	1.08
11995	n-Propylbenzene	103-65-1	N.D.	0.0005	0.007	1.08
11995	Styrene	100-42-5	N.D.	0.0005	0.007	1.08
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.007	1.08

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0007	0.007	1.08
11995	Toluene	108-88-3	N.D.	0.0008	0.007	1.08
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	0.007	1.08
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0007	0.007	1.08
11995	Trichloroethene	79-01-6	N.D.	0.0007	0.007	1.08
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0009	0.007	1.08
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0007	0.007	1.08
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0007	0.007	1.08
11995	Vinyl Chloride	75-01-4	N.D.	0.0008	0.007	1.08
11995	Xylene (Total)	1330-20-7	N.D.	0.002	0.013	1.08
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.051	0.004	0.020	1
10726	Acenaphthylene	208-96-8	0.023	0.004	0.020	1
10726	Acetophenone	98-86-2	N.D.	0.020	0.060	1
10726	Anthracene	120-12-7	0.13	0.004	0.020	1
10726	Atrazine	1912-24-9	N.D.	0.24	0.52	1
10726	Benzaldehyde	100-52-7	N.D.	0.080	0.20	1
10726	Benzidine	92-87-5	N.D.	0.40	1.2	1
10726	Benzo(a)anthracene	56-55-3	0.18	0.008	0.020	1
10726	Benzo(a)pyrene	50-32-8	0.14	0.004	0.020	1
10726	Benzo(b)fluoranthene	205-99-2	0.19	0.004	0.020	1
10726	Benzo(g,h,i)perylene	191-24-2	0.084	0.004	0.020	1
10726	Benzo(k)fluoranthene	207-08-9	0.067	0.004	0.020	1
10726	1,1'-Biphenyl	92-52-4	N.D.	0.020	0.044	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.080	0.20	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.080	0.20	1
10726	Caprolactam	105-60-2	N.D.	0.040	0.20	1
10726	Carbazole	86-74-8	0.044	0.020	0.044	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.028	0.060	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.024	0.052	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.040	1
10726	2-Chlorophenol	95-57-8	N.D.	0.020	0.044	1
10726	Chrysene	218-01-9	0.16	0.004	0.020	1
10726	Dibenz(a,h)anthracene	53-70-3	0.022	0.008	0.020	1
10726	Dibenzofuran	132-64-9	0.046	0.020	0.044	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.020	0.060	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.020	0.044	1

*=This limit was used in the evaluation of the final result

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.020	0.044	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.40	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.024	0.052	1
10726	Diethylphthalate	84-66-2	N.D.	0.080	0.20	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.036	0.080	1
10726	Dimethylphthalate	131-11-3	N.D.	0.080	0.20	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.28	0.60	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.40	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.080	0.20	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.028	0.060	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.028	0.060	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.024	0.052	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.080	0.20	1
10726	Fluoranthene	206-44-0	0.45	0.004	0.020	1
10726	Fluorene	86-73-7	0.060	0.004	0.020	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.020	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.044	0.093	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.24	0.60	1
10726	Hexachloroethane	67-72-1	N.D.	0.040	0.20	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.075	0.004	0.020	1
10726	Isophorone	78-59-1	N.D.	0.020	0.044	1
10726	2-Methylnaphthalene	91-57-6	0.047	0.004	0.040	1
10726	2-Methylphenol	95-48-7	N.D.	0.020	0.080	1
10726	4-Methylphenol	106-44-5	N.D.	0.020	0.060	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.096	0.008	0.020	1
10726	2-Nitroaniline	88-74-4	N.D.	0.020	0.060	1
10726	Nitrobenzene	98-95-3	N.D.	0.032	0.080	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.080	0.20	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.028	0.060	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.020	0.044	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.080	0.20	1
10726	Pentachlorophenol	87-86-5	N.D.	0.080	0.20	1
10726	Phenanthrene	85-01-8	0.38	0.004	0.020	1
10726	Phenol	108-95-2	N.D.	0.020	0.044	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
10726	Pyrene	129-00-0	0.37	0.004	0.020	1
10726	Pyridine	110-86-1	N.D.	0.080	0.20	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.028	0.060	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.036	0.080	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.032	0.068	1
GC/MS Semivolatiles SW-846 8270D SIM						
12969	1,4-Dioxane	123-91-1	N.D.	8	20	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A						
10401	2,4-D	94-75-7	N.D. D1	0.014	0.043	1
10401	2,4,5-T	93-76-5	N.D. D1	0.00098	0.0020	1
10401	2,4,5-TP	93-72-1	N.D. D1	0.00090	0.0020	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A Feb 2007 Rev 1						
10885	PCB-1016	12674-11-2	N.D. D1	4.3	20	1
10885	PCB-1221	11104-28-2	N.D. D1	5.5	20	1
10885	PCB-1232	11141-16-5	N.D. D1	9.5	20	1
10885	PCB-1242	53469-21-9	N.D. D1	3.9	20	1
10885	PCB-1248	12672-29-6	N.D. D1	3.9	20	1
10885	PCB-1254	11097-69-1	N.D. D1	3.9	20	1
10885	PCB-1260	11096-82-5	N.D. D1	5.8	20	1
10885	Total PCBs ¹	1336-36-3	N.D.	3.9	20	1
For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.						
Pesticides SW-846 8081B						
10590	Aldrin	309-00-2	N.D. D1	0.0020	0.0099	10
10590	Alpha BHC	319-84-6	N.D. D2	0.0020	0.0099	10
10590	Beta BHC	319-85-7	N.D. D2	0.0053	0.018	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0025	0.0099	10
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.0020	0.0099	10
10590	4,4'-Ddd	72-54-8	N.D. D1	0.0039	0.024	10
10590	4,4'-Dde	72-55-9	N.D. D1	0.0039	0.024	10
10590	4,4'-Ddt	50-29-3	N.D. D2	0.0094	0.024	10
10590	Delta BHC	319-86-8	N.D. D1	0.0054	0.018	10
10590	Dieldrin	60-57-1	N.D. D2	0.0039	0.024	10

*=This limit was used in the evaluation of the final result

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			mg/kg	mg/kg	mg/kg	
10590	Endosulfan I	959-98-8	N.D. D2	0.0026	0.0099	10
10590	Endosulfan II	33213-65-9	N.D. D1	0.013	0.024	10
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0039	0.024	10
10590	Endrin	72-20-8	N.D. D1	0.0081	0.024	10
10590	Heptachlor	76-44-8	N.D. D2	0.0037	0.0099	10

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.67
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.67
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.22
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.22
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.45
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.90
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.22
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.22
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.22
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.22
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.22
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.22
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.22
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.22
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.22
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.22
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.22
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.22
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.22
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.22
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.22

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary.

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg
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*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	4.54	0.156	0.466	2
06126	Barium	7440-39-3	21.8	0.213	0.466	2
06127	Beryllium	7440-41-7	0.387	0.0277	0.0698	2
06128	Cadmium	7440-43-9	N.D.	0.0587	0.116	2
06131	Chromium	7440-47-3	10.3	0.179	0.466	2
02829	Trivalent Chromium soils ¹	16065-83-1	10.3	0.18	0.51	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	8.84	0.204	0.466	2
06135	Lead	7439-92-1	8.93	0.0587	0.233	2
06137	Manganese	7439-96-5	103	0.249	0.466	2
06139	Nickel	7440-02-0	10.1	0.190	0.466	2
06141	Selenium	7782-49-2	0.191 J	0.152	0.466	2
06142	Silver	7440-22-4	N.D.	0.0473	0.116	2
06149	Zinc	7440-66-6	29.5	0.624	2.33	2
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0606 J	0.0184	0.0807	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.21	0.58	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.17	0.51	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	17.4	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201381AA	05/17/2020 21:37	Joel Trout	1.08
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 15:30	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/15/2020 19:46	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLD026	05/18/2020 20:08	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLB026	05/15/2020 00:08	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLD026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 07:39	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201350022A	05/15/2020 15:11	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 09:59	Dylan Schreiner	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201350022A	05/14/2020 23:55	Laura Duquette	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 16:01	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:30	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:20	Bradley M Berlot	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/19/2020 09:20	Bradley M Berlot	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB19_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314150
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 15:30
SDG#: CMS08-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:22	Patrick J Engle	2
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:28	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201B	05/15/2020 11:50	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201B	05/15/2020 08:20	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_1-3 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314151
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 11:50
SDG#: CMS08-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06135	Lead	7439-92-1	98.2	0.244	0.970	10
		SW-846 7471B	mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.116	0.0153	0.0671	1
Wet Chemistry						
		SM 2540 G-2011 %Moisture Calc	%	%	%	
00111	Moisture ¹	n.a.	5.4	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/18/2020 19:32	Patrick J Engle	10
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:30	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_1-3 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1314152
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 11:50
SDG#: CMS08-12

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	0.247	0.0071	0.0150	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201391404501	05/19/2020 00:04	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201391404501	05/19/2020 00:04	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:05	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201391404501	05/18/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20135-9169-947	05/14/2020 12:53	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_6-8 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314153
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 11:55
SDG#: CMS08-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg	
06135	Lead	7439-92-1	4.57	0.0624	0.248	2
		SW-846 7471B	mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.0710 J	0.0194	0.0855	1
Wet Chemistry		SM 2540 G-2011 %Moisture Calc	%	%	%	
00111	Moisture ¹	n.a.	24.5	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404902A	05/14/2020 19:25	Patrick J Engle	2
00159	Mercury	SW-846 7471B	1	201351063801	05/14/2020 10:32	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404902	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063801	05/14/2020 08:15	Annamaria Kuhns	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_6-8 TCLP NVE Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: TL 1314154
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 11:55
SDG#: CMS08-14

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals						
		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	201391404501	05/19/2020 00:07	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	201391404501	05/19/2020 00:07	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	201550571305	06/04/2020 07:07	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	201391404501	05/18/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201550571305	06/03/2020 17:35	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	20135-9169-947	05/14/2020 12:53	Craig S Pfautz	n.a.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.043	0.006	0.018	0.86
11995	Acrolein	107-02-8	N.D.	0.005	0.092	0.86
11995	Acrylonitrile	107-13-1	N.D.	0.0007	0.018	0.86
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.86
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.86
11995	Bromoform	75-25-2	N.D.	0.005	0.009	0.86
11995	Bromomethane	74-83-9	N.D.	0.0006	0.005	0.86
11995	2-Butanone	78-93-3	N.D.	0.002	0.009	0.86
11995	t-Butyl alcohol	75-65-0	N.D.	0.014	0.092	0.86
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.007	0.86
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.86
11995	tert-Butylbenzene	98-06-6	N.D.	0.0007	0.005	0.86
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.86
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.86
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.86
11995	Chloroethane	75-00-3	N.D.	0.0009	0.005	0.86
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.86
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.86
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.86
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.86
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.86
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.86
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.86
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.86
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.86
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.86
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.86
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.86
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.86
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.86
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0009	0.009	0.86
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.86
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.86
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.86
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.86
11995	Methyl Acetate	79-20-9	N.D.	0.0009	0.005	0.86
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.86
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.86
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.86
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.86
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.86

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.86
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.86
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.86
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.86
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.86
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0006	0.005	0.86
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.86
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.86
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.86
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.009	0.86
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	1.1	0.004	0.018	1
10726	Acenaphthylene	208-96-8	0.22	0.004	0.018	1
10726	Acetophenone	98-86-2	N.D.	0.018	0.053	1
10726	Anthracene	120-12-7	2.6	0.004	0.018	1
10726	Atrazine	1912-24-9	N.D.	0.21	0.46	1
10726	Benzaldehyde	100-52-7	N.D.	0.071	0.18	1
10726	Benzidine	92-87-5	N.D.	0.36	1.1	1
10726	Benzo(a)anthracene	56-55-3	7.6	0.036	0.089	5
10726	Benzo(a)pyrene	50-32-8	6.3	0.018	0.089	5
10726	Benzo(b)fluoranthene	205-99-2	7.7	0.018	0.089	5
10726	Benzo(g,h,i)perylene	191-24-2	2.9	0.004	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	2.2	0.004	0.018	1
10726	1,1'-Biphenyl	92-52-4	0.12	0.018	0.039	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.071	0.18	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.071	0.18	1
10726	Caprolactam	105-60-2	N.D.	0.036	0.18	1
10726	Carbazole	86-74-8	1.2	0.018	0.039	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.025	0.053	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.021	0.046	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.007	0.036	1
10726	2-Chlorophenol	95-57-8	N.D.	0.018	0.039	1
10726	Chrysene	218-01-9	6.4	0.018	0.089	5
10726	Dibenz(a,h)anthracene	53-70-3	0.77	0.007	0.018	1
10726	Dibenzofuran	132-64-9	0.76	0.018	0.039	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.018	0.053	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.018	0.039	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.018	0.039	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.36	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.021	0.046	1
10726	Diethylphthalate	84-66-2	N.D.	0.071	0.18	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.032	0.071	1
10726	Dimethylphthalate	131-11-3	N.D.	0.071	0.18	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.25	0.53	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.36	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.071	0.18	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.025	0.053	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.025	0.053	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.021	0.046	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.071	0.18	1
10726	Fluoranthene	206-44-0	17	0.018	0.089	5
10726	Fluorene	86-73-7	0.94	0.004	0.018	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.007	0.018	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.039	0.082	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.21	0.53	1
10726	Hexachloroethane	67-72-1	N.D.	0.036	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	2.7	0.004	0.018	1
10726	Isophorone	78-59-1	N.D.	0.018	0.039	1
10726	2-Methylnaphthalene	91-57-6	0.35	0.004	0.036	1
10726	2-Methylphenol	95-48-7	N.D.	0.018	0.071	1
10726	4-Methylphenol	106-44-5	0.037 J	0.018	0.053	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.72	0.007	0.018	1
10726	2-Nitroaniline	88-74-4	N.D.	0.018	0.053	1
10726	Nitrobenzene	98-95-3	N.D.	0.028	0.071	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.071	0.18	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.025	0.053	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.018	0.039	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.071	0.18	1
10726	Pentachlorophenol	87-86-5	N.D.	0.071	0.18	1
10726	Phenanthrene	85-01-8	14	0.018	0.089	5
10726	Phenol	108-95-2	N.D.	0.018	0.039	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
10726	Pyrene	129-00-0	14	0.018	0.089	5
10726	Pyridine	110-86-1	N.D.	0.071	0.18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.025	0.053	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.032	0.071	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.028	0.060	1
GC/MS Semivolatiles SW-846 8270D SIM						
12969	1,4-Dioxane	123-91-1	N.D.	7	18	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides SW-846 8151A						
10401	2,4-D	94-75-7	N.D. D2	0.013	0.038	1
10401	2,4,5-T	93-76-5	N.D. D2	0.00087	0.0018	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00080	0.0018	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A Feb 2007 Rev 1						
10885	PCB-1016	12674-11-2	N.D. D1	3.9	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.6	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	N.D. D1	3.5	18	1
10885	PCB-1260	11096-82-5	N.D. D1	5.2	18	1
10885	Total PCBs ¹	1336-36-3	N.D.	3.5	18	1
For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.						
Pesticides SW-846 8081B						
10590	Aldrin	309-00-2	N.D. D1	0.0018	0.0089	10
10590	Alpha BHC	319-84-6	N.D. D2	0.0018	0.0089	10
10590	Beta BHC	319-85-7	N.D. D1	0.0047	0.016	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0022	0.0089	10
10590	Alpha Chlordane	5103-71-9	N.D. D1	0.0018	0.0089	10
10590	4,4'-Ddd	72-54-8	N.D. D1	0.0035	0.021	10
10590	4,4'-Dde	72-55-9	N.D. D2	0.0035	0.021	10
10590	4,4'-Ddt	50-29-3	N.D. D1	0.0085	0.021	10
10590	Delta BHC	319-86-8	N.D. D2	0.0048	0.016	10
10590	Dieldrin	60-57-1	N.D. D2	0.0035	0.021	10

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Endosulfan I	959-98-8	N.D. D2	0.0024	0.0089	10
10590	Endosulfan II	33213-65-9	N.D. D2	0.012	0.021	10
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0035	0.021	10
10590	Endrin	72-20-8	N.D. D1	0.0073	0.021	10
10590	Heptachlor	76-44-8	N.D. D2	0.0033	0.0089	10

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.60
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.60
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.20
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.20
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.40
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.80
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.20
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.20
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.20
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.20
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.20
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.20
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.20
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.20
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.20
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.20
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.20
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.20
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.20
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.20
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.20

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg
06125	Arsenic	7440-38-2	10.4	0.144
06126	Barium	7440-39-3	117	0.983

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06127	Beryllium	7440-41-7	0.523	0.0256	0.0644	2
06128	Cadmium	7440-43-9	0.677	0.0541	0.107	2
06131	Chromium	7440-47-3	18.6	0.165	0.430	2
02829	Trivalent Chromium soils ¹	16065-83-1	18.6	0.17	0.45	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	59.3	0.189	0.430	2
06135	Lead	7439-92-1	580	0.541	2.15	20
06137	Manganese	7439-96-5	311	1.15	2.15	10
06139	Nickel	7440-02-0	23.7	0.175	0.430	2
06141	Selenium	7782-49-2	0.688	0.140	0.430	2
06142	Silver	7440-22-4	0.133	0.0436	0.107	2
06149	Zinc	7440-66-6	249	2.88	10.7	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.292	0.0158	0.0693	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.19	0.53	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.15	0.45	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00111	Moisture ¹	n.a.	6.9	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201381AA	05/17/2020 21:59	Joel Trout	0.86
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:40	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 12:00	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/15/2020 20:10	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/18/2020 15:00	Edward C Monborne	5
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLD026	05/18/2020 20:39	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLB026	05/15/2020 00:08	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLD026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 08:12	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201350022A	05/15/2020 15:21	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 10:27	Dylan Schreiner	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201350022A	05/14/2020 23:55	Laura Duquette	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 16:10	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:34	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:32	Bradley M Berlot	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:49	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:34	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:34	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:34	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:23	Patrick J Engle	20
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:04	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:49	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:49	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314155
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:34	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:32	Bradley M Berlot	10
00159	Mercury	SW-846 7471B	1	201351063802	05/14/2020 10:44	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404903	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063802	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:44	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 SS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314156
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15SS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry						
		SW-846 7196A	mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	36.2	0.15	0.45	1
Wet Chemistry						
		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00118	Moisture ¹	n.a.	6.9	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 IS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314157
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-151S

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry						
		SW-846 7196A	mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	826	3.8	11.3	25
Wet Chemistry						
		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00118	Moisture ¹	n.a.	6.9	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	25
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 PDS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314158
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15PDS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry						
		SW-846 7196A	mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	47.1	0.60	1.8	4
Wet Chemistry						
		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00118	Moisture ¹	n.a.	6.9	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	4
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.43	0.006	0.020	0.92
11995	Acrolein	107-02-8	0.16	0.005	0.099	0.92
11995	Acrylonitrile	107-13-1	0.078	0.0008	0.020	0.92
11995	Benzene	71-43-2	0.021	0.0005	0.005	0.92
11995	Bromodichloromethane	75-27-4	0.020	0.0004	0.005	0.92
11995	Bromoform	75-25-2	0.018	0.005	0.01	0.92
11995	Bromomethane	74-83-9	0.020	0.0007	0.005	0.92
11995	2-Butanone	78-93-3	0.22	0.002	0.01	0.92
11995	t-Butyl alcohol	75-65-0	0.25	0.015	0.099	0.92
11995	n-Butylbenzene	104-51-8	0.021	0.003	0.008	0.92
11995	sec-Butylbenzene	135-98-8	0.023	0.002	0.005	0.92
11995	tert-Butylbenzene	98-06-6	0.022	0.0008	0.005	0.92
11995	Carbon Disulfide	75-15-0	0.019	0.0006	0.005	0.92
11995	Carbon Tetrachloride	56-23-5	0.021	0.0005	0.005	0.92
11995	Chlorobenzene	108-90-7	0.021	0.0005	0.005	0.92
11995	Chloroethane	75-00-3	0.019	0.001	0.005	0.92
11995	Chloroform	67-66-3	0.021	0.0006	0.005	0.92
11995	Chloromethane	74-87-3	0.020	0.0006	0.005	0.92
11995	1,2-Dibromo-3-chloropropane	96-12-8	0.017	0.0005	0.005	0.92
11995	Dibromochloromethane	124-48-1	0.021	0.0005	0.005	0.92
11995	1,2-Dibromoethane	106-93-4	0.019	0.0004	0.005	0.92
11995	1,2-Dichlorobenzene	95-50-1	0.020	0.0005	0.005	0.92
11995	1,3-Dichlorobenzene	541-73-1	0.020	0.0005	0.005	0.92
11995	1,4-Dichlorobenzene	106-46-7	0.020	0.0004	0.005	0.92
11995	Dichlorodifluoromethane	75-71-8	0.029	0.0006	0.005	0.92
11995	1,1-Dichloroethane	75-34-3	0.020	0.0005	0.005	0.92
11995	1,2-Dichloroethane	107-06-2	0.018	0.0006	0.005	0.92
11995	1,1-Dichloroethene	75-35-4	0.021	0.0005	0.005	0.92
11995	cis-1,2-Dichloroethene	156-59-2	0.021	0.0005	0.005	0.92
11995	trans-1,2-Dichloroethene	156-60-5	0.020	0.0005	0.005	0.92
11995	1,2-Dichloroethene (Total) ¹	540-59-0	0.041	0.001	0.01	0.92
11995	1,2-Dichloropropane	78-87-5	0.021	0.0005	0.005	0.92
11995	cis-1,3-Dichloropropene	10061-01-5	0.019	0.0004	0.005	0.92
11995	trans-1,3-Dichloropropene	10061-02-6	0.018	0.0005	0.005	0.92
11995	Ethylbenzene	100-41-4	0.021	0.0004	0.005	0.92
11995	Methyl Acetate	79-20-9	0.016	0.001	0.005	0.92
11995	Methyl Tertiary Butyl Ether	1634-04-4	0.018	0.0005	0.005	0.92
11995	Methylene Chloride	75-09-2	0.020	0.002	0.005	0.92
11995	n-Propylbenzene	103-65-1	0.023	0.0004	0.005	0.92
11995	Styrene	100-42-5	0.019	0.0004	0.005	0.92
11995	1,1,2,2-Tetrachloroethane	79-34-5	0.021	0.0004	0.005	0.92

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	0.021	0.0005	0.005	0.92
11995	Toluene	108-88-3	0.021	0.0006	0.005	0.92
11995	1,1,1-Trichloroethane	71-55-6	0.020	0.0006	0.005	0.92
11995	1,1,2-Trichloroethane	79-00-5	0.022	0.0005	0.005	0.92
11995	Trichloroethene	79-01-6	0.020	0.0005	0.005	0.92
11995	Trichlorofluoromethane	75-69-4	0.024	0.0007	0.005	0.92
11995	1,2,4-Trimethylbenzene	95-63-6	0.022	0.0005	0.005	0.92
11995	1,3,5-Trimethylbenzene	108-67-8	0.023	0.0005	0.005	0.92
11995	Vinyl Chloride	75-01-4	0.020	0.0006	0.005	0.92
11995	Xylene (Total)	1330-20-7	0.062	0.001	0.01	0.92
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	2.1	0.004	0.018	1
10726	Acenaphthylene	208-96-8	1.7	0.004	0.018	1
10726	Acetophenone	98-86-2	1.3	0.018	0.053	1
10726	Anthracene	120-12-7	3.1	0.004	0.018	1
10726	Atrazine	1912-24-9	1.6	0.21	0.46	1
10726	Benzaldehyde	100-52-7	1.1	0.071	0.18	1
10726	Benzidine	92-87-5	0.68 J	0.36	1.1	1
10726	Benzo(a)anthracene	56-55-3	5.7 E	0.007	0.018	1
10726	Benzo(a)pyrene	50-32-8	5.5 E	0.004	0.018	1
10726	Benzo(b)fluoranthene	205-99-2	6.1 E	0.004	0.018	1
10726	Benzo(g,h,i)perylene	191-24-2	4.0	0.004	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	3.6	0.004	0.018	1
10726	1,1'-Biphenyl	92-52-4	1.6	0.018	0.039	1
10726	Butylbenzylphthalate	85-68-7	1.6	0.071	0.18	1
10726	Di-n-butylphthalate	84-74-2	1.7	0.071	0.18	1
10726	Caprolactam	105-60-2	1.6	0.036	0.18	1
10726	Carbazole	86-74-8	2.4	0.018	0.039	1
10726	bis(2-Chloroethyl)ether	111-44-4	1.2	0.025	0.053	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	1.2	0.021	0.046	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	1.6	0.007	0.036	1
10726	2-Chlorophenol	95-57-8	1.3	0.018	0.039	1
10726	Chrysene	218-01-9	5.6 E	0.004	0.018	1
10726	Dibenz(a,h)anthracene	53-70-3	2.1	0.007	0.018	1
10726	Dibenzofuran	132-64-9	2.0	0.018	0.039	1
10726	1,2-Dichlorobenzene	95-50-1	1.1	0.018	0.053	1
10726	1,3-Dichlorobenzene	541-73-1	1.1	0.018	0.039	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	1.1	0.018	0.039	1
10726	3,3'-Dichlorobenzidine	91-94-1	1.3	0.11	0.36	1
10726	2,4-Dichlorophenol	120-83-2	1.5	0.021	0.046	1
10726	Diethylphthalate	84-66-2	1.5	0.071	0.18	1
10726	2,4-Dimethylphenol	105-67-9	1.2	0.032	0.071	1
10726	Dimethylphthalate	131-11-3	1.4	0.071	0.18	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	1.3	0.25	0.53	1
10726	2,4-Dinitrophenol	51-28-5	2.1	0.36	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	1.6	0.071	0.18	1
10726	2,6-Dinitrotoluene	606-20-2	1.6	0.025	0.053	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	3.2	0.025	0.053	1
10726	1,2-Diphenylhydrazine	122-66-7	1.6	0.021	0.046	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1.9	0.071	0.18	1
10726	Fluoranthene	206-44-0	8.1 E	0.004	0.018	1
10726	Fluorene	86-73-7	2.2	0.004	0.018	1
10726	Hexachlorobenzene	118-74-1	1.6	0.007	0.018	1
10726	Hexachlorobutadiene	87-68-3	1.3	0.039	0.082	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.21	0.53	1
10726	Hexachloroethane	67-72-1	0.81	0.036	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	3.9	0.004	0.018	1
10726	Isophorone	78-59-1	1.3	0.018	0.039	1
10726	2-Methylnaphthalene	91-57-6	1.7	0.004	0.036	1
10726	2-Methylphenol	95-48-7	1.3	0.018	0.071	1
10726	4-Methylphenol	106-44-5	1.4	0.018	0.053	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	1.8	0.007	0.018	1
10726	2-Nitroaniline	88-74-4	1.9	0.018	0.053	1
10726	Nitrobenzene	98-95-3	1.3	0.028	0.071	1
10726	N-Nitrosodimethylamine	62-75-9	1.0	0.071	0.18	1
10726	N-Nitroso-di-n-propylamine	621-64-7	1.3	0.025	0.053	1
10726	N-Nitrosodiphenylamine	86-30-6	1.7	0.018	0.039	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	1.7	0.071	0.18	1
10726	Pentachlorophenol	87-86-5	1.5	0.071	0.18	1
10726	Phenanthrene	85-01-8	7.2 E	0.004	0.018	1
10726	Phenol	108-95-2	1.4	0.018	0.039	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Pyrene	129-00-0	7.3 E	0.004	0.018	1
10726	Pyridine	110-86-1	0.72	0.071	0.18	1
10726	1,2,4-Trichlorobenzene	120-82-1	1.4	0.025	0.053	1
10726	2,4,5-Trichlorophenol	95-95-4	1.6	0.032	0.071	1
10726	2,4,6-Trichlorophenol	88-06-2	1.4	0.028	0.060	1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D SIM	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	17 J	7	18	10

Reporting limits were raised due to interference from the sample matrix.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Herbicides			SW-846 8151A	mg/kg	mg/kg	
10401	2,4-D	94-75-7	0.14 D1	0.013	0.038	1
10401	2,4,5-T	93-76-5	0.017 D1	0.00087	0.0018	1
10401	2,4,5-TP	93-72-1	0.014 D2	0.00080	0.0018	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs			SW-846 8082A Feb 2007 Rev 1	ug/kg	ug/kg	
10885	PCB-1016	12674-11-2	120 D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.5	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	N.D. D1	3.5	18	1
10885	PCB-1260	11096-82-5	130 D1	5.2	18	1
10885	Total PCBs ¹	1336-36-3	250	3.5	18	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary.

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Aldrin	309-00-2	0.0061 JD2	0.0018	0.0088	10
10590	Alpha BHC	319-84-6	0.0048 JD1	0.0018	0.0088	10
10590	Beta BHC	319-85-7	0.0062 JD2	0.0047	0.016	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0022	0.0088	10
10590	Alpha Chlordane	5103-71-9	0.0065 JD2	0.0018	0.0088	10
10590	4,4'-Ddd	72-54-8	0.012 JD1	0.0035	0.021	10
10590	4,4'-Dde	72-55-9	0.013 JD2	0.0035	0.021	10
10590	4,4'-Ddt	50-29-3	0.012 JD2	0.0084	0.021	10

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Delta BHC	319-86-8	N.D. D1	0.0048	0.016	10
10590	Dieldrin	60-57-1	0.011 JPD2	0.0035	0.021	10
10590	Endosulfan I	959-98-8	0.0044 JD1	0.0023	0.0088	10
10590	Endosulfan II	33213-65-9	N.D. D1	0.012	0.021	10
10590	Endosulfan Sulfate	1031-07-8	0.0097 JD2	0.0035	0.021	10
10590	Endrin	72-20-8	0.013 JD2	0.0072	0.021	10
10590	Heptachlor	76-44-8	0.0049 JPD2	0.0033	0.0088	10

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	18	0.59	2.0	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	18	0.59	2.9	1
14027	NEtFOSAA ¹	2991-50-6	19	0.20	2.0	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	23	0.20	2.0	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	16	0.39	2.0	1
14027	Perfluorobutanoic acid ¹	375-22-4	16	0.78	2.0	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	16	0.20	0.59	1
14027	Perfluorodecanoic acid ¹	335-76-2	18	0.20	0.59	1
14027	Perfluorododecanoic acid ¹	307-55-1	19	0.20	0.59	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	17	0.20	0.59	1
14027	Perfluoroheptanoic acid ¹	375-85-9	19	0.20	0.59	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	16	0.20	0.59	1
14027	Perfluorohexanoic acid ¹	307-24-4	18	0.20	0.59	1
14027	Perfluorononanoic acid ¹	375-95-1	20	0.20	0.59	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	20	0.20	0.59	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	16	0.20	0.59	1
14027	Perfluorooctanoic acid ¹	335-67-1	19	0.20	0.59	1
14027	Perfluoropentanoic acid ¹	2706-90-3	18	0.20	0.59	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	19	0.20	0.59	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	18	0.20	0.59	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	18	0.20	0.59	1

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg
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*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	16.0	0.126	0.377	2
06126	Barium	7440-39-3	228	0.862	1.88	10
06127	Beryllium	7440-41-7	1.46	0.0224	0.0565	2
06128	Cadmium	7440-43-9	1.47	0.0475	0.0942	2
06131	Chromium	7440-47-3	33.3	0.145	0.377	2
06133	Copper	7440-50-8	132	0.165	0.377	2
06135	Lead	7439-92-1	330	0.0475	0.188	2
06137	Manganese	7439-96-5	256	0.202	0.377	2
06139	Nickel	7440-02-0	35.0	0.153	0.377	2
06141	Selenium	7782-49-2	3.03	0.123	0.377	2
06142	Silver	7440-22-4	9.33	0.0383	0.0942	2
06149	Zinc	7440-66-6	380	2.53	9.42	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.588	0.0158	0.0693	1
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	5.1	0.19	0.53	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00118	Moisture ¹	n.a.	6.9	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201381AA	05/17/2020 22:22	Joel Trout	0.92
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 12:00	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/15/2020 20:34	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLD026	05/18/2020 21:10	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLB026	05/15/2020 00:08	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLD026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 08:46	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201350022A	05/15/2020 15:31	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 10:42	Dylan Schreiner	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201350022A	05/14/2020 23:55	Laura Duquette	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 16:19	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:38	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:39	Bradley M Berlot	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:56	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:38	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:38	Patrick J Engle	2
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:38	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:56	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:56	Patrick J Engle	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:56	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:56	Patrick J Engle	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:38	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:39	Bradley M Berlot	10
00159	Mercury	SW-846 7471B	1	201351063802	05/14/2020 10:50	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404903	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063802	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:45	Gregory Baldree	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 MS Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314159
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21

Collection Date/Time: 05/13/2020 12:00

SDG#: CMS08-15MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	0.41	0.007	0.022	1.03
11995	Acrolein	107-02-8	0.15	0.006	0.11	1.03
11995	Acrylonitrile	107-13-1	0.088	0.0009	0.022	1.03
11995	Benzene	71-43-2	0.023	0.0006	0.006	1.03
11995	Bromodichloromethane	75-27-4	0.022	0.0004	0.006	1.03
11995	Bromoform	75-25-2	0.021	0.006	0.011	1.03
11995	Bromomethane	74-83-9	0.021	0.0008	0.006	1.03
11995	2-Butanone	78-93-3	0.22	0.002	0.011	1.03
11995	t-Butyl alcohol	75-65-0	0.24	0.017	0.11	1.03
11995	n-Butylbenzene	104-51-8	0.021	0.003	0.009	1.03
11995	sec-Butylbenzene	135-98-8	0.026	0.002	0.006	1.03
11995	tert-Butylbenzene	98-06-6	0.026	0.0009	0.006	1.03
11995	Carbon Disulfide	75-15-0	0.019	0.0007	0.006	1.03
11995	Carbon Tetrachloride	56-23-5	0.024	0.0006	0.006	1.03
11995	Chlorobenzene	108-90-7	0.022	0.0006	0.006	1.03
11995	Chloroethane	75-00-3	0.020	0.001	0.006	1.03
11995	Chloroform	67-66-3	0.023	0.0007	0.006	1.03
11995	Chloromethane	74-87-3	0.022	0.0007	0.006	1.03
11995	1,2-Dibromo-3-chloropropane	96-12-8	0.022	0.0006	0.006	1.03
11995	Dibromochloromethane	124-48-1	0.025	0.0006	0.006	1.03
11995	1,2-Dibromoethane	106-93-4	0.021	0.0004	0.006	1.03
11995	1,2-Dichlorobenzene	95-50-1	0.023	0.0006	0.006	1.03
11995	1,3-Dichlorobenzene	541-73-1	0.022	0.0006	0.006	1.03
11995	1,4-Dichlorobenzene	106-46-7	0.021	0.0004	0.006	1.03
11995	Dichlorodifluoromethane	75-71-8	0.031	0.0007	0.006	1.03
11995	1,1-Dichloroethane	75-34-3	0.023	0.0006	0.006	1.03
11995	1,2-Dichloroethane	107-06-2	0.020	0.0007	0.006	1.03
11995	1,1-Dichloroethene	75-35-4	0.023	0.0006	0.006	1.03
11995	cis-1,2-Dichloroethene	156-59-2	0.023	0.0006	0.006	1.03
11995	trans-1,2-Dichloroethene	156-60-5	0.020	0.0006	0.006	1.03
11995	1,2-Dichloroethene (Total) ¹	540-59-0	0.043	0.001	0.011	1.03
11995	1,2-Dichloropropane	78-87-5	0.023	0.0006	0.006	1.03
11995	cis-1,3-Dichloropropene	10061-01-5	0.020	0.0004	0.006	1.03
11995	trans-1,3-Dichloropropene	10061-02-6	0.019	0.0006	0.006	1.03
11995	Ethylbenzene	100-41-4	0.023	0.0004	0.006	1.03
11995	Methyl Acetate	79-20-9	0.018	0.001	0.006	1.03
11995	Methyl Tertiary Butyl Ether	1634-04-4	0.022	0.0006	0.006	1.03
11995	Methylene Chloride	75-09-2	0.021	0.002	0.006	1.03
11995	n-Propylbenzene	103-65-1	0.026	0.0004	0.006	1.03
11995	Styrene	100-42-5	0.020	0.0004	0.006	1.03
11995	1,1,2,2-Tetrachloroethane	79-34-5	0.028	0.0004	0.006	1.03

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Tetrachloroethene	127-18-4	0.023	0.0006	0.006	1.03
11995	Toluene	108-88-3	0.023	0.0007	0.006	1.03
11995	1,1,1-Trichloroethane	71-55-6	0.023	0.0007	0.006	1.03
11995	1,1,2-Trichloroethane	79-00-5	0.025	0.0006	0.006	1.03
11995	Trichloroethene	79-01-6	0.021	0.0006	0.006	1.03
11995	Trichlorofluoromethane	75-69-4	0.027	0.0008	0.006	1.03
11995	1,2,4-Trimethylbenzene	95-63-6	0.025	0.0006	0.006	1.03
11995	1,3,5-Trimethylbenzene	108-67-8	0.026	0.0006	0.006	1.03
11995	Vinyl Chloride	75-01-4	0.022	0.0007	0.006	1.03
11995	Xylene (Total)	1330-20-7	0.066	0.002	0.011	1.03
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	1.9	0.004	0.018	1
10726	Acenaphthylene	208-96-8	1.6	0.004	0.018	1
10726	Acetophenone	98-86-2	1.3	0.018	0.054	1
10726	Anthracene	120-12-7	2.6	0.004	0.018	1
10726	Atrazine	1912-24-9	1.5	0.21	0.47	1
10726	Benzaldehyde	100-52-7	1.1	0.072	0.18	1
10726	Benzidine	92-87-5	1.7	0.36	1.1	1
10726	Benzo(a)anthracene	56-55-3	4.6 E	0.007	0.018	1
10726	Benzo(a)pyrene	50-32-8	4.4 E	0.004	0.018	1
10726	Benzo(b)fluoranthene	205-99-2	5.2 E	0.004	0.018	1
10726	Benzo(g,h,i)perylene	191-24-2	3.3	0.004	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	2.7	0.004	0.018	1
10726	1,1'-Biphenyl	92-52-4	1.5	0.018	0.039	1
10726	Butylbenzylphthalate	85-68-7	1.5	0.072	0.18	1
10726	Di-n-butylphthalate	84-74-2	1.6	0.072	0.18	1
10726	Caprolactam	105-60-2	1.5	0.036	0.18	1
10726	Carbazole	86-74-8	2.1	0.018	0.039	1
10726	bis(2-Chloroethyl)ether	111-44-4	1.2	0.025	0.054	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	1.2	0.021	0.047	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	1.6	0.007	0.036	1
10726	2-Chlorophenol	95-57-8	1.3	0.018	0.039	1
10726	Chrysene	218-01-9	4.3	0.004	0.018	1
10726	Dibenz(a,h)anthracene	53-70-3	1.9	0.007	0.018	1
10726	Dibenzofuran	132-64-9	1.9	0.018	0.039	1
10726	1,2-Dichlorobenzene	95-50-1	1.2	0.018	0.054	1
10726	1,3-Dichlorobenzene	541-73-1	1.1	0.018	0.039	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	1.2	0.018	0.039	1
10726	3,3'-Dichlorobenzidine	91-94-1	1.1	0.11	0.36	1
10726	2,4-Dichlorophenol	120-83-2	1.4	0.021	0.047	1
10726	Diethylphthalate	84-66-2	1.5	0.072	0.18	1
10726	2,4-Dimethylphenol	105-67-9	1.1	0.032	0.072	1
10726	Dimethylphthalate	131-11-3	1.3	0.072	0.18	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	1.1	0.25	0.54	1
10726	2,4-Dinitrophenol	51-28-5	1.6	0.36	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	1.5	0.072	0.18	1
10726	2,6-Dinitrotoluene	606-20-2	1.5	0.025	0.054	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	3.0	0.025	0.054	1
10726	1,2-Diphenylhydrazine	122-66-7	1.6	0.021	0.047	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1.7	0.072	0.18	1
10726	Fluoranthene	206-44-0	7.0 E	0.004	0.018	1
10726	Fluorene	86-73-7	2.0	0.004	0.018	1
10726	Hexachlorobenzene	118-74-1	1.5	0.007	0.018	1
10726	Hexachlorobutadiene	87-68-3	1.3	0.039	0.082	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.21	0.54	1
10726	Hexachloroethane	67-72-1	0.89	0.036	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	3.2	0.004	0.018	1
10726	Isophorone	78-59-1	1.3	0.018	0.039	1
10726	2-Methylnaphthalene	91-57-6	1.7	0.004	0.036	1
10726	2-Methylphenol	95-48-7	1.3	0.018	0.072	1
10726	4-Methylphenol	106-44-5	1.4	0.018	0.054	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	1.8	0.007	0.018	1
10726	2-Nitroaniline	88-74-4	2.3	0.018	0.054	1
10726	Nitrobenzene	98-95-3	1.3	0.029	0.072	1
10726	N-Nitrosodimethylamine	62-75-9	1.1	0.072	0.18	1
10726	N-Nitroso-di-n-propylamine	621-64-7	1.3	0.025	0.054	1
10726	N-Nitrosodiphenylamine	86-30-6	1.6	0.018	0.039	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	1.7	0.072	0.18	1
10726	Pentachlorophenol	87-86-5	1.6	0.072	0.18	1
10726	Phenanthrene	85-01-8	6.3 E	0.004	0.018	1
10726	Phenol	108-95-2	1.4	0.018	0.039	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Pyrene	129-00-0	6.5 E	0.004	0.018	1
10726	Pyridine	110-86-1	0.72	0.072	0.18	1
10726	1,2,4-Trichlorobenzene	120-82-1	1.4	0.025	0.054	1
10726	2,4,5-Trichlorophenol	95-95-4	1.5	0.032	0.072	1
10726	2,4,6-Trichlorophenol	88-06-2	1.5	0.029	0.061	1
GC/MS Semivolatiles			SW-846 8270D SIM	ug/kg	ug/kg	
12969	1,4-Dioxane	123-91-1	18	7	18	10
Reporting limits were raised due to interference from the sample matrix.						
Herbicides			SW-846 8151A	mg/kg	mg/kg	
10401	2,4-D	94-75-7	0.14 D1	0.013	0.038	1
10401	2,4,5-T	93-76-5	0.016 D1	0.00087	0.0018	1
10401	2,4,5-TP	93-72-1	0.013 D1	0.00080	0.0018	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
PCBs			SW-846 8082A Feb 2007	ug/kg	ug/kg	
			Rev 1			
10885	PCB-1016	12674-11-2	120 D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.5	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	N.D. D1	3.5	18	1
10885	PCB-1260	11096-82-5	120 D1	5.2	18	1
10885	Total PCBs ¹	1336-36-3	240	3.5	18	1
Target analytes were detected in the method blank associated with the samples as noted on the QC Summary.						
Pesticides			SW-846 8081B	mg/kg	mg/kg	
10590	Aldrin	309-00-2	0.0075 JD2	0.0018	0.0088	10
10590	Alpha BHC	319-84-6	0.0057 JD2	0.0018	0.0088	10
10590	Beta BHC	319-85-7	0.0070 JD2	0.0047	0.016	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0022	0.0088	10
10590	Alpha Chlordane	5103-71-9	0.0064 JPD1	0.0018	0.0088	10
10590	4,4'-Ddd	72-54-8	0.014 JD2	0.0035	0.021	10
10590	4,4'-Dde	72-55-9	0.016 JD2	0.0035	0.021	10
10590	4,4'-Ddt	50-29-3	0.014 JD2	0.0084	0.021	10
10590	Delta BHC	319-86-8	N.D. D1	0.0048	0.016	10
10590	Dieldrin	60-57-1	0.013 JPD2	0.0035	0.021	10
10590	Endosulfan I	959-98-8	0.0059 JD2	0.0023	0.0088	10

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/kg	mg/kg	mg/kg	
10590	Endosulfan II	33213-65-9	N.D. D1	0.012	0.021	10
10590	Endosulfan Sulfate	1031-07-8	0.014 JD2	0.0035	0.021	10
10590	Endrin	72-20-8	0.014 JD2	0.0072	0.021	10
10590	Heptachlor	76-44-8	0.0061 JPD2	0.0033	0.0088	10

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g		
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	19	0.59	2.0	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	19	0.59	3.0	1
14027	NEtFOSAA ¹	2991-50-6	21	0.20	2.0	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	21	0.20	2.0	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	18	0.39	2.0	1
14027	Perfluorobutanoic acid ¹	375-22-4	17	0.79	2.0	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	17	0.20	0.59	1
14027	Perfluorodecanoic acid ¹	335-76-2	19	0.20	0.59	1
14027	Perfluorododecanoic acid ¹	307-55-1	20	0.20	0.59	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	18	0.20	0.59	1
14027	Perfluoroheptanoic acid ¹	375-85-9	19	0.20	0.59	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	17	0.20	0.59	1
14027	Perfluorohexanoic acid ¹	307-24-4	19	0.20	0.59	1
14027	Perfluorononanoic acid ¹	375-95-1	20	0.20	0.59	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	21	0.20	0.59	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	15	0.20	0.59	1
14027	Perfluorooctanoic acid ¹	335-67-1	19	0.20	0.59	1
14027	Perfluoropentanoic acid ¹	2706-90-3	19	0.20	0.59	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	21	0.20	0.59	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	19	0.20	0.59	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	17	0.20	0.59	1

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	20.6	0.129	0.387	2
06126	Barium	7440-39-3	295	0.885	1.94	10
06127	Beryllium	7440-41-7	1.61	0.0230	0.0581	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06128	Cadmium	7440-43-9	1.47	0.0488	0.0968	2
06131	Chromium	7440-47-3	35.7	0.149	0.387	2
06133	Copper	7440-50-8	175	0.170	0.387	2
06135	Lead	7439-92-1	318	0.0488	0.194	2
06137	Manganese	7439-96-5	264	0.207	0.387	2
06139	Nickel	7440-02-0	39.7	0.158	0.387	2
06141	Selenium	7782-49-2	3.50	0.126	0.387	2
06142	Silver	7440-22-4	9.78	0.0393	0.0968	2
06149	Zinc	7440-66-6	442	2.59	9.68	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.776	0.0160	0.0704	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00118	Moisture ¹	n.a.	6.9	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201381AA	05/17/2020 22:44	Joel Trout	1.03
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 12:00	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/15/2020 20:58	William H Saadeh	1
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLD026	05/18/2020 21:41	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLB026	05/15/2020 00:08	Laura Duquette	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_3-5 MSD Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314160
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLD026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 09:19	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201350022A	05/15/2020 15:41	Covenant Mutuku	1
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 10:56	Dylan Schreiner	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	201350022A	05/14/2020 23:55	Laura Duquette	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 16:28	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:40	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:41	Bradley M Berlot	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:59	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:40	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:40	Patrick J Engle	2
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:40	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:59	Patrick J Engle	2
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:59	Patrick J Engle	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:59	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:59	Patrick J Engle	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:40	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:41	Bradley M Berlot	10
00159	Mercury	SW-846 7471B	1	201351063802	05/14/2020 10:52	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404903	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063802	05/14/2020 08:15	Annamaria Kuhns	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 DUP Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314161
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15DUP

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	
06125	Arsenic	7440-38-2	11.8	0.140	0.417	2
06126	Barium	7440-39-3	113	0.954	2.09	10
06127	Beryllium	7440-41-7	0.734	0.0248	0.0626	2
06128	Cadmium	7440-43-9	0.398	0.0526	0.104	2
06131	Chromium	7440-47-3	19.6	0.160	0.417	2
06133	Copper	7440-50-8	70.1	0.183	0.417	2
06135	Lead	7439-92-1	166	0.263	1.04	10
06137	Manganese	7439-96-5	340	1.12	2.09	10
06139	Nickel	7440-02-0	21.4	0.170	0.417	2
06141	Selenium	7782-49-2	0.624	0.136	0.417	2
06142	Silver	7440-22-4	0.122	0.0423	0.104	2
06149	Zinc	7440-66-6	305	2.79	10.4	10
			SW-846 7471B	mg/kg	mg/kg	
00159	Mercury	7439-97-6	1.29	0.0815	0.358	5
Wet Chemistry			SW-846 9012B	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.19	0.52	1
			SW-846 7196A	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.15	0.45	1
Wet Chemistry			SM 2540 G-2011	%	%	
			%Moisture Calc			
00118	Moisture ¹	n.a.	6.9	0.50	0.50	1
00121	Moisture Duplicate ¹	n.a.	7.3	0.50	0.50	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:37	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_3-5 DUP Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314161
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:00
SDG#: CMS08-15DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:36	Bradley M Berlot	10
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:54	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:37	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:37	Patrick J Engle	2
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:37	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:09	Patrick J Engle	10
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:09	Patrick J Engle	10
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:54	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 19:54	Patrick J Engle	2
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:37	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:36	Bradley M Berlot	10
00159	Mercury	SW-846 7471B	1	201351063802	05/14/2020 10:55	Damary Valentin	5
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404903	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063802	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201A	05/15/2020 11:46	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201A	05/15/2020 05:55	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1
00121	Moisture Duplicate	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
SW-846 8260C						
11995	Acetone	67-64-1	N.D.	0.29	0.95	39
11995	Acrolein	107-02-8	N.D.	0.24	4.8	39
11995	Acrylonitrile	107-13-1	N.D.	0.038	0.95	39
11995	Benzene	71-43-2	N.D.	0.024	0.24	39
11995	Bromodichloromethane	75-27-4	N.D.	0.019	0.24	39
11995	Bromoform	75-25-2	N.D.	0.24	0.48	39
11995	Bromomethane	74-83-9	N.D.	0.033	0.24	39
11995	2-Butanone	78-93-3	N.D.	0.095	0.48	39
11995	t-Butyl alcohol	75-65-0	N.D.	0.71	4.8	39
11995	n-Butylbenzene	104-51-8	0.35 J	0.14	0.38	39
11995	sec-Butylbenzene	135-98-8	0.54	0.095	0.24	39
11995	tert-Butylbenzene	98-06-6	N.D.	0.038	0.24	39
11995	Carbon Disulfide	75-15-0	N.D.	0.029	0.24	39
11995	Carbon Tetrachloride	56-23-5	N.D.	0.024	0.24	39
11995	Chlorobenzene	108-90-7	N.D.	0.024	0.24	39
11995	Chloroethane	75-00-3	N.D.	0.048	0.24	39
11995	Chloroform	67-66-3	N.D.	0.029	0.24	39
11995	Chloromethane	74-87-3	N.D.	0.029	0.24	39
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.024	0.24	39
11995	Dibromochloromethane	124-48-1	N.D.	0.024	0.24	39
11995	1,2-Dibromoethane	106-93-4	N.D.	0.019	0.24	39
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.024	0.24	39
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.024	0.24	39
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.019	0.24	39
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.029	0.24	39
11995	1,1-Dichloroethane	75-34-3	N.D.	0.024	0.24	39
11995	1,2-Dichloroethane	107-06-2	N.D.	0.029	0.24	39
11995	1,1-Dichloroethene	75-35-4	N.D.	0.024	0.24	39
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.024	0.24	39
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.024	0.24	39
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.048	0.48	39
11995	1,2-Dichloropropane	78-87-5	N.D.	0.024	0.24	39
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.019	0.24	39
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.024	0.24	39
11995	Ethylbenzene	100-41-4	N.D.	0.019	0.24	39
11995	Methyl Acetate	79-20-9	N.D.	0.048	0.24	39
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.024	0.24	39
11995	Methylene Chloride	75-09-2	N.D.	0.095	0.24	39
11995	n-Propylbenzene	103-65-1	1.1	0.019	0.24	39
11995	Styrene	100-42-5	N.D.	0.019	0.24	39
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.019	0.24	39

*=This limit was used in the evaluation of the final result

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/kg	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.024	0.24	39
11995	Toluene	108-88-3	N.D.	0.029	0.24	39
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.029	0.24	39
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.024	0.24	39
11995	Trichloroethene	79-01-6	N.D.	0.024	0.24	39
11995	Trichlorofluoromethane	75-69-4	N.D.	0.033	0.24	39
11995	1,2,4-Trimethylbenzene	95-63-6	21	0.24	2.4	390.02
11995	1,3,5-Trimethylbenzene	108-67-8	8.9	0.024	0.24	39
11995	Vinyl Chloride	75-01-4	N.D.	0.029	0.24	39
11995	Xylene (Total)	1330-20-7	3.8	0.067	0.48	39
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	1.4	0.012	0.060	1
10726	Acenaphthylene	208-96-8	0.63	0.012	0.060	1
10726	Acetophenone	98-86-2	N.D.	0.060	0.18	1
10726	Anthracene	120-12-7	3.4	0.012	0.060	1
10726	Atrazine	1912-24-9	N.D.	0.72	1.6	1
10726	Benzaldehyde	100-52-7	N.D.	0.24	0.60	1
10726	Benzidine	92-87-5	N.D.	1.2	3.6	1
10726	Benzo(a)anthracene	56-55-3	6.3	0.024	0.060	1
10726	Benzo(a)pyrene	50-32-8	5.0	0.012	0.060	1
10726	Benzo(b)fluoranthene	205-99-2	6.1	0.012	0.060	1
10726	Benzo(g,h,i)perylene	191-24-2	2.7	0.012	0.060	1
10726	Benzo(k)fluoranthene	207-08-9	2.4	0.012	0.060	1
10726	1,1'-Biphenyl	92-52-4	0.13 J	0.060	0.13	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.24	0.60	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.24	0.60	1
10726	Caprolactam	105-60-2	N.D.	0.12	0.60	1
10726	Carbazole	86-74-8	0.95	0.060	0.13	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.084	0.18	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.072	0.16	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.024	0.12	1
10726	2-Chlorophenol	95-57-8	N.D.	0.060	0.13	1
10726	Chrysene	218-01-9	5.0	0.012	0.060	1
10726	Dibenz(a,h)anthracene	53-70-3	0.78	0.024	0.060	1
10726	Dibenzofuran	132-64-9	1.2	0.060	0.13	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.060	0.18	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	0.13	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.060	0.13	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.36	1.2	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.072	0.16	1
10726	Diethylphthalate	84-66-2	N.D.	0.24	0.60	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.11	0.24	1
10726	Dimethylphthalate	131-11-3	N.D.	0.24	0.60	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.84	1.8	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1.2	3.6	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.24	0.60	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.084	0.18	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.084	0.18	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.072	0.16	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.24	0.60	1
10726	Fluoranthene	206-44-0	14	0.012	0.060	1
10726	Fluorene	86-73-7	1.9	0.012	0.060	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.024	0.060	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.13	0.28	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.72	1.8	1
10726	Hexachloroethane	67-72-1	N.D.	0.12	0.60	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	2.5	0.012	0.060	1
10726	Isophorone	78-59-1	N.D.	0.060	0.13	1
10726	2-Methylnaphthalene	91-57-6	0.59	0.012	0.12	1
10726	2-Methylphenol	95-48-7	N.D.	0.060	0.24	1
10726	4-Methylphenol	106-44-5	N.D.	0.060	0.18	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.64	0.024	0.060	1
10726	2-Nitroaniline	88-74-4	N.D.	0.060	0.18	1
10726	Nitrobenzene	98-95-3	N.D.	0.096	0.24	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.24	0.60	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.084	0.18	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.060	0.13	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.24	0.60	1
10726	Pentachlorophenol	87-86-5	N.D.	0.24	0.60	1
10726	Phenanthrene	85-01-8	18	0.12	0.60	10
10726	Phenol	108-95-2	N.D.	0.060	0.13	1

*=This limit was used in the evaluation of the final result

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
10726	Pyrene	129-00-0	11	0.012	0.060	1
10726	Pyridine	110-86-1	N.D.	0.24	0.60	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.084	0.18	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.11	0.24	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.096	0.21	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
GC/MS Semivolatiles SW-846 8270D SIM						
12969	1,4-Dioxane	123-91-1	140	8	20	10
Herbicides SW-846 8151A						
10401	2,4-D	94-75-7	N.D. D2	0.015	0.044	1
10401	2,4,5-T	93-76-5	N.D. D2	0.0010	0.0021	1
10401	2,4,5-TP	93-72-1	N.D. D2	0.00091	0.0021	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A Feb 2007 Rev 1						
10885	PCB-1016	12674-11-2	N.D. D1	22	100	5
10885	PCB-1221	11104-28-2	N.D. D1	28	100	5
10885	PCB-1232	11141-16-5	N.D. D1	48	100	5
10885	PCB-1242	53469-21-9	N.D. D1	20	100	5
10885	PCB-1248	12672-29-6	N.D. D1	20	100	5
10885	PCB-1254	11097-69-1	N.D. D1	20	100	5
10885	PCB-1260	11096-82-5	N.D. D1	30	100	5
10885	Total PCBs ¹	1336-36-3	N.D.	20	100	5
Pesticides SW-846 8081B						
10590	Aldrin	309-00-2	N.D. D2	0.0041	0.020	20
10590	Alpha BHC	319-84-6	N.D. D1	0.0041	0.020	20
10590	Beta BHC	319-85-7	N.D. D1	0.011	0.036	20
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0051	0.020	20
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.0041	0.020	20
10590	4,4'-Ddd	72-54-8	N.D. D2	0.0080	0.048	20
10590	4,4'-Dde	72-55-9	N.D. D2	0.0080	0.048	20
10590	4,4'-Ddt	50-29-3	N.D. D1	0.019	0.048	20
10590	Delta BHC	319-86-8	N.D. VD1	0.015	0.036	20

*=This limit was used in the evaluation of the final result

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Pesticides			mg/kg	mg/kg	mg/kg	
SW-846 8081B						
10590	Dieldrin	60-57-1	N.D. D2	0.0080	0.048	20
10590	Endosulfan I	959-98-8	N.D. D2	0.0053	0.020	20
10590	Endosulfan II	33213-65-9	N.D. D2	0.027	0.048	20
10590	Endosulfan Sulfate	1031-07-8	N.D. VD2	0.019	0.048	20
10590	Endrin	72-20-8	N.D. D1	0.016	0.048	20
10590	Heptachlor	76-44-8	N.D. D2	0.0075	0.020	20

For noncompliant preparation/method/calibration blanks further action is not required if the associated sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Reporting limits were raised due to interference from the sample matrix.

LC/MS/MS	Miscellaneous	EPA 537 Version 1.1 Modified	ng/g	ng/g	ng/g	
14027	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.69	2.3	1
14027	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.69	3.4	1
14027	NEtFOSAA ¹	2991-50-6	N.D.	0.23	2.3	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14027	NMeFOSAA ¹	2355-31-9	N.D.	0.23	2.3	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14027	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.46	2.3	1
14027	Perfluorobutanoic acid ¹	375-22-4	N.D.	0.92	2.3	1
14027	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.23	0.69	1
14027	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.23	0.69	1
14027	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.23	0.69	1
14027	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.23	0.69	1
14027	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.23	0.69	1
14027	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.23	0.69	1
14027	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.23	0.69	1
14027	Perfluorononanoic acid ¹	375-95-1	N.D.	0.23	0.69	1
14027	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.23	0.69	1
14027	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.23	0.69	1
14027	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.23	0.69	1
14027	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.23	0.69	1
14027	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.23	0.69	1
14027	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.23	0.69	1
14027	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.23	0.69	1

Metals	SW-846 6020B Rev.2, July 2014	mg/kg	mg/kg	mg/kg		
06125	Arsenic	7440-38-2	3.73	0.140	0.420	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals						
SW-846 6020B Rev.2, July 2014			mg/kg	mg/kg	mg/kg	
06126	Barium	7440-39-3	29.4	0.192	0.420	2
06127	Beryllium	7440-41-7	0.140	0.0250	0.0630	2
06128	Cadmium	7440-43-9	0.254	0.0529	0.105	2
06131	Chromium	7440-47-3	5.01	0.161	0.420	2
02829	Trivalent Chromium soils ¹	16065-83-1	5.0	0.17	0.51	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06133	Copper	7440-50-8	34.6	0.184	0.420	2
06135	Lead	7439-92-1	118	0.265	1.05	10
06137	Manganese	7439-96-5	52.6	0.225	0.420	2
06139	Nickel	7440-02-0	5.12	0.171	0.420	2
06141	Selenium	7782-49-2	0.489	0.137	0.420	2
06142	Silver	7440-22-4	0.122	0.0426	0.105	2
06149	Zinc	7440-66-6	163	2.81	10.5	10
SW-846 7471B			mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	0.291	0.0179	0.0786	1
Wet Chemistry						
SW-846 9012B			mg/kg	mg/kg	mg/kg	
05895	Total Cyanide (solid)	57-12-5	N.D.	0.21	0.58	1
SW-846 7196A			mg/kg	mg/kg	mg/kg	
00425	Hexavalent Chromium (SOLIDS)	18540-29-9	N.D.	0.17	0.51	1
Wet Chemistry						
SM 2540 G-2011			%	%	%	
%Moisture Calc						
00111	Moisture ¹	n.a.	17.9	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	R201362AA	05/15/2020 17:23	Jennifer K Howe	39
11995	VOCs 8260C	SW-846 8260C	1	R201362AA	05/15/2020 17:44	Jennifer K Howe	390.02
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013556787	05/14/2020 09:41	Essence Orden-Slocum	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013556787	05/13/2020 12:05	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 14:14	Edward C Monborne	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 16:36	Edward C Monborne	10
12969	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20135SLD026	05/18/2020 22:12	William H Saadeh	10
10813	BNA Soil Microwave APP IX	SW-846 3546	2	20139SLA026	05/19/2020 00:42	Laura Duquette	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	20135SLD026	05/15/2020 00:08	Laura Duquette	1
10401	2,4,5-T, 2,4-D, 2,4,5-TP 8151A	SW-846 8151A	1	201350020A	05/16/2020 09:52	Rachel Umberger	1
10885	7 PCBs + Total Soil	SW-846 8082A Feb 2007 Rev 1	1	201390026A	05/19/2020 15:37	Elizabeth E Donovan	5
10590	NY Part 375 Pests Soil	SW-846 8081B	1	201350016A	05/19/2020 11:25	Dylan Schreiner	20
10497	PCB Microwave Soil Extraction	SW-846 3546	2	201390026A	05/18/2020 19:40	Bradley W VanLeuven	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	201350016A	05/14/2020 23:55	Laura Duquette	1
04181	Herbicide Soil Extraction	SW-846 3550C/SW-846 8151A	1	201350020A	05/15/2020 00:10	Sherry L Morrow	1
14027	NY 21 PFAS Soil	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 16:37	Katie Renfro	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	1	20135005	05/14/2020 07:00	Austin Prince	1
06125	Arsenic	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
06126	Barium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
06127	Beryllium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:37	Patrick J Engle	2
06128	Cadmium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
06131	Chromium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
02829	Trivalent Chromium soils	SW-846 6020B Rev.2, July 2014	1	201380282901	05/15/2020 22:13	Katlin N Burkholder	1
06133	Copper	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
06135	Lead	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:40	Patrick J Engle	10
06137	Manganese	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
06139	Nickel	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:37	Patrick J Engle	2
06141	Selenium	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/18/2020 20:37	Patrick J Engle	2

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB20_14-16 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314162
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 12:05
SDG#: CMS08-16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06142	Silver	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/14/2020 19:43	Patrick J Engle	2
06149	Zinc	SW-846 6020B Rev.2, July 2014	1	201351404903A	05/19/2020 09:49	Bradley M Berlot	10
00159	Mercury	SW-846 7471B	1	201351063802	05/14/2020 10:57	Damary Valentin	1
14049	ICP/ICPMS-SW, 3050B - U345	SW-846 3050B	1	201351404903	05/14/2020 06:00	Annamaria Kuhns	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	201351063802	05/14/2020 08:15	Annamaria Kuhns	1
05895	Total Cyanide (solid)	SW-846 9012B	1	20136102201B	05/15/2020 11:52	Gregory Baldree	1
05896	Cyanide Solid Distillation	SW-846 9012B	1	20136102201B	05/15/2020 08:20	Nancy J Shoop	1
00425	Hexavalent Chromium (SOLIDS)	SW-846 7196A	1	20135042501B	05/14/2020 22:15	Daniel S Smith	1
07825	Hexavalent Cr (Extraction)	SW-846 3060A	1	20135042501B	05/14/2020 09:35	Daniel S Smith	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB23_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314163
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 10:45
SDG#: CMS08-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	0.030	0.005	0.023	1
10726	Acenaphthylene	208-96-8	0.062	0.005	0.023	1
10726	Acetophenone	98-86-2	0.032 J	0.023	0.070	1
10726	Anthracene	120-12-7	0.33	0.005	0.023	1
10726	Atrazine	1912-24-9	N.D.	0.28	0.60	1
10726	Benzaldehyde	100-52-7	N.D.	0.093	0.23	1
10726	Benzidine	92-87-5	N.D.	0.46	1.4	1
10726	Benzo(a)anthracene	56-55-3	1.6	0.009	0.023	1
10726	Benzo(a)pyrene	50-32-8	7.1	0.046	0.23	10
10726	Benzo(b)fluoranthene	205-99-2	8.1	0.046	0.23	10
10726	Benzo(g,h,i)perylene	191-24-2	27	0.046	0.23	10
10726	Benzo(k)fluoranthene	207-08-9	3.2	0.046	0.23	10
10726	1,1'-Biphenyl	92-52-4	N.D.	0.023	0.051	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.093	0.23	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.093	0.23	1
10726	Caprolactam	105-60-2	N.D.	0.046	0.23	1
10726	Carbazole	86-74-8	0.037 J	0.023	0.051	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.033	0.070	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.028	0.060	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.009	0.046	1
10726	2-Chlorophenol	95-57-8	N.D.	0.023	0.051	1
10726	Chrysene	218-01-9	1.6	0.005	0.023	1
10726	Dibenz(a,h)anthracene	53-70-3	3.0	0.009	0.023	1
10726	Dibenzofuran	132-64-9	0.050 J	0.023	0.051	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.023	0.070	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.023	0.051	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.023	0.051	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.14	0.46	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.028	0.060	1
10726	Diethylphthalate	84-66-2	N.D.	0.093	0.23	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.042	0.093	1
10726	Dimethylphthalate	131-11-3	N.D.	0.093	0.23	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.33	0.70	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.46	1.4	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.093	0.23	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.033	0.070	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.033	0.070	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.028	0.060	1

*=This limit was used in the evaluation of the final result

Sample Description: LB23_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314163
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 10:45
SDG#: CMS08-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.093	0.23	1
10726	Fluoranthene	206-44-0	1.7	0.005	0.023	1
10726	Fluorene	86-73-7	0.044	0.005	0.023	1
10726	Hexachlorobenzene	118-74-1	0.018 J	0.009	0.023	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.051	0.11	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.28	0.70	1
10726	Hexachloroethane	67-72-1	N.D.	0.046	0.23	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	19	0.046	0.23	10
10726	Isophorone	78-59-1	N.D.	0.023	0.051	1
10726	2-Methylnaphthalene	91-57-6	0.016 J	0.005	0.046	1
10726	2-Methylphenol	95-48-7	N.D.	0.023	0.093	1
10726	4-Methylphenol	106-44-5	N.D.	0.023	0.070	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.091	0.009	0.023	1
10726	2-Nitroaniline	88-74-4	N.D.	0.023	0.070	1
10726	Nitrobenzene	98-95-3	N.D.	0.037	0.093	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.093	0.23	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.033	0.070	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.023	0.051	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.093	0.23	1
10726	Pentachlorophenol	87-86-5	N.D.	0.093	0.23	1
10726	Phenanthrene	85-01-8	0.88	0.005	0.023	1
10726	Phenol	108-95-2	N.D.	0.023	0.051	1
10726	Pyrene	129-00-0	2.0	0.005	0.023	1
10726	Pyridine	110-86-1	N.D.	0.093	0.23	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.033	0.070	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.042	0.093	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.037	0.079	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	28.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB23_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314163
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 10:45
SDG#: CMS08-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	Wet Chemistry	SM 2540 G-2011	%	%	%	
		%Moisture Calc				

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 14:38	Edward C Monborne	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 17:00	Edward C Monborne	10
10813	BNA Soil Microwave APP IX	SW-846 3546	2	20139SLA026	05/19/2020 00:42	Laura Duquette	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: LB24_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314164
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 14:45
SDG#: CMS08-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	Acenaphthene	83-32-9	0.77	0.004	0.019	1
10726	Acenaphthylene	208-96-8	0.36	0.004	0.019	1
10726	Acetophenone	98-86-2	N.D.	0.019	0.057	1
10726	Anthracene	120-12-7	1.4	0.004	0.019	1
10726	Atrazine	1912-24-9	N.D.	0.23	0.50	1
10726	Benzaldehyde	100-52-7	N.D.	0.077	0.19	1
10726	Benzidine	92-87-5	N.D.	0.38	1.1	1
10726	Benzo(a)anthracene	56-55-3	2.9	0.008	0.019	1
10726	Benzo(a)pyrene	50-32-8	2.6	0.004	0.019	1
10726	Benzo(b)fluoranthene	205-99-2	3.1	0.004	0.019	1
10726	Benzo(g,h,i)perylene	191-24-2	1.8	0.004	0.019	1
10726	Benzo(k)fluoranthene	207-08-9	1.3	0.004	0.019	1
10726	1,1'-Biphenyl	92-52-4	0.086	0.019	0.042	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.077	0.19	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.077	0.19	1
10726	Caprolactam	105-60-2	N.D.	0.038	0.19	1
10726	Carbazole	86-74-8	0.61	0.019	0.042	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.027	0.057	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.023	0.050	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.038	1
10726	2-Chlorophenol	95-57-8	N.D.	0.019	0.042	1
10726	Chrysene	218-01-9	2.6	0.004	0.019	1
10726	Dibenz(a,h)anthracene	53-70-3	0.46	0.008	0.019	1
10726	Dibenzofuran	132-64-9	0.46	0.019	0.042	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.019	0.057	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.019	0.042	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.019	0.042	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.11	0.38	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.023	0.050	1
10726	Diethylphthalate	84-66-2	N.D.	0.077	0.19	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.034	0.077	1
10726	Dimethylphthalate	131-11-3	N.D.	0.077	0.19	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.27	0.57	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.38	1.1	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.077	0.19	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.027	0.057	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.027	0.057	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.023	0.050	1

*=This limit was used in the evaluation of the final result

Sample Description: LB24_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314164
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 14:45
SDG#: CMS08-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/kg	mg/kg	mg/kg	
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.077	0.19	1
10726	Fluoranthene	206-44-0	8.3	0.019	0.096	5
10726	Fluorene	86-73-7	0.64	0.004	0.019	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.019	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.042	0.088	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.23	0.57	1
10726	Hexachloroethane	67-72-1	N.D.	0.038	0.19	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1.6	0.004	0.019	1
10726	Isophorone	78-59-1	N.D.	0.019	0.042	1
10726	2-Methylnaphthalene	91-57-6	0.24	0.004	0.038	1
10726	2-Methylphenol	95-48-7	N.D.	0.019	0.077	1
10726	4-Methylphenol	106-44-5	0.045 J	0.019	0.057	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.49	0.008	0.019	1
10726	2-Nitroaniline	88-74-4	N.D.	0.019	0.057	1
10726	Nitrobenzene	98-95-3	N.D.	0.031	0.077	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.077	0.19	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.027	0.057	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.019	0.042	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.077	0.19	1
10726	Pentachlorophenol	87-86-5	N.D.	0.077	0.19	1
10726	Phenanthrene	85-01-8	7.6	0.019	0.096	5
10726	Phenol	108-95-2	N.D.	0.019	0.042	1
10726	Pyrene	129-00-0	6.7	0.019	0.096	5
10726	Pyridine	110-86-1	N.D.	0.077	0.19	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.027	0.057	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.034	0.077	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.031	0.065	1
Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	13.2	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: LB24_10-12 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1314164
ELLE Group #: 2099431
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 14:45
SDG#: CMS08-18

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/15/2020 22:10	William H Saadeh	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20135SLB026	05/18/2020 16:11	Edward C Monborne	5
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20135SLB026	05/15/2020 00:08	Laura Duquette	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20136820001A	05/15/2020 10:39	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB05_051320 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1314165
ELLE Group #: 2099431
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020
SDG#: CMS08-19TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOTB05_051320 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1314165
ELLE Group #: 2099431
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020
SDG#: CMS08-19TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	N201391AA	05/18/2020 23:48	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	N201391AA	05/18/2020 23:47	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOFB05_051320 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1314166
ELLE Group #: 2099431
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21
Collection Date/Time: 05/13/2020 13:30
SDG#: CMS08-20FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D SIM						
12971	1,4-Dioxane	123-91-1	N.D.	ug/l 0.8	ug/l 2	1
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified						
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	2.5	6.2	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.2	3.7	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.62	3.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.75	2.5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.62	2.5	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	2.5	6.2	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.62	2.5	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.62	2.5	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.62	2.5	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.62	2.5	1
14473	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.62	2.5	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.62	2.5	1
14473	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.62	2.5	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	0.62	2.5	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.62	2.5	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.62	2.5	1
14473	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.62	2.5	1
14473	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.62	2.5	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.62	2.5	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.62	2.5	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.62	2.5	1

Reporting limits were raised due to limited sample volume.

The recovery for the extraction standard(s) in the method blank are outside the QC acceptance limits as noted on the QC Summary.

Sample Comments

State of New York Certification No. 10670
Preservation requirements were not met. The pH preservation of all non-volatile containers was checked upon receipt at the laboratory. The container for the following analysis was not within the specification and was adjusted accordingly by the laboratory: Total Cyanide (water)

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: SOFB05_051320 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1314166
ELLE Group #: 2099431
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/13/2020 22:21

Collection Date/Time: 05/13/2020 13:30

SDG#: CMS08-20FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12971	1,4-Dioxane 8270D SIM	SW-846 8270D SIM	1	20136WAJ026	05/18/2020 19:07	William H Saadeh	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20136WAJ026	05/18/2020 12:41	Christine E Gleim	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20139002	05/19/2020 03:42	Jason W Knight	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	2	20139002	05/18/2020 06:30	Nelson Richards	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: B201361AA	Sample number(s): 1314144-1314146,1314149		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005
n-Propylbenzene	N.D.	0.0004	0.005

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
Batch number: B201381AA	Sample number(s): 1314143,1314150,1314155,1314159-1314160		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005
n-Propylbenzene	N.D.	0.0004	0.005
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
Batch number: R201362AA	Sample number(s): 1314162		
Acetone	N.D.	0.30	1.0
Acrolein	N.D.	0.25	5.0
Acrylonitrile	N.D.	0.040	1.0
Benzene	N.D.	0.025	0.25
Bromodichloromethane	N.D.	0.020	0.25
Bromoform	N.D.	0.25	0.50
Bromomethane	N.D.	0.035	0.25
2-Butanone	N.D.	0.10	0.50
t-Butyl alcohol	N.D.	0.75	5.0
n-Butylbenzene	N.D.	0.15	0.40
sec-Butylbenzene	N.D.	0.10	0.25
tert-Butylbenzene	N.D.	0.040	0.25
Carbon Disulfide	N.D.	0.030	0.25
Carbon Tetrachloride	N.D.	0.025	0.25
Chlorobenzene	N.D.	0.025	0.25
Chloroethane	N.D.	0.050	0.25
Chloroform	N.D.	0.030	0.25
Chloromethane	N.D.	0.030	0.25
1,2-Dibromo-3-chloropropane	N.D.	0.025	0.25
Dibromochloromethane	N.D.	0.025	0.25
1,2-Dibromoethane	N.D.	0.020	0.25
1,2-Dichlorobenzene	N.D.	0.025	0.25
1,3-Dichlorobenzene	N.D.	0.025	0.25

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
1,4-Dichlorobenzene	N.D.	0.020	0.25
Dichlorodifluoromethane	N.D.	0.030	0.25
1,1-Dichloroethane	N.D.	0.025	0.25
1,2-Dichloroethane	N.D.	0.030	0.25
1,1-Dichloroethene	N.D.	0.025	0.25
cis-1,2-Dichloroethene	N.D.	0.025	0.25
trans-1,2-Dichloroethene	N.D.	0.025	0.25
1,2-Dichloroethene (Total)	N.D.	0.050	0.50
1,2-Dichloropropane	N.D.	0.025	0.25
cis-1,3-Dichloropropene	N.D.	0.020	0.25
trans-1,3-Dichloropropene	N.D.	0.025	0.25
Ethylbenzene	N.D.	0.020	0.25
Methyl Acetate	N.D.	0.050	0.25
Methyl Tertiary Butyl Ether	N.D.	0.025	0.25
Methylene Chloride	N.D.	0.10	0.25
n-Propylbenzene	N.D.	0.020	0.25
Styrene	N.D.	0.020	0.25
1,1,2,2-Tetrachloroethane	N.D.	0.020	0.25
Tetrachloroethene	N.D.	0.025	0.25
Toluene	N.D.	0.030	0.25
1,1,1-Trichloroethane	N.D.	0.030	0.25
1,1,2-Trichloroethane	N.D.	0.025	0.25
Trichloroethene	N.D.	0.025	0.25
Trichlorofluoromethane	N.D.	0.035	0.25
1,2,4-Trimethylbenzene	N.D.	0.025	0.25
1,3,5-Trimethylbenzene	N.D.	0.025	0.25
Vinyl Chloride	N.D.	0.030	0.25
Xylene (Total)	N.D.	0.070	0.50
	mg/l	mg/l	mg/l
Batch number: N201391AA	Sample number(s): 1314165		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,1,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
	mg/kg	mg/kg	mg/kg
Batch number: 20135SLA026	Sample number(s): 1314143-1314144		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Benzaldehyde	N.D.	0.067	0.17
Benzidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4_2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067
2,4,6-Trichlorophenol	N.D.	0.027	0.057
Batch number: 20135SLB026	Sample number(s): 1314149-1314150,1314155,1314159-1314160,1314164		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17
Benzidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4_2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067
2,4,6-Trichlorophenol	N.D.	0.027	0.057
Batch number: 20139SLA026	Sample number(s): 1314145-1314146,1314162-1314163		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Benzidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4,2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067
2,4,6-Trichlorophenol	N.D.	0.027	0.057
	ug/kg	ug/kg	ug/kg
Batch number: 20135SLC026	Sample number(s): 1314143-1314144,1314146		
1,4-Dioxane	1 J	0.7	2
Batch number: 20135SLD026	Sample number(s): 1314149-1314150,1314155,1314159-1314160,1314162		
1,4-Dioxane	2	0.7	2
Batch number: 20139SLD026	Sample number(s): 1314145		
1,4-Dioxane	N.D.	0.7	2
	ug/l	ug/l	ug/l
Batch number: 20136WAJ026	Sample number(s): 1314166		
1,4-Dioxane	N.D.	0.2	0.5
	mg/kg	mg/kg	mg/kg
Batch number: 201350020A	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162		
2,4-D	N.D.	0.012	0.036
2,4,5-T	N.D.	0.00082	0.0017
2,4,5-TP	N.D.	0.00075	0.0017
	ug/kg	ug/kg	ug/kg
Batch number: 201350022A	Sample number(s): 1314149-1314150,1314155,1314159-1314160		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	33	4.9	17
Total PCBs	33	3.3	17
Batch number: 201390026A	Sample number(s): 1314143-1314146,1314162		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
Total PCBs	N.D.	3.3	17
	mg/kg	mg/kg	mg/kg
Batch number: 201350016A	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162		
Aldrin	N.D.	0.00017	0.00083
Alpha BHC	N.D.	0.00017	0.00083
Beta BHC	N.D.	0.00044	0.0015
Gamma BHC - Lindane	N.D.	0.00021	0.00083
Alpha Chlordane	N.D.	0.00017	0.00083
4,4'-Ddd	N.D.	0.00033	0.0020
4,4'-Dde	N.D.	0.00033	0.0020
4,4'-Ddt	0.0025	0.00079	0.0020
Delta BHC	N.D.	0.00045	0.0015
Dieldrin	N.D.	0.00033	0.0020
Endosulfan I	N.D.	0.00022	0.00083
Endosulfan II	N.D.	0.0011	0.0020
Endosulfan Sulfate	N.D.	0.00033	0.0020
Endrin	N.D.	0.00068	0.0020
Heptachlor	N.D.	0.00031	0.00083
	ng/g	ng/g	ng/g
Batch number: 20135005	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162		
6:2-Fluorotelomersulfonic acid	N.D.	0.60	2.0
8:2-Fluorotelomersulfonic acid	N.D.	0.60	3.0
NEtFOSAA	N.D.	0.20	2.0
NMeFOSAA	N.D.	0.20	2.0
Perfluorobutanesulfonic acid	N.D.	0.40	2.0
Perfluorobutanoic acid	N.D.	0.80	2.0
Perfluorodecanesulfonic acid	N.D.	0.20	0.60
Perfluorodecanoic acid	N.D.	0.20	0.60
Perfluorododecanoic acid	N.D.	0.20	0.60
Perfluoroheptanesulfonic acid	N.D.	0.20	0.60
Perfluoroheptanoic acid	N.D.	0.20	0.60
Perfluorohexanesulfonic acid	N.D.	0.20	0.60
Perfluorohexanoic acid	N.D.	0.20	0.60
Perfluorononanoic acid	N.D.	0.20	0.60
Perfluorooctanesulfonamide	N.D.	0.20	0.60
Perfluorooctanesulfonic acid	N.D.	0.20	0.60

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/g	ng/g	ng/g
Perfluorooctanoic acid	N.D.	0.20	0.60
Perfluoropentanoic acid	N.D.	0.20	0.60
Perfluorotetradecanoic acid	N.D.	0.20	0.60
Perfluorotridecanoic acid	N.D.	0.20	0.60
Perfluoroundecanoic acid	N.D.	0.20	0.60
	ng/l	ng/l	ng/l
Batch number: 20139002	Sample number(s): 1314166		
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
	mg/kg	mg/kg	mg/kg
Batch number: 201351063801	Sample number(s): 1314141,1314143-1314147,1314149-1314151,1314153		
Mercury	0.0174 J	0.0152	0.0667
Batch number: 201351063802	Sample number(s): 1314155,1314159-1314162		
Mercury	0.0209 J	0.0152	0.0667
Batch number: 201351404902A	Sample number(s): 1314141,1314143-1314147,1314149-1314151,1314153		
Arsenic	N.D.	0.134	0.400
Barium	N.D.	0.183	0.400
Beryllium	N.D.	0.0238	0.0600
Cadmium	N.D.	0.0504	0.100
Chromium	N.D.	0.154	0.400
Copper	N.D.	0.176	0.400
Lead	N.D.	0.0504	0.200
Manganese	N.D.	0.214	0.400

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Nickel	N.D.	0.163	0.400
Selenium	N.D.	0.130	0.400
Silver	N.D.	0.0406	0.100
Zinc	0.744 J	0.536	2.00
Batch number: 201351404903A	Sample number(s): 1314155,1314159-1314162		
Arsenic	N.D.	0.134	0.400
Barium	N.D.	0.183	0.400
Beryllium	N.D.	0.0238	0.0600
Cadmium	N.D.	0.0504	0.100
Chromium	N.D.	0.154	0.400
Copper	N.D.	0.176	0.400
Lead	N.D.	0.0504	0.200
Manganese	N.D.	0.214	0.400
Nickel	N.D.	0.163	0.400
Selenium	N.D.	0.130	0.400
Silver	N.D.	0.0406	0.100
Zinc	N.D.	0.536	2.00
	mg/l	mg/l	mg/l
Batch number: 201391404501	Sample number(s): 1314142,1314148,1314152,1314154		
Arsenic	N.D.	0.0160	0.0300
Lead	N.D.	0.0071	0.0150
Batch number: 201550571305	Sample number(s): 1314142,1314148,1314152,1314154		
Mercury	N.D.	0.000079	0.00020
	mg/kg	mg/kg	mg/kg
Batch number: 20136102201A	Sample number(s): 1314143-1314146,1314149,1314155,1314159,1314161		
Total Cyanide (solid)	N.D.	0.18	0.50
Batch number: 20136102201B	Sample number(s): 1314150,1314162		
Total Cyanide (solid)	N.D.	0.18	0.50
Batch number: 20135042501B	Sample number(s): 1314143-1314146,1314149-1314150,1314155-1314158,1314161-1314162		
Hexavalent Chromium (SOLIDS)	N.D.	0.14	0.42

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: B201361AA	Sample number(s): 1314144-1314146,1314149								
Acetone	0.150	0.169	0.150	0.208	112	138	41-150	21	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Acrolein	0.150	0.139	0.150	0.147	93	98	57-131	5	30
Acrylonitrile	0.100	0.0956	0.100	0.0892	96	89	66-120	7	30
Benzene	0.0200	0.0206	0.0200	0.0191	103	96	80-120	7	30
Bromodichloromethane	0.0200	0.0207	0.0200	0.0196	104	98	70-120	5	30
Bromoform	0.0200	0.0192	0.0200	0.0184	96	92	51-127	4	30
Bromomethane	0.0200	0.0179	0.0200	0.0166	89	83	45-140	7	30
2-Butanone	0.150	0.149	0.150	0.167	99	111	57-128	11	30
t-Butyl alcohol	0.200	0.199	0.200	0.202	100	101	74-121	1	30
n-Butylbenzene	0.0200	0.0191	0.0200	0.0181	95	90	71-121	5	30
sec-Butylbenzene	0.0200	0.0202	0.0200	0.0190	101	95	72-120	6	30
tert-Butylbenzene	0.0200	0.0193	0.0200	0.0183	97	91	68-120	5	30
Carbon Disulfide	0.0200	0.0205	0.0200	0.0184	103	92	64-133	11	30
Carbon Tetrachloride	0.0200	0.0210	0.0200	0.0191	105	95	64-134	9	30
Chlorobenzene	0.0200	0.0202	0.0200	0.0191	101	95	80-120	6	30
Chloroethane	0.0200	0.0175	0.0200	0.0158	88	79	43-135	11	30
Chloroform	0.0200	0.0205	0.0200	0.0194	103	97	80-120	5	30
Chloromethane	0.0200	0.0200	0.0200	0.0175	100	88	56-120	13	30
1,2-Dibromo-3-chloropropane	0.0200	0.0188	0.0200	0.0179	94	89	48-134	5	30
Dibromochloromethane	0.0200	0.0212	0.0200	0.0203	106	101	69-125	4	30
1,2-Dibromoethane	0.0200	0.0201	0.0200	0.0191	100	96	76-120	5	30
1,2-Dichlorobenzene	0.0200	0.0198	0.0200	0.0187	99	93	76-120	6	30
1,3-Dichlorobenzene	0.0200	0.0193	0.0200	0.0184	96	92	75-120	4	30
1,4-Dichlorobenzene	0.0200	0.0194	0.0200	0.0186	97	93	80-120	4	30
Dichlorodifluoromethane	0.0200	0.0256	0.0200	0.0235	128*	118	21-127	8	30
1,1-Dichloroethane	0.0200	0.0204	0.0200	0.0192	102	96	79-120	6	30
1,2-Dichloroethane	0.0200	0.0197	0.0200	0.0192	99	96	71-128	3	30
1,1-Dichloroethene	0.0200	0.0216	0.0200	0.0197	108	98	73-129	9	30
cis-1,2-Dichloroethene	0.0200	0.0222	0.0200	0.0208	111	104	80-125	7	30
trans-1,2-Dichloroethene	0.0200	0.0207	0.0200	0.0193	104	96	80-126	7	30
1,2-Dichloroethene (Total)	0.0400	0.0429	0.0400	0.0400	107	100	80-126	7	30
1,2-Dichloropropane	0.0200	0.0209	0.0200	0.0195	105	98	80-120	7	30
cis-1,3-Dichloropropene	0.0200	0.0206	0.0200	0.0195	103	97	66-120	5	30
trans-1,3-Dichloropropene	0.0200	0.0199	0.0200	0.0192	99	96	68-122	4	30
Ethylbenzene	0.0200	0.0202	0.0200	0.0189	101	95	78-120	6	30
Methyl Acetate	0.0200	0.0187	0.0200	0.0174	94	87	67-128	7	30
Methyl Tertiary Butyl Ether	0.0200	0.0194	0.0200	0.0190	97	95	72-120	2	30
Methylene Chloride	0.0200	0.0203	0.0200	0.0196	102	98	76-122	4	30
n-Propylbenzene	0.0200	0.0204	0.0200	0.0192	102	96	72-123	6	30
Styrene	0.0200	0.0193	0.0200	0.0182	96	91	76-120	6	30
1,1,2,2-Tetrachloroethane	0.0200	0.0199	0.0200	0.0190	100	95	69-125	5	30
Tetrachloroethene	0.0200	0.0201	0.0200	0.0188	100	94	73-120	7	30
Toluene	0.0200	0.0197	0.0200	0.0183	98	92	80-120	7	30
1,1,1-Trichloroethane	0.0200	0.0201	0.0200	0.0185	100	93	69-123	8	30
1,1,2-Trichloroethane	0.0200	0.0212	0.0200	0.0208	106	104	80-120	2	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichloroethene	0.0200	0.0203	0.0200	0.0188	101	94	80-120	7	30
Trichlorofluoromethane	0.0200	0.0222	0.0200	0.0198	111	99	55-134	11	30
1,2,4-Trimethylbenzene	0.0200	0.0196	0.0200	0.0187	98	93	73-120	5	30
1,3,5-Trimethylbenzene	0.0200	0.0196	0.0200	0.0188	98	94	73-120	5	30
Vinyl Chloride	0.0200	0.0192	0.0200	0.0172	96	86	52-120	11	30
Xylene (Total)	0.0600	0.0600	0.0600	0.0558	100	93	75-120	7	30
Batch number: B201381AA	Sample number(s): 1314143,1314150,1314155,1314159-1314160								
Acetone	0.150	0.194	0.150	0.174	129	116	41-150	11	30
Acrolein	0.150	0.159	0.150	0.137	106	92	57-131	14	30
Acrylonitrile	0.100	0.0754	0.100	0.0840	75	84	66-120	11	30
Benzene	0.0200	0.0192	0.0200	0.0195	96	97	80-120	1	30
Bromodichloromethane	0.0200	0.0192	0.0200	0.0198	96	99	70-120	3	30
Bromoform	0.0200	0.0175	0.0200	0.0186	88	93	51-127	6	30
Bromomethane	0.0200	0.0177	0.0200	0.0175	88	87	45-140	1	30
2-Butanone	0.150	0.159	0.150	0.147	106	98	57-128	8	30
t-Butyl alcohol	0.200	0.201	0.200	0.202	100	101	74-121	1	30
n-Butylbenzene	0.0200	0.0201	0.0200	0.0198	101	99	71-121	2	30
sec-Butylbenzene	0.0200	0.0206	0.0200	0.0205	103	103	72-120	0	30
tert-Butylbenzene	0.0200	0.0198	0.0200	0.0195	99	98	68-120	1	30
Carbon Disulfide	0.0200	0.0176	0.0200	0.0177	88	89	64-133	1	30
Carbon Tetrachloride	0.0200	0.0191	0.0200	0.0190	95	95	64-134	0	30
Chlorobenzene	0.0200	0.0200	0.0200	0.0202	100	101	80-120	1	30
Chloroethane	0.0200	0.0168	0.0200	0.0167	84	84	43-135	1	30
Chloroform	0.0200	0.0196	0.0200	0.0198	98	99	80-120	1	30
Chloromethane	0.0200	0.0184	0.0200	0.0180	92	90	56-120	2	30
1,2-Dibromo-3-chloropropane	0.0200	0.0157	0.0200	0.0180	79	90	48-134	13	30
Dibromochloromethane	0.0200	0.0203	0.0200	0.0208	101	104	69-125	3	30
1,2-Dibromoethane	0.0200	0.0185	0.0200	0.0195	92	97	76-120	5	30
1,2-Dichlorobenzene	0.0200	0.0200	0.0200	0.0203	100	101	76-120	2	30
1,3-Dichlorobenzene	0.0200	0.0200	0.0200	0.0201	100	101	75-120	0	30
1,4-Dichlorobenzene	0.0200	0.0202	0.0200	0.0202	101	101	80-120	0	30
Dichlorodifluoromethane	0.0200	0.0167	0.0200	0.0168	84	84	21-127	0	30
1,1-Dichloroethane	0.0200	0.0189	0.0200	0.0191	94	95	79-120	1	30
1,2-Dichloroethane	0.0200	0.0178	0.0200	0.0185	89	92	71-128	4	30
1,1-Dichloroethene	0.0200	0.0185	0.0200	0.0190	93	95	73-129	2	30
cis-1,2-Dichloroethene	0.0200	0.0208	0.0200	0.0211	104	105	80-125	1	30
trans-1,2-Dichloroethene	0.0200	0.0191	0.0200	0.0193	95	96	80-126	1	30
1,2-Dichloroethene (Total)	0.0400	0.0399	0.0400	0.0403	100	101	80-126	1	30
1,2-Dichloropropane	0.0200	0.0193	0.0200	0.0198	97	99	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0190	0.0200	0.0196	95	98	66-120	3	30
trans-1,3-Dichloropropene	0.0200	0.0186	0.0200	0.0195	93	98	68-122	5	30
Ethylbenzene	0.0200	0.0200	0.0200	0.0201	100	100	78-120	0	30
Methyl Acetate	0.0200	0.0146	0.0200	0.0167	73	83	67-128	13	30

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	0.0200	0.0173	0.0200	0.0187	86	94	72-120	8	30
Methylene Chloride	0.0200	0.0189	0.0200	0.0194	95	97	76-122	3	30
n-Propylbenzene	0.0200	0.0208	0.0200	0.0208	104	104	72-123	0	30
Styrene	0.0200	0.0192	0.0200	0.0195	96	97	76-120	2	30
1,1,1,2-Tetrachloroethane	0.0200	0.0179	0.0200	0.0196	89	98	69-125	9	30
Tetrachloroethene	0.0200	0.0194	0.0200	0.0195	97	98	73-120	1	30
Toluene	0.0200	0.0193	0.0200	0.0194	96	97	80-120	1	30
1,1,1-Trichloroethane	0.0200	0.0185	0.0200	0.0188	93	94	69-123	1	30
1,1,2-Trichloroethane	0.0200	0.0202	0.0200	0.0204	101	102	80-120	1	30
Trichloroethene	0.0200	0.0192	0.0200	0.0196	96	98	80-120	2	30
Trichlorofluoromethane	0.0200	0.0183	0.0200	0.0183	92	92	55-134	0	30
1,2,4-Trimethylbenzene	0.0200	0.0199	0.0200	0.0200	100	100	73-120	0	30
1,3,5-Trimethylbenzene	0.0200	0.0202	0.0200	0.0203	101	101	73-120	0	30
Vinyl Chloride	0.0200	0.0182	0.0200	0.0180	91	90	52-120	1	30
Xylene (Total)	0.0600	0.0601	0.0600	0.0604	100	101	75-120	1	30
Batch number: R201362AA	Sample number(s): 1314162								
Acetone	7.50	7.51	7.50	6.93	100	92	41-150	8	30
Acrolein	7.50	7.96	7.50	7.76	106	103	57-131	3	30
Acrylonitrile	5.00	5.55	5.00	5.52	111	110	66-120	1	30
Benzene	1.00	1.03	1.00	1.02	103	102	80-120	1	30
Bromodichloromethane	1.00	1.02	1.00	1.01	102	101	70-120	1	30
Bromoform	1.00	0.951	1.00	0.946	95	95	51-127	0	30
Bromomethane	1.00	1.37	1.00	1.42	137	142*	45-140	4	30
2-Butanone	7.50	6.83	7.50	6.54	91	87	57-128	4	30
t-Butyl alcohol	10	9.26	10	9.24	93	92	74-121	0	30
n-Butylbenzene	1.00	0.964	1.00	0.958	96	96	71-121	1	30
sec-Butylbenzene	1.00	0.964	1.00	0.955	96	95	72-120	1	30
tert-Butylbenzene	1.00	0.936	1.00	0.923	94	92	68-120	1	30
Carbon Disulfide	1.00	1.08	1.00	1.09	108	109	64-133	1	30
Carbon Tetrachloride	1.00	0.984	1.00	0.992	98	99	64-134	1	30
Chlorobenzene	1.00	0.973	1.00	0.973	97	97	80-120	0	30
Chloroethane	1.00	1.32	1.00	1.28	132	128	43-135	3	30
Chloroform	1.00	0.987	1.00	0.973	99	97	80-120	1	30
Chloromethane	1.00	0.888	1.00	0.897	89	90	56-120	1	30
1,2-Dibromo-3-chloropropane	1.00	1.06	1.00	1.06	106	106	48-134	0	30
Dibromochloromethane	1.00	1.03	1.00	1.03	103	103	69-125	0	30
1,2-Dibromoethane	1.00	0.997	1.00	0.995	100	99	76-120	0	30
1,2-Dichlorobenzene	1.00	0.973	1.00	0.971	97	97	76-120	0	30
1,3-Dichlorobenzene	1.00	0.970	1.00	0.962	97	96	75-120	1	30
1,4-Dichlorobenzene	1.00	0.982	1.00	0.971	98	97	80-120	1	30
Dichlorodifluoromethane	1.00	0.714	1.00	0.722	71	72	21-127	1	30
1,1-Dichloroethane	1.00	1.08	1.00	1.06	108	106	79-120	2	30
1,2-Dichloroethane	1.00	1.00	1.00	0.988	100	99	71-128	1	30

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethene	1.00	1.07	1.00	1.07	107	107	73-129	0	30
cis-1,2-Dichloroethene	1.00	1.06	1.00	1.05	106	105	80-125	1	30
trans-1,2-Dichloroethene	1.00	1.02	1.00	1.01	102	101	80-126	1	30
1,2-Dichloroethene (Total)	2.00	2.08	2.00	2.05	104	103	80-126	1	30
1,2-Dichloropropane	1.00	1.10	1.00	1.10	110	110	80-120	0	30
cis-1,3-Dichloropropene	1.00	1.05	1.00	1.04	105	104	66-120	1	30
trans-1,3-Dichloropropene	1.00	1.06	1.00	1.04	106	104	68-122	2	30
Ethylbenzene	1.00	1.01	1.00	1.02	101	102	78-120	1	30
Methyl Acetate	1.00	1.23	1.00	1.24	123	124	67-128	1	30
Methyl Tertiary Butyl Ether	1.00	0.925	1.00	0.915	92	92	72-120	1	30
Methylene Chloride	1.00	1.08	1.00	1.06	108	106	76-122	1	30
n-Propylbenzene	1.00	1.06	1.00	1.05	106	105	72-123	1	30
Styrene	1.00	1.02	1.00	1.02	102	102	76-120	0	30
1,1,2,2-Tetrachloroethane	1.00	1.09	1.00	1.10	109	110	69-125	1	30
Tetrachloroethene	1.00	0.937	1.00	0.928	94	93	73-120	1	30
Toluene	1.00	1.03	1.00	1.02	103	102	80-120	1	30
1,1,1-Trichloroethane	1.00	0.964	1.00	0.969	96	97	69-123	1	30
1,1,2-Trichloroethane	1.00	1.07	1.00	1.06	107	106	80-120	1	30
Trichloroethene	1.00	0.962	1.00	0.957	96	96	80-120	1	30
Trichlorofluoromethane	1.00	0.933	1.00	0.942	93	94	55-134	1	30
1,2,4-Trimethylbenzene	1.00	1.00	1.00	0.990	100	99	73-120	1	30
1,3,5-Trimethylbenzene	1.00	1.01	1.00	1.00	101	100	73-120	1	30
Vinyl Chloride	1.00	0.861	1.00	0.875	86	87	52-120	2	30
Xylene (Total)	3.00	3.01	3.00	3.01	100	100	75-120	0	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: N201391AA	Sample number(s): 1314165								
Acetone	0.150	0.158	0.150	0.164	105	109	54-157	4	30
Acrolein	0.150	0.147	0.150	0.148	98	99	47-136	1	30
Acrylonitrile	0.100	0.0938	0.100	0.103	94	103	60-129	9	30
Benzene	0.0200	0.0207	0.0200	0.0200	103	100	80-120	3	30
Bromodichloromethane	0.0200	0.0189	0.0200	0.0181	94	91	71-120	4	30
Bromoform	0.0200	0.0192	0.0200	0.0202	96	101	51-120	5	30
Bromomethane	0.0200	0.0165	0.0200	0.0168	82	84	53-128	2	30
2-Butanone	0.150	0.147	0.150	0.145	98	97	59-135	1	30
t-Butyl alcohol	0.200	0.229	0.200	0.241	115	120	60-130	5	30
n-Butylbenzene	0.0200	0.0203	0.0200	0.0203	101	102	76-120	0	30
sec-Butylbenzene	0.0200	0.0209	0.0200	0.0210	104	105	77-120	0	30
tert-Butylbenzene	0.0200	0.0218	0.0200	0.0205	109	102	78-120	6	30
Carbon Disulfide	0.0200	0.0203	0.0200	0.0220	102	110	65-128	8	30
Carbon Tetrachloride	0.0200	0.0189	0.0200	0.0191	95	96	64-134	1	30
Chlorobenzene	0.0200	0.0205	0.0200	0.0202	103	101	80-120	1	30
Chloroethane	0.0200	0.0170	0.0200	0.0172	85	86	55-123	1	30
Chloroform	0.0200	0.0194	0.0200	0.0196	97	98	80-120	1	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloromethane	0.0200	0.0148	0.0200	0.0150	74	75	56-121	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0186	0.0200	0.0187	93	93	47-131	0	30
Dibromochloromethane	0.0200	0.0201	0.0200	0.0193	101	97	71-120	4	30
1,2-Dibromoethane	0.0200	0.0198	0.0200	0.0190	99	95	77-120	4	30
1,2-Dichlorobenzene	0.0200	0.0206	0.0200	0.0202	103	101	80-120	2	30
1,3-Dichlorobenzene	0.0200	0.0205	0.0200	0.0203	102	101	80-120	1	30
1,4-Dichlorobenzene	0.0200	0.0207	0.0200	0.0204	103	102	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0125	0.0200	0.0123	62	61	41-127	2	30
1,1-Dichloroethane	0.0200	0.0189	0.0200	0.0204	94	102	80-120	8	30
1,2-Dichloroethane	0.0200	0.0174	0.0200	0.0170	87	85	73-124	2	30
1,1-Dichloroethene	0.0200	0.0187	0.0200	0.0213	93	106	80-131	13	30
cis-1,2-Dichloroethene	0.0200	0.0214	0.0200	0.0215	107	108	80-125	0	30
trans-1,2-Dichloroethene	0.0200	0.0189	0.0200	0.0206	95	103	80-126	9	30
1,2-Dichloroethene (Total)	0.0400	0.0403	0.0400	0.0421	101	105	80-125	4	30
1,2-Dichloropropane	0.0200	0.0211	0.0200	0.0206	106	103	80-120	3	30
cis-1,3-Dichloropropene	0.0200	0.0193	0.0200	0.0179	96	89	75-120	7	30
trans-1,3-Dichloropropene	0.0200	0.0186	0.0200	0.0183	93	92	67-120	1	30
Ethylbenzene	0.0200	0.0206	0.0200	0.0204	103	102	80-120	1	30
Methyl Acetate	0.0200	0.0188	0.0200	0.0206	94	103	54-136	9	30
Methyl Tertiary Butyl Ether	0.0200	0.0171	0.0200	0.0184	86	92	69-122	7	30
Methylene Chloride	0.0200	0.0184	0.0200	0.0197	92	99	80-120	7	30
n-Propylbenzene	0.0200	0.0216	0.0200	0.0214	108	107	79-121	1	30
Styrene	0.0200	0.0204	0.0200	0.0215	102	108	80-120	5	30
1,1,2,2-Tetrachloroethane	0.0200	0.0213	0.0200	0.0211	106	106	72-120	1	30
Tetrachloroethene	0.0200	0.0201	0.0200	0.0202	101	101	80-120	0	30
Toluene	0.0200	0.0207	0.0200	0.0200	103	100	80-120	3	30
1,1,1-Trichloroethane	0.0200	0.0186	0.0200	0.0182	93	91	67-126	2	30
1,1,2-Trichloroethane	0.0200	0.0206	0.0200	0.0199	103	99	80-120	4	30
Trichloroethene	0.0200	0.0192	0.0200	0.0185	96	93	80-120	4	30
Trichlorofluoromethane	0.0200	0.0173	0.0200	0.0183	86	91	55-135	5	30
1,2,4-Trimethylbenzene	0.0200	0.0201	0.0200	0.0198	101	99	75-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0206	0.0200	0.0203	103	101	75-120	1	30
Vinyl Chloride	0.0200	0.0156	0.0200	0.0157	78	78	56-120	1	30
Xylene (Total)	0.0600	0.0627	0.0600	0.0651	104	109	80-120	4	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20135SLA026	Sample number(s): 1314143-1314144								
Acenaphthene	1.67	1.41			84		61-112		
Acenaphthylene	1.67	1.40			84		60-124		
Acetophenone	1.67	1.25			75		48-109		
Anthracene	1.67	1.50			90		67-120		
Atrazine	1.67	1.53			92		70-129		
Benzaldehyde	1.67	0.833			50		20-101		
Benzidine	8.33	3.89			47		18-105		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(a)anthracene	1.67	1.57			94		68-120		
Benzo(a)pyrene	1.67	1.60			96		68-119		
Benzo(b)fluoranthene	1.67	1.59			95		67-125		
Benzo(g,h,i)perylene	1.67	1.48			89		68-125		
Benzo(k)fluoranthene	1.67	1.68			101		66-122		
1,1'-Biphenyl	1.67	1.41			84		59-106		
Butylbenzylphthalate	1.67	1.54			93		69-125		
Di-n-butylphthalate	1.67	1.52			91		70-126		
Caprolactam	1.67	1.39			83		62-119		
Carbazole	1.67	1.55			93		69-125		
bis(2-Chloroethyl)ether	1.67	1.20			72		44-104		
bis(2-Chloroisopropyl)ether	1.67	1.24			74		40-112		
2-Chloronaphthalene	1.67	1.19			72		48-123		
2-Chlorophenol	1.67	1.35			81		51-109		
Chrysene	1.67	1.48			89		66-111		
Dibenz(a,h)anthracene	1.67	1.55			93		69-135		
Dibenzofuran	1.67	1.45			87		62-113		
1,2-Dichlorobenzene	1.67	1.23			74		38-106		
1,3-Dichlorobenzene	1.67	1.17			70		36-103		
1,4-Dichlorobenzene	1.67	1.21			72		25-127		
3,3'-Dichlorobenzidine	1.67	1.21			73		18-114		
2,4-Dichlorophenol	1.67	1.45			87		57-115		
Diethylphthalate	1.67	1.48			89		68-116		
2,4-Dimethylphenol	1.67	1.15			69		47-95		
Dimethylphthalate	1.67	1.44			86		66-113		
4,6-Dinitro-2-methylphenol	1.67	1.52			91		56-135		
2,4-Dinitrophenol	3.33	3.09			93		34-136		
2,4-Dinitrotoluene	1.67	1.57			94		61-121		
2,6-Dinitrotoluene	1.67	1.57			94		66-122		
1,2-Diphenylhydrazine	1.67	1.51			91		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.64			98		65-132		
Fluoranthene	1.67	1.51			91		65-114		
Fluorene	1.67	1.49			89		62-110		
Hexachlorobenzene	1.67	1.48			89		62-124		
Hexachlorobutadiene	1.67	1.33			80		39-120		
Hexachlorocyclopentadiene	3.33	2.03			61		13-115		
Hexachloroethane	1.67	1.16			69		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.53			92		64-130		
Isophorone	1.67	1.32			79		51-113		
2-Methylnaphthalene	1.67	1.36			81		52-104		
2-Methylphenol	1.67	1.36			82		52-116		
4-Methylphenol	1.67	1.39			83		52-121		
Naphthalene	1.67	1.30			78		49-104		
2-Nitroaniline	1.67	1.55			93		65-132		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nitrobenzene	1.67	1.28			77		41-118		
N-Nitrosodimethylamine	1.67	1.17			70		31-107		
N-Nitroso-di-n-propylamine	1.67	1.31			78		49-108		
N-Nitrosodiphenylamine	1.67	1.52			91		64-127		
Di-n-octylphthalate	1.67	1.65			99		65-139		
Pentachlorophenol	1.67	1.64			99		40-131		
Phenanthrene	1.67	1.49			89		67-116		
Phenol	1.67	1.34			80		57-107		
Pyrene	1.67	1.47			88		67-109		
Pyridine	1.67	0.921			55		10-117		
1,2,4-Trichlorobenzene	1.67	1.36			82		46-109		
2,4,5-Trichlorophenol	1.67	1.52			91		62-121		
2,4,6-Trichlorophenol	1.67	1.53			92		60-120		
Batch number: 20135SLB026	Sample number(s): 1314149-1314150,1314155,1314159-1314160,1314164								
Acenaphthene	1.67	1.41			85		61-112		
Acenaphthylene	1.67	1.43			86		60-124		
Acetophenone	1.67	1.26			76		48-109		
Anthracene	1.67	1.56			94		67-120		
Atrazine	1.67	1.59			95		70-129		
Benzaldehyde	1.67	0.864			52		20-101		
Benzidine	8.33	2.76			33		18-105		
Benzo(a)anthracene	1.67	1.59			95		68-120		
Benzo(a)pyrene	1.67	1.63			98		68-119		
Benzo(b)fluoranthene	1.67	1.59			96		67-125		
Benzo(g,h,i)perylene	1.67	1.52			91		68-125		
Benzo(k)fluoranthene	1.67	1.68			101		66-122		
1,1'-Biphenyl	1.67	1.42			85		59-106		
Butylbenzylphthalate	1.67	1.58			95		69-125		
Di-n-butylphthalate	1.67	1.60			96		70-126		
Caprolactam	1.67	1.43			86		62-119		
Carbazole	1.67	1.63			98		69-125		
bis(2-Chloroethyl)ether	1.67	1.17			70		44-104		
bis(2-Chloroisopropyl)ether	1.67	1.20			72		40-112		
2-Chloronaphthalene	1.67	1.19			71		48-123		
2-Chlorophenol	1.67	1.33			80		51-109		
Chrysene	1.67	1.48			89		66-111		
Dibenz(a,h)anthracene	1.67	1.56			93		69-135		
Dibenzofuran	1.67	1.47			88		62-113		
1,2-Dichlorobenzene	1.67	1.15			69		38-106		
1,3-Dichlorobenzene	1.67	1.12			67		36-103		
1,4-Dichlorobenzene	1.67	1.14			68		25-127		
3,3'-Dichlorobenzidine	1.67	0.922			55		18-114		
2,4-Dichlorophenol	1.67	1.49			89		57-115		

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Diethylphthalate	1.67	1.55			93		68-116		
2,4-Dimethylphenol	1.67	1.16			69		47-95		
Dimethylphthalate	1.67	1.48			89		66-113		
4,6-Dinitro-2-methylphenol	1.67	1.71			103		56-135		
2,4-Dinitrophenol	3.33	3.65			109		34-136		
2,4-Dinitrotoluene	1.67	1.59			96		61-121		
2,6-Dinitrotoluene	1.67	1.63			98		66-122		
1,2-Diphenylhydrazine	1.67	1.57			94		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.66			99		65-132		
Fluoranthene	1.67	1.57			94		65-114		
Fluorene	1.67	1.54			92		62-110		
Hexachlorobenzene	1.67	1.54			92		62-124		
Hexachlorobutadiene	1.67	1.28			77		39-120		
Hexachlorocyclopentadiene	3.33	2.08			62		13-115		
Hexachloroethane	1.67	1.09			65		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.55			93		64-130		
Isophorone	1.67	1.30			78		51-113		
2-Methylnaphthalene	1.67	1.35			81		52-104		
2-Methylphenol	1.67	1.35			81		52-116		
4-Methylphenol	1.67	1.33			80		52-121		
Naphthalene	1.67	1.28			77		49-104		
2-Nitroaniline	1.67	1.62			97		65-132		
Nitrobenzene	1.67	1.24			74		41-118		
N-Nitrosodimethylamine	1.67	1.07			64		31-107		
N-Nitroso-di-n-propylamine	1.67	1.30			78		49-108		
N-Nitrosodiphenylamine	1.67	1.61			97		64-127		
Di-n-octylphthalate	1.67	1.74			105		65-139		
Pentachlorophenol	1.67	1.83			110		40-131		
Phenanthrene	1.67	1.58			95		67-116		
Phenol	1.67	1.35			81		57-107		
Pyrene	1.67	1.50			90		67-109		
Pyridine	1.67	0.742			45		10-117		
1,2,4-Trichlorobenzene	1.67	1.30			78		46-109		
2,4,5-Trichlorophenol	1.67	1.62			97		62-121		
2,4,6-Trichlorophenol	1.67	1.59			95		60-120		
Batch number: 20139SLA026	Sample number(s): 1314145-1314146,1314162-1314163								
Acenaphthene	1.67	1.38			83		61-112		
Acenaphthylene	1.67	1.40			84		60-124		
Acetophenone	1.67	1.19			72		48-109		
Anthracene	1.67	1.55			93		67-120		
Atrazine	1.67	1.63			98		70-129		
Benzaldehyde	1.67	0.749			45		20-101		
Benzidine	8.33	4.61			55		18-105		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(a)anthracene	1.67	1.65			99		68-120		
Benzo(a)pyrene	1.67	1.70			102		68-119		
Benzo(b)fluoranthene	1.67	1.63			98		67-125		
Benzo(g,h,i)perylene	1.67	1.69			101		68-125		
Benzo(k)fluoranthene	1.67	1.73			104		66-122		
1,1'-Biphenyl	1.67	1.36			82		59-106		
Butylbenzylphthalate	1.67	1.59			95		69-125		
Di-n-butylphthalate	1.67	1.60			96		70-126		
Caprolactam	1.67	1.43			86		62-119		
Carbazole	1.67	1.62			97		69-125		
bis(2-Chloroethyl)ether	1.67	1.10			66		44-104		
bis(2-Chloroisopropyl)ether	1.67	0.977			59		40-112		
2-Chloronaphthalene	1.67	1.20			72		48-123		
2-Chlorophenol	1.67	1.32			79		51-109		
Chrysene	1.67	1.46			87		66-111		
Dibenz(a,h)anthracene	1.67	1.78			107		69-135		
Dibenzofuran	1.67	1.44			86		62-113		
1,2-Dichlorobenzene	1.67	1.19			72		38-106		
1,3-Dichlorobenzene	1.67	1.15			69		36-103		
1,4-Dichlorobenzene	1.67	1.17			70		25-127		
3,3'-Dichlorobenzidine	1.67	1.28			77		18-114		
2,4-Dichlorophenol	1.67	1.49			89		57-115		
Diethylphthalate	1.67	1.53			92		68-116		
2,4-Dimethylphenol	1.67	1.16			70		47-95		
Dimethylphthalate	1.67	1.46			88		66-113		
4,6-Dinitro-2-methylphenol	1.67	2.29			137*		56-135		
2,4-Dinitrophenol	3.33	5.56			167*		34-136		
2,4-Dinitrotoluene	1.67	1.66			100		61-121		
2,6-Dinitrotoluene	1.67	1.66			99		66-122		
1,2-Diphenylhydrazine	1.67	1.42			85		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.65			99		65-132		
Fluoranthene	1.67	1.58			95		65-114		
Fluorene	1.67	1.48			89		62-110		
Hexachlorobenzene	1.67	1.51			91		62-124		
Hexachlorobutadiene	1.67	1.32			79		39-120		
Hexachlorocyclopentadiene	3.33	1.99			60		13-115		
Hexachloroethane	1.67	1.16			69		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.74			104		64-130		
Isophorone	1.67	1.22			73		51-113		
2-Methylnaphthalene	1.67	1.31			79		52-104		
2-Methylphenol	1.67	1.27			76		52-116		
4-Methylphenol	1.67	1.32			79		52-121		
Naphthalene	1.67	1.25			75		49-104		
2-Nitroaniline	1.67	1.68			101		65-132		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nitrobenzene	1.67	1.19			71		41-118		
N-Nitrosodimethylamine	1.67	1.03			62		31-107		
N-Nitroso-di-n-propylamine	1.67	1.18			71		49-108		
N-Nitrosodiphenylamine	1.67	1.56			94		64-127		
Di-n-octylphthalate	1.67	1.77			106		65-139		
Pentachlorophenol	1.67	2.03			122		40-131		
Phenanthrene	1.67	1.56			94		67-116		
Phenol	1.67	1.27			76		57-107		
Pyrene	1.67	1.45			87		67-109		
Pyridine	1.67	0.746			45		10-117		
1,2,4-Trichlorobenzene	1.67	1.33			80		46-109		
2,4,5-Trichlorophenol	1.67	1.66			99		62-121		
2,4,6-Trichlorophenol	1.67	1.71			103		60-120		
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 20135SLC026	Sample number(s): 1314143-1314144,1314146								
1,4-Dioxane	33.33	9.82			29		21-79		
Batch number: 20135SLD026	Sample number(s): 1314149-1314150,1314155,1314159-1314160,1314162								
1,4-Dioxane	33.33	12.89			39		21-79		
Batch number: 20139SLD026	Sample number(s): 1314145								
1,4-Dioxane	33.33	14.01			42		21-79		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 20136WAJ026	Sample number(s): 1314166								
1,4-Dioxane	1.00	0.378	1.00	0.412	38	41	30-90	9	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201350020A	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162								
2,4-D	0.0834	0.0976			117		57-142		
2,4,5-T	0.00833	0.0112			134		59-137		
2,4,5-TP	0.00833	0.0118			141*		70-130		
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 201350022A	Sample number(s): 1314149-1314150,1314155,1314159-1314160								
PCB-1016	166.9	150.25			90		76-121		
PCB-1260	167.03	188.84			113		79-130		
Batch number: 201390026A	Sample number(s): 1314143-1314146,1314162								
PCB-1016	166.9	163.18			98		76-121		
PCB-1260	167.03	171.9			103		79-130		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201350016A	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162								

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Aldrin	0.00333	0.00240			72		60-117		
Alpha BHC	0.00338	0.00235			70		65-124		
Beta BHC	0.00333	0.00237			71		68-129		
Gamma BHC - Lindane	0.00333	0.00236			71		68-133		
Alpha Chlordane	0.00333	0.00259			78		73-131		
4,4'-Ddd	0.00671	0.00524			78		69-138		
4,4'-Dde	0.00667	0.00557			84		68-146		
4,4'-Ddt	0.00671	0.00615			92		67-135		
Delta BHC	0.00333	0.00245			74		45-151		
Dieldrin	0.00667	0.00534			80		63-126		
Endosulfan I	0.00333	0.00245			73		62-119		
Endosulfan II	0.00667	0.00531			80		65-126		
Endosulfan Sulfate	0.00667	0.00571			86		71-132		
Endrin	0.00667	0.00510			76*		86-135		
Heptachlor	0.00333	0.00251			75		66-118		

	ng/g	ng/g	ng/g	ng/g					
Batch number: 20135005	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162								
6:2-Fluorotelomersulfonic acid	23.7	18.8			79		51-144		
8:2-Fluorotelomersulfonic acid	23.94	19.69			82		54-152		
NEtFOSAA	25	20.9			84		51-145		
NMeFOSAA	25	21.36			85		55-152		
Perfluorobutanesulfonic acid	22.12	16.61			75		63-139		
Perfluorobutanoic acid	25	17.27			69		56-188		
Perfluorodecanesulfonic acid	24.08	17.14			71		60-142		
Perfluorodecanoic acid	25	17.97			72		65-144		
Perfluorododecanoic acid	25	19.39			78		62-150		
Perfluoroheptanesulfonic acid	23.78	16.54			70		67-139		
Perfluoroheptanoic acid	25	19.88			80		65-153		
Perfluorohexanesulfonic acid	23.64	17.24			73		59-139		
Perfluorohexanoic acid	25	18.79			75		64-149		
Perfluorononanoic acid	25	18.06			72		64-151		
Perfluorooctanesulfonamide	25	19.47			78		61-133		
Perfluorooctanesulfonic acid	23.9	14.96			63		54-132		
Perfluorooctanoic acid	25	17.59			70		65-147		
Perfluoropentanoic acid	25	19.29			77		71-139		
Perfluorotetradecanoic acid	25	19.46			78		66-147		
Perfluorotridecanoic acid	25	18.78			75		63-152		
Perfluoroundecanoic acid	25	18.11			72		65-146		

	ng/l	ng/l	ng/l	ng/l					
Batch number: 20139002	Sample number(s): 1314166								
6:2-Fluorotelomersulfonic acid	24.28	24.11	24.28	23.7	99	98	56-140	2	30
8:2-Fluorotelomersulfonic acid	24.52	24.8	24.52	25.44	101	104	58-143	3	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
NEtFOSAA	25.6	24.71	25.6	25.35	97	99	53-140	3	30
NMeFOSAA	25.6	26.41	25.6	27.79	103	109	59-141	5	30
Perfluorobutanesulfonic acid	22.64	20.2	22.64	20.53	89	91	67-135	2	30
Perfluorobutanoic acid	25.6	20.43	25.6	21.2	80	83	63-160	4	30
Perfluorodecanesulfonic acid	24.64	20.19	24.64	22.1	82	90	62-135	9	30
Perfluorodecanoic acid	25.6	23.45	25.6	24.48	92	96	66-141	4	30
Perfluorododecanoic acid	25.6	23.84	25.6	24.91	93	97	65-143	4	30
Perfluoroheptanesulfonic acid	24.36	22.8	24.36	21.75	94	89	67-138	5	30
Perfluoroheptanoic acid	25.6	25.11	25.6	25.56	98	100	69-144	2	30
Perfluorohexanesulfonic acid	24.2	21.73	24.2	21.49	90	89	63-132	1	30
Perfluorohexanoic acid	25.6	23.04	25.6	25.21	90	98	69-139	9	30
Perfluorononanoic acid	25.6	24.96	25.6	26.03	97	102	66-144	4	30
Perfluorooctanesulfonamide	25.6	24.84	25.6	25.31	97	99	67-126	2	30
Perfluorooctanesulfonic acid	24.48	18.96	24.48	20.47	77	84	53-129	8	30
Perfluorooctanoic acid	25.6	22.59	25.6	23	88	90	67-139	2	30
Perfluoropentanoic acid	25.6	22.69	25.6	24.37	89	95	73-135	7	30
Perfluorotetradecanoic acid	25.6	23.88	25.6	26.16	93	102	69-141	9	30
Perfluorotridecanoic acid	25.6	23.38	25.6	23.58	91	92	66-146	1	30
Perfluoroundecanoic acid	25.6	23.55	25.6	25.18	92	98	66-140	7	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201351063801	Sample number(s): 1314141,1314143-1314147,1314149-1314151,1314153								
Mercury	0.100	0.113			113		80-115		
Batch number: 201351063802	Sample number(s): 1314155,1314159-1314162								
Mercury	0.100	0.112			112		80-115		
Batch number: 201351404902A	Sample number(s): 1314141,1314143-1314147,1314149-1314151,1314153								
Arsenic	1.00	0.931			93		80-120		
Barium	5.00	4.84			97		80-120		
Beryllium	0.400	0.425			106		80-120		
Cadmium	0.500	0.495			99		80-120		
Chromium	5.00	4.98			100		86-120		
Copper	5.00	4.83			97		85-120		
Lead	0.500	0.540			108		80-120		
Manganese	5.00	4.61			92		80-120		
Nickel	5.00	5.15			103		86-120		
Selenium	1.00	0.993			99		85-120		
Silver	5.00	4.97			99		84-120		
Zinc	50	47.16			94		85-120		
Batch number: 201351404903A	Sample number(s): 1314155,1314159-1314162								
Arsenic	1.00	0.954			95		80-120		
Barium	5.00	4.90			98		80-120		
Beryllium	0.400	0.389			97		80-120		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	0.500	0.465			93		80-120		
Chromium	5.00	4.80			96		86-120		
Copper	5.00	4.81			96		85-120		
Lead	0.500	0.532			106		80-120		
Manganese	5.00	4.73			95		80-120		
Nickel	5.00	5.28			106		86-120		
Selenium	1.00	1.00			100		85-120		
Silver	5.00	4.87			97		84-120		
Zinc	50	50.99			102		85-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201391404501	Sample number(s): 1314142,1314148,1314152,1314154								
Arsenic	0.0600	0.0648			108		80-120		
Lead	0.0300	0.0321			107		80-120		
Batch number: 201550571305	Sample number(s): 1314142,1314148,1314152,1314154								
Mercury	0.00100	0.000971			97		80-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20136102201A	Sample number(s): 1314143-1314146,1314149,1314155,1314159,1314161								
Total Cyanide (solid)	10	10.11			101		90-110		
Batch number: 20136102201B	Sample number(s): 1314150,1314162								
Total Cyanide (solid)	10	10.11			101		90-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20135042501B	Sample number(s): 1314143-1314146,1314149-1314150,1314155-1314158,1314161-1314162								
Hexavalent Chromium (SOLIDS)	5.00	4.89			98		80-120		
	%	%	%	%					
Batch number: 20136820001A	Sample number(s): 1314141,1314143-1314147,1314149-1314151,1314153,1314155-1314164								
Moisture	89.5	89.36			100		99-101		
Moisture	89.5	89.36			100		99-101		
Moisture Duplicate	89.5	89.36			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: B201381AA	Sample number(s): 1314143,1314150,1314155,1314159-1314160 UNSPK: 1314155									
Acetone	0.0402	0.138	0.401	0.155	0.386	261*	224*	41-150	4	30
Acrolein	N.D.	0.138	0.149	0.155	0.139	108	90	57-131	7	30
Acrylonitrile	N.D.	0.0921	0.0729	0.103	0.0816	79	79	66-120	11	30
Benzene	N.D.	0.0184	0.0191	0.0206	0.0213	104	103	80-120	11	30
Bromodichloromethane	N.D.	0.0184	0.0190	0.0206	0.0209	103	101	70-120	10	30
Bromoform	N.D.	0.0184	0.0169	0.0206	0.0192	92	93	51-127	13	30
Bromomethane	N.D.	0.0184	0.0182	0.0206	0.0195	99	94	45-140	7	30
2-Butanone	N.D.	0.138	0.207	0.155	0.209	150*	135*	57-128	1	30
t-Butyl alcohol	N.D.	0.184	0.237	0.206	0.219	128*	106	74-121	8	30
n-Butylbenzene	N.D.	0.0184	0.0192	0.0206	0.0195	104	94	71-121	2	30
sec-Butylbenzene	N.D.	0.0184	0.0213	0.0206	0.0241	115	117	72-120	13	30
tert-Butylbenzene	N.D.	0.0184	0.0206	0.0206	0.0246	112	119	68-120	17	30
Carbon Disulfide	N.D.	0.0184	0.0174	0.0206	0.0173	95	84	64-133	1	30
Carbon Tetrachloride	N.D.	0.0184	0.0198	0.0206	0.0219	108	106	64-134	10	30
Chlorobenzene	N.D.	0.0184	0.0192	0.0206	0.0205	104	99	80-120	6	30
Chloroethane	N.D.	0.0184	0.0172	0.0206	0.0187	94	91	43-135	8	30
Chloroform	N.D.	0.0184	0.0194	0.0206	0.0216	105	105	80-120	10	30
Chloromethane	N.D.	0.0184	0.0187	0.0206	0.0204	102	99	56-120	9	30
1,2-Dibromo-3-chloropropane	N.D.	0.0184	0.0158	0.0206	0.0209	86	101	48-134	28	30
Dibromochloromethane	N.D.	0.0184	0.0197	0.0206	0.0231	107	112	69-125	16	30
1,2-Dibromoethane	N.D.	0.0184	0.0178	0.0206	0.0194	97	94	76-120	9	30
1,2-Dichlorobenzene	N.D.	0.0184	0.0191	0.0206	0.0212	104	103	76-120	11	30
1,3-Dichlorobenzene	N.D.	0.0184	0.0189	0.0206	0.0205	103	99	75-120	8	30
1,4-Dichlorobenzene	N.D.	0.0184	0.0186	0.0206	0.0193	101	94	80-120	4	30
Dichlorodifluoromethane	N.D.	0.0184	0.0267	0.0206	0.0290	145*	141*	21-127	8	30
1,1-Dichloroethane	N.D.	0.0184	0.0188	0.0206	0.0212	102	103	79-120	12	30
1,2-Dichloroethane	N.D.	0.0184	0.0172	0.0206	0.0187	93	91	71-128	8	30
1,1-Dichloroethene	N.D.	0.0184	0.0198	0.0206	0.0217	107	105	73-129	10	30
cis-1,2-Dichloroethene	N.D.	0.0184	0.0200	0.0206	0.0214	109	104	80-123	7	30
trans-1,2-Dichloroethene	N.D.	0.0184	0.0186	0.0206	0.0191	101	93	80-125	3	30
1,2-Dichloroethene (Total)	N.D.	0.0368	0.0386	0.0412	0.0405	105	98	80-123	5	30
1,2-Dichloropropane	N.D.	0.0184	0.0192	0.0206	0.0211	104	102	80-120	10	30
cis-1,3-Dichloropropene	N.D.	0.0184	0.0175	0.0206	0.0182	95	88	66-120	4	30
trans-1,3-Dichloropropene	N.D.	0.0184	0.0170	0.0206	0.0172	92	84	68-122	2	30
Ethylbenzene	N.D.	0.0184	0.0197	0.0206	0.0210	107	102	78-120	7	30
Methyl Acetate	N.D.	0.0184	0.0150	0.0206	0.0166	81	81	67-128	10	30
Methyl Tertiary Butyl Ether	N.D.	0.0184	0.0171	0.0206	0.0201	93	98	72-120	16	30
Methylene Chloride	N.D.	0.0184	0.0186	0.0206	0.0199	101	97	76-122	7	30
n-Propylbenzene	N.D.	0.0184	0.0217	0.0206	0.0245	118	119	72-123	12	30
Styrene	N.D.	0.0184	0.0180	0.0206	0.0182	98	88	76-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.0184	0.0199	0.0206	0.0262	108	127*	69-125	27	30
Tetrachloroethene	N.D.	0.0184	0.0197	0.0206	0.0213	107	103	73-120	8	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Toluene	N.D.	0.0184	0.0193	0.0206	0.0216	105	105	80-120	11	30
1,1,1-Trichloroethane	N.D.	0.0184	0.0189	0.0206	0.0212	102	103	69-123	12	30
1,1,2-Trichloroethane	N.D.	0.0184	0.0201	0.0206	0.0236	109	115	80-120	16	30
Trichloroethene	N.D.	0.0184	0.0189	0.0206	0.0200	103	97	80-120	5	30
Trichlorofluoromethane	N.D.	0.0184	0.0224	0.0206	0.0251	122	122	55-134	11	30
1,2,4-Trimethylbenzene	N.D.	0.0184	0.0202	0.0206	0.0233	110	113	73-120	14	30
1,3,5-Trimethylbenzene	N.D.	0.0184	0.0210	0.0206	0.0242	114	117	73-120	14	30
Vinyl Chloride	N.D.	0.0184	0.0190	0.0206	0.0202	103	98	52-120	6	30
Xylene (Total)	N.D.	0.0552	0.0581	0.0619	0.0614	105	99	75-120	6	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20135SLB026	Sample number(s): 1314149-1314150,1314155,1314159-1314160,1314164 UNSPK: 1314155									
Acenaphthene	0.993	1.66	1.95	1.67	1.80	58*	48*	61-112	8	30
Acenaphthylene	0.204	1.66	1.62	1.67	1.52	85	79	60-124	7	30
Acetophenone	N.D.	1.66	1.19	1.67	1.19	72	71	48-109	0	30
Anthracene	2.38	1.66	2.85	1.67	2.44	29*	4*	67-120	15	30
Atrazine	N.D.	1.66	1.47	1.67	1.42	89	85	70-129	4	30
Benzaldehyde	N.D.	1.66	1.03	1.67	1.06	62	64	20-101	2	30
Benzidine	N.D.	8.28	0.630	8.33	1.55	8*	19	18-105	84*	30
Benzo(a)anthracene	7.12	1.66	5.34	1.67	4.24	-106 (2)	-172 (2)	68-120	23	30
Benzo(a)pyrene	5.91	1.66	5.11	1.67	4.11	-47*	-107*	68-119	22	30
Benzo(b)fluoranthene	7.17	1.66	5.66	1.67	4.87	-90 (2)	-137 (2)	67-125	15	30
Benzo(g,h,i)perylene	2.72	1.66	3.76	1.67	3.08	63*	22*	68-125	20	30
Benzo(k)fluoranthene	2.09	1.66	3.32	1.67	2.52	75	26*	66-122	28	30
1,1'-Biphenyl	0.114	1.66	1.48	1.67	1.44	83	80	59-106	3	30
Butylbenzylphthalate	N.D.	1.66	1.52	1.67	1.43	92	86	69-125	6	30
Di-n-butylphthalate	N.D.	1.66	1.55	1.67	1.49	94	90	70-126	4	30
Caprolactam	N.D.	1.66	1.47	1.67	1.39	89	84	62-119	5	30
Carbazole	1.07	1.66	2.24	1.67	1.98	70	55*	69-125	12	30
bis(2-Chloroethyl)ether	N.D.	1.66	1.09	1.67	1.10	66	66	44-104	1	30
bis(2-Chloroisopropyl)ether	N.D.	1.66	1.08	1.67	1.12	66	67	40-112	3	30
2-Chloronaphthalene	N.D.	1.66	1.50	1.67	1.47	91	88	48-123	2	30
2-Chlorophenol	N.D.	1.66	1.21	1.67	1.25	73	75	51-109	3	30
Chrysene	5.94	1.66	5.17	1.67	4.00	-46*	-116*	66-111	26	30
Dibenz(a,h)anthracene	0.719	1.66	1.99	1.67	1.82	77	66*	69-135	9	30
Dibenzofuran	0.707	1.66	1.90	1.67	1.74	72	62	62-113	9	30
1,2-Dichlorobenzene	N.D.	1.66	1.06	1.67	1.13	64	68	38-106	6	30
1,3-Dichlorobenzene	N.D.	1.66	1.03	1.67	1.07	62	64	36-103	3	30
1,4-Dichlorobenzene	N.D.	1.66	1.04	1.67	1.10	63	66	25-127	5	30
3,3'-Dichlorobenzidine	N.D.	1.66	1.17	1.67	1.06	70	64	18-114	9	30
2,4-Dichlorophenol	N.D.	1.66	1.37	1.67	1.33	83	80	57-115	3	30
Diethylphthalate	N.D.	1.66	1.42	1.67	1.38	86	83	68-116	3	30
2,4-Dimethylphenol	N.D.	1.66	1.08	1.67	1.06	65	64	47-95	1	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Dimethylphthalate	N.D.	1.66	1.34	1.67	1.24	81	74	66-113	8	30
4,6-Dinitro-2-methylphenol	N.D.	1.66	1.22	1.67	0.989	74	59	56-135	21	30
2,4-Dinitrophenol	N.D.	3.31	1.95	3.33	1.50	59	45	34-136	26	30
2,4-Dinitrotoluene	N.D.	1.66	1.45	1.67	1.35	87	81	61-121	7	30
2,6-Dinitrotoluene	N.D.	1.66	1.53	1.67	1.41	93	85	66-122	8	30
1,2-Diphenylhydrazine	N.D.	1.66	1.51	1.67	1.47	91	88	74-117	3	30
bis(2-Ethylhexyl)phthalate	N.D.	1.66	1.77	1.67	1.59	107	96	65-132	11	30
Fluoranthene	15.67	1.66	7.54	1.67	6.51	-490 (2)	-548 (2)	65-114	15	30
Fluorene	0.871	1.66	2.01	1.67	1.87	69	60*	62-110	7	30
Hexachlorobenzene	N.D.	1.66	1.48	1.67	1.44	89	86	62-124	3	30
Hexachlorobutadiene	N.D.	1.66	1.19	1.67	1.25	72	75	39-120	5	30
Hexachlorocyclopentadiene	N.D.	3.31	N.D.	3.33	N.D.	0*	0*	13-115	0	30
Hexachloroethane	N.D.	1.66	0.753	1.67	0.826	45	50	30-112	9	30
Indeno(1,2,3-cd)pyrene	2.54	1.66	3.60	1.67	2.99	64	27*	64-130	18	30
Isophorone	N.D.	1.66	1.25	1.67	1.24	75	74	51-113	0	30
2-Methylnaphthalene	0.328	1.66	1.60	1.67	1.56	77	74	52-104	3	30
2-Methylphenol	N.D.	1.66	1.23	1.67	1.24	74	75	52-116	1	30
4-Methylphenol	0.0343	1.66	1.29	1.67	1.27	76	74	52-121	1	30
Naphthalene	0.668	1.66	1.67	1.67	1.65	60	59	49-104	1	30
2-Nitroaniline	N.D.	1.66	1.81	1.67	2.10	110	126	65-132	15	30
Nitrobenzene	N.D.	1.66	1.19	1.67	1.20	72	72	41-118	0	30
N-Nitrosodimethylamine	N.D.	1.66	0.974	1.67	0.979	59	59	31-107	1	30
N-Nitroso-di-n-propylamine	N.D.	1.66	1.20	1.67	1.23	72	74	49-108	2	30
N-Nitrosodiphenylamine	N.D.	1.66	1.54	1.67	1.51	93	91	64-127	2	30
Di-n-octylphthalate	N.D.	1.66	1.59	1.67	1.54	96	92	65-139	3	30
Pentachlorophenol	N.D.	1.66	1.37	1.67	1.44	82	87	40-131	5	30
Phenanthrene	12.9	1.66	6.73	1.67	5.89	-372 (2)	-420 (2)	67-116	13	30
Phenol	N.D.	1.66	1.28	1.67	1.27	77	76	51-107	1	30
Pyrene	12.95	1.66	6.84	1.67	6.02	-368 (2)	-415 (2)	67-109	13	30
Pyridine	N.D.	1.66	0.671	1.67	0.668	40	40	10-117	0	30
1,2,4-Trichlorobenzene	N.D.	1.66	1.26	1.67	1.28	76	77	46-109	2	30
2,4,5-Trichlorophenol	N.D.	1.66	1.46	1.67	1.41	88	85	62-121	3	30
2,4,6-Trichlorophenol	N.D.	1.66	1.32	1.67	1.39	80	83	60-120	5	30
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 20135SLD026	Sample number(s): 1314149-1314150,1314155,1314159-1314160,1314162 UNSPK: 1314155									
1,4-Dioxane	N.D.	33.11	16.24	33	16.8	49	51	21-79	3	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201350020A	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162 UNSPK: 1314155									
2,4-D	N.D.	0.0828	0.130	0.0829	0.127	157*	153*	57-142	2	50

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2,4,5-T	N.D.	0.00827	0.0157	0.00828	0.0146	190*	177*	59-137	7	50
2,4,5-TP	N.D.	0.00827	0.0127	0.00828	0.0125	154*	151*	70-130	2	50
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 201350022A	Sample number(s): 1314149-1314150,1314155,1314159-1314160 UNSPK: 1314155									
PCB-1016	N.D.	165.79	113.01	165.79	108.93	68*	66*	76-121	4	50
PCB-1260	N.D.	165.93	116.88	165.93	115.25	70*	69*	79-130	1	50
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201350016A	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162 UNSPK: 1314155									
Aldrin	N.D.	0.00328	0.00568	0.00330	0.00697	173*	211*	60-117	20	50
Alpha BHC	N.D.	0.00333	0.00443	0.00334	0.00529	133*	158*	65-124	18	50
Beta BHC	N.D.	0.00328	0.00580	0.00330	0.00655	177*	198*	68-129	12	50
Gamma BHC - Lindane	N.D.	0.00328	N.D.	0.00330	N.D.	0*	0*	68-133	0	50
Alpha Chlordane	N.D.	0.00328	0.00609	0.00330	0.00592	186*	179*	73-131	3	50
4,4'-Ddd	N.D.	0.00661	0.0114	0.00664	0.0127	172*	191*	69-138	11	50
4,4'-Dde	N.D.	0.00657	0.0123	0.00660	0.0147	187*	223*	68-146	18	50
4,4'-Ddt	N.D.	0.00661	0.0111	0.00664	0.0131	168*	198*	67-135	17	50
Delta BHC	N.D.	0.00328	N.D.	0.00330	N.D.	0*	0*	45-151	0	50
Dieldrin	N.D.	0.00657	0.0101	0.00660	0.0120	154*	182*	63-126	17	50
Endosulfan I	N.D.	0.00328	0.00413	0.00330	0.00552	126*	167*	62-119	29	50
Endosulfan II	N.D.	0.00657	N.D.	0.00660	N.D.	0*	0*	65-126	0	50
Endosulfan Sulfate	N.D.	0.00657	0.00903	0.00660	0.0126	137*	191*	71-132	33	50
Endrin	N.D.	0.00657	0.0123	0.00660	0.0126	188*	191*	86-135	2	50
Heptachlor	N.D.	0.00328	0.00456	0.00330	0.00569	139*	173*	66-118	22	50
	ng/g	ng/g	ng/g	ng/g	ng/g					
Batch number: 20135005	Sample number(s): 1314143-1314146,1314149-1314150,1314155,1314159-1314160,1314162 UNSPK: 1314155									
6:2-Fluorotelomersulfonic acid	N.D.	21.55	17.2	21.74	17.94	80	83	51-144	4	30
8:2-Fluorotelomersulfonic acid	N.D.	21.76	16.86	21.96	18.09	77	82	54-152	7	30
NEtFOSAA	N.D.	22.73	18.02	22.94	19.15	79	83	51-145	6	30
NMeFOSAA	N.D.	22.73	21.74	22.94	19.73	96	86	55-152	10	30
Perfluorobutanesulfonic acid	N.D.	20.11	15.31	20.29	17.1	76	84	63-139	11	30
Perfluorobutanoic acid	N.D.	22.73	14.91	22.94	15.61	66	68	56-188	5	30
Perfluorodecanesulfonic acid	N.D.	21.89	15.1	22.09	15.46	69	70	60-142	2	30
Perfluorodecanoic acid	N.D.	22.73	16.96	22.94	17.8	75	78	65-144	5	30
Perfluorododecanoic acid	N.D.	22.73	17.34	22.94	18.76	76	82	62-150	8	30
Perfluoroheptanesulfonic acid	N.D.	21.62	15.98	21.82	16.68	74	76	67-139	4	30
Perfluoroheptanoic acid	N.D.	22.73	17.86	22.94	17.9	79	78	65-153	0	30
Perfluorohexanesulfonic acid	N.D.	21.49	14.98	21.69	15.89	70	73	59-139	6	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Perfluorohexanoic acid	N.D.	22.73	17.04	22.94	18.03	75	79	64-149	6	30
Perfluorononanoic acid	N.D.	22.73	18.16	22.94	18.38	80	80	64-151	1	30
Perfluorooctanesulfonamide	N.D.	22.73	18.16	22.94	19.34	80	84	61-133	6	30
Perfluorooctanesulfonic acid	N.D.	21.73	14.79	21.93	14.34	68	65	54-132	3	30
Perfluorooctanoic acid	N.D.	22.73	17.6	22.94	17.48	77	76	65-147	1	30
Perfluoropentanoic acid	N.D.	22.73	16.45	22.94	18.04	72	79	71-139	9	30
Perfluorotetradecanoic acid	N.D.	22.73	17.91	22.94	19.33	79	84	66-147	8	30
Perfluorotridecanoic acid	N.D.	22.73	17.17	22.94	17.38	76	76	63-152	1	30
Perfluoroundecanoic acid	N.D.	22.73	16.33	22.94	16.18	72	71	65-146	1	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 201351063802	Sample number(s): 1314155,1314159-1314162 UNSPK: 1314155									
Mercury	0.272	0.161	0.547	0.164	0.722	170*	275*	80-120	28*	20
Batch number: 201351404903A	Sample number(s): 1314155,1314159-1314162 UNSPK: 1314155									
Arsenic	9.69	1.75	14.91	1.80	19.13	297 (2)	524 (2)	75-125	25*	20
Barium	109.19	8.77	212.38	9.01	274.62	1176 (2)	1836 (2)	75-125	26*	20
Beryllium	0.487	0.702	1.36	0.721	1.50	124	141*	75-125	10	20
Cadmium	0.631	0.877	1.37	0.901	1.37	84	82	75-125	0	20
Chromium	17.31	8.77	31.02	9.01	33.27	156*	177*	75-125	7	20
Copper	55.23	8.77	122.86	9.01	163.12	771 (2)	1198 (2)	75-125	28*	20
Lead	540.24	0.877	306.99	0.901	295.84	-26591 (2)	-27129 (2)	75-125	4	20
Manganese	289.64	8.77	237.89	9.01	245.7	-590 (2)	-488 (2)	75-118	3	20
Nickel	22.1	8.77	32.61	9.01	36.95	120	165*	75-125	12	20
Selenium	0.640	1.75	2.82	1.80	3.26	124	145*	75-125	14	20
Silver	0.124	8.77	8.68	9.01	9.11	98	100	75-125	5	20
Zinc	231.36	87.72	353.9	90.09	411.21	140*	200*	75-125	15	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201391404501	Sample number(s): 1314142,1314148,1314152,1314154 UNSPK: 1314142									
Arsenic	N.D.	5.00	5.04	5.00	4.80	101	96	75-125	5	20
Lead	1.15	5.00	5.72	5.00	5.62	91	89	75-125	2	20
Batch number: 201550571305	Sample number(s): 1314142,1314148,1314152,1314154 UNSPK: 1314142									
Mercury	N.D.	0.0200	0.0177	0.0200	0.0172	88	86	80-120	3	20
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20136102201A	Sample number(s): 1314143-1314146,1314149,1314155,1314159,1314161 UNSPK: 1314155									
Total Cyanide (solid)	N.D.	4.90	4.79			98		41-145		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20135042501B	Sample number(s): 1314143-1314146,1314149-1314150,1314155-1314158,1314161-1314162 UNSPK: 1314155									
Hexavalent Chromium (SOLIDS)	N.D.	40.3	33.66			84		75-125		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 201351063802	Sample number(s): 1314155,1314159-1314162 BKG: 1314155			
Mercury	0.272	1.20	126* (1)	20
Batch number: 201351404903A	Sample number(s): 1314155,1314159-1314162 BKG: 1314155			
Arsenic	9.69	10.97	12	20
Barium	109.19	105.01	4	20
Beryllium	0.487	0.683	34*	20
Cadmium	0.631	0.371	52* (1)	20
Chromium	17.31	18.26	5	20
Copper	55.23	65.28	17	20
Lead	540.24	154.52	111*	20
Manganese	289.64	316.22	9	20
Nickel	22.1	19.93	10	20
Selenium	0.640	0.581	10 (1)	20
Silver	0.124	0.114	9 (1)	20
Zinc	231.36	283.76	20	20
	mg/l	mg/l		
Batch number: 201391404501	Sample number(s): 1314142,1314148,1314152,1314154 BKG: 1314142			
Arsenic	N.D.	N.D.	0 (1)	20
Lead	1.15	1.22	6	20
Batch number: 201550571305	Sample number(s): 1314142,1314148,1314152,1314154 BKG: 1314142			
Mercury	N.D.	N.D.	0 (1)	20
	mg/kg	mg/kg		
Batch number: 20136102201A	Sample number(s): 1314143-1314146,1314149,1314155,1314159,1314161 BKG: 1314155			
Total Cyanide (solid)	N.D.	N.D.	0 (1)	20
	mg/kg	mg/kg		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 20135042501B Hexavalent Chromium (SOLIDS)	Sample number(s): 1314143-1314146,1314149-1314150,1314155-1314158,1314161-1314162 BKG: 1314155			
	N.D.	N.D.	0 (1)	20
	%	%		
Batch number: 20136820001A	Sample number(s): 1314141,1314143-1314147,1314149-1314151,1314153,1314155-1314164 BKG: 1314155			
Moisture	6.93	7.31	5	5
Moisture	6.93	7.31	5	5
Moisture Duplicate	6.93	7.31	5	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260C
Batch number: B201361AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1314144	101	98	108	85
1314145	101	95	110	83
1314146	99	96	106	86
1314149	102	104	99	96
Blank	100	104	98	98
LCS	102	105	99	99
LCSD	101	100	98	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs 8260C
Batch number: B201381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1314143	89	88	93	73
1314150	87	85	85	82
1314155	86	86	86	80
1314159	88	87	87	82
1314160	89	87	91	77
Blank	88	92	85	84
LCS	88	88	85	85
LCSD	89	93	85	85
MS	88	87	87	82
MSD	89	87	91	77

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260C
Batch number: B201381AA

Limits:	50-141	54-135	52-141	50-131
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Analysis Name: VOCs 8260C
Batch number: N201391AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1314165	96	99	97	91
Blank	93	97	99	91
LCS	94	96	97	91
LCS D	94	99	96	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs 8260C
Batch number: R201362AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1314162	50	54	92	120
Blank	81	87	88	86
LCS	88	92	93	89
LCS D	87	91	93	90
Limits:	50-141	54-135	52-141	50-131

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20135SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1314143	72	72	81	72	84	103
1314144	85	84	96	79	101	136*
Blank	71	74	83	70	80	103
LCS	77	79	93	75	83	101
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20135SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1314149	69	70	75	69	76	88
1314150	71	71	83	64	75	89
1314155	76	74	78	72	86	99
1314159	73	69	67	71	82	96
1314160	72	70	73	71	79	93
1314164	73	69	41	69	80	95
Blank	73	74	85	70	82	104

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20135SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
LCS	77	76	96	74	83	101
MS	73	69	67	71	82	96
MSD	72	70	73	71	79	93
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

Analysis Name: 1,4-Dioxane 8270D SIM add-on
Batch number: 20135SLC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1314143	116	86	103
1314144	399*	134*	104
1314146	33	22	37
Blank	80	77	69
LCS	92	88	69
Limits:	21-120	17-112	27-107

Analysis Name: 1,4-Dioxane 8270D SIM add-on
Batch number: 20135SLD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1314149	138*	72	95
1314150	108	73	91
1314155	112	92	90
1314159	104	77	82
1314160	98	67	75
1314162	71	77	83
Blank	89	87	75
LCS	90	89	78
MS	104	77	82
MSD	98	67	75
Limits:	21-120	17-112	27-107

Analysis Name: 1,4-Dioxane 8270D SIM
Batch number: 20136WAJ026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1314166	83	76	80
Blank	94	85	93
LCS	98	93	92
LCSD	88	84	86

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 1,4-Dioxane 8270D SIM
Batch number: 20136WAJ026

Limits: 38-109 31-99 30-108

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20139SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1314145	25	22	24	19*	22*	43
1314146	64	65	81	61	73	90
1314162	58	59	85	67	68	89
1314163	69	67	52	68	81	102
Blank	68	73	93	72	81	104
LCS	73	74	102	70	80	101
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

Analysis Name: 1,4-Dioxane 8270D SIM add-on
Batch number: 20139SLD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1314145	62	39	27
Blank	102	93	88
LCS	105	99	90
Limits:	21-120	17-112	27-107

Analysis Name: NY Part 375 Pests Soil
Batch number: 201350016A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1314143	244*	344*	182*	378*
1314144	125	173*	128	175*
1314145	37	85	11*	102
1314146	77	98	121	109
1314149	148*	183*	144*	197*
1314150	134	163*	136	172*
1314155	167*	210*	168*	256*
1314159	133	179*	145*	217*
1314160	150*	201*	160*	241*
1314162	88	125	95	181*
Blank	80	96	84	98
LCS	75	89	79	92
MS	133	179*	145*	217*
MSD	150*	201*	160*	241*

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NY Part 375 Pests Soil
Batch number: 201350016A

Limits: 19-136 46-152 19-136 46-152

Analysis Name: 2,4,5-T, 2,4-D, 2,4,5-TP 8151A
Batch number: 201350020A

	2,4-DCAA-D1	2,4-DCAA-D2
1314143	127	151*
1314144	123	107
1314145	123	109
1314146	119	117
1314149	128	110
1314150	119	119
1314155	123	106
1314159	318*	107
1314160	132	118
1314162	73	62
Blank	116	116
LCS	121	124
MS	318*	107
MSD	132	118

Limits: 27-136 27-136

Analysis Name: 7 PCBs + Total Soil
Batch number: 201350022A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1314149	56	61	54	67
1314150	78	81	79	83
1314155	54	61	50*	64
1314159	68	80	63	86
1314160	64	78	55	17*
Blank	95	97	99	104
LCS	92	101	97	100
MS	68	80	63	86
MSD	64	78	55	17*

Limits: 53-140 45-143 53-140 45-143

Analysis Name: 7 PCBs + Total Soil
Batch number: 201390026A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1314143	77	125	48*	96
1314144	61	59	28*	44*

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7 PCBs + Total Soil
Batch number: 201390026A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1314145	16*	19*	15*	18*
1314146	67	68	69	67
1314162	69	75	45*	68
Blank	96	97	96	99
LCS	87	97	90	99
Limits:	53-140	45-143	53-140	45-143

Analysis Name: NY 21 PFAS Soil
Batch number: 20135005

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1314143	106	104	105	89	93	91
1314144	111	115	114	109	118	117
1314145	92	96	93	94	86	87
1314146	98	99	99	86	92	92
1314149	94	90	97	93	99	92
1314150	113	112	108	108	114	108
1314155	106	102	108	94	100	92
1314159	101	105	108	97	103	95
1314160	100	102	99	98	100	99
1314162	102	99	102	97	98	95
Blank	120*	122*	112	120	109	107
LCS	103	100	100	101	99	99
MS	101	105	108	97	103	95
MSD	100	102	99	98	100	99
Limits:	40-117	38-118	38-120	36-120	38-124	39-120

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1314143	113	98	105	106	114	127
1314144	122	116*	109	113	113	127
1314145	110	101	91	94	93	101
1314146	106	96	95	97	98	109
1314149	106	98	103	96	105	109
1314150	118	119*	107	111	107	109
1314155	124	104	104	118	105	144
1314159	113	100	107	105	98	128
1314160	108	103	103	98	98	117
1314162	119	106	108	105	100	111
Blank	124	125*	127*	129*	120*	122
LCS	100	106	99	103	103	97
MS	113	100	107	105	98	128

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Soil
Batch number: 20135005

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
MSD	108	103	103	98	98	117
Limits:	25-154	44-115	45-118	39-123	43-118	26-155
	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1314143	75	111	83	106	113	104
1314144	73	129*	86	117	128*	120
1314145	80	97	88	89	98	85
1314146	96	112	111	102	100	95
1314149	52	106	70	95	99	103
1314150	51	113	62	107	108	108
1314155	75	102	81	106	103	94
1314159	40	99	56	102	99	98
1314160	73	109	83	97	98	95
1314162	82	113	95	101	102	100
Blank	113	132*	126	114	120	115
LCS	98	104	101	98	102	96
MS	40	99	56	102	99	98
MSD	73	109	83	97	98	95
Limits:	10-152	34-124	10-156	28-126	26-125	31-127

Analysis Name: NY 21 PFAS Water
Batch number: 20139002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1314166	103	104	107	99	97	94
Blank	121	113	110	122	116	115
LCS	101	101	100	104	98	99
LCSD	100	99	101	91	98	95
Limits:	43-130	38-150	23-175	36-137	35-143	33-140
	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1314166	106	106	102	100	111	100
Blank	134	116	117	116	120	138
LCS	108	105	104	99	106	105
LCSD	103	96	97	96	97	99
Limits:	29-182	52-124	52-121	48-130	50-124	37-169

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/04/2020 19:14

Group Number: 2099431

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Water
Batch number: 20139002

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1314166	114	117	124	110	105	98
Blank	135	135*	153*	123	124	110
LCS	115	112	124	107	107	97
LCSD	108	101	116	101	95	90
Limits:	36-143	44-128	42-149	36-127	21-134	10-134

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Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45200 Group # 2099431 Sample # 1319141-16 **222** COC # **606291**

Client Information				Matrix			Analysis Requested							For Lab Use Only					
Client: <u>LANGAN, DPC</u>		Acct. #:		<input type="checkbox"/> Tissue	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface	Preservation and Filtration Codes							FSC: _____	SCR#: _____				
Project Name/ #: <u>35 Commercial Street / 170222024</u>		PWSID #:		<input type="checkbox"/> Sediment	<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	Total # of Containers	TCLP Arsenic	Total Arsenic	TOTAL LEAD & MERCURY	TCL VOLs	TCL SWGS	Pest/ Herb. / TAL NERALS	HEX/TRICHLOR. / CHLORIDE	PFAS, 1-4, Dioxane	Preservation Codes			
Project Manager: <u>GREG WYKA</u>		P.O. #:		<input type="checkbox"/> Water	<input type="checkbox"/> Other:	H=HCl										T=Thiosulfate			
Sampler: <u>REID BALKIND</u>		Quote #:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Remarks		N=HNO ₃		B=NaOH		S=H ₂ SO ₄		P=H ₃ PO ₄		F=Field Filtered O=Other			
State where samples were collected: <u>NY</u>		For Compliance:		Sample Identification		Collected		Grab		Composite		Soil <input checked="" type="checkbox"/>		Water		Other:		Total # of Containers	
				Date		Time		X				<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		TCLP Arsenic	
				<u>5/13/20</u>		<u>8:45</u>		<u>X</u>				<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>8:50</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>8:55</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>9:00</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>9:05</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>1520</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>1525</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>1530</u>								<u>6</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>1150</u>								<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>	
				<u>1155</u>								<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>	

Turnaround Time (TAT) Requested (please circle)				Relinquished by <u>[Signature]</u>		Date <u>5/14/20</u>		Time <u>1610</u>		Received by <u>[Signature]</u>		Date <u>5/13/20</u>		Time <u>1610</u>	
Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				Relinquished by <u>[Signature]</u>		Date <u>5/12/20</u>		Time <u>1840</u>		Received by <u>[Signature]</u>		Date <u>5-13-20</u>		Time <u>1800</u>	
(Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by <u>[Signature]</u>		Date <u>5-13-20</u>		Time <u>2004</u>		Received by <u>[Signature]</u>		Date <u>5/13/20</u>		Time <u>2004</u>	
Requested TAT in business days: _____				Relinquished by _____		Date _____		Time _____		Received by _____		Date _____		Time _____	
E-mail address: <u>GWYKA@LANGAN.COM</u>				Relinquished by _____		Date _____		Time _____		Received by _____		Date <u>5/13/20</u>		Time <u>22:21</u>	
<u>PLEUNG@LANGAN.COM</u>				Relinquished by _____		Date _____		Time _____		Received by <u>[Signature]</u>		Date <u>5/13/20</u>		Time <u>20:21</u>	
<u>WYKA@LANGAN.COM</u>				Relinquished by _____		Date _____		Time _____		Received by _____		Date _____		Time _____	

Data Package Options (circle if required)				EDD Required? <u>Yes</u> No				Relinquished by Commercial Carrier: _____			
Type I (EPA Level 3 Equivalent/non-CLP)		Type VI (Raw Data Only)		If yes, format: <u>EDU15</u>				UPS _____ FedEx _____ Other _____			
Type III (Reduced non-CLP)		NJ DKQP TX TRRP-13		Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No				Temperature upon receipt _____ °C			
<u>NYSDEC</u> Category A or B		MA MCP CT RCP		(If yes, indicate QC sample and submit triplicate sample volume.)							

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APP
1319141
5/13/20
3

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45208 Group # 2099431 Sample # 131411-026

**NYC
222**

COC # 606290

Client Information				Matrix			Analysis Requested								For Lab Use Only				
Client: <u>LANKAN, DC</u>		Acct. #:		<input type="checkbox"/> Tissue <input type="checkbox"/> Ground <input type="checkbox"/> Surface			Preservation and Filtration Codes								FSC: <u>259782</u>				
Project Name #: <u>305 COMMERCIAL STREET / 170221024</u>		PWSID #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable Water <input type="checkbox"/> NPDES			TOTAL ARSENIC TOTAL ARGONIC TOTAL LEAD & MERCURY TCL VOCs TCL SVOCs PEST/HERBICIDES, TAL METALS HEXACHLOROCYCLOHEXANES PHAS, 1-H Dioxane								SCR#: <u>259782</u>				
Project Manager: <u>CAROL WYKA</u>		P.O. #:		<input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Other:			Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other								Remarks				
Sampler: <u>ROD BALKIND</u>		Quote #:																	
State where samples were collected: <u>NJ</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																	
Sample Identification		Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	TCL ARSENIC	TOTAL ARGONIC	TOTAL LEAD & MERCURY	TCL VOCs	TCL SVOCs	PEST/HERBICIDES, TAL METALS	HEXACHLOROCYCLOHEXANES	PHAS, 1-H Dioxane		
Date	Time																		
<u>LB20-3-5</u>	<u>5/13/20</u>	<u>1200</u>		X					6			X	X	X	X	X	X		
<u>LB20-14-16</u>		<u>1205</u>							6			X	X	X	X	X	X		
<u>LB23-10-12</u>		<u>1045</u>										X	X	X	X	X	X		
<u>LB24-10-12</u>		<u>1445</u>							1			X	X	X	X	X	X		
<u>SOTB05-051320</u>									1			X							
<u>SOFB05-051328</u>	<u>5/13/20</u>	<u>1330</u>							3							X	X		

Turnaround Time (TAT) Requested (please circle) Standard <u>Standard</u> Rush		Relinquished by <u>[Signature]</u>		Date	Time	Received by <u>[Signature]</u>	Date	Time
(Rush TAT is subject to laboratory approval and surcharge.)				<u>5/13/20</u>	<u>16:10</u>		<u>5/13/20</u>	<u>16:00</u>
Requested TAT in business days:		Relinquished by <u>[Signature]</u>		Date	Time	Received by <u>[Signature]</u>	Date	Time
<u>5</u>				<u>5/13/20</u>	<u>18:00</u>		<u>5-13-20</u>	<u>18:00</u>
E-mail address: <u>GWYKA@LANCASTER.COM</u>		Relinquished by <u>[Signature]</u>		Date	Time	Received by <u>[Signature]</u>	Date	Time
<u>LEUNG@LANCASTER.COM</u>				<u>5-13-20</u>	<u>20:22</u>	<u>20:22:00</u>	<u>5/13/20</u>	
<u>WYKA@LANCASTER.COM</u>		Relinquished by <u>[Signature]</u>		Date	Time	Received by <u>[Signature]</u>	Date	Time
							<u>5/13/20</u>	<u>20:24</u>
Data Package Options (circle if required)		Relinquished by <u>[Signature]</u>		Date	Time	Received by <u>[Signature]</u>	Date	Time
Type I (EPA Level 3 Equivalent/non-CLP)	Type VI (Raw Data Only)						<u>5/13/20</u>	<u>20:21</u>
Type III (Reduced non-CLP)	NJ DKQP TX TRRP-13			EDD Required? <u>Yes</u> No		Relinquished by Commercial Carrier:		
<u>NYSDEC Category A or B</u>	MA MCP CT RCP			If yes, format: <u>EQUS</u>		UPS <u>UPS</u> FedEx <u>FedEx</u> Other <u>Other</u>		
				Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No		Temperature upon receipt _____ °C		
				(If yes, indicate QC sample and submit triplicate sample volume.)				

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APR 16 2020
5/13/20
(3)



Group Number(s):

Client: Langan

2099431

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/13/2020
 Number of Packages: 3 Number of Projects: 1
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	Yes		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ann-Marie Phillips

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	Water	46730061WS	-0.2	IR	Wet	Y	Loose	N
1	Soil	46730061WS	0.6	IR	Wet	Y	Loose	N
2	Soil	46730061WS	2.4	IR	Wet	Y	Loose	N
3	Soil	46730061WS	0.3	IR	Wet	Y	Loose	N

Extra Sample Details

Sample ID on Label	Number of Extra Containers	Date on Label	Comments
SOMS01_051320	6	5/13/2020 12:00	
SOMSD01_051320	6	5/13/2020 12:00	

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
LB19_0.5-2.5	5/13/2020 13:20	

General Comments: Samples not frozen.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: May 22, 2020 09:06

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2099867
SDG: CMS09
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description

LB28_14.5-15.5 Grab Soil
TB06_051620 Water

Sample Collection

Date/Time

05/16/2020 15:00
05/16/2020

ELLE#

1316563
1316564

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2099867

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260C, GC/MS Volatiles****Sample #s: 1316564**

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

SW-846 8270D, GC/MS Semivolatiles**Sample #s: 1316563**

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 20139SLA026 (Sample number(s): 1316563)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol

Sample Description: LB28_14.5-15.5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1316563
ELLE Group #: 2099867
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS09-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/kg	mg/kg	mg/kg	
		SW-846 8260C				
11995	Acetone	67-64-1	0.042	0.006	0.021	0.83
11995	Acrolein	107-02-8	N.D.	0.005	0.10	0.83
11995	Acrylonitrile	107-13-1	N.D.	0.0008	0.021	0.83
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.83
11995	Bromodichloromethane	75-27-4	N.D.	0.0004	0.005	0.83
11995	Bromoform	75-25-2	N.D.	0.005	0.010	0.83
11995	Bromomethane	74-83-9	N.D.	0.0007	0.005	0.83
11995	2-Butanone	78-93-3	0.004 J	0.002	0.010	0.83
11995	t-Butyl alcohol	75-65-0	N.D.	0.015	0.10	0.83
11995	n-Butylbenzene	104-51-8	N.D.	0.003	0.008	0.83
11995	sec-Butylbenzene	135-98-8	N.D.	0.002	0.005	0.83
11995	tert-Butylbenzene	98-06-6	N.D.	0.0008	0.005	0.83
11995	Carbon Disulfide	75-15-0	N.D.	0.0006	0.005	0.83
11995	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.005	0.83
11995	Chlorobenzene	108-90-7	N.D.	0.0005	0.005	0.83
11995	Chloroethane	75-00-3	N.D.	0.001	0.005	0.83
11995	Chloroform	67-66-3	N.D.	0.0006	0.005	0.83
11995	Chloromethane	74-87-3	N.D.	0.0006	0.005	0.83
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0005	0.005	0.83
11995	Dibromochloromethane	124-48-1	N.D.	0.0005	0.005	0.83
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.005	0.83
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.005	0.83
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.005	0.83
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.0004	0.005	0.83
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.0006	0.005	0.83
11995	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.005	0.83
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.005	0.83
11995	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.005	0.83
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.005	0.83
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.005	0.83
11995	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.001	0.010	0.83
11995	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.005	0.83
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0004	0.005	0.83
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.005	0.83
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.005	0.83
11995	Methyl Acetate	79-20-9	N.D.	0.001	0.005	0.83
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.83
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.83
11995	n-Propylbenzene	103-65-1	N.D.	0.0004	0.005	0.83
11995	Styrene	100-42-5	N.D.	0.0004	0.005	0.83
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0004	0.005	0.83

*=This limit was used in the evaluation of the final result

Sample Description: LB28_14.5-15.5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1316563
ELLE Group #: 2099867
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS09-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/kg	mg/kg	
11995	Tetrachloroethene	127-18-4	N.D.	0.0005	0.005	0.83
11995	Toluene	108-88-3	N.D.	0.0006	0.005	0.83
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.0006	0.005	0.83
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.005	0.83
11995	Trichloroethene	79-01-6	N.D.	0.0005	0.005	0.83
11995	Trichlorofluoromethane	75-69-4	N.D.	0.0007	0.005	0.83
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.0005	0.005	0.83
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0005	0.005	0.83
11995	Vinyl Chloride	75-01-4	N.D.	0.0006	0.005	0.83
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.010	0.83
GC/MS Semivolatiles			SW-846 8270D	mg/kg	mg/kg	
10726	Acenaphthene	83-32-9	0.31	0.004	0.021	1
10726	Acenaphthylene	208-96-8	0.086	0.004	0.021	1
10726	Acetophenone	98-86-2	N.D.	0.021	0.062	1
10726	Anthracene	120-12-7	0.55	0.004	0.021	1
10726	Atrazine	1912-24-9	N.D.	0.25	0.53	1
10726	Benzaldehyde	100-52-7	N.D.	0.082	0.21	1
10726	Benzidine	92-87-5	N.D.	0.41	1.2	1
10726	Benzo(a)anthracene	56-55-3	1.3	0.008	0.021	1
10726	Benzo(a)pyrene	50-32-8	1.3	0.004	0.021	1
10726	Benzo(b)fluoranthene	205-99-2	1.5	0.004	0.021	1
10726	Benzo(g,h,i)perylene	191-24-2	0.79	0.004	0.021	1
10726	Benzo(k)fluoranthene	207-08-9	0.65	0.004	0.021	1
10726	1,1'-Biphenyl	92-52-4	0.036 J	0.021	0.045	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.082	0.21	1
10726	Di-n-butylphthalate	84-74-2	N.D.	0.082	0.21	1
10726	Caprolactam	105-60-2	N.D.	0.041	0.21	1
10726	Carbazole	86-74-8	0.22	0.021	0.045	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.029	0.062	1
10726	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.025	0.053	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.	0.008	0.041	1
10726	2-Chlorophenol	95-57-8	N.D.	0.021	0.045	1
10726	Chrysene	218-01-9	1.1	0.004	0.021	1
10726	Dibenz(a,h)anthracene	53-70-3	0.22	0.008	0.021	1
10726	Dibenzofuran	132-64-9	0.21	0.021	0.045	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	0.021	0.062	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	0.021	0.045	1

*=This limit was used in the evaluation of the final result

Sample Description: LB28_14.5-15.5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1316563
ELLE Group #: 2099867
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS09-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
SW-846 8270D						
10726	1,4-Dichlorobenzene	106-46-7	N.D.	0.021	0.045	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.12	0.41	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.025	0.053	1
10726	Diethylphthalate	84-66-2	N.D.	0.082	0.21	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	0.037	0.082	1
10726	Dimethylphthalate	131-11-3	N.D.	0.082	0.21	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.29	0.62	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	0.41	1.2	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	0.082	0.21	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	0.029	0.062	1
10726	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.029	0.062	1
10726	1,2-Diphenylhydrazine	122-66-7	N.D.	0.025	0.053	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.082	0.21	1
10726	Fluoranthene	206-44-0	2.6	0.004	0.021	1
10726	Fluorene	86-73-7	0.27	0.004	0.021	1
10726	Hexachlorobenzene	118-74-1	N.D.	0.008	0.021	1
10726	Hexachlorobutadiene	87-68-3	N.D.	0.045	0.094	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	0.25	0.62	1
10726	Hexachloroethane	67-72-1	N.D.	0.041	0.21	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	0.67	0.004	0.021	1
10726	Isophorone	78-59-1	N.D.	0.021	0.045	1
10726	2-Methylnaphthalene	91-57-6	0.096	0.004	0.041	1
10726	2-Methylphenol	95-48-7	N.D.	0.021	0.082	1
10726	4-Methylphenol	106-44-5	0.028 J	0.021	0.062	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.19	0.008	0.021	1
10726	2-Nitroaniline	88-74-4	N.D.	0.021	0.062	1
10726	Nitrobenzene	98-95-3	N.D.	0.033	0.082	1
10726	N-Nitrosodimethylamine	62-75-9	N.D.	0.082	0.21	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.029	0.062	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	0.021	0.045	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.	0.082	0.21	1
10726	Pentachlorophenol	87-86-5	N.D.	0.082	0.21	1
10726	Phenanthrene	85-01-8	2.5	0.004	0.021	1
10726	Phenol	108-95-2	0.023 J	0.021	0.045	1

*=This limit was used in the evaluation of the final result

Sample Description: LB28_14.5-15.5 Grab Soil
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: SW 1316563
ELLE Group #: 2099867
Matrix: Soil

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS09-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			mg/kg	mg/kg	mg/kg	
10726	Pyrene	129-00-0	2.2	0.004	0.021	1
10726	Pyridine	110-86-1	N.D.	0.082	0.21	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.029	0.062	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	0.037	0.082	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	0.033	0.070	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Wet Chemistry		SM 2540 G-2011	%	%	%	
		%Moisture Calc				
00111	Moisture ¹	n.a.	18.9	0.50	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs 8260C	SW-846 8260C	1	B201402AA	05/20/2020 01:33	Laura Green	0.83
06176	GC/MS - LL Water Prep	SW-846 5035A	1	202013756807	05/16/2020 21:31	Rebecca Williams	1
06176	GC/MS - LL Water Prep	SW-846 5035A	2	202013756807	05/16/2020 21:31	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	202013956810	05/16/2020 15:00	Client Supplied	1
10726	NYSDEC/NJDEP SVOCs 8270D Soil	SW-846 8270D	1	20139SLA026	05/19/2020 15:01	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	20139SLA026	05/19/2020 00:42	Laura Duquette	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	20140820002B	05/20/2020 09:54	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: TB06_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1316564
ELLE Group #: 2099867
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020
SDG#: CMS09-02TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: TB06_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: WW 1316564
ELLE Group #: 2099867
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020
SDG#: CMS09-02TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	N201412AA	05/20/2020 23:11	Laura Green	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	N201412AA	05/20/2020 23:10	Laura Green	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Batch number: B201402AA	Sample number(s): 1316563		
Acetone	N.D.	0.006	0.020
Acrolein	N.D.	0.005	0.10
Acrylonitrile	N.D.	0.0008	0.020
Benzene	N.D.	0.0005	0.005
Bromodichloromethane	N.D.	0.0004	0.005
Bromoform	N.D.	0.005	0.010
Bromomethane	N.D.	0.0007	0.005
2-Butanone	N.D.	0.002	0.010
t-Butyl alcohol	N.D.	0.015	0.10
n-Butylbenzene	N.D.	0.003	0.008
sec-Butylbenzene	N.D.	0.002	0.005
tert-Butylbenzene	N.D.	0.0008	0.005
Carbon Disulfide	N.D.	0.0006	0.005
Carbon Tetrachloride	N.D.	0.0005	0.005
Chlorobenzene	N.D.	0.0005	0.005
Chloroethane	N.D.	0.001	0.005
Chloroform	N.D.	0.0006	0.005
Chloromethane	N.D.	0.0006	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.0005	0.005
Dibromochloromethane	N.D.	0.0005	0.005
1,2-Dibromoethane	N.D.	0.0004	0.005
1,2-Dichlorobenzene	N.D.	0.0005	0.005
1,3-Dichlorobenzene	N.D.	0.0005	0.005
1,4-Dichlorobenzene	N.D.	0.0004	0.005
Dichlorodifluoromethane	N.D.	0.0006	0.005
1,1-Dichloroethane	N.D.	0.0005	0.005
1,2-Dichloroethane	N.D.	0.0006	0.005
1,1-Dichloroethene	N.D.	0.0005	0.005
cis-1,2-Dichloroethene	N.D.	0.0005	0.005
trans-1,2-Dichloroethene	N.D.	0.0005	0.005
1,2-Dichloroethene (Total)	N.D.	0.001	0.010
1,2-Dichloropropane	N.D.	0.0005	0.005
cis-1,3-Dichloropropene	N.D.	0.0004	0.005
trans-1,3-Dichloropropene	N.D.	0.0005	0.005
Ethylbenzene	N.D.	0.0004	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005
Methylene Chloride	N.D.	0.002	0.005
n-Propylbenzene	N.D.	0.0004	0.005

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Styrene	N.D.	0.0004	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0004	0.005
Tetrachloroethene	N.D.	0.0005	0.005
Toluene	N.D.	0.0006	0.005
1,1,1-Trichloroethane	N.D.	0.0006	0.005
1,1,2-Trichloroethane	N.D.	0.0005	0.005
Trichloroethene	N.D.	0.0005	0.005
Trichlorofluoromethane	N.D.	0.0007	0.005
1,2,4-Trimethylbenzene	N.D.	0.0005	0.005
1,3,5-Trimethylbenzene	N.D.	0.0005	0.005
Vinyl Chloride	N.D.	0.0006	0.005
Xylene (Total)	N.D.	0.001	0.010
	mg/l	mg/l	mg/l
Batch number: N201412AA	Sample number(s): 1316564		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,1,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
	mg/kg	mg/kg	mg/kg
Batch number: 20139SLA026	Sample number(s): 1316563		
Acenaphthene	N.D.	0.003	0.017
Acenaphthylene	N.D.	0.003	0.017
Acetophenone	N.D.	0.017	0.050
Anthracene	N.D.	0.003	0.017
Atrazine	N.D.	0.20	0.43
Benzaldehyde	N.D.	0.067	0.17
Benzidine	N.D.	0.33	1.0
Benzo(a)anthracene	N.D.	0.007	0.017
Benzo(a)pyrene	N.D.	0.003	0.017
Benzo(b)fluoranthene	N.D.	0.003	0.017
Benzo(g,h,i)perylene	N.D.	0.003	0.017
Benzo(k)fluoranthene	N.D.	0.003	0.017
1,1'-Biphenyl	N.D.	0.017	0.037
Butylbenzylphthalate	N.D.	0.067	0.17
Di-n-butylphthalate	N.D.	0.067	0.17
Caprolactam	N.D.	0.033	0.17
Carbazole	N.D.	0.017	0.037
bis(2-Chloroethyl)ether	N.D.	0.023	0.050
bis(2-Chloroisopropyl)ether	N.D.	0.020	0.043
2-Chloronaphthalene	N.D.	0.007	0.033
2-Chlorophenol	N.D.	0.017	0.037

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Chrysene	N.D.	0.003	0.017
Dibenz(a,h)anthracene	N.D.	0.007	0.017
Dibenzofuran	N.D.	0.017	0.037
1,2-Dichlorobenzene	N.D.	0.017	0.050
1,3-Dichlorobenzene	N.D.	0.017	0.037
1,4-Dichlorobenzene	N.D.	0.017	0.037
3,3'-Dichlorobenzidine	N.D.	0.10	0.33
2,4-Dichlorophenol	N.D.	0.020	0.043
Diethylphthalate	N.D.	0.067	0.17
2,4-Dimethylphenol	N.D.	0.030	0.067
Dimethylphthalate	N.D.	0.067	0.17
4,6-Dinitro-2-methylphenol	N.D.	0.23	0.50
2,4-Dinitrophenol	N.D.	0.33	1.0
2,4-Dinitrotoluene	N.D.	0.067	0.17
2,6-Dinitrotoluene	N.D.	0.023	0.050
2,4_2,6-Dinitrotoluenes	N.D.	0.023	0.050
1,2-Diphenylhydrazine	N.D.	0.020	0.043
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17
Fluoranthene	N.D.	0.003	0.017
Fluorene	N.D.	0.003	0.017
Hexachlorobenzene	N.D.	0.007	0.017
Hexachlorobutadiene	N.D.	0.037	0.077
Hexachlorocyclopentadiene	N.D.	0.20	0.50
Hexachloroethane	N.D.	0.033	0.17
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017
Isophorone	N.D.	0.017	0.037
2-Methylnaphthalene	N.D.	0.003	0.033
2-Methylphenol	N.D.	0.017	0.067
4-Methylphenol	N.D.	0.017	0.050
Naphthalene	N.D.	0.007	0.017
2-Nitroaniline	N.D.	0.017	0.050
Nitrobenzene	N.D.	0.027	0.067
N-Nitrosodimethylamine	N.D.	0.067	0.17
N-Nitroso-di-n-propylamine	N.D.	0.023	0.050
N-Nitrosodiphenylamine	N.D.	0.017	0.037
Di-n-octylphthalate	N.D.	0.067	0.17
Pentachlorophenol	N.D.	0.067	0.17
Phenanthrene	N.D.	0.003	0.017
Phenol	N.D.	0.017	0.037
Pyrene	N.D.	0.003	0.017
Pyridine	N.D.	0.067	0.17
1,2,4-Trichlorobenzene	N.D.	0.023	0.050
2,4,5-Trichlorophenol	N.D.	0.030	0.067
2,4,6-Trichlorophenol	N.D.	0.027	0.057

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B201402AA	Sample number(s): 1316563								
Acetone	0.150	0.192	0.150	0.199	128	133	41-150	4	30
Acrolein	0.150	0.138	0.150	0.147	92	98	57-131	7	30
Acrylonitrile	0.100	0.0961	0.100	0.0891	96	89	66-120	8	30
Benzene	0.0200	0.0192	0.0200	0.0193	96	97	80-120	1	30
Bromodichloromethane	0.0200	0.0200	0.0200	0.0198	100	99	70-120	1	30
Bromoform	0.0200	0.0197	0.0200	0.0185	98	93	51-127	6	30
Bromomethane	0.0200	0.0170	0.0200	0.0171	85	85	45-140	1	30
2-Butanone	0.150	0.155	0.150	0.158	103	106	57-128	2	30
t-Butyl alcohol	0.200	0.204	0.200	0.203	102	101	74-121	1	30
n-Butylbenzene	0.0200	0.0184	0.0200	0.0183	92	91	71-121	0	30
sec-Butylbenzene	0.0200	0.0192	0.0200	0.0192	96	96	72-120	0	30
tert-Butylbenzene	0.0200	0.0189	0.0200	0.0185	94	93	68-120	2	30
Carbon Disulfide	0.0200	0.0192	0.0200	0.0191	96	96	64-133	1	30
Carbon Tetrachloride	0.0200	0.0187	0.0200	0.0187	94	94	64-134	0	30
Chlorobenzene	0.0200	0.0198	0.0200	0.0196	99	98	80-120	1	30
Chloroethane	0.0200	0.0159	0.0200	0.0158	80	79	43-135	1	30
Chloroform	0.0200	0.0197	0.0200	0.0195	99	98	80-120	1	30
Chloromethane	0.0200	0.0177	0.0200	0.0175	89	88	56-120	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0194	0.0200	0.0182	97	91	48-134	6	30
Dibromochloromethane	0.0200	0.0214	0.0200	0.0205	107	103	69-125	4	30
1,2-Dibromoethane	0.0200	0.0205	0.0200	0.0195	103	98	76-120	5	30
1,2-Dichlorobenzene	0.0200	0.0199	0.0200	0.0196	100	98	76-120	2	30
1,3-Dichlorobenzene	0.0200	0.0195	0.0200	0.0195	97	97	75-120	0	30
1,4-Dichlorobenzene	0.0200	0.0198	0.0200	0.0195	99	98	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0217	0.0200	0.0213	109	107	21-127	2	30
1,1-Dichloroethane	0.0200	0.0192	0.0200	0.0190	96	95	79-120	1	30
1,2-Dichloroethane	0.0200	0.0191	0.0200	0.0188	95	94	71-128	2	30
1,1-Dichloroethene	0.0200	0.0196	0.0200	0.0197	98	98	73-129	1	30
cis-1,2-Dichloroethene	0.0200	0.0211	0.0200	0.0211	106	105	80-125	0	30
trans-1,2-Dichloroethene	0.0200	0.0194	0.0200	0.0195	97	97	80-126	0	30
1,2-Dichloroethene (Total)	0.0400	0.0405	0.0400	0.0405	101	101	80-126	0	30
1,2-Dichloropropane	0.0200	0.0198	0.0200	0.0197	99	98	80-120	1	30
cis-1,3-Dichloropropene	0.0200	0.0196	0.0200	0.0195	98	97	66-120	1	30
trans-1,3-Dichloropropene	0.0200	0.0196	0.0200	0.0192	98	96	68-122	2	30
Ethylbenzene	0.0200	0.0194	0.0200	0.0192	97	96	78-120	1	30
Methyl Acetate	0.0200	0.0183	0.0200	0.0169	92	85	67-128	8	30
Methyl Tertiary Butyl Ether	0.0200	0.0197	0.0200	0.0192	98	96	72-120	2	30
Methylene Chloride	0.0200	0.0197	0.0200	0.0196	99	98	76-122	1	30
n-Propylbenzene	0.0200	0.0197	0.0200	0.0198	98	99	72-123	1	30
Styrene	0.0200	0.0191	0.0200	0.0188	95	94	76-120	1	30
1,1,2,2-Tetrachloroethane	0.0200	0.0215	0.0200	0.0204	107	102	69-125	5	30

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Tetrachloroethene	0.0200	0.0197	0.0200	0.0194	98	97	73-120	2	30
Toluene	0.0200	0.0190	0.0200	0.0189	95	95	80-120	1	30
1,1,1-Trichloroethane	0.0200	0.0182	0.0200	0.0185	91	92	69-123	1	30
1,1,2-Trichloroethane	0.0200	0.0219	0.0200	0.0210	110	105	80-120	4	30
Trichloroethene	0.0200	0.0192	0.0200	0.0190	96	95	80-120	1	30
Trichlorofluoromethane	0.0200	0.0185	0.0200	0.0187	93	93	55-134	1	30
1,2,4-Trimethylbenzene	0.0200	0.0193	0.0200	0.0192	97	96	73-120	1	30
1,3,5-Trimethylbenzene	0.0200	0.0194	0.0200	0.0194	97	97	73-120	0	30
Vinyl Chloride	0.0200	0.0168	0.0200	0.0167	84	84	52-120	0	30
Xylene (Total)	0.0600	0.0587	0.0600	0.0577	98	96	75-120	2	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: N201412AA	Sample number(s): 1316564								
Acetone	0.150	0.164	0.150	0.171	109	114	54-157	4	30
Acrolein	0.150	0.149	0.150	0.148	100	99	47-136	1	30
Acrylonitrile	0.100	0.0945	0.100	0.0957	95	96	60-129	1	30
Benzene	0.0200	0.0201	0.0200	0.0202	101	101	80-120	0	30
Bromodichloromethane	0.0200	0.0189	0.0200	0.0203	94	102	71-120	7	30
Bromoform	0.0200	0.0192	0.0200	0.0192	96	96	51-120	0	30
Bromomethane	0.0200	0.0180	0.0200	0.0181	90	91	53-128	1	30
2-Butanone	0.150	0.134	0.150	0.131	90	87	59-135	3	30
t-Butyl alcohol	0.200	0.235	0.200	0.235	117	118	60-130	0	30
n-Butylbenzene	0.0200	0.0202	0.0200	0.0201	101	100	76-120	0	30
sec-Butylbenzene	0.0200	0.0207	0.0200	0.0210	104	105	77-120	1	30
tert-Butylbenzene	0.0200	0.0207	0.0200	0.0202	104	101	78-120	2	30
Carbon Disulfide	0.0200	0.0203	0.0200	0.0210	101	105	65-128	3	30
Carbon Tetrachloride	0.0200	0.0187	0.0200	0.0189	93	94	64-134	1	30
Chlorobenzene	0.0200	0.0203	0.0200	0.0207	101	104	80-120	2	30
Chloroethane	0.0200	0.0181	0.0200	0.0183	90	92	55-123	1	30
Chloroform	0.0200	0.0184	0.0200	0.0194	92	97	80-120	5	30
Chloromethane	0.0200	0.0176	0.0200	0.0177	88	89	56-121	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0189	0.0200	0.0184	95	92	47-131	3	30
Dibromochloromethane	0.0200	0.0202	0.0200	0.0201	101	100	71-120	1	30
1,2-Dibromoethane	0.0200	0.0197	0.0200	0.0199	99	99	77-120	1	30
1,2-Dichlorobenzene	0.0200	0.0208	0.0200	0.0204	104	102	80-120	2	30
1,3-Dichlorobenzene	0.0200	0.0206	0.0200	0.0204	103	102	80-120	1	30
1,4-Dichlorobenzene	0.0200	0.0204	0.0200	0.0208	102	104	80-120	2	30
Dichlorodifluoromethane	0.0200	0.0146	0.0200	0.0161	73	80	41-127	9	30
1,1-Dichloroethane	0.0200	0.0191	0.0200	0.0200	96	100	80-120	5	30
1,2-Dichloroethane	0.0200	0.0175	0.0200	0.0181	88	90	73-124	3	30
1,1-Dichloroethene	0.0200	0.0193	0.0200	0.0199	96	100	80-131	4	30
cis-1,2-Dichloroethene	0.0200	0.0198	0.0200	0.0209	99	104	80-125	5	30
trans-1,2-Dichloroethene	0.0200	0.0189	0.0200	0.0200	95	100	80-126	5	30
1,2-Dichloroethene (Total)	0.0400	0.0388	0.0400	0.0409	97	102	80-125	5	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloropropane	0.0200	0.0216	0.0200	0.0227	108	114	80-120	5	30
cis-1,3-Dichloropropene	0.0200	0.0195	0.0200	0.0210	97	105	75-120	7	30
trans-1,3-Dichloropropene	0.0200	0.0187	0.0200	0.0184	93	92	67-120	2	30
Ethylbenzene	0.0200	0.0201	0.0200	0.0205	100	102	80-120	2	30
Methyl Acetate	0.0200	0.0194	0.0200	0.0198	97	99	54-136	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0176	0.0200	0.0176	88	88	69-122	0	30
Methylene Chloride	0.0200	0.0186	0.0200	0.0196	93	98	80-120	5	30
n-Propylbenzene	0.0200	0.0212	0.0200	0.0212	106	106	79-121	0	30
Styrene	0.0200	0.0203	0.0200	0.0203	102	101	80-120	0	30
1,1,2,2-Tetrachloroethane	0.0200	0.0208	0.0200	0.0209	104	104	72-120	0	30
Tetrachloroethene	0.0200	0.0199	0.0200	0.0222	100	111	80-120	11	30
Toluene	0.0200	0.0204	0.0200	0.0207	102	104	80-120	2	30
1,1,1-Trichloroethane	0.0200	0.0180	0.0200	0.0183	90	92	67-126	2	30
1,1,2-Trichloroethane	0.0200	0.0218	0.0200	0.0204	109	102	80-120	6	30
Trichloroethene	0.0200	0.0192	0.0200	0.0207	96	103	80-120	7	30
Trichlorofluoromethane	0.0200	0.0181	0.0200	0.0188	91	94	55-135	3	30
1,2,4-Trimethylbenzene	0.0200	0.0197	0.0200	0.0198	99	99	75-120	0	30
1,3,5-Trimethylbenzene	0.0200	0.0203	0.0200	0.0202	102	101	75-120	0	30
Vinyl Chloride	0.0200	0.0174	0.0200	0.0180	87	90	56-120	3	30
Xylene (Total)	0.0600	0.0612	0.0600	0.0625	102	104	80-120	2	30
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 20139SLA026	Sample number(s): 1316563								
Acenaphthene	1.67	1.38			83		61-112		
Acenaphthylene	1.67	1.40			84		60-124		
Acetophenone	1.67	1.19			72		48-109		
Anthracene	1.67	1.55			93		67-120		
Atrazine	1.67	1.63			98		70-129		
Benzaldehyde	1.67	0.749			45		20-101		
Benzidine	8.33	4.61			55		18-105		
Benzo(a)anthracene	1.67	1.65			99		68-120		
Benzo(a)pyrene	1.67	1.70			102		68-119		
Benzo(b)fluoranthene	1.67	1.63			98		67-125		
Benzo(g,h,i)perylene	1.67	1.69			101		68-125		
Benzo(k)fluoranthene	1.67	1.73			104		66-122		
1,1'-Biphenyl	1.67	1.36			82		59-106		
Butylbenzylphthalate	1.67	1.59			95		69-125		
Di-n-butylphthalate	1.67	1.60			96		70-126		
Caprolactam	1.67	1.43			86		62-119		
Carbazole	1.67	1.62			97		69-125		
bis(2-Chloroethyl)ether	1.67	1.10			66		44-104		
bis(2-Chloroisopropyl)ether	1.67	0.977			59		40-112		
2-Chloronaphthalene	1.67	1.20			72		48-123		
2-Chlorophenol	1.67	1.32			79		51-109		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chrysene	1.67	1.46			87		66-111		
Dibenz(a,h)anthracene	1.67	1.78			107		69-135		
Dibenzofuran	1.67	1.44			86		62-113		
1,2-Dichlorobenzene	1.67	1.19			72		38-106		
1,3-Dichlorobenzene	1.67	1.15			69		36-103		
1,4-Dichlorobenzene	1.67	1.17			70		25-127		
3,3'-Dichlorobenzidine	1.67	1.28			77		18-114		
2,4-Dichlorophenol	1.67	1.49			89		57-115		
Diethylphthalate	1.67	1.53			92		68-116		
2,4-Dimethylphenol	1.67	1.16			70		47-95		
Dimethylphthalate	1.67	1.46			88		66-113		
4,6-Dinitro-2-methylphenol	1.67	2.29			137*		56-135		
2,4-Dinitrophenol	3.33	5.56			167*		34-136		
2,4-Dinitrotoluene	1.67	1.66			100		61-121		
2,6-Dinitrotoluene	1.67	1.66			99		66-122		
1,2-Diphenylhydrazine	1.67	1.42			85		74-117		
bis(2-Ethylhexyl)phthalate	1.67	1.65			99		65-132		
Fluoranthene	1.67	1.58			95		65-114		
Fluorene	1.67	1.48			89		62-110		
Hexachlorobenzene	1.67	1.51			91		62-124		
Hexachlorobutadiene	1.67	1.32			79		39-120		
Hexachlorocyclopentadiene	3.33	1.99			60		13-115		
Hexachloroethane	1.67	1.16			69		30-112		
Indeno(1,2,3-cd)pyrene	1.67	1.74			104		64-130		
Isophorone	1.67	1.22			73		51-113		
2-Methylnaphthalene	1.67	1.31			79		52-104		
2-Methylphenol	1.67	1.27			76		52-116		
4-Methylphenol	1.67	1.32			79		52-121		
Naphthalene	1.67	1.25			75		49-104		
2-Nitroaniline	1.67	1.68			101		65-132		
Nitrobenzene	1.67	1.19			71		41-118		
N-Nitrosodimethylamine	1.67	1.03			62		31-107		
N-Nitroso-di-n-propylamine	1.67	1.18			71		49-108		
N-Nitrosodiphenylamine	1.67	1.56			94		64-127		
Di-n-octylphthalate	1.67	1.77			106		65-139		
Pentachlorophenol	1.67	2.03			122		40-131		
Phenanthrene	1.67	1.56			94		67-116		
Phenol	1.67	1.27			76		57-107		
Pyrene	1.67	1.45			87		67-109		
Pyridine	1.67	0.746			45		10-117		
1,2,4-Trichlorobenzene	1.67	1.33			80		46-109		
2,4,5-Trichlorophenol	1.67	1.66			99		62-121		
2,4,6-Trichlorophenol	1.67	1.71			103		60-120		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/22/2020 09:06

Group Number: 2099867

LCS/LCSD (continued)

Analysis Name	LCS Spike Added %	LCS Conc %	LCSD Spike Added %	LCSD Conc %	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20140820002B	Sample number(s): 1316563								
Moisture	89.5	89.39			100		99-101		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260C
Batch number: B201402AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1316563	89	89	84	82
Blank	88	94	84	84
LCS	89	93	85	85
LCSD	89	89	85	85
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs 8260C
Batch number: N201412AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1316564	94	99	96	89
Blank	94	94	98	90
LCS	90	99	98	91
LCSD	93	95	99	92
Limits:	80-120	80-120	80-120	80-120

Analysis Name: NYSDEC/NJDEP SVOCs 8270D Soil
Batch number: 20139SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1316563	60	61	32	59	70	79
Blank	68	73	93	72	81	104
LCS	73	74	102	70	80	101
Limits:	21-112	18-115	10-136	23-115	34-117	35-135

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45208 Group # 2099867 Sample # 1316563-64 P. 1 of 1

COC # **606772**

Client Information				Matrix				Analysis Requested							For Lab Use Only			
Client: <u>LANBAN, DPC</u>		Acct. #:		<input type="checkbox"/> Tissue <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Other:				Preservation and Filtration Codes (Grid with handwritten 'VOLs' and 'SNDGS' in columns)							FSC: _____			
Project Name/#: <u>35 COMMERCIAL STREET, BROOKLYN, NY</u>		Project #: <u>170229024</u>													SCR#: _____			
Project Manager: <u>GREG WYKA / WOO KIM</u>		P.O. #:													Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other			
Sampler: <u>LUKE MCCARTNEY</u>		Quote #:													Remarks			
State where samples were collected: <u>NYS</u>		For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>																
Sample Identification			Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	Analysis Requested							Remarks
			Date	Time							Sediment	NPDES	Other:	Total # of Containers				
<u>LB28-14.5-15.5</u>			<u>5/16/20</u>	<u>1500</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<u>5</u>	(Handwritten: VOLs, SNDGS, TB)							
<u>TRO6-051620</u>			<u>5/16/20</u>	<u>-</u>				<u>TB</u>										
Turnaround Time (TAT) Requested (please circle) Standard <input checked="" type="radio"/> Rush <input type="radio"/> (Rush TAT is subject to laboratory approval and surcharge.)													Relinquished by: <u>[Signature]</u> Date: <u>5/16/20</u> Time: <u>1625</u> Received by: <u>[Signature]</u> Date: <u>16MAY20</u> Time: <u>1625</u>					
Requested TAT in business days: _____													Relinquished by: <u>[Signature]</u> Date: <u>16MAY20</u> Time: <u>1930</u> Received by: _____ Date: _____ Time: _____					
E-mail address: <u>GWYKA@LANBAN.COM, WKIM@LANBAN.COM</u>													Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____					
Data Package Options (circle if required) Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) NJ DKQP TX TRRP-13 NYSDEC Category A or B MA MCP CT RCP													Relinquished by: <u>[Signature]</u> Date: <u>5/16/20</u> Time: <u>1930</u> Received by: _____ Date: _____ Time: _____					
EDD Required? Yes <input checked="" type="radio"/> No <input type="radio"/> If yes, format: <u>RAW</u>													Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____					
Site-Specific QC (MS/MSD/Dup)? Yes <input type="checkbox"/> No <input type="checkbox"/> (If yes, indicate QC sample and submit triplicate sample volume.)													Temperature upon receipt <u>-0.26.0</u> °C					



Client: Lanagn, DPC

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/16/2020
 Number of Packages: 7 Number of Projects: 4
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples
									Collected Same
									Day as Receipt?
1	Water	46730061WS	20.6	IR	Wet	Y	Bagged	Y	Y
2	Water	46730061WS	6.0	IR	Wet	Y	Bagged	N	N
3	Water	46730061WS	12.1	IR	Wet	Y	Bagged	Y	Y
4	Water	46730061WS	4.1	IR	Wet	Y	Bagged	N	N
5	Water	46730061WS	8.2	IR	Wet	Y	Bagged	Y	Y
6	Soil	46730061WS	-0.2	IR	Wet	Y	Bagged	N	N
7	Soil	46730061WS	4.2	IR	Wet	Y	Bagged	N	N



Client: Lanagn, DPC

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/16/2020
 Number of Packages: 7 Number of Projects: 4
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples	
									Collected Same	Day as Receipt?
1	Water	46730061WS	20.6	IR	Wet	Y	Bagged	Y	Y	Y
2	Water	46730061WS	6.0	IR	Wet	Y	Bagged	N	N	N
3	Water	46730061WS	12.1	IR	Wet	Y	Bagged	Y	Y	Y
4	Water	46730061WS	4.1	IR	Wet	Y	Bagged	N	N	N
5	Water	46730061WS	8.2	IR	Wet	Y	Bagged	Y	Y	Y
6	Soil	46730061WS	-0.2	IR	Wet	Y	Bagged	N	N	N
7	Soil	46730061WS	4.2	IR	Wet	Y	Bagged	N	N	N

General Comments: Samples not frozen.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: May 27, 2020 08:01

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2099869
SDG: CMS11
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MW13_051620 Groundwater	05/16/2020 09:50	1316581
GWMS01_051620 Groundwater	05/16/2020 09:50	1316582
GWMSD01_051620 Groundwater	05/16/2020 09:50	1316583
MW13_051620 Duplicate Groundwater	05/16/2020 09:50	1316584
MW13_051620 Filtered Groundwater	05/16/2020 09:50	1316585
GWMS01_051620 Filtered Groundwater	05/16/2020 09:50	1316586
GWMSD01_051620 Filtered Groundwater	05/16/2020 09:50	1316587
MW13_051620 Duplicate Filtered Groundwater	05/16/2020 09:50	1316588
MW13N_051620 Groundwater	05/16/2020 13:40	1316589
MW13N_051620 Filtered Groundwater	05/16/2020 13:40	1316590
MW22_051620 Groundwater	05/16/2020 15:00	1316591
MW22_051620 Filtered Groundwater	05/16/2020 15:00	1316592
GWFB01_051620 Water	05/16/2020 15:45	1316593
GWFB01_051620 Filtered Water	05/16/2020 15:45	1316594
GWTB01_051620 Water	05/16/2020	1316595

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2099869

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Sample #: 1316594

The holding time was not met for dissolved sample filtration. The filtration time for dissolved metals is to be within 15 minutes from collection. Since the filtration occurred after receipt in the laboratory, the 15 minute criteria was exceeded. This sample was not collected per applicable Clean Water Act (40CFR136) or SW-846 regulations.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1316593, 1316595

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 1316581

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: acetone.

Batch #: 5201422AA (Sample number(s): 1316581-1316583, 1316589, 1316591 UNSPK: 1316581)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Vinyl Chloride

SW-846 8081B, Pesticides

Batch #: 201430006A (Sample number(s): 1316581-1316583, 1316589, 1316591, 1316593 UNSPK: 1316581)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1316581

SW-846 8151A, Herbicides

Sample #s: 1316582, 1316583

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Sample #s: 1316581, 1316589

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 201400007A (Sample number(s): 1316581-1316583, 1316589, 1316591, 1316593 UNSPK: 1316581)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

EPA 537 Version 1.1 Modified, LC/MS/MS Miscellaneous

Sample #s: 1316581, 1316582, 1316583, 1316591

Reporting limits were raised due to interference from the sample matrix.

SW-846 6020B Rev.2, July 2014, Metals

Batch #: 201391404703A (Sample number(s): 1316581-1316584 UNSPK: 1316581 BKG: 1316581)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Lead, Manganese

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Barium

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Lead

Batch #: 201391404704A (Sample number(s): 1316585-1316593 UNSPK: 1316585 BKG: 1316585)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Barium

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Manganese

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Lead

SW-846 6020B Rev.2, July 2014, Metals Dissolved

Batch #: 201391404704A (Sample number(s): 1316585-1316593 UNSPK: 1316585 BKG: 1316585)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Barium

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Manganese

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Lead

SW-846 7196A, Wet Chemistry

Batch #: 20137027601A (Sample number(s): 1316581-1316584, 1316589, 1316591, 1316593 UNSPK:
1316581 BKG: 1316581)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Hexavalent Chromium

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	0.008 J	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.003	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: acetone.

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles						
		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	0.0006	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.0001	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.010	1
14242	Anthracene	120-12-7	N.D.	0.0001	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.010	1
14242	Benzidine	92-87-5	N.D.	0.020	0.060	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.011	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.0001	0.0005	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.008	0.021	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.014	0.030	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.011	1
14242	Fluoranthene	206-44-0	N.D.	0.0001	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.011	1
14242	Hexachloroethane	67-72-1	N.D.	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0001	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	0.0007	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005	0.011	1
14242	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
14242	Phenanthrene	85-01-8	N.D.	0.0001	0.0005	1
14242	Phenol	108-95-2	N.D.	0.0005	0.002	1
14242	Pyrene	129-00-0	N.D.	0.0001	0.0005	1
14242	Pyridine	110-86-1	N.D.	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005	0.002	1
GC/MS Semivolatiles SW-846 8270D SIM						
14244	1,4-Dioxane	123-91-1	0.1 J	0.1	0.3	1
Herbicides SW-846 8151A						
10407	2,4-D	94-75-7	N.D. D1	0.00024	0.00058	1
10407	2,4,5-T	93-76-5	N.D. D2	0.000063	0.00014	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.0000096	0.000048	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A						
10591	PCB-1016	12674-11-2	N.D. D1	0.00010	0.00052	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00010	0.00052	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00021	0.00052	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00010	0.00052	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00010	0.00052	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00010	0.00052	1
10591	PCB-1260	11096-82-5	N.D. D2	0.00016	0.00052	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00010	0.00052	1
Pesticides SW-846 8081B						
10589	Aldrin	309-00-2	N.D. D1	0.0000021	0.000010	1
10589	Alpha BHC	319-84-6	N.D. D2	0.0000031	0.000010	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000036	0.000010	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0000021	0.000010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000031	0.000010	1
10589	4,4'-Ddd	72-54-8	N.D. D2	0.0000052	0.000021	1
10589	4,4'-Dde	72-55-9	N.D. D2	0.0000052	0.000021	1
10589	4,4'-Ddt	50-29-3	N.D. D1	0.0000054	0.000021	1
10589	Delta BHC	319-86-8	N.D. D2	0.0000036	0.000010	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Dieldrin	60-57-1	N.D. D2	0.0000055	0.000021	1
10589	Endosulfan I	959-98-8	N.D. D2	0.0000045	0.000010	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000016	0.000042	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000061	0.000021	1
10589	Endrin	72-20-8	N.D. D2	0.0000085	0.000031	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000021	0.000010	1
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	20	49	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	9.8	30	1
14473	NETFOSAA ¹	2991-50-6	N.D.	4.9	30	1
NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	5.9	20	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	4.9	20	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	20	49	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	4.9	20	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	4.9	20	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	4.9	20	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	4.9	20	1
14473	Perfluoroheptanoic acid ¹	375-85-9	8.8 J	4.9	20	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	4.9	20	1
14473	Perfluorohexanoic acid ¹	307-24-4	11 J	4.9	20	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	4.9	20	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	4.9	20	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	4.9	20	1
14473	Perfluorooctanoic acid ¹	335-67-1	52	4.9	20	1
14473	Perfluoropentanoic acid ¹	2706-90-3	12 J	4.9	20	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	4.9	20	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	4.9	20	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	4.9	20	1

Reporting limits were raised due to interference from the sample matrix.

Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D. K2	0.0050	0.0100	1
Metals		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0030	0.00068	0.0020	1
06026	Barium	7440-39-3	0.325	0.00075	0.0020	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0021	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0057	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0215	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.352	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0018	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.00033 J	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.0444	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry			SW-846 9012B	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for SVOCs by SW-846 8270D.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201422AA	05/21/2020 21:59	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201422AA	05/21/2020 21:58	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 13:23	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139WAC026	05/20/2020 14:48	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20139WAC026	05/18/2020 18:10	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201400007A	05/21/2020 19:23	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201390007A	05/20/2020 09:30	Richard A Shober	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/26/2020 12:55	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201390007A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201390006A	05/18/2020 18:10	Patrick Thimes	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316581
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11120	Pesticide Waters Update IV Ext	SW-846 3510C	2	201430006A	05/22/2020 20:15	Osvaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201400007A	05/19/2020 20:15	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20138002	05/19/2020 08:28	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20138002	05/17/2020 15:30	Eric Hockley	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404403	05/18/2020 17:13	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:08	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:31	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:08	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:08	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571301	05/19/2020 08:05	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404403	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404703	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571301	05/18/2020 07:40	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20141117101A	05/21/2020 20:33	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20141117101A	05/20/2020 17:00	Barbara A Washington	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	0.18	0.0007	0.020	1
11997	Acrolein	107-02-8	0.14	0.002	0.10	1
11997	Acrylonitrile	107-13-1	0.095	0.0003	0.020	1
11997	Benzene	71-43-2	0.021	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	0.020	0.0002	0.001	1
11997	Bromoform	75-25-2	0.018	0.001	0.004	1
11997	Bromomethane	74-83-9	0.022	0.0003	0.001	1
11997	2-Butanone	78-93-3	0.14	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	0.19	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	0.022	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	0.022	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	0.022	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	0.018	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	0.021	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	0.022	0.0002	0.001	1
11997	Chloroethane	75-00-3	0.022	0.0002	0.001	1
11997	Chloroform	67-66-3	0.021	0.0002	0.001	1
11997	Chloromethane	74-87-3	0.022	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	0.020	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	0.020	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	0.021	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	0.022	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	0.022	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	0.022	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	0.022	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	0.021	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	0.021	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	0.021	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	0.022	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	0.022	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	0.044	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	0.021	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	0.020	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	0.019	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	0.022	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	0.019	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.022	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	0.021	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	0.023	0.0002	0.005	1
11997	Styrene	100-42-5	0.022	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	0.022	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	0.023	0.0002	0.001	1
11997	Toluene	108-88-3	0.022	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	0.021	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	0.022	0.0002	0.001	1
11997	Trichloroethene	79-01-6	0.022	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	0.025	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	0.022	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	0.022	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	0.024	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	0.068	0.001	0.006	1
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	0.044	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	0.042	0.0001	0.0005	1
14242	Acetophenone	98-86-2	0.043	0.004	0.010	1
14242	Anthracene	120-12-7	0.046	0.0001	0.0005	1
14242	Atrazine	1912-24-9	0.046	0.002	0.005	1
14242	Benzaldehyde	100-52-7	0.044	0.003	0.010	1
14242	Benzidine	92-87-5	0.11	0.021	0.062	1
14242	Benzo(a)anthracene	56-55-3	0.051	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	0.048	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	0.049	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	0.040	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	0.047	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	0.042	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	0.048	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	0.047	0.002	0.005	1
14242	Caprolactam	105-60-2	0.014	0.005	0.011	1
14242	Carbazole	86-74-8	0.048	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	0.039	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	0.039	0.0005	0.002	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14242	2-Chloronaphthalene	91-58-7	0.045	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	0.040	0.0005	0.002	1
14242	Chrysene	218-01-9	0.046	0.0001	0.0005	1
14242	Dibenz(a,h)anthracene	53-70-3	0.043	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	0.045	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	0.037	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	0.035	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
			mg/l	mg/l	mg/l	
14242	1,4-Dichlorobenzene	106-46-7	0.036	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	0.026	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	0.046	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	0.050	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	0.039	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	0.046	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	0.048	0.008	0.022	1
14242	2,4-Dinitrophenol	51-28-5	0.089	0.015	0.031	1
14242	2,4-Dinitrotoluene	121-14-2	0.050	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	0.049	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	0.099	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	0.047	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	0.047	0.005	0.011	1
14242	Fluoranthene	206-44-0	0.048	0.0001	0.0005	1
14242	Fluorene	86-73-7	0.047	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	0.046	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	0.043	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	0.049	0.005	0.011	1
14242	Hexachloroethane	67-72-1	0.035	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	0.041	0.0001	0.0005	1
14242	Isophorone	78-59-1	0.045	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	0.042	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	0.042	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	0.043	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	0.041	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	0.049	0.002	0.007	1
14242	Nitrobenzene	98-95-3	0.046	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	0.026	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	0.044	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	0.047	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14242	Di-n-octylphthalate	117-84-0	0.047	0.005	0.011	1
14242	Pentachlorophenol	87-86-5	0.051	0.001	0.005	1
14242	Phenanthrene	85-01-8	0.046	0.0001	0.0005	1
14242	Phenol	108-95-2	0.030	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D mg/l mg/l mg/l						
14242	Pyrene	129-00-0	0.045	0.0001	0.0005	1
14242	Pyridine	110-86-1	0.021	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	0.041	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	0.050	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	0.048	0.0005	0.002	1
GC/MS Semivolatiles SW-846 8270D SIM ug/l ug/l ug/l						
14244	1,4-Dioxane	123-91-1	0.6	0.1	0.3	1
Herbicides SW-846 8151A mg/l mg/l mg/l						
10407	2,4-D	94-75-7	0.0038 D1	0.00024	0.00058	1
10407	2,4,5-T	93-76-5	0.00045 D1	0.000063	0.00014	1
10407	2,4,5-TP	93-72-1	0.00039 D1	0.0000097	0.000048	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
PCBs SW-846 8082A mg/l mg/l mg/l						
10591	PCB-1016	12674-11-2	0.0046 D2	0.00010	0.00050	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00010	0.00050	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00020	0.00050	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00010	0.00050	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00010	0.00050	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00010	0.00050	1
10591	PCB-1260	11096-82-5	0.0045 D2	0.00015	0.00050	1
10591	Total PCBs ¹	1336-36-3	0.0090	0.00010	0.00050	1
Pesticides SW-846 8081B mg/l mg/l mg/l						
10589	Aldrin	309-00-2	0.000063 D1	0.0000020	0.000010	1
10589	Alpha BHC	319-84-6	0.000092 D2	0.0000030	0.000010	1
10589	Beta BHC	319-85-7	0.000093 D1	0.0000034	0.000010	1
10589	Gamma BHC - Lindane	58-89-9	0.000089 D2	0.0000020	0.000010	1
10589	Alpha Chlordane	5103-71-9	0.000082 D1	0.0000030	0.000010	1
10589	4,4'-Ddd	72-54-8	0.00016 D2	0.0000050	0.000020	1
10589	4,4'-Dde	72-55-9	0.00015 D1	0.0000050	0.000020	1
10589	4,4'-Ddt	50-29-3	0.00021 D2	0.0000052	0.000020	1
10589	Delta BHC	319-86-8	0.000087 D2	0.0000034	0.000010	1
10589	Dieldrin	60-57-1	0.00017 D2	0.0000053	0.000020	1
10589	Endosulfan I	959-98-8	0.000087 D1	0.0000043	0.000010	1
10589	Endosulfan II	33213-65-9	0.00018 D1	0.000015	0.000040	1
10589	Endosulfan Sulfate	1031-07-8	0.00019 D1	0.0000058	0.000020	1
10589	Endrin	72-20-8	0.00017 D2	0.0000082	0.000030	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides						
	SW-846 8081B		mg/l	mg/l	mg/l	
10589	Heptachlor	76-44-8	0.000065 D2	0.0000020	0.000010	1
LC/MS/MS Miscellaneous						
	EPA 537 Version 1.1 Modified		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	230	20	50	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	230	9.9	30	1
14473	NEtFOSAA ¹	2991-50-6	250	5.0	30	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	270	6.0	20	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	200	5.0	20	1
14473	Perfluorobutanoic acid ¹	375-22-4	220	20	50	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	210	5.0	20	1
14473	Perfluorodecanoic acid ¹	335-76-2	250	5.0	20	1
14473	Perfluorododecanoic acid ¹	307-55-1	240	5.0	20	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	210	5.0	20	1
14473	Perfluoroheptanoic acid ¹	375-85-9	250	5.0	20	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	210	5.0	20	1
14473	Perfluorohexanoic acid ¹	307-24-4	250	5.0	20	1
14473	Perfluorononanoic acid ¹	375-95-1	250	5.0	20	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	240	5.0	20	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	200	5.0	20	1
14473	Perfluorooctanoic acid ¹	335-67-1	280	5.0	20	1
14473	Perfluoropentanoic acid ¹	2706-90-3	240	5.0	20	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	250	5.0	20	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	240	5.0	20	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	250	5.0	20	1

Reporting limits were raised due to interference from the sample matrix.

Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	0.0201	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014						
06025	Arsenic	7440-38-2	0.0132	0.00068	0.0020	1
06026	Barium	7440-39-3	0.346	0.00075	0.0020	1
06027	Beryllium	7440-41-7	0.0039	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0051	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0491	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	0.049	0.010	0.030	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0556	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0318	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.427	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0525	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0108	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.554	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00094	0.000050	0.00020	1
Wet Chemistry			SW-846 9012B	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	0.22	0.0050	0.010	1
			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for SVOCs by SW-846 8270D.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201422AA	05/21/2020 22:20	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201422AA	05/21/2020 22:19	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 13:52	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139WAC026	05/20/2020 15:16	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20139WAC026	05/18/2020 18:10	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201400007A	05/21/2020 19:56	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201390007A	05/20/2020 09:40	Richard A Shober	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/26/2020 13:28	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201390007A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201390006A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	2	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201400007A	05/19/2020 20:15	Karen L Beyer	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316582
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20138002	05/19/2020 08:37	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20138002	05/17/2020 15:30	Eric Hockley	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404403	05/18/2020 23:14	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:14	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:36	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:14	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:14	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571301	05/19/2020 08:09	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404403	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404703	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571301	05/18/2020 07:40	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20141117101A	05/21/2020 20:34	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20141117101A	05/20/2020 17:00	Barbara A Washington	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	0.17	0.0007	0.020	1
11997	Acrolein	107-02-8	0.13	0.002	0.10	1
11997	Acrylonitrile	107-13-1	0.094	0.0003	0.020	1
11997	Benzene	71-43-2	0.021	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	0.020	0.0002	0.001	1
11997	Bromoform	75-25-2	0.018	0.001	0.004	1
11997	Bromomethane	74-83-9	0.022	0.0003	0.001	1
11997	2-Butanone	78-93-3	0.14	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	0.20	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	0.023	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	0.022	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	0.022	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	0.018	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	0.021	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	0.022	0.0002	0.001	1
11997	Chloroethane	75-00-3	0.022	0.0002	0.001	1
11997	Chloroform	67-66-3	0.021	0.0002	0.001	1
11997	Chloromethane	74-87-3	0.022	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	0.020	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	0.020	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	0.021	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	0.022	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	0.022	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	0.022	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	0.021	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	0.021	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	0.020	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	0.021	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	0.022	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	0.021	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	0.043	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	0.021	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	0.019	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	0.019	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	0.022	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	0.019	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.022	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	0.021	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	0.023	0.0002	0.005	1
11997	Styrene	100-42-5	0.022	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	0.021	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	0.023	0.0002	0.001	1
11997	Toluene	108-88-3	0.022	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	0.021	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	0.022	0.0002	0.001	1
11997	Trichloroethene	79-01-6	0.021	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	0.024	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	0.022	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	0.022	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	0.024	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	0.067	0.001	0.006	1
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	0.044	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	0.043	0.0001	0.0005	1
14242	Acetophenone	98-86-2	0.044	0.004	0.010	1
14242	Anthracene	120-12-7	0.047	0.0001	0.0005	1
14242	Atrazine	1912-24-9	0.048	0.002	0.005	1
14242	Benzaldehyde	100-52-7	0.044	0.003	0.010	1
14242	Benzidine	92-87-5	0.10	0.021	0.062	1
14242	Benzo(a)anthracene	56-55-3	0.051	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	0.047	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	0.048	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	0.041	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	0.049	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	0.042	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	0.047	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	0.047	0.002	0.005	1
14242	Caprolactam	105-60-2	0.015	0.005	0.011	1
14242	Carbazole	86-74-8	0.049	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	0.039	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	0.040	0.0005	0.002	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14242	2-Chloronaphthalene	91-58-7	0.045	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	0.039	0.0005	0.002	1
14242	Chrysene	218-01-9	0.047	0.0001	0.0005	1
14242	Dibenz(a,h)anthracene	53-70-3	0.045	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	0.045	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	0.038	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	0.037	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	1,4-Dichlorobenzene	106-46-7	0.037	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	0.028	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	0.045	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	0.047	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	0.039	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	0.041	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	0.049	0.008	0.022	1
14242	2,4-Dinitrophenol	51-28-5	0.085	0.014	0.031	1
14242	2,4-Dinitrotoluene	121-14-2	0.048	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	0.047	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	0.095	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	0.049	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	0.048	0.005	0.011	1
14242	Fluoranthene	206-44-0	0.049	0.0001	0.0005	1
14242	Fluorene	86-73-7	0.046	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	0.049	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	0.045	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	0.049	0.005	0.011	1
14242	Hexachloroethane	67-72-1	0.037	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	0.043	0.0001	0.0005	1
14242	Isophorone	78-59-1	0.046	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	0.044	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	0.040	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	0.039	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	0.043	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	0.049	0.002	0.007	1
14242	Nitrobenzene	98-95-3	0.046	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	0.027	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	0.046	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	0.048	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14242	Di-n-octylphthalate	117-84-0	0.047	0.005	0.011	1
14242	Pentachlorophenol	87-86-5	0.052	0.001	0.005	1
14242	Phenanthrene	85-01-8	0.047	0.0001	0.0005	1
14242	Phenol	108-95-2	0.025	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D mg/l mg/l mg/l						
14242	Pyrene	129-00-0	0.046	0.0001	0.0005	1
14242	Pyridine	110-86-1	0.020	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	0.042	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	0.049	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	0.045	0.0005	0.002	1
GC/MS Semivolatiles SW-846 8270D SIM ug/l ug/l ug/l						
14244	1,4-Dioxane	123-91-1	0.6	0.1	0.3	1
Herbicides SW-846 8151A mg/l mg/l mg/l						
10407	2,4-D	94-75-7	0.0041 D2	0.00024	0.00058	1
10407	2,4,5-T	93-76-5	0.00049 D1	0.000063	0.00014	1
10407	2,4,5-TP	93-72-1	0.00042 D1	0.0000096	0.000048	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
PCBs SW-846 8082A mg/l mg/l mg/l						
10591	PCB-1016	12674-11-2	0.0048 D2	0.00010	0.00051	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00010	0.00051	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00020	0.00051	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00010	0.00051	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00010	0.00051	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00010	0.00051	1
10591	PCB-1260	11096-82-5	0.0047 D2	0.00015	0.00051	1
10591	Total PCBs ¹	1336-36-3	0.0095	0.00010	0.00051	1
Pesticides SW-846 8081B mg/l mg/l mg/l						
10589	Aldrin	309-00-2	0.000075 D1	0.0000021	0.000010	1
10589	Alpha BHC	319-84-6	0.000099 D2	0.0000031	0.000010	1
10589	Beta BHC	319-85-7	0.00010 D1	0.0000035	0.000010	1
10589	Gamma BHC - Lindane	58-89-9	0.000099 D2	0.0000021	0.000010	1
10589	Alpha Chlordane	5103-71-9	0.000095 D1	0.0000031	0.000010	1
10589	4,4'-Ddd	72-54-8	0.00018 D2	0.0000052	0.000021	1
10589	4,4'-Dde	72-55-9	0.00019 D1	0.0000052	0.000021	1
10589	4,4'-Ddt	50-29-3	0.00024 D2	0.0000054	0.000021	1
10589	Delta BHC	319-86-8	0.000098 D2	0.0000035	0.000010	1
10589	Dieldrin	60-57-1	0.00018 D2	0.0000055	0.000021	1
10589	Endosulfan I	959-98-8	0.000096 D1	0.0000044	0.000010	1
10589	Endosulfan II	33213-65-9	0.00021 D1	0.000015	0.000041	1
10589	Endosulfan Sulfate	1031-07-8	0.00022 D1	0.0000060	0.000021	1
10589	Endrin	72-20-8	0.00019 D2	0.0000084	0.000031	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides						
	SW-846 8081B		mg/l	mg/l	mg/l	
10589	Heptachlor	76-44-8	0.000079 D2	0.0000021	0.000010	1
LC/MS/MS Miscellaneous						
	EPA 537 Version 1.1 Modified		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	230	20	50	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	230	9.9	30	1
14473	NEtFOSAA ¹	2991-50-6	240	5.0	30	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	280	5.9	20	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	210	5.0	20	1
14473	Perfluorobutanoic acid ¹	375-22-4	220	20	50	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	210	5.0	20	1
14473	Perfluorodecanoic acid ¹	335-76-2	240	5.0	20	1
14473	Perfluorododecanoic acid ¹	307-55-1	240	5.0	20	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	210	5.0	20	1
14473	Perfluoroheptanoic acid ¹	375-85-9	250	5.0	20	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	220	5.0	20	1
14473	Perfluorohexanoic acid ¹	307-24-4	240	5.0	20	1
14473	Perfluorononanoic acid ¹	375-95-1	240	5.0	20	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	230	5.0	20	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	200	5.0	20	1
14473	Perfluorooctanoic acid ¹	335-67-1	280	5.0	20	1
14473	Perfluoropentanoic acid ¹	2706-90-3	240	5.0	20	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	250	5.0	20	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	230	5.0	20	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	250	5.0	20	1

Reporting limits were raised due to interference from the sample matrix.

Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	0.0200	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014						
06025	Arsenic	7440-38-2	0.0140	0.00068	0.0020	1
06026	Barium	7440-39-3	0.350	0.00075	0.0020	1
06027	Beryllium	7440-41-7	0.0039	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0053	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0509	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	0.051	0.010	0.030	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0572	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0393	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.430	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0542	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0109	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.583	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00094	0.000050	0.00020	1
Wet Chemistry			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for SVOCs by SW-846 8270D.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201422AA	05/21/2020 22:41	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201422AA	05/21/2020 22:40	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 14:21	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139WAC026	05/20/2020 15:45	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20139WAC026	05/18/2020 18:10	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201400007A	05/21/2020 20:29	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201390007A	05/20/2020 09:51	Richard A Shoiber	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/26/2020 13:52	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201390007A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201390006A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	2	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201400007A	05/19/2020 20:15	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20138002	05/19/2020 08:46	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20138002	05/17/2020 15:30	Eric Hockley	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316583
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404403	05/18/2020 23:17	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:18	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:38	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:18	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:18	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571301	05/19/2020 08:11	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404403	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404703	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571301	05/18/2020 07:40	Annamaria Kuhns	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Duplicate Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316584
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01DUP

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals						
SW-846 6010D Rev.4, July 2014						
07066	Silver	7440-22-4	N.D. K2	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014						
06025	Arsenic	7440-38-2	0.0028	0.00068	0.0020	1
06026	Barium	7440-39-3	0.319	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0020 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0057	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0215	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.340	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0020	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.00034 J	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.0424	0.0062	0.0100	1
SW-846 7470A						
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry						
SW-846 9012B						
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
SW-846 7196A						
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404403	05/18/2020 17:19	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Duplicate Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316584
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-01DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:12	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/18/2020 19:35	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:12	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404703A	05/19/2020 19:12	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571301	05/19/2020 08:07	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404403	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404703	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571301	05/18/2020 07:40	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20141117101A	05/21/2020 20:36	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20141117101A	05/20/2020 17:00	Barbara A Washington	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316585
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0018 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.283	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00066 J	0.00033	0.0020	1
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	0.00015 J	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.310	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0012	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.0115	0.0062	0.0100	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 16:55	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 19:59	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316585
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:05	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 19:59	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 19:59	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:10	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316586
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07066	Silver	7440-22-4	0.0208	0.0050	0.0100	1
			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0119	0.00068	0.0020	1
06026	Barium	7440-39-3	0.370	0.00075	0.0020	1
06027	Beryllium	7440-41-7	0.0040	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0054	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0470	0.00033	0.0020	1
06033	Copper	7440-50-8	0.0485	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0052	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.328	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0505	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0106	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.529	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00091	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:05	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:04	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMS01_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316586
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:10	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:04	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:04	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:14	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316587
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved			mg/l	mg/l	mg/l	
SW-846 6010D Rev.4, July 2014						
07066	Silver	7440-22-4	0.0209	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014			mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0115	0.00068	0.0020	1
06026	Barium	7440-39-3	0.412	0.00075	0.0020	1
06027	Beryllium	7440-41-7	0.0039	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0052	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0470	0.00033	0.0020	1
06033	Copper	7440-50-8	0.0480	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0052	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.298	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0516	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0110	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.547	0.0062	0.0100	1
SW-846 7470A			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	0.00087	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:08	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:06	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: GWMSD01_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316587
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:12	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:06	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:06	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:16	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Duplicate Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316588
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02DUP

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0016 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.280	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00059 J	0.00033	0.0020	1
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	0.00012 J	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.302	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0011	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.0111	0.0062	0.0100	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:01	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:02	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13_051620 Duplicate Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316588
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 09:50
SDG#: CMS11-02DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:08	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:02	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:02	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:12	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.0001	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.010	1
14242	Anthracene	120-12-7	N.D.	0.0001	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.010	1
14242	Benzidine	92-87-5	N.D.	0.020	0.061	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.011	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.008	0.021	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.014	0.031	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.011	1
14242	Fluoranthene	206-44-0	N.D.	0.0001	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.011	1
14242	Hexachloroethane	67-72-1	N.D.	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0001	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	N.D.	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005	0.011	1
14242	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
14242	Phenanthrene	85-01-8	N.D.	0.0001	0.0005	1
14242	Phenol	108-95-2	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	Pyrene	129-00-0	N.D.	0.0001 mg/l	0.0005 mg/l	1
14242	Pyridine	110-86-1	N.D.	0.002 mg/l	0.005 mg/l	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005 mg/l	0.002 mg/l	1
GC/MS Semivolatiles SW-846 8270D SIM						
14244	1,4-Dioxane	123-91-1	N.D.	0.1 ug/l	0.3 ug/l	1
Herbicides SW-846 8151A						
10407	2,4-D	94-75-7	N.D. D2	0.00024 mg/l	0.00059 mg/l	1
10407	2,4,5-T	93-76-5	N.D. D1	0.000064 mg/l	0.00015 mg/l	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.0000098 mg/l	0.000049 mg/l	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A						
10591	PCB-1016	12674-11-2	N.D. D1	0.00010 mg/l	0.00052 mg/l	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00010 mg/l	0.00052 mg/l	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00021 mg/l	0.00052 mg/l	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00010 mg/l	0.00052 mg/l	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00010 mg/l	0.00052 mg/l	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00010 mg/l	0.00052 mg/l	1
10591	PCB-1260	11096-82-5	0.0015 D2	0.00015 mg/l	0.00052 mg/l	1
10591	Total PCBs ¹	1336-36-3	0.0015	0.00010 mg/l	0.00052 mg/l	1
Pesticides SW-846 8081B						
10589	Aldrin	309-00-2	N.D. D1	0.0000022 mg/l	0.000011 mg/l	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0000033 mg/l	0.000011 mg/l	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000038 mg/l	0.000011 mg/l	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0000022 mg/l	0.000011 mg/l	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000033 mg/l	0.000011 mg/l	1
10589	4,4'-Ddd	72-54-8	N.D. D2	0.0000055 mg/l	0.000022 mg/l	1
10589	4,4'-Dde	72-55-9	N.D. D1	0.0000055 mg/l	0.000022 mg/l	1
10589	4,4'-Ddt	50-29-3	N.D. D2	0.0000058 mg/l	0.000022 mg/l	1
10589	Delta BHC	319-86-8	N.D. D2	0.0000038 mg/l	0.000011 mg/l	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000059 mg/l	0.000022 mg/l	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0000048 mg/l	0.000011 mg/l	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000017 mg/l	0.000044 mg/l	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000064 mg/l	0.000022 mg/l	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides						
		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Endrin	72-20-8	N.D. D2	0.0000090	0.000033	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000022	0.000011	1
LC/MS/MS Miscellaneous						
		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.8	4.4	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.88	2.6	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.44	2.6	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.53	1.8	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	3.7	0.44	1.8	1
14473	Perfluorobutanoic acid ¹	375-22-4	11	1.8	4.4	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.44	1.8	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.44	1.8	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.44	1.8	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.44	1.8	1
14473	Perfluoroheptanoic acid ¹	375-85-9	5.4	0.44	1.8	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	1.7 J	0.44	1.8	1
14473	Perfluorohexanoic acid ¹	307-24-4	12	0.44	1.8	1
14473	Perfluorononanoic acid ¹	375-95-1	1.1 J	0.44	1.8	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.44	1.8	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	5.3	0.44	1.8	1
14473	Perfluorooctanoic acid ¹	335-67-1	43	0.44	1.8	1
14473	Perfluoropentanoic acid ¹	2706-90-3	15	0.44	1.8	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.44	1.8	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.44	1.8	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.44	1.8	1
Metals						
		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0027	0.00068	0.0020	1
06026	Barium	7440-39-3	0.105	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.0016 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0019	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0083	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.829	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0016	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry			SW-846 9012B	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for SVOCs by SW-846 8270D.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201422AA	05/21/2020 23:02	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201422AA	05/21/2020 23:01	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 14:49	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139WAC026	05/20/2020 16:13	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20139WAC026	05/18/2020 18:10	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201400007A	05/21/2020 21:36	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201390007A	05/20/2020 10:01	Richard A Shober	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/26/2020 14:16	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201390007A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201390006A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	2	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201400007A	05/19/2020 20:15	Karen L Beyer	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316589
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20138002	05/19/2020 08:55	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20138002	05/17/2020 15:30	Eric Hockley	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:14	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:17	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:19	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:17	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:16	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:18	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20141117101B	05/21/2020 20:37	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20141117101B	05/20/2020 17:00	Barbara A Washington	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316590
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0021	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0984	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00058 J	0.00033	0.0020	1
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	N.D.	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.802	0.0032	0.0100	5
06039	Nickel	7440-02-0	N.D.	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0100	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:17	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:21	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316590
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS11-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:23	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:21	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:18	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:20	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.0009 J	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.0001	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.010	1
14242	Anthracene	120-12-7	N.D.	0.0001	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.010	1
14242	Benzidine	92-87-5	N.D.	0.020	0.060	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.011	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.008	0.021	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.014	0.030	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.011	1
14242	Fluoranthene	206-44-0	N.D.	0.0001	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.011	1
14242	Hexachloroethane	67-72-1	N.D.	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0001	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	0.0001 J	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005	0.011	1
14242	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
14242	Phenanthrene	85-01-8	N.D.	0.0001	0.0005	1
14242	Phenol	108-95-2	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles			SW-846 8270D	mg/l	mg/l	
14242	Pyrene	129-00-0	N.D.	0.0001	0.0005	1
14242	Pyridine	110-86-1	N.D.	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005	0.002	1
GC/MS Semivolatiles			SW-846 8270D SIM	ug/l	ug/l	
14244	1,4-Dioxane	123-91-1	0.1 J	0.1	0.3	1
Herbicides			SW-846 8151A	mg/l	mg/l	
10407	2,4-D	94-75-7	N.D. D2	0.00024	0.00058	1
10407	2,4,5-T	93-76-5	N.D. D1	0.000063	0.00014	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.0000097	0.000048	1
PCBs			SW-846 8082A	mg/l	mg/l	
10591	PCB-1016	12674-11-2	N.D. D1	0.00010	0.00052	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00010	0.00052	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00021	0.00052	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00010	0.00052	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00010	0.00052	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00010	0.00052	1
10591	PCB-1260	11096-82-5	N.D. D2	0.00015	0.00052	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00010	0.00052	1
Pesticides			SW-846 8081B	mg/l	mg/l	
10589	Aldrin	309-00-2	N.D. D1	0.0000020	0.000010	1
10589	Alpha BHC	319-84-6	N.D. D2	0.0000031	0.000010	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000035	0.000010	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0000020	0.000010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000031	0.000010	1
10589	4,4'-Ddd	72-54-8	N.D. D2	0.0000051	0.000020	1
10589	4,4'-Dde	72-55-9	N.D. D2	0.0000051	0.000020	1
10589	4,4'-Ddt	50-29-3	N.D. D1	0.0000053	0.000020	1
10589	Delta BHC	319-86-8	N.D. D2	0.0000035	0.000010	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000054	0.000020	1
10589	Endosulfan I	959-98-8	N.D. D2	0.0000044	0.000010	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000015	0.000041	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000059	0.000020	1
10589	Endrin	72-20-8	N.D. D2	0.0000083	0.000031	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000020	0.000010	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit* ng/l	Limit of Quantitation ng/l	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified						
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	20	49	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	9.9	30	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	4.9	30	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	5.9	20	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	4.9	20	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	20	49	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	4.9	20	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	4.9	20	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	4.9	20	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	4.9	20	1
14473	Perfluoroheptanoic acid ¹	375-85-9	8.1 J	4.9	20	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	4.9	20	1
14473	Perfluorohexanoic acid ¹	307-24-4	13 J	4.9	20	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	4.9	20	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	4.9	20	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	6.6 J	4.9	20	1
14473	Perfluorooctanoic acid ¹	335-67-1	66	4.9	20	1
14473	Perfluoropentanoic acid ¹	2706-90-3	16 J	4.9	20	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	4.9	20	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	4.9	20	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	4.9	20	1

Reporting limits were raised due to interference from the sample matrix.

Metals		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0037	0.00068	0.0020	1
06026	Barium	7440-39-3	0.121	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00053 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0046	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.620	0.0032	0.0100	5

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
06039	Nickel	7440-02-0	0.0018	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.0081 J	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry			SW-846 9012B	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for SVOCs by SW-846 8270D.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201422AA	05/21/2020 23:22	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201422AA	05/21/2020 23:21	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 15:18	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139WAC026	05/20/2020 16:41	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20139WAC026	05/18/2020 18:10	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201400007A	05/21/2020 22:09	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201390007A	05/20/2020 10:11	Richard A Shober	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/26/2020 14:29	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201390007A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201390006A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	2	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201400007A	05/19/2020 20:15	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20138002	05/19/2020 09:05	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20138002	05/17/2020 15:30	Eric Hockley	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:27	Elaine F Stoltzfus	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316591
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:25	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:27	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:23	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:25	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:25	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:22	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20141117101B	05/21/2020 20:41	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20141117101B	05/20/2020 17:00	Barbara A Washington	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316592
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0032	0.00068	0.0020	1
06026	Barium	7440-39-3	0.126	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00067 J	0.00033	0.0020	1
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	N.D.	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.620	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0018	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0100	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:30	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:29	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW22_051620 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316592
ELLE Group #: 2099869
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:00
SDG#: CMS11-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:30	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:29	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:25	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:24	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
<p>A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.</p>						
GC/MS Semivolatiles			SW-846 8270D	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.0001	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.0001	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.010	1
14242	Anthracene	120-12-7	N.D.	0.0001	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.010	1
14242	Benzidine	92-87-5	N.D.	0.021	0.062	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.0001	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.0001	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.0001	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.0001	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.010	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.011	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
<p>Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.</p>						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.0001	0.0005	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/l	mg/l	mg/l	
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.010	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.010	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.008	0.022	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.014	0.031	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.001	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.001	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.011	1
14242	Fluoranthene	206-44-0	N.D.	0.0001	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.0001	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.011	1
14242	Hexachloroethane	67-72-1	N.D.	0.001	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0001	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	N.D.	0.0001	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005 mg/l	0.011 mg/l	1
14242	Pentachlorophenol	87-86-5	N.D.	0.001 mg/l	0.005 mg/l	1
14242	Phenanthrene	85-01-8	N.D.	0.0001 mg/l	0.0005 mg/l	1
14242	Phenol	108-95-2	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	Pyrene	129-00-0	N.D.	0.0001 mg/l	0.0005 mg/l	1
14242	Pyridine	110-86-1	N.D.	0.002 mg/l	0.005 mg/l	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005 mg/l	0.002 mg/l	1
GC/MS Semivolatiles SW-846 8270D SIM						
14244	1,4-Dioxane	123-91-1	N.D.	0.1 ug/l	0.4 ug/l	1
Herbicides SW-846 8151A						
10407	2,4-D	94-75-7	N.D. D1	0.00028 mg/l	0.00066 mg/l	1
10407	2,4,5-T	93-76-5	N.D. D1	0.000072 mg/l	0.00017 mg/l	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.000011 mg/l	0.000055 mg/l	1
PCBs SW-846 8082A						
10591	PCB-1016	12674-11-2	N.D. D1	0.00012 mg/l	0.00060 mg/l	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00012 mg/l	0.00060 mg/l	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00024 mg/l	0.00060 mg/l	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00012 mg/l	0.00060 mg/l	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00012 mg/l	0.00060 mg/l	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00012 mg/l	0.00060 mg/l	1
10591	PCB-1260	11096-82-5	N.D. D2	0.00018 mg/l	0.00060 mg/l	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00012 mg/l	0.00060 mg/l	1
Pesticides SW-846 8081B						
10589	Aldrin	309-00-2	N.D. D1	0.0000024 mg/l	0.000012 mg/l	1
10589	Alpha BHC	319-84-6	N.D. D2	0.0000035 mg/l	0.000012 mg/l	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000040 mg/l	0.000012 mg/l	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D2	0.0000024 mg/l	0.000012 mg/l	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000035 mg/l	0.000012 mg/l	1
10589	4,4'-Ddd	72-54-8	N.D. D2	0.0000059 mg/l	0.000024 mg/l	1
10589	4,4'-Dde	72-55-9	N.D. D1	0.0000059 mg/l	0.000024 mg/l	1
10589	4,4'-Ddt	50-29-3	N.D. D2	0.0000061 mg/l	0.000024 mg/l	1
10589	Delta BHC	319-86-8	N.D. D2	0.0000040 mg/l	0.000012 mg/l	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000063 mg/l	0.000024 mg/l	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0000051 mg/l	0.000012 mg/l	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000018 mg/l	0.000047 mg/l	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000068 mg/l	0.000024 mg/l	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides						
		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Endrin	72-20-8	N.D. D2	0.0000096	0.000035	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000024	0.000012	1
LC/MS/MS Miscellaneous						
	EPA 537 Version 1.1 Modified		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	2.0	5.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.0	3.0	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.50	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.60	2.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.50	2.0	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	2.0	5.0	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.50	2.0	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.50	2.0	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.50	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.50	2.0	1
14473	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.50	2.0	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.50	2.0	1
14473	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.50	2.0	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	0.50	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.50	2.0	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.50	2.0	1
14473	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.50	2.0	1
14473	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.50	2.0	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.50	2.0	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.50	2.0	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.50	2.0	1
Metals						
		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	N.D.	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00048 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	N.D.	0.000071	0.00050	1
06037	Manganese	7439-96-5	N.D.	0.00063	0.0020	1
06039	Nickel	7440-02-0	N.D.	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry			SW-846 9012B	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for SVOCs by SW-846 8270D.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	N201412AA	05/20/2020 23:55	Laura Green	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	N201412AA	05/20/2020 23:54	Laura Green	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 15:47	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20139WAC026	05/20/2020 17:09	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20139WAC026	05/18/2020 18:10	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201400007A	05/21/2020 22:43	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201390007A	05/20/2020 10:41	Richard A Shober	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/26/2020 14:41	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201390007A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201390006A	05/18/2020 18:10	Patrick Thimes	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	2	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201400007A	05/19/2020 20:15	Karen L Beyer	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316593
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-07FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20138002	05/19/2020 09:14	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20138002	05/17/2020 15:30	Eric Hockley	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201391404404	05/18/2020 17:33	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:32	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201430282801	05/22/2020 09:44	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/19/2020 20:32	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201391404704A	05/18/2020 20:27	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201390571302	05/19/2020 07:30	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201391404404	05/18/2020 06:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201391404704	05/18/2020 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201390571302	05/18/2020 07:40	Annamaria Kuhns	1
08255	Total Cyanide (water)	SW-846 9012B	1	20141117101B	05/21/2020 20:42	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20141117101B	05/20/2020 17:00	Barbara A Washington	1
00276	Hexavalent Chromium	SW-846 7196A	1	20137027601A	05/16/2020 21:10	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Filtered Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316594
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-08FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
		SW-846 6020B Rev.2, July 2014	mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	N.D.	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	N.D.	0.00033	0.0020	1
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	N.D.	0.000071	0.00050	1
06037	Manganese	7439-96-5	N.D.	0.00063	0.0020	1
06039	Nickel	7440-02-0	N.D.	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0100	1
		SW-846 7470A	mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

03277 Lab Filtration - Metals

The holding time was not met for dissolved sample filtration. The filtration time for dissolved metals is to be within 15 minutes from collection. Since the filtration occurred after receipt in the laboratory, the 15 minute criteria was exceeded. This sample was not collected per applicable Clean Water Act (40CFR136) or SW-846 regulations.

Sample Comments

State of New York Certification No. 10670
This sample was lab filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201411404403	05/20/2020 21:42	Cindy M Gehman	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB01_051620 Filtered Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316594
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020 15:45
SDG#: CMS11-08FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/21/2020 03:19	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/21/2020 03:19	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201411404703A	05/20/2020 21:54	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201410571303	05/21/2020 08:26	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201411404403	05/20/2020 14:25	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201411404703	05/20/2020 14:25	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201410571303	05/20/2020 15:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: GWTB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316595
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020
SDG#: CMS11-09TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: GWTB01_051620 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1316595
ELLE Group #: 2099869
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/16/2020 19:50
Collection Date/Time: 05/16/2020
SDG#: CMS11-09TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	N201412AA	05/21/2020 00:17	Laura Green	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	N201412AA	05/21/2020 00:16	Laura Green	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 5201422AA	Sample number(s): 1316581-1316583,1316589,1316591		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
Batch number: N201412AA	Sample number(s): 1316593,1316595		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
Batch number: 20143WAA026	Sample number(s): 1316581-1316583,1316589,1316591,1316593		
Acenaphthene	N.D.	0.0001	0.0005
Acenaphthylene	N.D.	0.0001	0.0005
Acetophenone	N.D.	0.004	0.010
Anthracene	N.D.	0.0001	0.0005
Atrazine	N.D.	0.002	0.005
Benzaldehyde	N.D.	0.003	0.010
Benzidine	N.D.	0.020	0.060
Benzo(a)anthracene	N.D.	0.0001	0.0005
Benzo(a)pyrene	N.D.	0.0001	0.0005
Benzo(b)fluoranthene	N.D.	0.0001	0.0005
Benzo(g,h,i)perylene	N.D.	0.0001	0.0005
Benzo(k)fluoranthene	N.D.	0.0001	0.0005
1,1'-Biphenyl	N.D.	0.003	0.010
Butylbenzylphthalate	N.D.	0.002	0.005
Di-n-butylphthalate	N.D.	0.002	0.005
Caprolactam	N.D.	0.005	0.011
Carbazole	N.D.	0.0005	0.002
bis(2-Chloroethyl)ether	N.D.	0.0005	0.002
bis(2-Chloroisopropyl)ether	N.D.	0.0005	0.002
2-Chloronaphthalene	N.D.	0.0004	0.001
2-Chlorophenol	N.D.	0.0005	0.002
Chrysene	N.D.	0.0001	0.0005
Dibenz(a,h)anthracene	N.D.	0.0001	0.0005

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Dibenzofuran	N.D.	0.0005	0.002
1,2-Dichlorobenzene	N.D.	0.0005	0.002
1,3-Dichlorobenzene	N.D.	0.0005	0.002
1,4-Dichlorobenzene	N.D.	0.0005	0.002
3,3'-Dichlorobenzidine	N.D.	0.003	0.010
2,4-Dichlorophenol	N.D.	0.0005	0.002
Diethylphthalate	N.D.	0.002	0.005
2,4-Dimethylphenol	N.D.	0.003	0.010
Dimethylphthalate	N.D.	0.002	0.005
4,6-Dinitro-2-methylphenol	N.D.	0.008	0.021
2,4-Dinitrophenol	N.D.	0.014	0.030
2,4-Dinitrotoluene	N.D.	0.001	0.005
2,6-Dinitrotoluene	N.D.	0.0005	0.002
2,4,2,6-Dinitrotoluenes	N.D.	0.001	0.005
1,2-Diphenylhydrazine	N.D.	0.0005	0.002
bis(2-Ethylhexyl)phthalate	N.D.	0.005	0.011
Fluoranthene	N.D.	0.0001	0.0005
Fluorene	N.D.	0.0001	0.0005
Hexachlorobenzene	N.D.	0.0001	0.0005
Hexachlorobutadiene	N.D.	0.0005	0.002
Hexachlorocyclopentadiene	N.D.	0.005	0.011
Hexachloroethane	N.D.	0.001	0.005
Indeno(1,2,3-cd)pyrene	N.D.	0.0001	0.0005
Isophorone	N.D.	0.0005	0.002
2-Methylnaphthalene	N.D.	0.0001	0.0005
2-Methylphenol	N.D.	0.0005	0.002
4-Methylphenol	N.D.	0.0005	0.002
Naphthalene	N.D.	0.0001	0.0005
2-Nitroaniline	N.D.	0.002	0.007
Nitrobenzene	N.D.	0.0005	0.002
N-Nitrosodimethylamine	N.D.	0.002	0.005
N-Nitroso-di-n-propylamine	N.D.	0.0007	0.003
N-Nitrosodiphenylamine	N.D.	0.0007	0.003
Di-n-octylphthalate	N.D.	0.005	0.011
Pentachlorophenol	N.D.	0.001	0.005
Phenanthrene	N.D.	0.0001	0.0005
Phenol	N.D.	0.0005	0.002
Pyrene	N.D.	0.0001	0.0005
Pyridine	N.D.	0.002	0.005
1,2,4-Trichlorobenzene	N.D.	0.0005	0.002
2,4,5-Trichlorophenol	N.D.	0.0005	0.002
2,4,6-Trichlorophenol	N.D.	0.0005	0.002
	ug/l	ug/l	ug/l

Batch number: 20139WAC026

Sample number(s): 1316581-1316583,1316589,1316591,1316593

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
1,4-Dioxane	N.D.	0.1	0.3
	mg/l	mg/l	mg/l
Batch number: 201400007A	Sample number(s): 1316581-1316583,1316589,1316591,1316593		
2,4-D	N.D.	0.00025	0.00060
2,4,5-T	N.D.	0.000065	0.00015
2,4,5-TP	N.D.	0.000010	0.000050
Batch number: 201390007A	Sample number(s): 1316581-1316583,1316589,1316591,1316593		
PCB-1016	N.D.	0.00010	0.00050
PCB-1221	N.D.	0.00010	0.00050
PCB-1232	N.D.	0.00020	0.00050
PCB-1242	N.D.	0.00010	0.00050
PCB-1248	N.D.	0.00010	0.00050
PCB-1254	N.D.	0.00010	0.00050
PCB-1260	N.D.	0.00015	0.00050
Total PCBs	N.D.	0.00010	0.00050
Batch number: 201430006A	Sample number(s): 1316581-1316583,1316589,1316591,1316593		
Aldrin	N.D.	0.0000020	0.000010
Alpha BHC	N.D.	0.0000030	0.000010
Beta BHC	N.D.	0.0000034	0.000010
Gamma BHC - Lindane	N.D.	0.0000020	0.000010
Alpha Chlordane	N.D.	0.0000030	0.000010
4,4'-Ddd	N.D.	0.0000050	0.000020
4,4'-Dde	N.D.	0.0000050	0.000020
4,4'-Ddt	N.D.	0.0000052	0.000020
Delta BHC	N.D.	0.0000034	0.000010
Dieldrin	N.D.	0.0000053	0.000020
Endosulfan I	N.D.	0.0000043	0.000010
Endosulfan II	N.D.	0.000015	0.000040
Endosulfan Sulfate	N.D.	0.0000058	0.000020
Endrin	N.D.	0.0000081	0.000030
Heptachlor	N.D.	0.0000020	0.000010
	ng/l	ng/l	ng/l
Batch number: 20138002	Sample number(s): 1316581-1316583,1316589,1316591,1316593		
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NETFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
	mg/l	mg/l	mg/l
Batch number: 201390571301	Sample number(s): 1316581-1316584		
Mercury	N.D.	0.000050	0.00020
Batch number: 201390571302	Sample number(s): 1316585-1316593		
Mercury	N.D.	0.000050	0.00020
Batch number: 201391404403	Sample number(s): 1316581-1316584		
Silver	N.D.	0.0050	0.0100
Batch number: 201391404404	Sample number(s): 1316585-1316593		
Silver	N.D.	0.0050	0.0100
Batch number: 201391404703A	Sample number(s): 1316581-1316584		
Arsenic	N.D.	0.00068	0.0020
Barium	N.D.	0.00075	0.0020
Beryllium	N.D.	0.00012	0.00050
Cadmium	N.D.	0.00015	0.00050
Chromium	N.D.	0.00033	0.0020
Copper	N.D.	0.00036	0.0010
Lead	N.D.	0.000071	0.00050
Manganese	N.D.	0.00063	0.0020
Nickel	N.D.	0.00060	0.0010
Selenium	N.D.	0.00028	0.0010
Zinc	N.D.	0.0062	0.0100
Batch number: 201391404704A	Sample number(s): 1316585-1316593		
Arsenic	N.D.	0.00068	0.0020
Barium	N.D.	0.00075	0.0020
Beryllium	N.D.	0.00012	0.00050
Cadmium	N.D.	0.00015	0.00050
Chromium	0.00038 J	0.00033	0.0020
Copper	N.D.	0.00036	0.0010
Lead	N.D.	0.000071	0.00050
Manganese	0.00064 J	0.00063	0.0020

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Nickel	N.D.	0.00060	0.0010
Selenium	N.D.	0.00028	0.0010
Zinc	N.D.	0.0062	0.0100
Batch number: 201410571303	Sample number(s): 1316594		
Mercury	N.D.	0.000050	0.00020
Batch number: 201411404403	Sample number(s): 1316594		
Silver	N.D.	0.0050	0.0100
Batch number: 201411404703A	Sample number(s): 1316594		
Arsenic	N.D.	0.00068	0.0020
Barium	N.D.	0.00075	0.0020
Beryllium	N.D.	0.00012	0.00050
Cadmium	N.D.	0.00015	0.00050
Chromium	N.D.	0.00033	0.0020
Copper	N.D.	0.00036	0.0010
Lead	N.D.	0.000071	0.00050
Manganese	0.0030	0.00063	0.0020
Nickel	N.D.	0.00060	0.0010
Selenium	N.D.	0.00028	0.0010
Zinc	N.D.	0.0062	0.0100
Batch number: 20141117101A	Sample number(s): 1316581-1316582,1316584		
Total Cyanide (water)	N.D.	0.0050	0.010
Batch number: 20141117101B	Sample number(s): 1316589,1316591,1316593		
Total Cyanide (water)	N.D.	0.0050	0.010
Batch number: 20137027601A	Sample number(s): 1316581-1316584,1316589,1316591,1316593		
Hexavalent Chromium	N.D.	0.010	0.030

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 5201422AA	Sample number(s): 1316581-1316583,1316589,1316591								
Acetone	0.150	0.206			137		54-157		
Acrolein	0.150	0.134			89		47-136		
Acrylonitrile	0.100	0.0973			97		60-129		
Benzene	0.0200	0.0203			102		80-120		
Bromodichloromethane	0.0200	0.0195			97		71-120		
Bromoform	0.0200	0.0184			92		51-120		
Bromomethane	0.0200	0.0196			98		53-128		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Butanone	0.150	0.158			105		59-135		
t-Butyl alcohol	0.200	0.185			92		60-130		
n-Butylbenzene	0.0200	0.0216			108		76-120		
sec-Butylbenzene	0.0200	0.0215			107		77-120		
tert-Butylbenzene	0.0200	0.0226			113		78-120		
Carbon Disulfide	0.0200	0.0177			89		65-128		
Carbon Tetrachloride	0.0200	0.0199			99		64-134		
Chlorobenzene	0.0200	0.0217			108		80-120		
Chloroethane	0.0200	0.0194			97		55-123		
Chloroform	0.0200	0.0205			102		80-120		
Chloromethane	0.0200	0.0188			94		56-121		
1,2-Dibromo-3-chloropropane	0.0200	0.0198			99		47-131		
Dibromochloromethane	0.0200	0.0198			99		71-120		
1,2-Dibromoethane	0.0200	0.0212			106		77-120		
1,2-Dichlorobenzene	0.0200	0.0217			109		80-120		
1,3-Dichlorobenzene	0.0200	0.0213			107		80-120		
1,4-Dichlorobenzene	0.0200	0.0218			109		80-120		
Dichlorodifluoromethane	0.0200	0.0173			87		41-127		
1,1-Dichloroethane	0.0200	0.0201			100		80-120		
1,2-Dichloroethane	0.0200	0.0206			103		73-124		
1,1-Dichloroethene	0.0200	0.0200			100		80-131		
cis-1,2-Dichloroethene	0.0200	0.0216			108		80-125		
trans-1,2-Dichloroethene	0.0200	0.0205			103		80-126		
1,2-Dichloroethene (Total)	0.0400	0.0421			105		80-125		
1,2-Dichloropropane	0.0200	0.0207			104		80-120		
cis-1,3-Dichloropropene	0.0200	0.0196			98		75-120		
trans-1,3-Dichloropropene	0.0200	0.0194			97		67-120		
Ethylbenzene	0.0200	0.0215			108		80-120		
Methyl Acetate	0.0200	0.0210			105		54-136		
Methyl Tertiary Butyl Ether	0.0200	0.0198			99		69-122		
Methylene Chloride	0.0200	0.0210			105		80-120		
n-Propylbenzene	0.0200	0.0219			109		79-121		
Styrene	0.0200	0.0215			107		80-120		
1,1,1,2-Tetrachloroethane	0.0200	0.0219			109		72-120		
Tetrachloroethene	0.0200	0.0217			109		80-120		
Toluene	0.0200	0.0208			104		80-120		
1,1,1-Trichloroethane	0.0200	0.0198			99		67-126		
1,1,2-Trichloroethane	0.0200	0.0219			110		80-120		
Trichloroethene	0.0200	0.0205			103		80-120		
Trichlorofluoromethane	0.0200	0.0206			103		55-135		
1,2,4-Trimethylbenzene	0.0200	0.0210			105		75-120		
1,3,5-Trimethylbenzene	0.0200	0.0214			107		75-120		
Vinyl Chloride	0.0200	0.0206			103		56-120		
Xylene (Total)	0.0600	0.0650			108		80-120		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: N201412AA	Sample number(s): 1316593,1316595								
Acetone	0.150	0.164	0.150	0.171	109	114	54-157	4	30
Acrolein	0.150	0.149	0.150	0.148	100	99	47-136	1	30
Acrylonitrile	0.100	0.0945	0.100	0.0957	95	96	60-129	1	30
Benzene	0.0200	0.0201	0.0200	0.0202	101	101	80-120	0	30
Bromodichloromethane	0.0200	0.0189	0.0200	0.0203	94	102	71-120	7	30
Bromoform	0.0200	0.0192	0.0200	0.0192	96	96	51-120	0	30
Bromomethane	0.0200	0.0180	0.0200	0.0181	90	91	53-128	1	30
2-Butanone	0.150	0.134	0.150	0.131	90	87	59-135	3	30
t-Butyl alcohol	0.200	0.235	0.200	0.235	117	118	60-130	0	30
n-Butylbenzene	0.0200	0.0202	0.0200	0.0201	101	100	76-120	0	30
sec-Butylbenzene	0.0200	0.0207	0.0200	0.0210	104	105	77-120	1	30
tert-Butylbenzene	0.0200	0.0207	0.0200	0.0202	104	101	78-120	2	30
Carbon Disulfide	0.0200	0.0203	0.0200	0.0210	101	105	65-128	3	30
Carbon Tetrachloride	0.0200	0.0187	0.0200	0.0189	93	94	64-134	1	30
Chlorobenzene	0.0200	0.0203	0.0200	0.0207	101	104	80-120	2	30
Chloroethane	0.0200	0.0181	0.0200	0.0183	90	92	55-123	1	30
Chloroform	0.0200	0.0184	0.0200	0.0194	92	97	80-120	5	30
Chloromethane	0.0200	0.0176	0.0200	0.0177	88	89	56-121	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0189	0.0200	0.0184	95	92	47-131	3	30
Dibromochloromethane	0.0200	0.0202	0.0200	0.0201	101	100	71-120	1	30
1,2-Dibromoethane	0.0200	0.0197	0.0200	0.0199	99	99	77-120	1	30
1,2-Dichlorobenzene	0.0200	0.0208	0.0200	0.0204	104	102	80-120	2	30
1,3-Dichlorobenzene	0.0200	0.0206	0.0200	0.0204	103	102	80-120	1	30
1,4-Dichlorobenzene	0.0200	0.0204	0.0200	0.0208	102	104	80-120	2	30
Dichlorodifluoromethane	0.0200	0.0146	0.0200	0.0161	73	80	41-127	9	30
1,1-Dichloroethane	0.0200	0.0191	0.0200	0.0200	96	100	80-120	5	30
1,2-Dichloroethane	0.0200	0.0175	0.0200	0.0181	88	90	73-124	3	30
1,1-Dichloroethene	0.0200	0.0193	0.0200	0.0199	96	100	80-131	4	30
cis-1,2-Dichloroethene	0.0200	0.0198	0.0200	0.0209	99	104	80-125	5	30
trans-1,2-Dichloroethene	0.0200	0.0189	0.0200	0.0200	95	100	80-126	5	30
1,2-Dichloroethene (Total)	0.0400	0.0388	0.0400	0.0409	97	102	80-125	5	30
1,2-Dichloropropane	0.0200	0.0216	0.0200	0.0227	108	114	80-120	5	30
cis-1,3-Dichloropropene	0.0200	0.0195	0.0200	0.0210	97	105	75-120	7	30
trans-1,3-Dichloropropene	0.0200	0.0187	0.0200	0.0184	93	92	67-120	2	30
Ethylbenzene	0.0200	0.0201	0.0200	0.0205	100	102	80-120	2	30
Methyl Acetate	0.0200	0.0194	0.0200	0.0198	97	99	54-136	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0176	0.0200	0.0176	88	88	69-122	0	30
Methylene Chloride	0.0200	0.0186	0.0200	0.0196	93	98	80-120	5	30
n-Propylbenzene	0.0200	0.0212	0.0200	0.0212	106	106	79-121	0	30
Styrene	0.0200	0.0203	0.0200	0.0203	102	101	80-120	0	30
1,1,2,2-Tetrachloroethane	0.0200	0.0208	0.0200	0.0209	104	104	72-120	0	30
Tetrachloroethene	0.0200	0.0199	0.0200	0.0222	100	111	80-120	11	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Toluene	0.0200	0.0204	0.0200	0.0207	102	104	80-120	2	30
1,1,1-Trichloroethane	0.0200	0.0180	0.0200	0.0183	90	92	67-126	2	30
1,1,2-Trichloroethane	0.0200	0.0218	0.0200	0.0204	109	102	80-120	6	30
Trichloroethene	0.0200	0.0192	0.0200	0.0207	96	103	80-120	7	30
Trichlorofluoromethane	0.0200	0.0181	0.0200	0.0188	91	94	55-135	3	30
1,2,4-Trimethylbenzene	0.0200	0.0197	0.0200	0.0198	99	99	75-120	0	30
1,3,5-Trimethylbenzene	0.0200	0.0203	0.0200	0.0202	102	101	75-120	0	30
Vinyl Chloride	0.0200	0.0174	0.0200	0.0180	87	90	56-120	3	30
Xylene (Total)	0.0600	0.0612	0.0600	0.0625	102	104	80-120	2	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20143WAA026	Sample number(s): 1316581-1316583,1316589,1316591,1316593								
Acenaphthene	0.0500	0.0411			82		52-114		
Acenaphthylene	0.0500	0.0405			81		56-127		
Acetophenone	0.0500	0.0423			85		61-114		
Anthracene	0.0500	0.0444			89		67-116		
Atrazine	0.0500	0.0491			98		71-133		
Benzaldehyde	0.0500	0.0381			76		55-116		
Benzidine	0.250	0.121			48		25-77		
Benzo(a)anthracene	0.0500	0.0482			96		68-123		
Benzo(a)pyrene	0.0500	0.0471			94		71-117		
Benzo(b)fluoranthene	0.0500	0.0469			94		69-121		
Benzo(g,h,i)perylene	0.0500	0.0397			79		60-119		
Benzo(k)fluoranthene	0.0500	0.0491			98		69-122		
1,1'-Biphenyl	0.0500	0.0404			81		56-109		
Butylbenzylphthalate	0.0500	0.0312			62		40-133		
Di-n-butylphthalate	0.0500	0.0405			81		58-125		
Caprolactam	0.0500	0.0129			26		10-57		
Carbazole	0.0500	0.0465			93		64-127		
bis(2-Chloroethyl)ether	0.0500	0.0379			76		58-108		
bis(2-Chloroisopropyl)ether	0.0500	0.0385			77		44-108		
2-Chloronaphthalene	0.0500	0.0386			77		51-107		
2-Chlorophenol	0.0500	0.0410			82		57-105		
Chrysene	0.0500	0.0451			90		65-121		
Dibenz(a,h)anthracene	0.0500	0.0437			87		63-128		
Dibenzofuran	0.0500	0.0430			86		60-112		
1,2-Dichlorobenzene	0.0500	0.0359			72		35-104		
1,3-Dichlorobenzene	0.0500	0.0337			67		28-103		
1,4-Dichlorobenzene	0.0500	0.0345			69		34-97		
3,3'-Dichlorobenzidine	0.0500	0.0381			76		42-107		
2,4-Dichlorophenol	0.0500	0.0455			91		65-110		
Diethylphthalate	0.0500	0.0353			71		42-126		
2,4-Dimethylphenol	0.0500	0.0372			74		53-93		
Dimethylphthalate	0.0500	0.0183			37		10-134		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4,6-Dinitro-2-methylphenol	0.0500	0.0481			96		63-129		
2,4-Dinitrophenol	0.100	0.0852			85		44-134		
2,4-Dinitrotoluene	0.0500	0.0462			92		66-122		
2,6-Dinitrotoluene	0.0500	0.0462			92		71-120		
1,2-Diphenylhydrazine	0.0500	0.0456			91		64-120		
bis(2-Ethylhexyl)phthalate	0.0500	0.0462			92		61-129		
Fluoranthene	0.0500	0.0473			95		63-122		
Fluorene	0.0500	0.0445			89		56-115		
Hexachlorobenzene	0.0500	0.0455			91		60-117		
Hexachlorobutadiene	0.0500	0.0390			78		20-108		
Hexachlorocyclopentadiene	0.100	0.0326			33		10-91		
Hexachloroethane	0.0500	0.0332			66		23-95		
Indeno(1,2,3-cd)pyrene	0.0500	0.0414			83		59-123		
Isophorone	0.0500	0.0439			88		63-120		
2-Methylnaphthalene	0.0500	0.0412			82		51-107		
2-Methylphenol	0.0500	0.0393			79		53-107		
4-Methylphenol	0.0500	0.0390			78		49-108		
Naphthalene	0.0500	0.0390			78		51-102		
2-Nitroaniline	0.0500	0.0455			91		66-126		
Nitrobenzene	0.0500	0.0434			87		59-109		
N-Nitrosodimethylamine	0.0500	0.0258			52		17-101		
N-Nitroso-di-n-propylamine	0.0500	0.0442			88		58-120		
N-Nitrosodiphenylamine	0.0500	0.0450			90		60-126		
Di-n-octylphthalate	0.0500	0.0462			92		60-136		
Pentachlorophenol	0.0500	0.0461			92		54-131		
Phenanthrene	0.0500	0.0448			90		65-113		
Phenol	0.0500	0.0242			48		19-79		
Pyrene	0.0500	0.0439			88		65-115		
Pyridine	0.0500	0.0202			40		23-64		
1,2,4-Trichlorobenzene	0.0500	0.0397			79		34-106		
2,4,5-Trichlorophenol	0.0500	0.0469			94		66-118		
2,4,6-Trichlorophenol	0.0500	0.0467			93		69-117		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 20139WAC026	Sample number(s): 1316581-1316583,1316589,1316591,1316593								
1,4-Dioxane	1.00	0.464			46		18-91		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201400007A	Sample number(s): 1316581-1316583,1316589,1316591,1316593								
2,4-D	0.00250	0.00419			167*		70-134		
2,4,5-T	0.000250	0.000462			185*		69-164		
2,4,5-TP	0.000250	0.000422			169*		81-137		
	mg/l	mg/l	mg/l	mg/l					

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 201390007A	Sample number(s): 1316581-1316583,1316589,1316591,1316593								
PCB-1016	0.00501	0.00442			88		60-117		
PCB-1260	0.00501	0.00507			101		57-134		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201430006A	Sample number(s): 1316581-1316583,1316589,1316591,1316593								
Aldrin	0.000100	0.0000664			66		28-119		
Alpha BHC	0.000101	0.000109			108		47-132		
Beta BHC	0.000100	0.000114			114		27-143		
Gamma BHC - Lindane	0.000100	0.000110			110		29-136		
Alpha Chlordane	0.000100	0.0000955			95		28-136		
4,4'-Ddd	0.000201	0.000199			99		42-148		
4,4'-Dde	0.000200	0.000170			85		22-138		
4,4'-Ddt	0.000201	0.000200			99		40-145		
Delta BHC	0.000100	0.000110			110		28-141		
Dieldrin	0.000200	0.000205			103		31-145		
Endosulfan I	0.000100	0.000104			104		40-138		
Endosulfan II	0.000200	0.000207			104		27-138		
Endosulfan Sulfate	0.000200	0.000203			102		41-133		
Endrin	0.000200	0.000202			101		35-143		
Heptachlor	0.000100	0.0000762			76		38-135		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 20138002	Sample number(s): 1316581-1316583,1316589,1316591,1316593								
6:2-Fluorotelomersulfonic acid	24.28	24.35			100		56-140		
8:2-Fluorotelomersulfonic acid	24.52	25.96			106		58-143		
NEtFOSAA	25.6	25.61			100		53-140		
NMeFOSAA	25.6	27.86			109		59-141		
Perfluorobutanesulfonic acid	22.64	20.41			90		67-135		
Perfluorobutanoic acid	25.6	20.93			82		63-160		
Perfluorodecanesulfonic acid	24.64	20.96			85		62-135		
Perfluorodecanoic acid	25.6	24.53			96		66-141		
Perfluorododecanoic acid	25.6	25.46			99		65-143		
Perfluoroheptanesulfonic acid	24.36	23.53			97		67-138		
Perfluoroheptanoic acid	25.6	26.49			103		69-144		
Perfluorohexanesulfonic acid	24.2	22.9			95		63-132		
Perfluorohexanoic acid	25.6	22.92			90		69-139		
Perfluorononanoic acid	25.6	25.59			100		66-144		
Perfluorooctanesulfonamide	25.6	24.3			95		67-126		
Perfluorooctanesulfonic acid	24.48	19.52			80		53-129		
Perfluorooctanoic acid	25.6	22.99			90		67-139		
Perfluoropentanoic acid	25.6	23.15			90		73-135		
Perfluorotetradecanoic acid	25.6	24.68			96		69-141		
Perfluorotridecanoic acid	25.6	23.91			93		66-146		

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluoroundecanoic acid	25.6	23.68			93		66-140		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201390571301 Mercury	Sample number(s): 1316581-1316584 0.00100	0.000910			91		80-110		
Batch number: 201390571302 Mercury	Sample number(s): 1316585-1316593 0.00100	0.000919			92		80-110		
Batch number: 201391404403 Silver	Sample number(s): 1316581-1316584 0.0200	0.0200			100		80-120		
Batch number: 201391404404 Silver	Sample number(s): 1316585-1316593 0.0200	0.0208			104		80-120		
Batch number: 201391404703A Arsenic	Sample number(s): 1316581-1316584 0.0100	0.0101			101		85-120		
Barium	0.0500	0.0489			98		80-120		
Beryllium	0.00400	0.00386			97		90-112		
Cadmium	0.00500	0.00512			102		84-120		
Chromium	0.0500	0.0473			95		90-115		
Copper	0.0500	0.0487			97		89-120		
Lead	0.00500	0.00490			98		90-110		
Manganese	0.0500	0.0524			105		89-120		
Nickel	0.0500	0.0510			102		90-114		
Selenium	0.0100	0.0101			101		90-113		
Zinc	0.500	0.513			103		90-115		
Batch number: 201391404704A Arsenic	Sample number(s): 1316585-1316593 0.0100	0.0103			103		85-120		
Barium	0.0500	0.0510			102		80-120		
Beryllium	0.00400	0.00397			99		90-112		
Cadmium	0.00500	0.00521			104		84-120		
Chromium	0.0500	0.0480			96		90-115		
Copper	0.0500	0.0497			99		89-120		
Lead	0.00500	0.00502			100		90-110		
Manganese	0.0500	0.0518			104		89-120		
Nickel	0.0500	0.0517			103		90-114		
Selenium	0.0100	0.0103			103		90-113		
Zinc	0.500	0.524			105		90-115		
Batch number: 201410571303 Mercury	Sample number(s): 1316594 0.00100	0.000801	0.00100	0.000812	80	81	80-110	1	20
Batch number: 201411404403 Silver	Sample number(s): 1316594 0.0200	0.0204	0.0200	0.0201	102	100	80-120	2	20

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 201411404703A	Sample number(s): 1316594								
Arsenic	0.0100	0.0104	0.0100	0.00997	104	100	85-120	5	20
Barium	0.0500	0.0491	0.0500	0.0499	98	100	80-120	2	20
Beryllium	0.00400	0.00379	0.00400	0.00386	95	96	90-112	2	20
Cadmium	0.00500	0.00493	0.00500	0.00508	99	102	84-120	3	20
Chromium	0.0500	0.0500	0.0500	0.0502	100	100	90-115	0	20
Copper	0.0500	0.0512	0.0500	0.0508	102	102	89-120	1	20
Lead	0.00500	0.00521	0.00500	0.00518	104	104	90-110	1	20
Manganese	0.0500	0.0533	0.0500	0.0536	107	107	89-120	0	20
Nickel	0.0500	0.0510	0.0500	0.0509	102	102	90-114	0	20
Selenium	0.0100	0.00985	0.0100	0.00982	99	98	90-113	0	20
Zinc	0.500	0.505	0.500	0.507	101	101	90-115	0	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20141117101A	Sample number(s): 1316581-1316582,1316584								
Total Cyanide (water)	0.200	0.220			110		90-110		
Batch number: 20141117101B	Sample number(s): 1316589,1316591,1316593								
Total Cyanide (water)	0.200	0.220			110		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20137027601A	Sample number(s): 1316581-1316584,1316589,1316591,1316593								
Hexavalent Chromium	0.200	0.200			100		90-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5201422AA	Sample number(s): 1316581-1316583,1316589,1316591 UNSPK: 1316581									
Acetone	0.00782	0.150	0.180	0.150	0.171	115	109	54-157	5	30
Acrolein	N.D.	0.150	0.136	0.150	0.133	90	89	47-136	2	30
Acrylonitrile	N.D.	0.100	0.0954	0.100	0.0938	95	94	60-129	2	30
Benzene	N.D.	0.0200	0.0212	0.0200	0.0208	106	104	80-120	2	30
Bromodichloromethane	N.D.	0.0200	0.0198	0.0200	0.0197	99	99	71-120	1	30
Bromoform	N.D.	0.0200	0.0180	0.0200	0.0178	90	89	51-120	1	30
Bromomethane	N.D.	0.0200	0.0225	0.0200	0.0218	112	109	53-128	3	30
2-Butanone	N.D.	0.150	0.143	0.150	0.141	95	94	59-135	1	30
t-Butyl alcohol	N.D.	0.200	0.191	0.200	0.197	95	98	60-130	3	30
n-Butylbenzene	N.D.	0.0200	0.0222	0.0200	0.0230	111	115	76-120	3	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
sec-Butylbenzene	N.D.	0.0200	0.0224	0.0200	0.0224	112	112	77-120	0	30
tert-Butylbenzene	N.D.	0.0200	0.0223	0.0200	0.0222	111	111	78-120	1	30
Carbon Disulfide	N.D.	0.0200	0.0185	0.0200	0.0182	92	91	65-128	1	30
Carbon Tetrachloride	N.D.	0.0200	0.0213	0.0200	0.0208	107	104	64-134	2	30
Chlorobenzene	N.D.	0.0200	0.0222	0.0200	0.0219	111	110	80-120	1	30
Chloroethane	N.D.	0.0200	0.0220	0.0200	0.0219	110	109	55-123	0	30
Chloroform	N.D.	0.0200	0.0213	0.0200	0.0209	106	104	80-120	2	30
Chloromethane	N.D.	0.0200	0.0222	0.0200	0.0217	111	109	56-121	2	30
1,2-Dibromo-3-chloropropane	N.D.	0.0200	0.0198	0.0200	0.0197	99	98	47-131	1	30
Dibromochloromethane	N.D.	0.0200	0.0198	0.0200	0.0196	99	98	71-120	1	30
1,2-Dibromoethane	N.D.	0.0200	0.0209	0.0200	0.0207	104	104	77-120	1	30
1,2-Dichlorobenzene	N.D.	0.0200	0.0220	0.0200	0.0218	110	109	80-120	1	30
1,3-Dichlorobenzene	N.D.	0.0200	0.0221	0.0200	0.0217	111	108	80-120	2	30
1,4-Dichlorobenzene	N.D.	0.0200	0.0222	0.0200	0.0220	111	110	80-120	1	30
Dichlorodifluoromethane	N.D.	0.0200	0.0216	0.0200	0.0210	108	105	41-127	3	30
1,1-Dichloroethane	N.D.	0.0200	0.0210	0.0200	0.0207	105	104	80-120	1	30
1,2-Dichloroethane	N.D.	0.0200	0.0207	0.0200	0.0204	103	102	73-124	2	30
1,1-Dichloroethene	N.D.	0.0200	0.0209	0.0200	0.0213	105	106	80-131	2	30
cis-1,2-Dichloroethene	N.D.	0.0200	0.0222	0.0200	0.0222	111	111	80-120	0	30
trans-1,2-Dichloroethene	N.D.	0.0200	0.0216	0.0200	0.0211	108	105	80-120	2	30
1,2-Dichloroethene (Total)	N.D.	0.0400	0.0438	0.0400	0.0433	110	108	80-120	1	30
1,2-Dichloropropane	N.D.	0.0200	0.0212	0.0200	0.0211	106	105	80-120	1	30
cis-1,3-Dichloropropene	N.D.	0.0200	0.0195	0.0200	0.0193	98	97	75-120	1	30
trans-1,3-Dichloropropene	N.D.	0.0200	0.0193	0.0200	0.0192	96	96	67-120	1	30
Ethylbenzene	N.D.	0.0200	0.0224	0.0200	0.0221	112	111	80-120	1	30
Methyl Acetate	N.D.	0.0200	0.0193	0.0200	0.0187	96	93	54-136	3	30
Methyl Tertiary Butyl Ether	0.00284	0.0200	0.0222	0.0200	0.0220	97	96	69-122	1	30
Methylene Chloride	N.D.	0.0200	0.0212	0.0200	0.0209	106	105	80-120	2	30
n-Propylbenzene	N.D.	0.0200	0.0229	0.0200	0.0227	115	113	79-121	1	30
Styrene	N.D.	0.0200	0.0221	0.0200	0.0217	110	109	80-120	2	30
1,1,2,2-Tetrachloroethane	N.D.	0.0200	0.0215	0.0200	0.0208	108	104	72-120	3	30
Tetrachloroethene	N.D.	0.0200	0.0230	0.0200	0.0226	115	113	80-120	2	30
Toluene	N.D.	0.0200	0.0218	0.0200	0.0215	109	108	80-120	1	30
1,1,1-Trichloroethane	N.D.	0.0200	0.0212	0.0200	0.0208	106	104	67-126	2	30
1,1,2-Trichloroethane	N.D.	0.0200	0.0224	0.0200	0.0216	112	108	80-120	4	30
Trichloroethene	N.D.	0.0200	0.0218	0.0200	0.0214	109	107	80-120	2	30
Trichlorofluoromethane	N.D.	0.0200	0.0245	0.0200	0.0238	123	119	55-135	3	30
1,2,4-Trimethylbenzene	N.D.	0.0200	0.0218	0.0200	0.0216	109	108	75-120	1	30
1,3,5-Trimethylbenzene	N.D.	0.0200	0.0221	0.0200	0.0220	111	110	75-120	1	30
Vinyl Chloride	N.D.	0.0200	0.0245	0.0200	0.0237	122*	119	56-120	3	30
Xylene (Total)	N.D.	0.0600	0.0677	0.0600	0.0669	113	112	80-120	1	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 20143WAA026	Sample number(s): 1316581-1316583,1316589,1316591,1316593 UNSPK: 1316581									
Acenaphthene	0.000550	0.0519	0.0441	0.0517	0.0437	84	83	52-114	1	30
Acenaphthylene	N.D.	0.0519	0.0423	0.0517	0.0427	81	83	56-127	1	30
Acetophenone	N.D.	0.0519	0.0434	0.0517	0.0442	84	86	61-114	2	30
Anthracene	N.D.	0.0519	0.0455	0.0517	0.0469	88	91	67-116	3	30
Atrazine	N.D.	0.0519	0.0461	0.0517	0.0477	89	92	71-133	3	30
Benzaldehyde	N.D.	0.0519	0.0445	0.0517	0.0442	86	86	55-116	1	30
Benzidine	N.D.	0.259	0.110	0.258	0.102	42	39	25-77	8	30
Benzo(a)anthracene	N.D.	0.0519	0.0506	0.0517	0.0510	98	99	68-123	1	30
Benzo(a)pyrene	N.D.	0.0519	0.0479	0.0517	0.0474	92	92	71-117	1	30
Benzo(b)fluoranthene	N.D.	0.0519	0.0485	0.0517	0.0477	94	92	69-121	2	30
Benzo(g,h,i)perylene	N.D.	0.0519	0.0395	0.0517	0.0414	76	80	60-119	5	30
Benzo(k)fluoranthene	N.D.	0.0519	0.0468	0.0517	0.0492	90	95	69-122	5	30
1,1'-Biphenyl	N.D.	0.0519	0.0422	0.0517	0.0423	81	82	56-109	0	30
Butylbenzylphthalate	N.D.	0.0519	0.0476	0.0517	0.0472	92	91	40-133	1	30
Di-n-butylphthalate	N.D.	0.0519	0.0467	0.0517	0.0473	90	92	58-125	1	30
Caprolactam	N.D.	0.0519	0.0140	0.0517	0.0150	27	29	10-57	7	30
Carbazole	N.D.	0.0519	0.0482	0.0517	0.0490	93	95	64-127	2	30
bis(2-Chloroethyl)ether	N.D.	0.0519	0.0391	0.0517	0.0395	75	76	58-108	1	30
bis(2-Chloroisopropyl)ether	N.D.	0.0519	0.0392	0.0517	0.0399	76	77	44-108	2	30
2-Chloronaphthalene	N.D.	0.0519	0.0445	0.0517	0.0450	86	87	51-107	1	30
2-Chlorophenol	N.D.	0.0519	0.0403	0.0517	0.0393	78	76	57-105	3	30
Chrysene	N.D.	0.0519	0.0463	0.0517	0.0473	89	92	65-121	2	30
Dibenz(a,h)anthracene	N.D.	0.0519	0.0435	0.0517	0.0451	84	87	63-128	4	30
Dibenzofuran	N.D.	0.0519	0.0449	0.0517	0.0448	87	87	60-112	0	30
1,2-Dichlorobenzene	N.D.	0.0519	0.0367	0.0517	0.0381	71	74	35-104	4	30
1,3-Dichlorobenzene	N.D.	0.0519	0.0351	0.0517	0.0369	68	72	28-103	5	30
1,4-Dichlorobenzene	N.D.	0.0519	0.0360	0.0517	0.0371	69	72	34-97	3	30
3,3'-Dichlorobenzidine	N.D.	0.0519	0.0259	0.0517	0.0278	50	54	42-107	7	30
2,4-Dichlorophenol	N.D.	0.0519	0.0458	0.0517	0.0448	88	87	65-110	2	30
Diethylphthalate	N.D.	0.0519	0.0496	0.0517	0.0467	96	90	42-126	6	30
2,4-Dimethylphenol	N.D.	0.0519	0.0387	0.0517	0.0388	75	75	53-93	0	30
Dimethylphthalate	N.D.	0.0519	0.0462	0.0517	0.0414	89	80	10-134	11	30
4,6-Dinitro-2-methylphenol	N.D.	0.0519	0.0479	0.0517	0.0494	92	96	63-129	3	30
2,4-Dinitrophenol	N.D.	0.104	0.0894	0.103	0.0852	86	82	44-134	5	30
2,4-Dinitrotoluene	N.D.	0.0519	0.0501	0.0517	0.0476	97	92	66-122	5	30
2,6-Dinitrotoluene	N.D.	0.0519	0.0491	0.0517	0.0469	95	91	71-120	5	30
1,2-Diphenylhydrazine	N.D.	0.0519	0.0472	0.0517	0.0491	91	95	64-120	4	30
bis(2-Ethylhexyl)phthalate	N.D.	0.0519	0.0474	0.0517	0.0484	91	94	61-129	2	30
Fluoranthene	N.D.	0.0519	0.0480	0.0517	0.0494	93	96	63-122	3	30
Fluorene	N.D.	0.0519	0.0474	0.0517	0.0464	91	90	56-115	2	30
Hexachlorobenzene	N.D.	0.0519	0.0464	0.0517	0.0490	89	95	60-117	6	30
Hexachlorobutadiene	N.D.	0.0519	0.0432	0.0517	0.0452	83	87	20-108	4	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Hexachlorocyclopentadiene	N.D.	0.104	0.0491	0.103	0.0493	47	48	10-91	1	30
Hexachloroethane	N.D.	0.0519	0.0351	0.0517	0.0366	68	71	23-95	4	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0519	0.0414	0.0517	0.0434	80	84	59-123	5	30
Isophorone	N.D.	0.0519	0.0452	0.0517	0.0460	87	89	63-120	2	30
2-Methylnaphthalene	N.D.	0.0519	0.0424	0.0517	0.0438	82	85	51-107	3	30
2-Methylphenol	N.D.	0.0519	0.0424	0.0517	0.0403	82	78	53-107	5	30
4-Methylphenol	N.D.	0.0519	0.0426	0.0517	0.0388	82	75	49-108	9	30
Naphthalene	0.000660	0.0519	0.0409	0.0517	0.0429	78	82	51-102	5	30
2-Nitroaniline	N.D.	0.0519	0.0488	0.0517	0.0485	94	94	66-126	1	30
Nitrobenzene	N.D.	0.0519	0.0456	0.0517	0.0459	88	89	59-109	1	30
N-Nitrosodimethylamine	N.D.	0.0519	0.0255	0.0517	0.0271	49	52	17-101	6	30
N-Nitroso-di-n-propylamine	N.D.	0.0519	0.0443	0.0517	0.0458	85	89	58-120	3	30
N-Nitrosodiphenylamine	N.D.	0.0519	0.0469	0.0517	0.0481	90	93	60-126	3	30
Di-n-octylphthalate	N.D.	0.0519	0.0468	0.0517	0.0474	90	92	60-136	1	30
Pentachlorophenol	N.D.	0.0519	0.0506	0.0517	0.0519	98	100	54-131	3	30
Phenanthrene	N.D.	0.0519	0.0457	0.0517	0.0466	88	90	65-113	2	30
Phenol	N.D.	0.0519	0.0302	0.0517	0.0250	58	48	19-79	19	30
Pyrene	N.D.	0.0519	0.0452	0.0517	0.0459	87	89	65-115	1	30
Pyridine	N.D.	0.0519	0.0205	0.0517	0.0200	40	39	23-64	3	30
1,2,4-Trichlorobenzene	N.D.	0.0519	0.0412	0.0517	0.0419	80	81	34-106	2	30
2,4,5-Trichlorophenol	N.D.	0.0519	0.0503	0.0517	0.0487	97	94	66-118	3	30
2,4,6-Trichlorophenol	N.D.	0.0519	0.0483	0.0517	0.0455	93	88	69-117	6	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 20139WAC026	Sample number(s): 1316581-1316583,1316589,1316591,1316593 UNSPK: 1316581									
1,4-Dioxane	0.118	1.03	0.562	1.01	0.568	43	45	18-91	1	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201400007A	Sample number(s): 1316581-1316583,1316589,1316591,1316593 UNSPK: 1316581									
2,4-D	N.D.	0.00242	0.00385	0.00241	0.00410	159*	170*	70-134	6	30
2,4,5-T	N.D.	0.000241	0.000452	0.000241	0.000488	187*	203*	69-164	8	30
2,4,5-TP	N.D.	0.000241	0.000387	0.000241	0.000419	160*	174*	81-137	8	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201390007A	Sample number(s): 1316581-1316583,1316589,1316591,1316593 UNSPK: 1316581									
PCB-1016	N.D.	0.00505	0.00455	0.00507	0.00480	90	95	60-117	5	30
PCB-1260	N.D.	0.00505	0.00447	0.00507	0.00467	89	92	57-134	4	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201430006A	Sample number(s): 1316581-1316583,1316589,1316591,1316593 UNSPK: 1316581									
Aldrin	N.D.	0.000101	0.000627	0.000103	0.000748	62	72	28-119	18	30

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Alpha BHC	N.D.	0.000102	0.0000916	0.000105	0.0000985	90	94	47-132	7	30
Beta BHC	N.D.	0.000101	0.0000932	0.000103	0.000104	92	101	27-143	11	30
Gamma BHC - Lindane	N.D.	0.000101	0.0000893	0.000103	0.0000992	89	96	29-136	10	30
Alpha Chlordane	N.D.	0.000101	0.0000822	0.000103	0.0000950	82	92	28-136	14	30
4,4'-Ddd	N.D.	0.000203	0.000157	0.000208	0.000184	77	89	42-148	16	30
4,4'-Dde	N.D.	0.000202	0.000155	0.000207	0.000189	77	91	22-138	20	30
4,4'-Ddt	N.D.	0.000203	0.000205	0.000208	0.000239	101	115	40-145	15	30
Delta BHC	N.D.	0.000101	0.0000871	0.000103	0.0000978	86	95	28-141	12	30
Dieldrin	N.D.	0.000202	0.000167	0.000207	0.000183	83	89	31-145	9	30
Endosulfan I	N.D.	0.000101	0.0000867	0.000103	0.0000961	86	93	40-138	10	30
Endosulfan II	N.D.	0.000202	0.000181	0.000207	0.000215	90	104	27-138	17	30
Endosulfan Sulfate	N.D.	0.000202	0.000191	0.000207	0.000219	94	106	41-133	14	30
Endrin	N.D.	0.000202	0.000175	0.000207	0.000190	87	92	35-143	8	30
Heptachlor	N.D.	0.000101	0.0000651	0.000103	0.0000788	65	76	38-135	19	30

ng/l ng/l ng/l ng/l ng/l

Batch number: 20138002	Sample number(s): 1316581-1316583,1316589,1316591,1316593 UNSPK: 1316581									
6:2-Fluorotelomersulfonic acid	N.D.	241.06	225.18	240.49	227.49	93	95	56-140	1	30
8:2-Fluorotelomersulfonic acid	N.D.	243.45	228.34	242.87	233.58	94	96	58-143	2	30
NEtFOSAA	N.D.	254.17	250.11	253.57	243.44	98	96	53-140	3	30
NMeFOSAA	N.D.	254.17	273.75	253.57	283.02	108	112	59-141	3	30
Perfluorobutanesulfonic acid	N.D.	224.78	204.81	224.25	209.6	91	93	67-135	2	30
Perfluorobutanoic acid	N.D.	254.17	218.05	253.57	215.98	86	85	63-160	1	30
Perfluorodecanesulfonic acid	N.D.	244.64	214.27	244.06	211.98	88	87	62-135	1	30
Perfluorodecanoic acid	N.D.	254.17	249.79	253.57	243.46	98	96	66-141	3	30
Perfluorododecanoic acid	N.D.	254.17	242.86	253.57	237.64	96	94	65-143	2	30
Perfluoroheptanesulfonic acid	N.D.	241.86	212.72	241.28	211.89	88	88	67-138	0	30
Perfluoroheptanoic acid	8.78	254.17	245.43	253.57	245.94	93	94	69-144	0	30
Perfluorohexanesulfonic acid	N.D.	240.27	205.93	239.7	215.22	86	90	63-132	4	30
Perfluorohexanoic acid	10.72	254.17	254.51	253.57	242.81	96	92	69-139	5	30
Perfluorononanoic acid	N.D.	254.17	250.58	253.57	243.71	99	96	66-144	3	30
Perfluorooctanesulfonamide	N.D.	254.17	241.89	253.57	231.22	95	91	67-126	5	30
Perfluorooctanesulfonic acid	N.D.	243.05	199.54	242.47	200.8	82	83	53-129	1	30
Perfluorooctanoic acid	51.79	254.17	282.57	253.57	277.52	91	89	67-139	2	30
Perfluoropentanoic acid	11.69	254.17	237.21	253.57	237.25	89	89	73-135	0	30
Perfluorotetradecanoic acid	N.D.	254.17	248.57	253.57	245.02	98	97	69-141	1	30

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/l	MS Spike Added ng/l	MS Conc ng/l	MSD Spike Added ng/l	MSD Conc ng/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Perfluorotridecanoic acid	N.D.	254.17	240.89	253.57	227.79	95	90	66-146	6	30
Perfluoroundecanoic acid	N.D.	254.17	251.28	253.57	251.21	99	99	66-140	0	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201390571301	Sample number(s): 1316581-1316584 UNSPK: 1316581									
Mercury	N.D.	0.00100	0.000942	0.00100	0.000944	94	94	80-120	0	20
Batch number: 201390571302	Sample number(s): 1316585-1316593 UNSPK: 1316585									
Mercury	N.D.	0.00100	0.000908	0.00100	0.000874	91	87	80-120	4	20
Batch number: 201391404403	Sample number(s): 1316581-1316584 UNSPK: 1316581									
Silver	N.D.	0.0200	0.0201	0.0200	0.0200	100	100	75-125	1	20
Batch number: 201391404404	Sample number(s): 1316585-1316593 UNSPK: 1316585									
Silver	N.D.	0.0200	0.0208	0.0200	0.0209	104	105	75-125	1	20
Batch number: 201391404703A	Sample number(s): 1316581-1316584 UNSPK: 1316581									
Arsenic	0.00304	0.0100	0.0132	0.0100	0.0140	102	110	75-125	6	20
Barium	0.325	0.0500	0.346	0.0500	0.350	41 (2)	49 (2)	75-125	1	20
Beryllium	N.D.	0.00400	0.00389	0.00400	0.00390	97	98	75-125	0	20
Cadmium	N.D.	0.00500	0.00511	0.00500	0.00526	102	105	75-125	3	20
Chromium	0.00206	0.0500	0.0491	0.0500	0.0509	94	98	75-125	4	20
Copper	0.00569	0.0500	0.0556	0.0500	0.0572	100	103	75-125	3	20
Lead	0.0215	0.00500	0.0318	0.00500	0.0393	205 (2)	355 (2)	75-125	21*	20
Manganese	0.352	0.0500	0.427	0.0500	0.430	150 (2)	156 (2)	75-125	1	20
Nickel	0.00185	0.0500	0.0525	0.0500	0.0542	101	105	75-125	3	20
Selenium	0.000326	0.0100	0.0108	0.0100	0.0109	104	106	75-125	1	20
Zinc	0.0444	0.500	0.554	0.500	0.583	102	108	75-125	5	20
Batch number: 201391404704A	Sample number(s): 1316585-1316593 UNSPK: 1316585									
Arsenic	0.00176	0.0100	0.0119	0.0100	0.0115	101	98	75-125	3	20
Barium	0.283	0.0500	0.370	0.0500	0.412	173 (2)	258 (2)	75-125	11	20
Beryllium	N.D.	0.00400	0.00396	0.00400	0.00386	99	96	75-125	3	20
Cadmium	N.D.	0.00500	0.00538	0.00500	0.00515	108	103	75-125	4	20
Chromium	0.000665	0.0500	0.0470	0.0500	0.0470	93	93	75-125	0	20
Copper	N.D.	0.0500	0.0485	0.0500	0.0480	97	96	75-125	1	20
Lead	0.000151	0.00500	0.00524	0.00500	0.00515	102	100	75-125	2	20
Manganese	0.310	0.0500	0.328	0.0500	0.298	36 (2)	-24 (2)	75-125	10	20
Nickel	0.00119	0.0500	0.0505	0.0500	0.0516	99	101	75-125	2	20
Selenium	N.D.	0.0100	0.0106	0.0100	0.0110	106	110	75-125	3	20
Zinc	0.0115	0.500	0.529	0.500	0.547	104	107	75-125	3	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 20141117101A	Sample number(s): 1316581-1316582,1316584 UNSPK: 1316581									

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Total Cyanide (water)	N.D.	0.200	0.223			112		72-114		
Batch number: 20141117101B	Sample number(s): 1316589,1316591,1316593 UNSPK: 1316589									
Total Cyanide (water)	N.D.	0.200	0.198			99		72-114		
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 20137027601A	Sample number(s): 1316581-1316584,1316589,1316591,1316593 UNSPK: 1316581									
Hexavalent Chromium	N.D.	0.200	N.D.	0.200	N.D.	0*	0*	85-115	0	5

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 201390571301	Sample number(s): 1316581-1316584 BKG: 1316581			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 201390571302	Sample number(s): 1316585-1316593 BKG: 1316585			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 201391404403	Sample number(s): 1316581-1316584 BKG: 1316581			
Silver	N.D.	N.D.	0 (1)	20
Batch number: 201391404404	Sample number(s): 1316585-1316593 BKG: 1316585			
Silver	N.D.	N.D.	0 (1)	20
Batch number: 201391404703A	Sample number(s): 1316581-1316584 BKG: 1316581			
Arsenic	0.00304	0.00285	6 (1)	20
Barium	0.325	0.319	2	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.00206	0.00197	5 (1)	20
Copper	0.00569	0.00568	0	20
Lead	0.0215	0.0215	0	20
Manganese	0.352	0.340	4	20
Nickel	0.00185	0.00198	7 (1)	20
Selenium	0.000326	0.000337	3 (1)	20
Zinc	0.0444	0.0424	5 (1)	20
Batch number: 201391404704A	Sample number(s): 1316585-1316593 BKG: 1316585			
Arsenic	0.00176	0.00161	9 (1)	20

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Barium	0.283	0.280	1	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.000665	0.000588	12 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	0.000151	0.000123	21* (1)	20
Manganese	0.310	0.302	3	20
Nickel	0.00119	0.00106	12 (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Zinc	0.0115	0.0111	4 (1)	20
mg/l				
Batch number: 20141117101A	Sample number(s): 1316581-1316582,1316584 BKG: 1316581			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20
mg/l				
Batch number: 20141117101B	Sample number(s): 1316589,1316591,1316593 BKG: 1316589			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20
mg/l				
Batch number: 20137027601A	Sample number(s): 1316581-1316584,1316589,1316591,1316593 BKG: 1316581			
Hexavalent Chromium	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260C
Batch number: 5201422AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1316581	97	103	100	97
1316582	99	102	101	100
1316583	99	101	101	100
1316589	97	102	100	96
1316591	97	103	100	97
Blank	97	104	99	95
LCS	99	101	101	99
MS	99	102	101	100
MSD	99	101	101	100
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260C
Batch number: N201412AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1316593	95	99	89	88
1316595	94	97	98	89
Blank	94	94	98	90
LCS	90	99	98	91
LCSD	93	95	99	92
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 1,4-Dioxane 8270D SIM add-on
Batch number: 20139WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1316581	79	86	82
1316582	97	94	98
1316583	88	97	98
1316589	89	28	81
1316591	86	44	78
1316593	82	79	75
Blank	83	81	86
LCS	72	81	70
MS	97	94	98
MSD	88	97	98
Limits:	34-125	10-138	15-121

Analysis Name: TCL SW846 8270D MINI
Batch number: 20143WAA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1316581	36	42	92	75	71	90
1316582	52	55	98	82	78	88
1316583	43	52	95	85	80	94
1316589	12	21	63	79	76	90
1316591	16	21	70	71	70	93
1316593	34	47	93	77	74	96
Blank	26	37	88	66	61	78
LCS	42	58	96	83	78	96
MS	52	55	98	82	78	88
MSD	43	52	95	85	80	94
Limits:	10-67	10-84	18-141	38-113	44-102	34-128

Analysis Name: 7 PCBs + Total Water
Batch number: 201390007A

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7 PCBs + Total Water
Batch number: 201390007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1316581	69	54	73	52
1316582	65	52	70	55
1316583	68	47	74	48
1316589	67	94	71	96
1316591	73	75	79	75
1316593	62	35	63	33
Blank	66	68	72	67
LCS	46	70	50	72
MS	65	52	70	55
MSD	68	47	74	48
Limits:	33-137	10-148	33-137	10-148

Analysis Name: Herbicides in Water 8151A
Batch number: 201400007A

	2,4-DCAA-D1	2,4-DCAA-D2
1316581	122	117
1316582	133	120
1316583	138	133
1316589	124	127
1316591	119	122
1316593	123	123
Blank	81	80
LCS	139	141
MS	133	120
MSD	138	133
Limits:	34-142	34-142

Analysis Name: NY Part 375 Pests Water
Batch number: 201430006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1316581	57	30*	55	32
1316582	71	42	67	44
1316583	81	43	74	44
1316589	83	93	79	99
1316591	73	82	73	87
1316593	83	51	82	54
Blank	69	67	68	74
LCS	78	69	76	73
MS	71	42	67	44
MSD	81	43	74	44

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NY Part 375 Pests Water
Batch number: 201430006A

Limits: 29-129 32-149 29-129 32-149

Analysis Name: NY 21 PFAS Water
Batch number: 20138002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1316581	108	102	103	107	103	103
1316582	112	115	118	107	107	112
1316583	98	99	100	100	99	101
1316589	108	117	123	105	105	111
1316591	102	103	104	100	103	102
1316593	107	103	104	102	106	104
Blank	108	105	103	102	104	100
LCS	105	102	104	104	96	94
MS	112	115	118	107	107	112
MSD	98	99	100	100	99	101
Limits:	43-130	38-150	23-175	36-137	35-143	33-140
	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1316581	163	106	108	117	108	150
1316582	161	113	108	116	107	144
1316583	143	102	95	101	99	130
1316589	149	111	110	115	105	115
1316591	107	106	101	98	103	100
1316593	112	107	108	101	111	105
Blank	109	105	106	101	113	108
LCS	101	103	107	103	104	102
MS	161	113	108	116	107	144
MSD	143	102	95	101	99	130
Limits:	29-182	52-124	52-121	48-130	50-124	37-169
	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1316581	106	112	128	107	101	90
1316582	114	110	127	106	104	93
1316583	102	104	120	102	96	91
1316589	111	113	126	103	102	98
1316591	113	116	128	108	105	103
1316593	117	120	124	114	109	101
Blank	121	114	125	117	111	105
LCS	118	117	127	113	109	101
MS	114	110	127	106	104	93

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/27/2020 08:01

Group Number: 2099869

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Water
Batch number: 20138002

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
MSD	102	104	120	102	96	91
Limits:	36-143	44-128	42-149	36-127	21-134	10-134

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



Client: Lanagn, DPC

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/16/2020
 Number of Packages: 7 Number of Projects: 4
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp)* All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples	
									Collected Same	Day as Receipt?
1	Water	46730061WS	20.6	IR	Wet	Y	Bagged	Y	Y	Y
2	Water	46730061WS	6.0	IR	Wet	Y	Bagged	N	N	N
3	Water	46730061WS	12.1	IR	Wet	Y	Bagged	Y	Y	Y
4	Water	46730061WS	4.1	IR	Wet	Y	Bagged	N	N	N
5	Water	46730061WS	8.2	IR	Wet	Y	Bagged	Y	Y	Y
6	Soil	46730061WS	-0.2	IR	Wet	Y	Bagged	N	N	N
7	Soil	46730061WS	4.2	IR	Wet	Y	Bagged	N	N	N

General Comments: Samples not frozen.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: May 28, 2020 08:33

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2100197
SDG: CMS12
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MW16_052020 Groundwater	05/20/2020 07:55	1317993
MW16_052020 Filtered Groundwater	05/20/2020 07:55	1317994
MW18_052020 Groundwater	05/20/2020 13:05	1317995
MW18_052020 Filtered Groundwater	05/20/2020 13:05	1317996
MW19_052020 Groundwater	05/20/2020 10:10	1317997
MW19_052020 Filtered Groundwater	05/20/2020 10:10	1317998
GWDUP01_052020 Groundwater	05/20/2020	1317999
GWDUP01_052020 Filtered Groundwater	05/20/2020	1318000
GWFB02_052020 Water	05/20/2020 14:30	1318001
GWTB02_052020 Water	05/20/2020	1318002

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2100197

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260C, GC/MS Volatiles**

Sample #s: 1317993, 1317995, 1317997

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1317999

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

Sample #s: 1317995

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

Batch #: 20147WAC026 (Sample number(s): 1317995, 1317999)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window:
2-Nitroaniline, 2,4-Dimethylphenol, 2,4,6-Trichlorophenol, Isophorone, 2,6-Dinitrotoluene, Benzidine

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 1317993, 1317995, 1317997, 1317999, 1318001

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Batch #: 20143WAC026 (Sample number(s): 1317993, 1317995, 1317997, 1317999, 1318001)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) LCS

SW-846 8082A, PCBs

Sample #s: 1317993, 1317995, 1317997, 1317999

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 201430007A (Sample number(s): 1317993, 1317995, 1317997, 1317999)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: PCB-1016, PCB-1260

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: PCB-1016, PCB-1260

SW-846 8151A, Herbicides

Sample #s: 1317993, 1317995, 1317997

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Sample #s: 1317999

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

Batch #: 201430018A (Sample number(s): 1317993, 1317995, 1317997, 1317999)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 2,4-D, 2,4,5-TP, 2,4,5-T

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1317999

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Acetone	67-64-1	0.001 J	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	0.001 J	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.0004 J	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
<p>A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.</p>						
GC/MS Semivolatiles			SW-846 8270D	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.0001	0.0006	1
14242	Acenaphthylene	208-96-8	N.D.	0.0001	0.0006	1
14242	Acetophenone	98-86-2	N.D.	0.005	0.012	1
14242	Anthracene	120-12-7	N.D.	0.0001	0.0006	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.006	1
14242	Benzaldehyde	100-52-7	N.D.	0.004	0.012	1
14242	Benzidine	92-87-5	N.D.	0.024	0.071	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.0001	0.0006	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.0001	0.0006	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.0001	0.0006	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0006	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.0001	0.0006	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.004	0.012	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.006	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.006	1
14242	Caprolactam	105-60-2	N.D.	0.006	0.013	1
14242	Carbazole	86-74-8	N.D.	0.0006	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0006	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0006	0.002	1
<p>Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.</p>						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0005	0.001	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0006	0.002	1
14242	Chrysene	218-01-9	N.D.	0.0001	0.0006	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/l	mg/l	mg/l	
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0006	1
14242	Dibenzofuran	132-64-9	N.D.	0.0006	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0006	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0006	0.002	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0006	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.004	0.012	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0006	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.006	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.004	0.012	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.006	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.01	0.025	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.017	0.036	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.001	0.006	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0006	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.001	0.006	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0006	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.006	0.013	1
14242	Fluoranthene	206-44-0	N.D.	0.0001	0.0006	1
14242	Fluorene	86-73-7	N.D.	0.0001	0.0006	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0006	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0006	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.006	0.013	1
14242	Hexachloroethane	67-72-1	N.D.	0.001	0.006	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0001	0.0006	1
14242	Isophorone	78-59-1	N.D.	0.0006	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0006	1
14242	2-Methylphenol	95-48-7	N.D.	0.0006	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0006	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	N.D.	0.0001	0.0006	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.008	1
14242	Nitrobenzene	98-95-3	N.D.	0.0006	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.006	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0008	0.004	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0008	0.004	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.006	0.013	1
14242	Pentachlorophenol	87-86-5	N.D.	0.001	0.006	1
14242	Phenanthrene	85-01-8	N.D.	0.0001	0.0006	1
14242	Phenol	108-95-2	N.D.	0.0006	0.002	1
14242	Pyrene	129-00-0	N.D.	0.0001	0.0006	1
14242	Pyridine	110-86-1	N.D.	0.002	0.006	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0006	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0006	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0006	0.002	1
GC/MS Semivolatiles SW-846 8270D SIM						
14244	1,4-Dioxane	123-91-1	N.D.	0.1	0.4	1
The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.						
Herbicides SW-846 8151A						
10407	2,4-D	94-75-7	N.D. D2	0.00025	0.00059	1
10407	2,4,5-T	93-76-5	N.D. D1	0.000064	0.00015	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.0000099	0.000049	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A						
10591	PCB-1016	12674-11-2	N.D. D1	0.00017	0.00086	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00017	0.00086	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00034	0.00086	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00017	0.00086	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00017	0.00086	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00017	0.00086	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00026	0.00086	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00017	0.00086	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
Pesticides SW-846 8081B						
10589	Aldrin	309-00-2	N.D. D1	0.0000023	0.000011	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0000034	0.000011	1
10589	Beta BHC	319-85-7	N.D. D2	0.0000039	0.000011	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0000023	0.000011	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides			SW-846 8081B	mg/l	mg/l	
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000034	0.000011	1
10589	4,4'-Ddd	72-54-8	N.D. D2	0.0000057	0.000023	1
10589	4,4'-Dde	72-55-9	N.D. D2	0.0000057	0.000023	1
10589	4,4'-Ddt	50-29-3	N.D. D1	0.0000060	0.000023	1
10589	Delta BHC	319-86-8	N.D. D1	0.0000039	0.000011	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000061	0.000023	1
10589	Endosulfan I	959-98-8	N.D. D2	0.0000049	0.000011	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000017	0.000046	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000067	0.000023	1
10589	Endrin	72-20-8	N.D. D1	0.0000093	0.000034	1
10589	Heptachlor	76-44-8	N.D. D1	0.0000023	0.000011	1
LC/MS/MS Miscellaneous			EPA 537 Version 1.1 Modified	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.8	4.4	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.88	2.6	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.44	2.6	1
			NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.			
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.53	1.8	1
			NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.			
14473	Perfluorobutanesulfonic acid ¹	375-73-5	5.0	0.44	1.8	1
14473	Perfluorobutanoic acid ¹	375-22-4	13	1.8	4.4	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.44	1.8	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.44	1.8	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.44	1.8	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.44	1.8	1
14473	Perfluoroheptanoic acid ¹	375-85-9	4.1	0.44	1.8	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	0.90 J	0.44	1.8	1
14473	Perfluorohexanoic acid ¹	307-24-4	12	0.44	1.8	1
14473	Perfluorononanoic acid ¹	375-95-1	0.51 J	0.44	1.8	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.44	1.8	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	2.0	0.44	1.8	1
14473	Perfluorooctanoic acid ¹	335-67-1	16	0.44	1.8	1
14473	Perfluoropentanoic acid ¹	2706-90-3	18	0.44	1.8	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.44	1.8	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.44	1.8	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.44	1.8	1
Metals			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		SW-846 6020B Rev.2, July 2014		mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0223	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0767	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D. K4	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00078 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	0.00092	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.644	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0034	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.0063 J	0.0062	0.0100	1
		SW-846 7470A		mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1
Wet Chemistry		SW-846 9012B		mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
		SW-846 7196A		mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201473AA	05/26/2020 22:59	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201473AA	05/26/2020 22:58	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 16:15	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20143WAC026	05/26/2020 13:08	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20143WAC026	05/22/2020 18:50	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201430018A	05/26/2020 22:40	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201430007A	05/26/2020 11:38	Covenant Mutuku	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/27/2020 00:14	James Patrushev	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317993
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201430007A	05/22/2020 20:15	Oswaldo R Sanchez	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201430018A	05/25/2020 20:05	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20142002	05/22/2020 16:33	Jason W Knight	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20142002	05/21/2020 07:00	Pamela Rothharp	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:37	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:38	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201480282801	05/27/2020 09:18	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:21	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:23	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:38	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:12	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:18	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1
08255	Total Cyanide (water)	SW-846 9012B	1	20148117101A	05/27/2020 10:45	Jonathan Saul	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20148117101A	05/27/2020 08:00	Nancy J Shoop	1
00276	Hexavalent Chromium	SW-846 7196A	1	20142027601A	05/21/2020 02:45	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317994
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0083	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0304	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	N.D.	0.00033	0.0020	1
06033	Copper	7440-50-8	N.D.	0.00036	0.0010	1
06035	Lead	7439-92-1	N.D.	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.262	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0012	0.00060	0.0010	1
06041	Selenium	7782-49-2	N.D.	0.00028	0.0010	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:27	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:31	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:11	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW16_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317994
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 07:55
SDG#: CMS12-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:11	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:31	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:02	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:30	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
		SW-846 8260C				
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.0005 J	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
SW-846 8260C						
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
<p>A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.</p>						
GC/MS Semivolatiles			mg/l	mg/l	mg/l	
SW-846 8270D						
14242	Acenaphthene	83-32-9	N.D.	0.00009	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.00009	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.009	1
14242	Anthracene	120-12-7	N.D.	0.00009	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.009	1
14242	Benzidine	92-87-5	N.D.	0.019	0.056	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.00009	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.00009	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.00009	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00009	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.00009	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.009	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.010	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
<p>Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.</p>						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.0009	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.00009	0.0005	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
			mg/l	mg/l	mg/l	
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00009	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.009	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.009	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.007	0.020	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.013	0.028	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.0009	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.0009	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.010	1
14242	Fluoranthene	206-44-0	N.D.	0.00009	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.00009	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.00009	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.010	1
14242	Hexachloroethane	67-72-1	N.D.	0.0009	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00009	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.00009	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	N.D.	0.00009	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/l	mg/l	mg/l	
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005	0.010	1
14242	Pentachlorophenol	87-86-5	N.D.	0.0009	0.005	1
14242	Phenanthrene	85-01-8	N.D.	0.00009	0.0005	1
14242	Phenol	108-95-2	0.0007 J	0.0005	0.002	1
14242	Pyrene	129-00-0	N.D.	0.00009	0.0005	1
14242	Pyridine	110-86-1	N.D.	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005	0.002	1

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

GC/MS Semivolatiles	SW-846 8270D SIM	ug/l	ug/l	ug/l		
14244	1,4-Dioxane	123-91-1	N.D.	0.09	0.3	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Herbicides	SW-846 8151A	mg/l	mg/l	mg/l		
10407	2,4-D	94-75-7	N.D. D2	0.00024	0.00057	1
10407	2,4,5-T	93-76-5	N.D. D1	0.000062	0.00014	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.0000096	0.000048	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

PCBs	SW-846 8082A	mg/l	mg/l	mg/l		
10591	PCB-1016	12674-11-2	N.D. D1	0.00014	0.00069	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00014	0.00069	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00028	0.00069	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00014	0.00069	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00014	0.00069	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00014	0.00069	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00021	0.00069	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00014	0.00069	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
Pesticides		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Aldrin	309-00-2	N.D. D1	0.0000018	0.0000092	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0000028	0.0000092	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000031	0.0000092	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0000018	0.0000092	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000028	0.0000092	1
10589	4,4'-Ddd	72-54-8	N.D. D1	0.0000046	0.000018	1
10589	4,4'-Dde	72-55-9	N.D. D2	0.0000046	0.000018	1
10589	4,4'-Ddt	50-29-3	N.D. D2	0.0000048	0.000018	1
10589	Delta BHC	319-86-8	N.D. D1	0.0000031	0.0000092	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000049	0.000018	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0000040	0.0000092	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000014	0.000037	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000054	0.000018	1
10589	Endrin	72-20-8	N.D. D2	0.0000075	0.000028	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000018	0.0000092	1
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.7	4.4	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.87	2.6	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.44	2.6	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.52	1.7	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	8.0	0.44	1.7	1
14473	Perfluorobutanoic acid ¹	375-22-4	33	1.7	4.4	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.44	1.7	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.44	1.7	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.44	1.7	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	0.87 J	0.44	1.7	1
14473	Perfluoroheptanoic acid ¹	375-85-9	29	0.44	1.7	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	5.0	0.44	1.7	1
14473	Perfluorohexanoic acid ¹	307-24-4	77	0.44	1.7	1
14473	Perfluorononanoic acid ¹	375-95-1	12	0.44	1.7	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	0.58 J	0.44	1.7	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	25	0.44	1.7	1
14473	Perfluorooctanoic acid ¹	335-67-1	170	0.44	1.7	1
14473	Perfluoropentanoic acid ¹	2706-90-3	110	0.44	1.7	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.44	1.7	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.44	1.7	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous						
EPA 537 Version 1.1 Modified			ng/l	ng/l	ng/l	
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.44	1.7	1
Metals						
SW-846 6010D Rev.4, July 2014			mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014			mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0043	0.00068	0.0020	1
06026	Barium	7440-39-3	0.130	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D. K4	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0015	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00050 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0025	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0021	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.912	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0102	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0020	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.405	0.0062	0.0100	1
SW-846 7470A			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1
Wet Chemistry						
SW-846 9012B			mg/l	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
SW-846 7196A			mg/l	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201473AA	05/27/2020 01:43	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201473AA	05/27/2020 01:42	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20147WAC026	05/27/2020 12:39	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20143WAC026	05/26/2020 13:36	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20147WAC026	05/26/2020 19:30	Oswaldo R Sanchez	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20143WAC026	05/22/2020 18:50	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201430018A	05/26/2020 23:13	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201430007A	05/26/2020 11:49	Covenant Mutuku	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/27/2020 00:26	James Patrushev	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201430007A	05/22/2020 20:15	Oswaldo R Sanchez	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201430018A	05/25/2020 20:05	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20142002	05/22/2020 16:42	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20142002	05/21/2020 07:00	Pamela Rothharp	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:56	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:48	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201480282801	05/27/2020 09:18	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:50	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:52	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:48	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:24	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:42	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1
08255	Total Cyanide (water)	SW-846 9012B	1	20148117101A	05/27/2020 10:46	Jonathan Saul	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317995
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59

Collection Date/Time: 05/20/2020 13:05

SDG#: CMS12-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08256	Cyanide Water Distillation	SW-846 9012B	1	20148117101A	05/27/2020 08:00	Nancy J Shoop	1
00276	Hexavalent Chromium	SW-846 7196A	1	20142027601A	05/21/2020 02:45	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317996
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 13:05
SDG#: CMS12-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved			SW-846 6010D Rev.4, July 2014	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0043	0.00068	0.0020	1
06026	Barium	7440-39-3	0.134	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D. K4	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0013	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00044 J	0.00033	0.0020	1
06033	Copper	7440-50-8	0.0012	0.00036	0.0010	1
06035	Lead	7439-92-1	0.00040 J	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.926	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0101	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0020	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.414	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:43	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:46	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:45	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW18_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317996
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59

Collection Date/Time: 05/20/2020 13:05

SDG#: CMS12-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:47	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:46	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:21	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:38	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			SW-846 8260C	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
<p>A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.</p>						
GC/MS Semivolatiles			SW-846 8270D	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.00009	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.00009	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.009	1
14242	Anthracene	120-12-7	N.D.	0.00009	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.009	1
14242	Benzidine	92-87-5	N.D.	0.019	0.056	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.00009	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.00009	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.00009	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00009	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.00009	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.009	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.010	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
<p>Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.</p>						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.0009	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.00009	0.0005	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
			mg/l	mg/l	mg/l	
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00009	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.009	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.009	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.007	0.020	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.013	0.028	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.0009	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4,2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.0009	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.010	1
14242	Fluoranthene	206-44-0	N.D.	0.00009	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.00009	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.00009	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.010	1
14242	Hexachloroethane	67-72-1	N.D.	0.0009	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00009	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.00009	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	0.0002 J	0.00009	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005 mg/l	0.010 mg/l	1
14242	Pentachlorophenol	87-86-5	N.D.	0.0009 mg/l	0.005 mg/l	1
14242	Phenanthrene	85-01-8	N.D.	0.00009 mg/l	0.0005 mg/l	1
14242	Phenol	108-95-2	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	Pyrene	129-00-0	N.D.	0.00009 mg/l	0.0005 mg/l	1
14242	Pyridine	110-86-1	N.D.	0.002 mg/l	0.005 mg/l	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005 mg/l	0.002 mg/l	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005 mg/l	0.002 mg/l	1
GC/MS Semivolatiles SW-846 8270D SIM						
14244	1,4-Dioxane	123-91-1	N.D.	0.09 ug/l	0.3 ug/l	1
The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.						
Herbicides SW-846 8151A						
10407	2,4-D	94-75-7	N.D. D1	0.00024 mg/l	0.00057 mg/l	1
10407	2,4,5-T	93-76-5	N.D. D2	0.000062 mg/l	0.00014 mg/l	1
10407	2,4,5-TP	93-72-1	N.D. D1	0.0000096 mg/l	0.000048 mg/l	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
PCBs SW-846 8082A						
10591	PCB-1016	12674-11-2	N.D. D1	0.00014 mg/l	0.00069 mg/l	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00014 mg/l	0.00069 mg/l	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00027 mg/l	0.00069 mg/l	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00014 mg/l	0.00069 mg/l	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00014 mg/l	0.00069 mg/l	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00014 mg/l	0.00069 mg/l	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00021 mg/l	0.00069 mg/l	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00014 mg/l	0.00069 mg/l	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
Pesticides SW-846 8081B						
10589	Aldrin	309-00-2	N.D. D1	0.0000018 mg/l	0.0000092 mg/l	1
10589	Alpha BHC	319-84-6	N.D. D2	0.0000027 mg/l	0.0000092 mg/l	1
10589	Beta BHC	319-85-7	N.D. D2	0.0000031 mg/l	0.0000092 mg/l	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0000018 mg/l	0.0000092 mg/l	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides						
		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000027	0.0000092	1
10589	4,4'-Ddd	72-54-8	N.D. D1	0.0000046	0.000018	1
10589	4,4'-Dde	72-55-9	N.D. D1	0.0000046	0.000018	1
10589	4,4'-Ddt	50-29-3	N.D. D1	0.0000048	0.000018	1
10589	Delta BHC	319-86-8	N.D. D1	0.0000031	0.0000092	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000049	0.000018	1
10589	Endosulfan I	959-98-8	N.D. D2	0.0000039	0.0000092	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000014	0.000037	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000053	0.000018	1
10589	Endrin	72-20-8	N.D. D2	0.0000074	0.000027	1
10589	Heptachlor	76-44-8	N.D. D1	0.0000018	0.0000092	1
LC/MS/MS Miscellaneous						
		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.7	4.2	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.85	2.5	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.42	2.5	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.51	1.7	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	7.4	0.42	1.7	1
14473	Perfluorobutanoic acid ¹	375-22-4	47	1.7	4.2	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.42	1.7	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.42	1.7	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.42	1.7	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.42	1.7	1
14473	Perfluoroheptanoic acid ¹	375-85-9	32	0.42	1.7	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	2.6	0.42	1.7	1
14473	Perfluorohexanoic acid ¹	307-24-4	120	0.42	1.7	1
14473	Perfluorononanoic acid ¹	375-95-1	4.4	0.42	1.7	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.42	1.7	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	2.0	0.42	1.7	1
14473	Perfluorooctanoic acid ¹	335-67-1	100	0.42	1.7	1
14473	Perfluoropentanoic acid ¹	2706-90-3	190	0.42	1.7	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.42	1.7	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.42	1.7	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.42	1.7	1
Metals						
		SW-846 6010D Rev.4, July 2014	mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals			SW-846 6020B Rev.2, July 2014	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0026	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0636	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D. K4	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00072 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.00096 J	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0014	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.203	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0309	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0035	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.252	0.0062	0.0100	1
			SW-846 7470A	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1
Wet Chemistry			SW-846 9012B	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
			SW-846 7196A	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	5201473AA	05/27/2020 02:04	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5201473AA	05/27/2020 02:03	Kevin A Sposito	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20143WAA026	05/24/2020 17:13	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20143WAC026	05/26/2020 14:04	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	20143WAA026	05/22/2020 18:50	Patrick Thimes	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20143WAC026	05/22/2020 18:50	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201430018A	05/26/2020 23:47	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201430007A	05/26/2020 11:59	Covenant Mutuku	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/27/2020 00:38	James Patrushev	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317997
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201430007A	05/22/2020 20:15	Oswaldo R Sanchez	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201430018A	05/25/2020 20:05	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20142002	05/22/2020 16:51	Jason W Knight	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20142002	05/21/2020 07:00	Pamela Rothharp	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:53	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:40	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201480282801	05/27/2020 09:18	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:26	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:26	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:40	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:14	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:34	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1
08255	Total Cyanide (water)	SW-846 9012B	1	20148117101A	05/27/2020 10:48	Jonathan Saul	1
08256	Cyanide Water Distillation	SW-846 9012B	1	20148117101A	05/27/2020 08:00	Nancy J Shoop	1
00276	Hexavalent Chromium	SW-846 7196A	1	20142027601A	05/21/2020 02:45	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317998
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved						
SW-846 6010D Rev.4, July 2014			mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014			mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0023	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0615	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D.	0.00012	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00053 J	0.00033	0.0020	1
06033	Copper	7440-50-8	0.00052 J	0.00036	0.0010	1
06035	Lead	7439-92-1	0.00012 J	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.195	0.00063	0.0020	1
06039	Nickel	7440-02-0	0.0313	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0038	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.256	0.0062	0.0100	1
SW-846 7470A			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:47	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:33	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:16	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: MW19_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317998
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 10:10
SDG#: CMS12-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:16	Patrick J Engle	1
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:33	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:04	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:32	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles			mg/l	mg/l	mg/l	
	SW-846 8260C					
11997	Acetone	67-64-1	N.D.	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	0.0002 J	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.0005 J	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1
GC/MS Semivolatiles		SW-846 8270D	mg/l	mg/l	mg/l	
14242	Acenaphthene	83-32-9	N.D.	0.00009	0.0005	1
14242	Acenaphthylene	208-96-8	N.D.	0.00009	0.0005	1
14242	Acetophenone	98-86-2	N.D.	0.004	0.009	1
14242	Anthracene	120-12-7	N.D.	0.00009	0.0005	1
14242	Atrazine	1912-24-9	N.D.	0.002	0.005	1
14242	Benzaldehyde	100-52-7	N.D.	0.003	0.009	1
14242	Benzidine	92-87-5	N.D.	0.019	0.057	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.00009	0.0005	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.00009	0.0005	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.00009	0.0005	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00009	0.0005	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.00009	0.0005	1
14242	1,1'-Biphenyl	92-52-4	N.D.	0.003	0.009	1
14242	Butylbenzylphthalate	85-68-7	N.D.	0.002	0.005	1
14242	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
14242	Caprolactam	105-60-2	N.D.	0.005	0.010	1
14242	Carbazole	86-74-8	N.D.	0.0005	0.002	1
14242	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.0005	0.002	1
14242	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.0005	0.002	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14242	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.0009	1
14242	2-Chlorophenol	95-57-8	N.D.	0.0005	0.002	1
14242	Chrysene	218-01-9	N.D.	0.00009	0.0005	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00009	0.0005	1
14242	Dibenzofuran	132-64-9	N.D.	0.0005	0.002	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.0005	0.002	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.0005	0.002	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	0.003	0.009	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.0005	0.002	1
14242	Diethylphthalate	84-66-2	N.D.	0.002	0.005	1
14242	2,4-Dimethylphenol	105-67-9	N.D.	0.003	0.009	1
14242	Dimethylphthalate	131-11-3	N.D.	0.002	0.005	1
14242	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	0.008	0.020	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	0.013	0.028	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	0.0009	0.005	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.0005	0.002	1
14242	2,4_2,6-Dinitrotoluenes ¹	25321-14-6	N.D.	0.0009	0.005	1
14242	1,2-Diphenylhydrazine	122-66-7	N.D.	0.0005	0.002	1
Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.						
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.005	0.010	1
14242	Fluoranthene	206-44-0	N.D.	0.00009	0.0005	1
14242	Fluorene	86-73-7	N.D.	0.00009	0.0005	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.00009	0.0005	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.0005	0.002	1
14242	Hexachlorocyclopentadiene	77-47-4	N.D.	0.005	0.010	1
14242	Hexachloroethane	67-72-1	N.D.	0.0009	0.005	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00009	0.0005	1
14242	Isophorone	78-59-1	N.D.	0.0005	0.002	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.00009	0.0005	1
14242	2-Methylphenol	95-48-7	N.D.	0.0005	0.002	1
14242	4-Methylphenol	106-44-5	N.D.	0.0005	0.002	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	N.D.	0.00009	0.0005	1
14242	2-Nitroaniline	88-74-4	N.D.	0.002	0.007	1
14242	Nitrobenzene	98-95-3	N.D.	0.0005	0.002	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	0.002	0.005	1
14242	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.0007	0.003	1
14242	N-Nitrosodiphenylamine	86-30-6	N.D.	0.0007	0.003	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14242	Di-n-octylphthalate	117-84-0	N.D.	0.005	0.010	1
14242	Pentachlorophenol	87-86-5	N.D.	0.0009	0.005	1
14242	Phenanthrene	85-01-8	N.D.	0.00009	0.0005	1
14242	Phenol	108-95-2	N.D.	0.0005	0.002	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			mg/l	mg/l	mg/l	
14242	Pyrene	129-00-0	N.D.	0.00009	0.0005	1
14242	Pyridine	110-86-1	N.D.	0.002	0.005	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0005	0.002	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.0005	0.002	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.0005	0.002	1

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

GC/MS Semivolatiles SW-846 8270D SIM			ug/l	ug/l	ug/l	
14244	1,4-Dioxane	123-91-1	N.D.	0.09	0.3	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Herbicides SW-846 8151A			mg/l	mg/l	mg/l	
10407	2,4-D	94-75-7	N.D. D1	0.00024	0.00057	1
10407	2,4,5-T	93-76-5	N.D. D2	0.000062	0.00014	1
10407	2,4,5-TP	93-72-1	N.D. D2	0.0000096	0.000048	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

PCBs SW-846 8082A			mg/l	mg/l	mg/l	
10591	PCB-1016	12674-11-2	N.D. D1	0.00014	0.00070	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00014	0.00070	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00028	0.00070	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00014	0.00070	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00014	0.00070	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00014	0.00070	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00021	0.00070	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00014	0.00070	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s)

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
was not detected in the sample, the data is reported.						
Pesticides		SW-846 8081B	mg/l	mg/l	mg/l	
10589	Aldrin	309-00-2	N.D. D1	0.0000019	0.0000094	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0000028	0.0000094	1
10589	Beta BHC	319-85-7	N.D. D1	0.0000032	0.0000094	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0000019	0.0000094	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0000028	0.0000094	1
10589	4,4'-Ddd	72-54-8	N.D. D1	0.0000047	0.000019	1
10589	4,4'-Dde	72-55-9	N.D. D1	0.0000047	0.000019	1
10589	4,4'-Ddt	50-29-3	N.D. D2	0.0000049	0.000019	1
10589	Delta BHC	319-86-8	N.D. D1	0.0000032	0.0000094	1
10589	Dieldrin	60-57-1	N.D. D2	0.0000050	0.000019	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0000040	0.0000094	1
10589	Endosulfan II	33213-65-9	N.D. D2	0.000014	0.000038	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0000055	0.000019	1
10589	Endrin	72-20-8	N.D. D2	0.0000076	0.000028	1
10589	Heptachlor	76-44-8	N.D. D2	0.0000019	0.0000094	1
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	1.8	4.4	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.88	2.6	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.44	2.6	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.53	1.8	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	8.0	0.44	1.8	1
14473	Perfluorobutanoic acid ¹	375-22-4	33	1.8	4.4	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.44	1.8	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.44	1.8	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.44	1.8	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	0.84 J	0.44	1.8	1
14473	Perfluoroheptanoic acid ¹	375-85-9	30	0.44	1.8	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	5.1	0.44	1.8	1
14473	Perfluorohexanoic acid ¹	307-24-4	80	0.44	1.8	1
14473	Perfluorononanoic acid ¹	375-95-1	12	0.44	1.8	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	0.58 J	0.44	1.8	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	24	0.44	1.8	1
14473	Perfluorooctanoic acid ¹	335-67-1	170	0.44	1.8	1
14473	Perfluoropentanoic acid ¹	2706-90-3	120	0.44	1.8	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.44	1.8	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.44	1.8	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous						
EPA 537 Version 1.1 Modified			ng/l	ng/l	ng/l	
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.44	1.8	1
Metals						
SW-846 6010D Rev.4, July 2014			mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014			mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0042	0.00068	0.0020	1
06026	Barium	7440-39-3	0.131	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D. K4	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0012	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00052 J	0.00033	0.0020	1
02828	Trivalent Chromium waters ¹	16065-83-1	N.D.	0.010	0.030	1
The Trivalent Chromium result is calculated by subtracting Hexavalent Chromium from Total Chromium.						
06033	Copper	7440-50-8	0.0027	0.00036	0.0010	1
06035	Lead	7439-92-1	0.0020	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.924	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0096	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0019	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.415	0.0062	0.0100	1
SW-846 7470A			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1
Wet Chemistry						
SW-846 9012B			mg/l	mg/l	mg/l	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1
SW-846 7196A			mg/l	mg/l	mg/l	
00276	Hexavalent Chromium	18540-29-9	N.D.	0.010	0.030	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	L201481AA	05/27/2020 15:11	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201481AA	05/27/2020 15:10	Corie Mellinger	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	20147WAC026	05/27/2020 13:07	Edward C Monborne	1
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20143WAC026	05/26/2020 14:33	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	2	20147WAC026	05/26/2020 19:30	Oswaldo R Sanchez	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20143WAC026	05/22/2020 18:50	Patrick Thimes	1
10407	Herbicides in Water 8151A	SW-846 8151A	1	201430018A	05/27/2020 00:20	Rachel Umberger	1
10591	7 PCBs + Total Water	SW-846 8082A	1	201430007A	05/26/2020 12:10	Covenant Mutuku	1
10589	NY Part 375 Pests Water	SW-846 8081B	1	201430006A	05/27/2020 00:50	James Patrushev	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201430007A	05/22/2020 20:15	Oswaldo R Sanchez	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	201430006A	05/22/2020 20:15	Oswaldo R Sanchez	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	201430018A	05/25/2020 20:05	Karen L Beyer	1
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20142002	05/22/2020 17:00	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20142002	05/21/2020 07:00	Pamela Rothhapt	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:40	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:42	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
02828	Trivalent Chromium waters	SW-846 6020B Rev.2, July 2014	1	201480282801	05/27/2020 09:18	Tshina Alamos	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:35	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:38	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:42	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:16	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:36	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1
08255	Total Cyanide (water)	SW-846 9012B	1	20148117101A	05/27/2020 10:52	Jonathan Saul	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1317999
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-07FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08256	Cyanide Water Distillation	SW-846 9012B	1	20148117101A	05/27/2020 08:00	Nancy J Shoop	1
00276	Hexavalent Chromium	SW-846 7196A	1	20142027601A	05/21/2020 02:45	Daniel S Smith	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1318000
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-08FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved						
SW-846 6010D Rev.4, July 2014			mg/l	mg/l	mg/l	
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
SW-846 6020B Rev.2, July 2014			mg/l	mg/l	mg/l	
06025	Arsenic	7440-38-2	0.0042	0.00068	0.0020	1
06026	Barium	7440-39-3	0.132	0.00075	0.0020	1
06027	Beryllium	7440-41-7	N.D. K4	0.00012	0.00050	1
06028	Cadmium	7440-43-9	0.0013	0.00015	0.00050	1
06031	Chromium	7440-47-3	0.00034 J	0.00033	0.0020	1
06033	Copper	7440-50-8	0.0013	0.00036	0.0010	1
06035	Lead	7439-92-1	0.00030 J	0.000071	0.00050	1
06037	Manganese	7439-96-5	0.934	0.0032	0.0100	5
06039	Nickel	7440-02-0	0.0107	0.00060	0.0010	1
06041	Selenium	7782-49-2	0.0020	0.00028	0.0010	1
06049	Zinc	7440-66-6	0.413	0.0062	0.0100	1
SW-846 7470A			mg/l	mg/l	mg/l	
00259	Mercury	7439-97-6	N.D.	0.000079	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	201421404401	05/22/2020 11:50	Elaine F Stoltzfus	1
06025	Arsenic	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:44	Patrick J Engle	1
06026	Barium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:19	Patrick J Engle	1
06027	Beryllium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:19	Patrick J Engle	1
06028	Cadmium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:44	Patrick J Engle	1
06031	Chromium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:19	Patrick J Engle	1
06033	Copper	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:40	Patrick J Engle	1
06035	Lead	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:19	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: GWDUP01_052020 Filtered Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1318000
ELLE Group #: 2100197
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59

Collection Date/Time: 05/20/2020

SDG#: CMS12-08FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06037	Manganese	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/26/2020 13:42	Patrick J Engle	5
06039	Nickel	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 17:44	Patrick J Engle	1
06041	Selenium	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:19	Patrick J Engle	1
06049	Zinc	SW-846 6020B Rev.2, July 2014	1	201421404701A	05/22/2020 16:19	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	201420571302	05/22/2020 05:40	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	201421404401	05/21/2020 14:35	JoElla L Rice	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	201421404701	05/21/2020 14:30	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	201420571302	05/21/2020 15:25	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB02_052020 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1318001
ELLE Group #: 2100197
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020 14:30
SDG#: CMS12-09FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D SIM						
14244	1,4-Dioxane	123-91-1	N.D.	ug/l 0.09	ug/l 0.3	1
The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.						
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified						
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	ng/l 1.6	ng/l 4.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	0.81	2.4	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.40	2.4	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.48	1.6	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	0.40	1.6	1
14473	Perfluorobutanoic acid ¹	375-22-4	N.D.	1.6	4.0	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.40	1.6	1
14473	Perfluorodecanoic acid ¹	335-76-2	N.D.	0.40	1.6	1
14473	Perfluorododecanoic acid ¹	307-55-1	N.D.	0.40	1.6	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.40	1.6	1
14473	Perfluoroheptanoic acid ¹	375-85-9	N.D.	0.40	1.6	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	0.40	1.6	1
14473	Perfluorohexanoic acid ¹	307-24-4	N.D.	0.40	1.6	1
14473	Perfluorononanoic acid ¹	375-95-1	N.D.	0.40	1.6	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.40	1.6	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.40	1.6	1
14473	Perfluorooctanoic acid ¹	335-67-1	N.D.	0.40	1.6	1
14473	Perfluoropentanoic acid ¹	2706-90-3	N.D.	0.40	1.6	1
14473	Perfluorotetradecanoic acid ¹	376-06-7	N.D.	0.40	1.6	1
14473	Perfluorotridecanoic acid ¹	72629-94-8	N.D.	0.40	1.6	1
14473	Perfluoroundecanoic acid ¹	2058-94-8	N.D.	0.40	1.6	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14244	1,4-Dioxane 8270D SIM add-on	SW-846 8270D SIM	1	20143WAC026	05/26/2020 15:01	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	20143WAC026	05/22/2020 18:50	Patrick Thimes	1

*=This limit was used in the evaluation of the final result

Sample Description: GWFB02_052020 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1318001
ELLE Group #: 2100197
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59

Collection Date/Time: 05/20/2020 14:30

SDG#: CMS12-09FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	NY 21 PFAS Water	EPA 537 Version 1.1 Modified	1	20142002	05/22/2020 17:09	Archie H Covely	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	20142002	05/21/2020 07:00	Pamela Rothhapt	1

*=This limit was used in the evaluation of the final result

Sample Description: GWTB02_052020 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1318002
ELLE Group #: 2100197
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-10TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Acetone	67-64-1	0.0007 J	0.0007	0.020	1
11997	Acrolein	107-02-8	N.D.	0.002	0.10	1
11997	Acrylonitrile	107-13-1	N.D.	0.0003	0.020	1
11997	Benzene	71-43-2	N.D.	0.0002	0.001	1
11997	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
11997	Bromoform	75-25-2	N.D.	0.001	0.004	1
11997	Bromomethane	74-83-9	N.D.	0.0003	0.001	1
11997	2-Butanone	78-93-3	N.D.	0.0003	0.010	1
11997	t-Butyl alcohol	75-65-0	N.D.	0.012	0.050	1
11997	n-Butylbenzene	104-51-8	N.D.	0.0002	0.005	1
11997	sec-Butylbenzene	135-98-8	N.D.	0.0002	0.005	1
11997	tert-Butylbenzene	98-06-6	N.D.	0.0003	0.005	1
11997	Carbon Disulfide	75-15-0	N.D.	0.0002	0.005	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
11997	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
11997	Chloroethane	75-00-3	N.D.	0.0002	0.001	1
11997	Chloroform	67-66-3	N.D.	0.0002	0.001	1
11997	Chloromethane	74-87-3	N.D.	0.0002	0.001	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.0003	0.005	1
11997	Dibromochloromethane	124-48-1	N.D.	0.0002	0.001	1
11997	1,2-Dibromoethane	106-93-4	N.D.	0.0002	0.001	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	0.0002	0.001	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
11997	1,2-Dichloroethene (Total) ¹	540-59-0	N.D.	0.0004	0.002	1
11997	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
11997	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
11997	Methyl Acetate	79-20-9	N.D.	0.0003	0.005	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
11997	Methylene Chloride	75-09-2	N.D.	0.0003	0.001	1
11997	n-Propylbenzene	103-65-1	N.D.	0.0002	0.005	1
11997	Styrene	100-42-5	N.D.	0.0002	0.005	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1

*=This limit was used in the evaluation of the final result

Sample Description: GWTB02_052020 Water
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1318002
ELLE Group #: 2100197
Matrix: Water

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/20/2020 23:59
Collection Date/Time: 05/20/2020
SDG#: CMS12-10TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C	mg/l	mg/l	mg/l	
11997	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
11997	Toluene	108-88-3	N.D.	0.0002	0.001	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.0003	0.001	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
11997	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
11997	Trichlorofluoromethane	75-69-4	N.D.	0.0002	0.001	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	0.005	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.0003	0.005	1
11997	Vinyl Chloride	75-01-4	N.D.	0.0002	0.001	1
11997	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1

Sample Comments

State of New York Certification No. 10670

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs 8260C	SW-846 8260C	1	L201481AA	05/27/2020 12:37	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201481AA	05/27/2020 12:36	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 5201473AA	Sample number(s): 1317993,1317995,1317997		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
Batch number: L201481AA	Sample number(s): 1317999,1318002		
Acetone	N.D.	0.0007	0.020
Acrolein	N.D.	0.002	0.10
Acrylonitrile	N.D.	0.0003	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.001	0.004
Bromomethane	N.D.	0.0003	0.001
2-Butanone	N.D.	0.0003	0.010
t-Butyl alcohol	N.D.	0.012	0.050
n-Butylbenzene	N.D.	0.0002	0.005
sec-Butylbenzene	N.D.	0.0002	0.005
tert-Butylbenzene	N.D.	0.0003	0.005
Carbon Disulfide	N.D.	0.0002	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0002	0.001
1,2-Dibromo-3-chloropropane	N.D.	0.0003	0.005
Dibromochloromethane	N.D.	0.0002	0.001
1,2-Dibromoethane	N.D.	0.0002	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0002	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloroethene (Total)	N.D.	0.0004	0.002

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Acetate	N.D.	0.0003	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Methylene Chloride	N.D.	0.0003	0.001
n-Propylbenzene	N.D.	0.0002	0.005
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,1,1-Trichloroethane	N.D.	0.0003	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0002	0.001
1,2,4-Trimethylbenzene	N.D.	0.001	0.005
1,3,5-Trimethylbenzene	N.D.	0.0003	0.005
Vinyl Chloride	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.006
Batch number: 20143WAA026	Sample number(s): 1317993,1317997		
Acenaphthene	N.D.	0.0001	0.0005
Acenaphthylene	N.D.	0.0001	0.0005
Acetophenone	N.D.	0.004	0.010
Anthracene	N.D.	0.0001	0.0005
Atrazine	N.D.	0.002	0.005
Benzaldehyde	N.D.	0.003	0.010
Benzidine	N.D.	0.020	0.060
Benzo(a)anthracene	N.D.	0.0001	0.0005
Benzo(a)pyrene	N.D.	0.0001	0.0005
Benzo(b)fluoranthene	N.D.	0.0001	0.0005
Benzo(g,h,i)perylene	N.D.	0.0001	0.0005
Benzo(k)fluoranthene	N.D.	0.0001	0.0005
1,1'-Biphenyl	N.D.	0.003	0.010
Butylbenzylphthalate	N.D.	0.002	0.005
Di-n-butylphthalate	N.D.	0.002	0.005
Caprolactam	N.D.	0.005	0.011
Carbazole	N.D.	0.0005	0.002
bis(2-Chloroethyl)ether	N.D.	0.0005	0.002
bis(2-Chloroisopropyl)ether	N.D.	0.0005	0.002
2-Chloronaphthalene	N.D.	0.0004	0.001
2-Chlorophenol	N.D.	0.0005	0.002
Chrysene	N.D.	0.0001	0.0005
Dibenz(a,h)anthracene	N.D.	0.0001	0.0005

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Dibenzofuran	N.D.	0.0005	0.002
1,2-Dichlorobenzene	N.D.	0.0005	0.002
1,3-Dichlorobenzene	N.D.	0.0005	0.002
1,4-Dichlorobenzene	N.D.	0.0005	0.002
3,3'-Dichlorobenzidine	N.D.	0.003	0.010
2,4-Dichlorophenol	N.D.	0.0005	0.002
Diethylphthalate	N.D.	0.002	0.005
2,4-Dimethylphenol	N.D.	0.003	0.010
Dimethylphthalate	N.D.	0.002	0.005
4,6-Dinitro-2-methylphenol	N.D.	0.008	0.021
2,4-Dinitrophenol	N.D.	0.014	0.030
2,4-Dinitrotoluene	N.D.	0.001	0.005
2,6-Dinitrotoluene	N.D.	0.0005	0.002
2,4,6-Dinitrotoluenes	N.D.	0.001	0.005
1,2-Diphenylhydrazine	N.D.	0.0005	0.002
bis(2-Ethylhexyl)phthalate	N.D.	0.005	0.011
Fluoranthene	N.D.	0.0001	0.0005
Fluorene	N.D.	0.0001	0.0005
Hexachlorobenzene	N.D.	0.0001	0.0005
Hexachlorobutadiene	N.D.	0.0005	0.002
Hexachlorocyclopentadiene	N.D.	0.005	0.011
Hexachloroethane	N.D.	0.001	0.005
Indeno(1,2,3-cd)pyrene	N.D.	0.0001	0.0005
Isophorone	N.D.	0.0005	0.002
2-Methylnaphthalene	N.D.	0.0001	0.0005
2-Methylphenol	N.D.	0.0005	0.002
4-Methylphenol	N.D.	0.0005	0.002
Naphthalene	N.D.	0.0001	0.0005
2-Nitroaniline	N.D.	0.002	0.007
Nitrobenzene	N.D.	0.0005	0.002
N-Nitrosodimethylamine	N.D.	0.002	0.005
N-Nitroso-di-n-propylamine	N.D.	0.0007	0.003
N-Nitrosodiphenylamine	N.D.	0.0007	0.003
Di-n-octylphthalate	N.D.	0.005	0.011
Pentachlorophenol	N.D.	0.001	0.005
Phenanthrene	N.D.	0.0001	0.0005
Phenol	N.D.	0.0005	0.002
Pyrene	N.D.	0.0001	0.0005
Pyridine	N.D.	0.002	0.005
1,2,4-Trichlorobenzene	N.D.	0.0005	0.002
2,4,5-Trichlorophenol	N.D.	0.0005	0.002
2,4,6-Trichlorophenol	N.D.	0.0005	0.002
Batch number: 20147WAC026	Sample number(s): 1317995,1317999		
Acenaphthene	N.D.	0.0001	0.0005

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Acenaphthylene	N.D.	0.0001	0.0005
Acetophenone	N.D.	0.004	0.010
Anthracene	N.D.	0.0001	0.0005
Atrazine	N.D.	0.002	0.005
Benzaldehyde	N.D.	0.003	0.010
Benzdine	N.D.	0.020	0.060
Benzo(a)anthracene	N.D.	0.0001	0.0005
Benzo(a)pyrene	N.D.	0.0001	0.0005
Benzo(b)fluoranthene	N.D.	0.0001	0.0005
Benzo(g,h,i)perylene	N.D.	0.0001	0.0005
Benzo(k)fluoranthene	N.D.	0.0001	0.0005
1,1'-Biphenyl	N.D.	0.003	0.010
Butylbenzylphthalate	N.D.	0.002	0.005
Di-n-butylphthalate	N.D.	0.002	0.005
Caprolactam	N.D.	0.005	0.011
Carbazole	N.D.	0.0005	0.002
bis(2-Chloroethyl)ether	N.D.	0.0005	0.002
bis(2-Chloroisopropyl)ether	N.D.	0.0005	0.002
2-Chloronaphthalene	N.D.	0.0004	0.001
2-Chlorophenol	N.D.	0.0005	0.002
Chrysene	N.D.	0.0001	0.0005
Dibenz(a,h)anthracene	N.D.	0.0001	0.0005
Dibenzofuran	N.D.	0.0005	0.002
1,2-Dichlorobenzene	N.D.	0.0005	0.002
1,3-Dichlorobenzene	N.D.	0.0005	0.002
1,4-Dichlorobenzene	N.D.	0.0005	0.002
3,3'-Dichlorobenzidine	N.D.	0.003	0.010
2,4-Dichlorophenol	N.D.	0.0005	0.002
Diethylphthalate	N.D.	0.002	0.005
2,4-Dimethylphenol	N.D.	0.003	0.010
Dimethylphthalate	N.D.	0.002	0.005
4,6-Dinitro-2-methylphenol	N.D.	0.008	0.021
2,4-Dinitrophenol	N.D.	0.014	0.030
2,4-Dinitrotoluene	N.D.	0.001	0.005
2,6-Dinitrotoluene	N.D.	0.0005	0.002
2,4,2,6-Dinitrotoluenes	N.D.	0.001	0.005
1,2-Diphenylhydrazine	N.D.	0.0005	0.002
bis(2-Ethylhexyl)phthalate	N.D.	0.005	0.011
Fluoranthene	N.D.	0.0001	0.0005
Fluorene	N.D.	0.0001	0.0005
Hexachlorobenzene	N.D.	0.0001	0.0005
Hexachlorobutadiene	N.D.	0.0005	0.002
Hexachlorocyclopentadiene	N.D.	0.005	0.011
Hexachloroethane	N.D.	0.001	0.005
Indeno(1,2,3-cd)pyrene	N.D.	0.0001	0.0005

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Isophorone	N.D.	0.0005	0.002
2-Methylnaphthalene	N.D.	0.0001	0.0005
2-Methylphenol	N.D.	0.0005	0.002
4-Methylphenol	N.D.	0.0005	0.002
Naphthalene	N.D.	0.0001	0.0005
2-Nitroaniline	N.D.	0.002	0.007
Nitrobenzene	N.D.	0.0005	0.002
N-Nitrosodimethylamine	N.D.	0.002	0.005
N-Nitroso-di-n-propylamine	N.D.	0.0007	0.003
N-Nitrosodiphenylamine	N.D.	0.0007	0.003
Di-n-octylphthalate	N.D.	0.005	0.011
Pentachlorophenol	N.D.	0.001	0.005
Phenanthrene	N.D.	0.0001	0.0005
Phenol	N.D.	0.0005	0.002
Pyrene	N.D.	0.0001	0.0005
Pyridine	N.D.	0.002	0.005
1,2,4-Trichlorobenzene	N.D.	0.0005	0.002
2,4,5-Trichlorophenol	N.D.	0.0005	0.002
2,4,6-Trichlorophenol	N.D.	0.0005	0.002
	ug/l	ug/l	ug/l
Batch number: 20143WAC026	Sample number(s): 1317993,1317995,1317997,1317999,1318001		
1,4-Dioxane	N.D.	0.1	0.3
	mg/l	mg/l	mg/l
Batch number: 201430018A	Sample number(s): 1317993,1317995,1317997,1317999		
2,4-D	N.D.	0.00025	0.00060
2,4,5-T	N.D.	0.000065	0.00015
2,4,5-TP	N.D.	0.000010	0.000050
Batch number: 201430007A	Sample number(s): 1317993,1317995,1317997,1317999		
PCB-1016	N.D.	0.00010	0.00050
PCB-1221	N.D.	0.00010	0.00050
PCB-1232	N.D.	0.00020	0.00050
PCB-1242	N.D.	0.00010	0.00050
PCB-1248	N.D.	0.00010	0.00050
PCB-1254	N.D.	0.00010	0.00050
PCB-1260	N.D.	0.00015	0.00050
Total PCBs	N.D.	0.00010	0.00050
Batch number: 201430006A	Sample number(s): 1317993,1317995,1317997,1317999		
Aldrin	N.D.	0.0000020	0.000010
Alpha BHC	N.D.	0.0000030	0.000010
Beta BHC	N.D.	0.0000034	0.000010
Gamma BHC - Lindane	N.D.	0.0000020	0.000010
Alpha Chlordane	N.D.	0.0000030	0.000010

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
4,4'-Ddd	N.D.	0.0000050	0.000020
4,4'-Dde	N.D.	0.0000050	0.000020
4,4'-Ddt	N.D.	0.0000052	0.000020
Delta BHC	N.D.	0.0000034	0.000010
Dieldrin	N.D.	0.0000053	0.000020
Endosulfan I	N.D.	0.0000043	0.000010
Endosulfan II	N.D.	0.000015	0.000040
Endosulfan Sulfate	N.D.	0.0000058	0.000020
Endrin	N.D.	0.0000081	0.000030
Heptachlor	N.D.	0.0000020	0.000010
	ng/l	ng/l	ng/l
Batch number: 20142002	Sample number(s): 1317993,1317995,1317997,1317999,1318001		
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
	mg/l	mg/l	mg/l
Batch number: 201420571302	Sample number(s): 1317993-1318000		
Mercury	N.D.	0.000079	0.00020
Batch number: 201421404401	Sample number(s): 1317993-1318000		
Silver	N.D.	0.0050	0.0100
Batch number: 201421404701A	Sample number(s): 1317993-1318000		
Arsenic	N.D.	0.00068	0.0020
Barium	N.D.	0.00075	0.0020
Beryllium	N.D.	0.00012	0.00050

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Cadmium	N.D.	0.00015	0.00050
Chromium	0.00052 J	0.00033	0.0020
Copper	N.D.	0.00036	0.0010
Lead	N.D.	0.000071	0.00050
Manganese	N.D.	0.00063	0.0020
Nickel	N.D.	0.00060	0.0010
Selenium	N.D.	0.00028	0.0010
Zinc	N.D.	0.0062	0.0100
Batch number: 20148117101A	Sample number(s): 1317993,1317995,1317997,1317999		
Total Cyanide (water)	N.D.	0.0050	0.010
Batch number: 20142027601A	Sample number(s): 1317993,1317995,1317997,1317999		
Hexavalent Chromium	N.D.	0.010	0.030

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 5201473AA	Sample number(s): 1317993,1317995,1317997								
Acetone	0.150	0.200			133		54-157		
Acrolein	0.150	0.141			94		47-136		
Acrylonitrile	0.100	0.0959			96		60-129		
Benzene	0.0200	0.0197			98		80-120		
Bromodichloromethane	0.0200	0.0192			96		71-120		
Bromoform	0.0200	0.0186			93		51-120		
Bromomethane	0.0200	0.0192			96		53-128		
2-Butanone	0.150	0.151			101		59-135		
t-Butyl alcohol	0.200	0.174			87		60-130		
n-Butylbenzene	0.0200	0.0199			99		76-120		
sec-Butylbenzene	0.0200	0.0200			100		77-120		
tert-Butylbenzene	0.0200	0.0214			107		78-120		
Carbon Disulfide	0.0200	0.0189			94		65-128		
Carbon Tetrachloride	0.0200	0.0194			97		64-134		
Chlorobenzene	0.0200	0.0206			103		80-120		
Chloroethane	0.0200	0.0187			93		55-123		
Chloroform	0.0200	0.0200			100		80-120		
Chloromethane	0.0200	0.0178			89		56-121		
1,2-Dibromo-3-chloropropane	0.0200	0.0196			98		47-131		
Dibromochloromethane	0.0200	0.0193			97		71-120		
1,2-Dibromoethane	0.0200	0.0202			101		77-120		
1,2-Dichlorobenzene	0.0200	0.0205			102		80-120		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,3-Dichlorobenzene	0.0200	0.0202			101		80-120		
1,4-Dichlorobenzene	0.0200	0.0205			103		80-120		
Dichlorodifluoromethane	0.0200	0.0160			80		41-127		
1,1-Dichloroethane	0.0200	0.0197			99		80-120		
1,2-Dichloroethane	0.0200	0.0199			99		73-124		
1,1-Dichloroethene	0.0200	0.0199			99		80-131		
cis-1,2-Dichloroethene	0.0200	0.0210			105		80-125		
trans-1,2-Dichloroethene	0.0200	0.0200			100		80-126		
1,2-Dichloroethene (Total)	0.0400	0.0411			103		80-125		
1,2-Dichloropropane	0.0200	0.0200			100		80-120		
cis-1,3-Dichloropropene	0.0200	0.0189			95		75-120		
trans-1,3-Dichloropropene	0.0200	0.0186			93		67-120		
Ethylbenzene	0.0200	0.0206			103		80-120		
Methyl Acetate	0.0200	0.0212			106		54-136		
Methyl Tertiary Butyl Ether	0.0200	0.0185			92		69-122		
Methylene Chloride	0.0200	0.0206			103		80-120		
n-Propylbenzene	0.0200	0.0206			103		79-121		
Styrene	0.0200	0.0205			103		80-120		
1,1,2,2-Tetrachloroethane	0.0200	0.0204			102		72-120		
Tetrachloroethene	0.0200	0.0208			104		80-120		
Toluene	0.0200	0.0201			101		80-120		
1,1,1-Trichloroethane	0.0200	0.0194			97		67-126		
1,1,2-Trichloroethane	0.0200	0.0208			104		80-120		
Trichloroethene	0.0200	0.0199			99		80-120		
Trichlorofluoromethane	0.0200	0.0198			99		55-135		
1,2,4-Trimethylbenzene	0.0200	0.0199			99		75-120		
1,3,5-Trimethylbenzene	0.0200	0.0201			100		75-120		
Vinyl Chloride	0.0200	0.0196			98		56-120		
Xylene (Total)	0.0600	0.0619			103		80-120		
Batch number: L201481AA	Sample number(s): 1317999,1318002								
Acetone	0.150	0.144	0.150	0.140	96	93	54-157	3	30
Acrolein	0.150	0.141	0.150	0.137	94	91	47-136	3	30
Acrylonitrile	0.100	0.0969	0.100	0.0981	97	98	60-129	1	30
Benzene	0.0200	0.0189	0.0200	0.0191	94	95	80-120	1	30
Bromodichloromethane	0.0200	0.0187	0.0200	0.0190	93	95	71-120	2	30
Bromoform	0.0200	0.0189	0.0200	0.0188	94	94	51-120	1	30
Bromomethane	0.0200	0.0178	0.0200	0.0178	89	89	53-128	0	30
2-Butanone	0.150	0.153	0.150	0.154	102	103	59-135	1	30
t-Butyl alcohol	0.200	0.193	0.200	0.187	97	93	60-130	4	30
n-Butylbenzene	0.0200	0.0210	0.0200	0.0212	105	106	76-120	1	30
sec-Butylbenzene	0.0200	0.0206	0.0200	0.0209	103	104	77-120	1	30
tert-Butylbenzene	0.0200	0.0198	0.0200	0.0201	99	101	78-120	2	30
Carbon Disulfide	0.0200	0.0187	0.0200	0.0191	94	95	65-128	2	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Tetrachloride	0.0200	0.0185	0.0200	0.0190	93	95	64-134	2	30
Chlorobenzene	0.0200	0.0198	0.0200	0.0200	99	100	80-120	1	30
Chloroethane	0.0200	0.0188	0.0200	0.0191	94	95	55-123	1	30
Chloroform	0.0200	0.0190	0.0200	0.0192	95	96	80-120	1	30
Chloromethane	0.0200	0.0179	0.0200	0.0180	90	90	56-121	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0194	0.0200	0.0193	97	97	47-131	0	30
Dibromochloromethane	0.0200	0.0195	0.0200	0.0197	97	99	71-120	1	30
1,2-Dibromoethane	0.0200	0.0192	0.0200	0.0194	96	97	77-120	1	30
1,2-Dichlorobenzene	0.0200	0.0202	0.0200	0.0204	101	102	80-120	1	30
1,3-Dichlorobenzene	0.0200	0.0204	0.0200	0.0205	102	103	80-120	1	30
1,4-Dichlorobenzene	0.0200	0.0205	0.0200	0.0207	103	104	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0117	0.0200	0.0117	58	58	41-127	0	30
1,1-Dichloroethane	0.0200	0.0193	0.0200	0.0197	96	98	80-120	2	30
1,2-Dichloroethane	0.0200	0.0192	0.0200	0.0197	96	99	73-124	3	30
1,1-Dichloroethene	0.0200	0.0180	0.0200	0.0183	90	91	80-131	2	30
cis-1,2-Dichloroethene	0.0200	0.0198	0.0200	0.0199	99	100	80-125	1	30
trans-1,2-Dichloroethene	0.0200	0.0186	0.0200	0.0185	93	93	80-126	0	30
1,2-Dichloroethene (Total)	0.0400	0.0383	0.0400	0.0385	96	96	80-125	0	30
1,2-Dichloropropane	0.0200	0.0200	0.0200	0.0204	100	102	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0183	0.0200	0.0187	92	94	75-120	2	30
trans-1,3-Dichloropropene	0.0200	0.0190	0.0200	0.0192	95	96	67-120	1	30
Ethylbenzene	0.0200	0.0196	0.0200	0.0199	98	99	80-120	1	30
Methyl Acetate	0.0200	0.0197	0.0200	0.0199	98	99	54-136	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0169	0.0200	0.0172	85	86	69-122	2	30
Methylene Chloride	0.0200	0.0190	0.0200	0.0192	95	96	80-120	1	30
n-Propylbenzene	0.0200	0.0210	0.0200	0.0213	105	107	79-121	2	30
Styrene	0.0200	0.0201	0.0200	0.0202	100	101	80-120	0	30
1,1,2,2-Tetrachloroethane	0.0200	0.0207	0.0200	0.0215	103	108	72-120	4	30
Tetrachloroethene	0.0200	0.0187	0.0200	0.0191	93	96	80-120	2	30
Toluene	0.0200	0.0194	0.0200	0.0197	97	99	80-120	2	30
1,1,1-Trichloroethane	0.0200	0.0179	0.0200	0.0183	89	92	67-126	3	30
1,1,2-Trichloroethane	0.0200	0.0200	0.0200	0.0203	100	102	80-120	2	30
Trichloroethene	0.0200	0.0182	0.0200	0.0185	91	92	80-120	2	30
Trichlorofluoromethane	0.0200	0.0191	0.0200	0.0191	95	96	55-135	0	30
1,2,4-Trimethylbenzene	0.0200	0.0206	0.0200	0.0207	103	104	75-120	1	30
1,3,5-Trimethylbenzene	0.0200	0.0202	0.0200	0.0205	101	103	75-120	1	30
Vinyl Chloride	0.0200	0.0176	0.0200	0.0177	88	88	56-120	0	30
Xylene (Total)	0.0600	0.0598	0.0600	0.0608	100	101	80-120	2	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20143WAA026	Sample number(s): 1317993,1317997								
Acenaphthene	0.0500	0.0411			82		52-114		
Acenaphthylene	0.0500	0.0405			81		56-127		
Acetophenone	0.0500	0.0423			85		61-114		

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Anthracene	0.0500	0.0444			89		67-116		
Atrazine	0.0500	0.0491			98		71-133		
Benzaldehyde	0.0500	0.0381			76		55-116		
Benzidine	0.250	0.121			48		25-77		
Benzo(a)anthracene	0.0500	0.0482			96		68-123		
Benzo(a)pyrene	0.0500	0.0471			94		71-117		
Benzo(b)fluoranthene	0.0500	0.0469			94		69-121		
Benzo(g,h,i)perylene	0.0500	0.0397			79		60-119		
Benzo(k)fluoranthene	0.0500	0.0491			98		69-122		
1,1'-Biphenyl	0.0500	0.0404			81		56-109		
Butylbenzylphthalate	0.0500	0.0312			62		40-133		
Di-n-butylphthalate	0.0500	0.0405			81		58-125		
Caprolactam	0.0500	0.0129			26		10-57		
Carbazole	0.0500	0.0465			93		64-127		
bis(2-Chloroethyl)ether	0.0500	0.0379			76		58-108		
bis(2-Chloroisopropyl)ether	0.0500	0.0385			77		44-108		
2-Chloronaphthalene	0.0500	0.0386			77		51-107		
2-Chlorophenol	0.0500	0.0410			82		57-105		
Chrysene	0.0500	0.0451			90		65-121		
Dibenz(a,h)anthracene	0.0500	0.0437			87		63-128		
Dibenzofuran	0.0500	0.0430			86		60-112		
1,2-Dichlorobenzene	0.0500	0.0359			72		35-104		
1,3-Dichlorobenzene	0.0500	0.0337			67		28-103		
1,4-Dichlorobenzene	0.0500	0.0345			69		34-97		
3,3'-Dichlorobenzidine	0.0500	0.0381			76		42-107		
2,4-Dichlorophenol	0.0500	0.0455			91		65-110		
Diethylphthalate	0.0500	0.0353			71		42-126		
2,4-Dimethylphenol	0.0500	0.0372			74		53-93		
Dimethylphthalate	0.0500	0.0183			37		10-134		
4,6-Dinitro-2-methylphenol	0.0500	0.0481			96		63-129		
2,4-Dinitrophenol	0.100	0.0852			85		44-134		
2,4-Dinitrotoluene	0.0500	0.0462			92		66-122		
2,6-Dinitrotoluene	0.0500	0.0462			92		71-120		
1,2-Diphenylhydrazine	0.0500	0.0456			91		64-120		
bis(2-Ethylhexyl)phthalate	0.0500	0.0462			92		61-129		
Fluoranthene	0.0500	0.0473			95		63-122		
Fluorene	0.0500	0.0445			89		56-115		
Hexachlorobenzene	0.0500	0.0455			91		60-117		
Hexachlorobutadiene	0.0500	0.0390			78		20-108		
Hexachlorocyclopentadiene	0.100	0.0326			33		10-91		
Hexachloroethane	0.0500	0.0332			66		23-95		
Indeno(1,2,3-cd)pyrene	0.0500	0.0414			83		59-123		
Isophorone	0.0500	0.0439			88		63-120		
2-Methylnaphthalene	0.0500	0.0412			82		51-107		

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Methylphenol	0.0500	0.0393			79		53-107		
4-Methylphenol	0.0500	0.0390			78		49-108		
Naphthalene	0.0500	0.0390			78		51-102		
2-Nitroaniline	0.0500	0.0455			91		66-126		
Nitrobenzene	0.0500	0.0434			87		59-109		
N-Nitrosodimethylamine	0.0500	0.0258			52		17-101		
N-Nitroso-di-n-propylamine	0.0500	0.0442			88		58-120		
N-Nitrosodiphenylamine	0.0500	0.0450			90		60-126		
Di-n-octylphthalate	0.0500	0.0462			92		60-136		
Pentachlorophenol	0.0500	0.0461			92		54-131		
Phenanthrene	0.0500	0.0448			90		65-113		
Phenol	0.0500	0.0242			48		19-79		
Pyrene	0.0500	0.0439			88		65-115		
Pyridine	0.0500	0.0202			40		23-64		
1,2,4-Trichlorobenzene	0.0500	0.0397			79		34-106		
2,4,5-Trichlorophenol	0.0500	0.0469			94		66-118		
2,4,6-Trichlorophenol	0.0500	0.0467			93		69-117		
Batch number: 20147WAC026	Sample number(s): 1317995,1317999								
Acenaphthene	0.0500	0.0294			59		52-114		
Acenaphthylene	0.0500	0.0290			58		56-127		
Acetophenone	0.0500	0.0306			61		61-114		
Anthracene	0.0500	0.0339			68		67-116		
Atrazine	0.0500	0.0397			79		71-133		
Benzaldehyde	0.0500	0.0316			63		55-116		
Benzidine	0.250	0.0118			5*		25-77		
Benzo(a)anthracene	0.0500	0.0424			85		68-123		
Benzo(a)pyrene	0.0500	0.0398			80		71-117		
Benzo(b)fluoranthene	0.0500	0.0414			83		69-121		
Benzo(g,h,i)perylene	0.0500	0.0350			70		60-119		
Benzo(k)fluoranthene	0.0500	0.0415			83		69-122		
1,1'-Biphenyl	0.0500	0.0285			57		56-109		
Butylbenzylphthalate	0.0500	0.0314			63		40-133		
Di-n-butylphthalate	0.0500	0.0360			72		58-125		
Caprolactam	0.0500	0.00903			18		10-57		
Carbazole	0.0500	0.0390			78		64-127		
bis(2-Chloroethyl)ether	0.0500	0.0299			60		58-108		
bis(2-Chloroisopropyl)ether	0.0500	0.0324			65		44-108		
2-Chloronaphthalene	0.0500	0.0278			56		51-107		
2-Chlorophenol	0.0500	0.0310			62		57-105		
Chrysene	0.0500	0.0394			79		65-121		
Dibenz(a,h)anthracene	0.0500	0.0363			73		63-128		
Dibenzofuran	0.0500	0.0305			61		60-112		
1,2-Dichlorobenzene	0.0500	0.0243			49		35-104		

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,3-Dichlorobenzene	0.0500	0.0234			47		28-103		
1,4-Dichlorobenzene	0.0500	0.0238			48		34-97		
3,3'-Dichlorobenzidine	0.0500	0.0274			55		42-107		
2,4-Dichlorophenol	0.0500	0.0327			65		65-110		
Diethylphthalate	0.0500	0.0276			55		42-126		
2,4-Dimethylphenol	0.0500	0.0255			51*		53-93		
Dimethylphthalate	0.0500	0.0175			35		10-134		
4,6-Dinitro-2-methylphenol	0.0500	0.0375			75		63-129		
2,4-Dinitrophenol	0.100	0.0674			67		44-134		
2,4-Dinitrotoluene	0.0500	0.0335			67		66-122		
2,6-Dinitrotoluene	0.0500	0.0327			65*		71-120		
1,2-Diphenylhydrazine	0.0500	0.0346			69		64-120		
bis(2-Ethylhexyl)phthalate	0.0500	0.0413			83		61-129		
Fluoranthene	0.0500	0.0387			77		63-122		
Fluorene	0.0500	0.0320			64		56-115		
Hexachlorobenzene	0.0500	0.0314			63		60-117		
Hexachlorobutadiene	0.0500	0.0240			48		20-108		
Hexachlorocyclopentadiene	0.100	0.0183			18		10-91		
Hexachloroethane	0.0500	0.0226			45		23-95		
Indeno(1,2,3-cd)pyrene	0.0500	0.0346			69		59-123		
Isophorone	0.0500	0.0311			62*		63-120		
2-Methylnaphthalene	0.0500	0.0275			55		51-107		
2-Methylphenol	0.0500	0.0297			59		53-107		
4-Methylphenol	0.0500	0.0301			60		49-108		
Naphthalene	0.0500	0.0272			54		51-102		
2-Nitroaniline	0.0500	0.0327			65*		66-126		
Nitrobenzene	0.0500	0.0309			62		59-109		
N-Nitrosodimethylamine	0.0500	0.0203			41		17-101		
N-Nitroso-di-n-propylamine	0.0500	0.0320			64		58-120		
N-Nitrosodiphenylamine	0.0500	0.0333			67		60-126		
Di-n-octylphthalate	0.0500	0.0423			85		60-136		
Pentachlorophenol	0.0500	0.0351			70		54-131		
Phenanthrene	0.0500	0.0344			69		65-113		
Phenol	0.0500	0.0184			37		19-79		
Pyrene	0.0500	0.0372			74		65-115		
Pyridine	0.0500	0.0146			29		23-64		
1,2,4-Trichlorobenzene	0.0500	0.0252			50		34-106		
2,4,5-Trichlorophenol	0.0500	0.0343			69		66-118		
2,4,6-Trichlorophenol	0.0500	0.0342			68*		69-117		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 20143WAC026	Sample number(s): 1317993,1317995,1317997,1317999,1318001								
1,4-Dioxane	1.00	0.391	1.00	0.496	39	50	18-91	24	30

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 201430018A	Sample number(s): 1317993,1317995,1317997,1317999								
2,4-D	0.00250	0.00360	0.00250	0.00380	144*	152*	70-134	5	30
2,4,5-T	0.000250	0.000409	0.000250	0.000433	164	173*	69-164	6	30
2,4,5-TP	0.000250	0.000358	0.000250	0.000391	143*	156*	81-137	9	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201430007A	Sample number(s): 1317993,1317995,1317997,1317999								
PCB-1016	0.00501	0.00687	0.00501	0.00396	137*	79	60-117	54*	30
PCB-1260	0.00501	0.00701	0.00501	0.00481	140*	96	57-134	37*	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201430006A	Sample number(s): 1317993,1317995,1317997,1317999								
Aldrin	0.000100	0.0000664			66		28-119		
Alpha BHC	0.000101	0.000109			108		47-132		
Beta BHC	0.000100	0.000114			114		27-143		
Gamma BHC - Lindane	0.000100	0.000110			110		29-136		
Alpha Chlordane	0.000100	0.0000955			95		28-136		
4,4'-Ddd	0.000201	0.000199			99		42-148		
4,4'-Dde	0.000200	0.000170			85		22-138		
4,4'-Ddt	0.000201	0.000200			99		40-145		
Delta BHC	0.000100	0.000110			110		28-141		
Dieldrin	0.000200	0.000205			103		31-145		
Endosulfan I	0.000100	0.000104			104		40-138		
Endosulfan II	0.000200	0.000207			104		27-138		
Endosulfan Sulfate	0.000200	0.000203			102		41-133		
Endrin	0.000200	0.000202			101		35-143		
Heptachlor	0.000100	0.0000762			76		38-135		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 20142002	Sample number(s): 1317993,1317995,1317997,1317999,1318001								
6:2-Fluorotelomersulfonic acid	24.28	24.27	24.28	26.61	100	110	56-140	9	30
8:2-Fluorotelomersulfonic acid	24.52	23.3	24.52	26.13	95	107	58-143	11	30
NETFOSAA	25.6	26.52	25.6	28.65	104	112	53-140	8	30
NMeFOSAA	25.6	27.65	25.6	29.83	108	117	59-141	8	30
Perfluorobutanesulfonic acid	22.64	20.95	22.64	23.18	93	102	67-135	10	30
Perfluorobutanoic acid	25.6	22.2	25.6	23.85	87	93	63-160	7	30
Perfluorodecanesulfonic acid	24.64	22.07	24.64	23.21	90	94	62-135	5	30
Perfluorodecanoic acid	25.6	23.53	25.6	27.59	92	108	66-141	16	30
Perfluorododecanoic acid	25.6	25.35	25.6	28.46	99	111	65-143	12	30
Perfluoroheptanesulfonic acid	24.36	23.34	24.36	25.05	96	103	67-138	7	30
Perfluoroheptanoic acid	25.6	25.61	25.6	27.9	100	109	69-144	9	30
Perfluorohexanesulfonic acid	24.2	22.2	24.2	24.68	92	102	63-132	11	30
Perfluorohexanoic acid	25.6	25.25	25.6	26.82	99	105	69-139	6	30
Perfluorononanoic acid	25.6	25.37	25.6	28.07	99	110	66-144	10	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorooctanesulfonamide	25.6	25.46	25.6	27.34	99	107	67-126	7	30
Perfluorooctanesulfonic acid	24.48	19.95	24.48	22.07	82	90	53-129	10	30
Perfluorooctanoic acid	25.6	24.38	25.6	26.44	95	103	67-139	8	30
Perfluoropentanoic acid	25.6	23.74	25.6	26.36	93	103	73-135	10	30
Perfluorotetradecanoic acid	25.6	25.69	25.6	27.74	100	108	69-141	8	30
Perfluorotridecanoic acid	25.6	25.87	25.6	28.56	101	112	66-146	10	30
Perfluoroundecanoic acid	25.6	24.77	25.6	26.91	97	105	66-140	8	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201420571302	Sample number(s): 1317993-1318000								
Mercury	0.00100	0.000851			85		80-110		
Batch number: 201421404401	Sample number(s): 1317993-1318000								
Silver	0.0200	0.0186			93		80-120		
Batch number: 201421404701A	Sample number(s): 1317993-1318000								
Arsenic	0.0100	0.00985			99		85-120		
Barium	0.0500	0.0507			101		80-120		
Beryllium	0.00400	0.00423			106		90-112		
Cadmium	0.00500	0.00529			106		84-120		
Chromium	0.0500	0.0493			99		90-115		
Copper	0.0500	0.0495			99		89-120		
Lead	0.00500	0.00509			102		90-110		
Manganese	0.0500	0.0483			97		89-120		
Nickel	0.0500	0.0490			98		90-114		
Selenium	0.0100	0.00949			95		90-113		
Zinc	0.500	0.500			100		90-115		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20148117101A	Sample number(s): 1317993,1317995,1317997,1317999								
Total Cyanide (water)	0.200	0.197			99		90-110		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 20142027601A	Sample number(s): 1317993,1317995,1317997,1317999								
Hexavalent Chromium	0.200	0.198	0.200	0.200	99	100	90-110	1	4

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5201473AA	Sample number(s): 1317993,1317995,1317997 UNSPK: 1317993									
Acetone	0.00128	0.150	0.170	0.150	0.176	112	116	54-157	3	30
Acrolein	N.D.	0.150	0.126	0.150	0.140	84	93	47-136	10	30
Acrylonitrile	N.D.	0.100	0.0958	0.100	0.101	96	101	60-129	5	30
Benzene	N.D.	0.0200	0.0205	0.0200	0.0215	103	107	80-120	5	30
Bromodichloromethane	N.D.	0.0200	0.0195	0.0200	0.0204	98	102	71-120	4	30
Bromoform	N.D.	0.0200	0.0180	0.0200	0.0191	90	96	51-120	6	30
Bromomethane	N.D.	0.0200	0.0207	0.0200	0.0217	104	109	53-128	5	30
2-Butanone	N.D.	0.150	0.142	0.150	0.151	95	101	59-135	6	30
t-Butyl alcohol	N.D.	0.200	0.179	0.200	0.177	89	88	60-130	1	30
n-Butylbenzene	N.D.	0.0200	0.0208	0.0200	0.0220	104	110	76-120	6	30
sec-Butylbenzene	N.D.	0.0200	0.0208	0.0200	0.0221	104	110	77-120	6	30
tert-Butylbenzene	N.D.	0.0200	0.0220	0.0200	0.0233	110	116	78-120	6	30
Carbon Disulfide	N.D.	0.0200	0.0197	0.0200	0.0212	98	106	65-128	7	30
Carbon Tetrachloride	N.D.	0.0200	0.0210	0.0200	0.0220	105	110	64-134	5	30
Chlorobenzene	N.D.	0.0200	0.0213	0.0200	0.0224	107	112	80-120	5	30
Chloroethane	N.D.	0.0200	0.0203	0.0200	0.0213	102	107	55-123	5	30
Chloroform	N.D.	0.0200	0.0207	0.0200	0.0220	104	110	80-120	6	30
Chloromethane	N.D.	0.0200	0.0190	0.0200	0.0198	95	99	56-121	4	30
1,2-Dibromo-3-chloropropane	N.D.	0.0200	0.0189	0.0200	0.0202	95	101	47-131	6	30
Dibromochloromethane	N.D.	0.0200	0.0194	0.0200	0.0204	97	102	71-120	5	30
1,2-Dibromoethane	N.D.	0.0200	0.0199	0.0200	0.0211	99	106	77-120	6	30
1,2-Dichlorobenzene	N.D.	0.0200	0.0208	0.0200	0.0219	104	109	80-120	5	30
1,3-Dichlorobenzene	N.D.	0.0200	0.0208	0.0200	0.0219	104	110	80-120	5	30
1,4-Dichlorobenzene	N.D.	0.0200	0.0210	0.0200	0.0221	105	110	80-120	5	30
Dichlorodifluoromethane	N.D.	0.0200	0.0177	0.0200	0.0181	89	90	41-127	2	30
1,1-Dichloroethane	N.D.	0.0200	0.0206	0.0200	0.0216	103	108	80-120	5	30
1,2-Dichloroethane	0.000990	0.0200	0.0211	0.0200	0.0223	101	106	73-124	5	30
1,1-Dichloroethene	N.D.	0.0200	0.0222	0.0200	0.0228	111	114	80-131	3	30
cis-1,2-Dichloroethene	N.D.	0.0200	0.0218	0.0200	0.0230	109	115	80-120	5	30
trans-1,2-Dichloroethene	N.D.	0.0200	0.0213	0.0200	0.0226	107	113	80-120	6	30
1,2-Dichloroethene (Total)	N.D.	0.0400	0.0431	0.0400	0.0456	108	114	80-120	6	30
1,2-Dichloropropane	N.D.	0.0200	0.0205	0.0200	0.0215	102	107	80-120	5	30
cis-1,3-Dichloropropene	N.D.	0.0200	0.0187	0.0200	0.0199	93	99	75-120	6	30
trans-1,3-Dichloropropene	N.D.	0.0200	0.0183	0.0200	0.0196	91	98	67-120	7	30
Ethylbenzene	N.D.	0.0200	0.0213	0.0200	0.0224	106	112	80-120	5	30
Methyl Acetate	N.D.	0.0200	0.0204	0.0200	0.0219	102	110	54-136	7	30
Methyl Tertiary Butyl Ether	0.000362	0.0200	0.0187	0.0200	0.0201	91	98	69-122	7	30
Methylene Chloride	N.D.	0.0200	0.0212	0.0200	0.0223	106	112	80-120	5	30
n-Propylbenzene	N.D.	0.0200	0.0213	0.0200	0.0224	107	112	79-121	5	30
Styrene	N.D.	0.0200	0.0208	0.0200	0.0221	104	110	80-120	6	30
1,1,2,2-Tetrachloroethane	N.D.	0.0200	0.0195	0.0200	0.0208	97	104	72-120	7	30
Tetrachloroethene	N.D.	0.0200	0.0224	0.0200	0.0236	112	118	80-120	5	30

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Toluene	N.D.	0.0200	0.0206	0.0200	0.0218	103	109	80-120	5	30
1,1,1-Trichloroethane	N.D.	0.0200	0.0208	0.0200	0.0217	104	109	67-126	5	30
1,1,2-Trichloroethane	N.D.	0.0200	0.0207	0.0200	0.0220	103	110	80-120	6	30
Trichloroethene	N.D.	0.0200	0.0211	0.0200	0.0221	106	111	80-120	5	30
Trichlorofluoromethane	N.D.	0.0200	0.0224	0.0200	0.0229	112	114	55-135	2	30
1,2,4-Trimethylbenzene	N.D.	0.0200	0.0202	0.0200	0.0216	101	108	75-120	7	30
1,3,5-Trimethylbenzene	N.D.	0.0200	0.0205	0.0200	0.0217	103	109	75-120	6	30
Vinyl Chloride	N.D.	0.0200	0.0211	0.0200	0.0223	105	111	56-120	5	30
Xylene (Total)	N.D.	0.0600	0.0642	0.0600	0.0673	107	112	80-120	5	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201420571302	Sample number(s): 1317993-1318000 UNSPK: 1317993									
Mercury	N.D.	0.00100	0.000847	0.00100	0.000833	85	83	80-120	2	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 20148117101A	Sample number(s): 1317993,1317995,1317997,1317999 UNSPK: 1317997									
Total Cyanide (water)	N.D.	0.200	0.208			104		72-114		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 201420571302	Sample number(s): 1317993-1318000 BKG: 1317993			
Mercury	N.D.	N.D.	0 (1)	20
	mg/l	mg/l		
Batch number: 20148117101A	Sample number(s): 1317993,1317995,1317997,1317999 BKG: 1317997			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20
	mg/l	mg/l		
Batch number: 20142027601A	Sample number(s): 1317993,1317995,1317997,1317999 BKG: 1317993			
Hexavalent Chromium	N.D.	N.D.	0 (1)	5

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260C
Batch number: 5201473AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1317993	100	105	98	94
1317995	99	104	98	96
1317997	99	103	99	95
Blank	99	102	98	96
LCS	100	101	100	99
MS	100	102	100	99
MSD	100	101	100	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs 8260C
Batch number: L201481AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1317999	97	98	101	94
1318002	100	101	101	93
Blank	100	101	100	93
LCS	98	99	104	98
LCSD	97	99	103	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 20143WAA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1317993	33	42	85	75	70	94
1317997	20	28	82	73	68	88
Blank	26	37	88	66	61	78
LCS	42	58	96	83	78	96
Limits:	10-67	10-84	18-141	38-113	44-102	34-128

Analysis Name: 1,4-Dioxane 8270D SIM add-on
Batch number: 20143WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1317993	95	43	86
1317995	84	20	78
1317997	87	40	77
1317999	89	35	80
1318001	107	98	89
Blank	87	78	72
LCS	18*	26	14*
LCSD	96	93	86

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 1,4-Dioxane 8270D SIM add-on
Batch number: 20143WAC026

Limits: 34-125 10-138 15-121

Analysis Name: TCL SW846 8270D MINI
Batch number: 20147WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1317995	33	30	62	71	66	89
1317999	26	26	64	76	71	84
Blank	35	48	85	83	77	102
LCS	30	41	66	59	55	84
Limits:	10-67	10-84	18-141	38-113	44-102	34-128

Analysis Name: NY Part 375 Pests Water
Batch number: 201430006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1317993	73	66	73	68
1317995	68	55	68	57
1317997	77	78	75	77
1317999	77	67	75	69
Blank	69	67	68	74
LCS	78	69	76	73
Limits:	29-129	32-149	29-129	32-149

Analysis Name: 7 PCBs + Total Water
Batch number: 201430007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1317993	101	96	109	100
1317995	91	79	98	85
1317997	104	109	115	117
1317999	103	94	113	98
Blank	62	66	65	72
LCS	88	83	94	90
LCSD	47	69	47	76
Limits:	33-137	10-148	33-137	10-148

Analysis Name: Herbicides in Water 8151A
Batch number: 201430018A

	2,4-DCAA-D1	2,4-DCAA-D2
1317993	107	101
1317995	100	112

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Herbicides in Water 8151A
Batch number: 201430018A

	2,4-DCAA-D1	2,4-DCAA-D2
1317997	104	111
1317999	124	143*
Blank	109	113
LCS	120	122
LCSD	126	129
Limits:	34-142	34-142

Analysis Name: NY 21 PFAS Water
Batch number: 20142002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1317993	96	112	118	76	87	95
1317995	90	103	116	82	84	88
1317997	88	97	107	81	86	91
1317999	86	96	109	79	82	84
1318001	95	93	91	91	95	91
Blank	94	91	91	94	98	94
LCS	92	93	91	94	91	92
LCSD	91	89	91	92	88	91
Limits:	43-130	38-150	23-175	36-137	35-143	33-140

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1317993	170	95	90	101	94	146
1317995	138	86	88	98	89	121
1317997	126	86	85	91	87	100
1317999	137	84	79	87	85	122
1318001	105	96	92	96	92	100
Blank	105	97	97	97	96	100
LCS	102	96	96	94	100	105
LCSD	100	91	89	88	89	97
Limits:	29-182	52-124	52-121	48-130	50-124	37-169

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEiFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1317993	82	85	95	76	44	41
1317995	81	90	94	80	47	47
1317997	80	90	86	80	76	63
1317999	79	84	89	76	50	51
1318001	87	91	92	90	86	79
Blank	91	98	95	92	91	81
LCS	95	99	100	98	97	86

*- Outside of specification

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Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 05/28/2020 08:33

Group Number: 2100197

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: NY 21 PFAS Water
Batch number: 20142002

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
LCSD	90	97	95	89	88	80
Limits:	36-143	44-128	42-149	36-127	21-134	10-134

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 45208 Group # 2100197 Sample # 1317993-8002

COC # 606117

Client Information				Matrix				Analysis Requested										For Lab Use Only					
Client: <u>LANCAN, DPL</u>		Acct. #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/>		Other: <input type="checkbox"/>		Total # of Containers		Preservation and Filtration Codes						FSC: _____	SCR#: _____		
Project Name/#: <u>35 Commercial Street / 170229024</u>		PWSID #:		Grab <input type="checkbox"/> Composite <input type="checkbox"/>		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/>		Other: <input type="checkbox"/>		Total # of Containers		Preservation Codes						Remarks	
Project Manager: <u>GREG WYKA</u>		P.O. #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/>		Other: <input type="checkbox"/>		Total # of Containers		Preservation Codes						Remarks			
Sampler: <u>REID BALKIND</u>		Quote #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/>		Other: <input type="checkbox"/>		Total # of Containers		Preservation Codes						Remarks			
State where samples were collected:		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>		Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/>		Water <input type="checkbox"/> NPDES <input type="checkbox"/>		Other: <input type="checkbox"/>		Total # of Containers		Preservation Codes						Remarks			
Sample Identification			Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	TCL	VGS	TCL SVGS	HEB3/PEB	TCL METALS	HEAVY METALS / INORGANIC CHEM	CYANIDE	PFAS, 1,4-Dioxane	Dissolved Metals	FSC	SCR	Remarks	
Date	Time	Grab	Composite																				
<u>MW16</u>	<u>052020</u>	<u>5/24/20</u>	<u>7:55</u>								X	X	X	X	X	X	X	X	X			* 1 PLASTIC W/ NITRIC ACID IS FIELD FILTERED TO BE ANALYZED FOR DISSOLVED METALS, 1 IS NOT FIELD FILTERED TO BE ANALYZED FOR TOTAL METALS SEE LABEL	
<u>MW17</u>	<u>-052020</u>		<u>13:05</u>								X	X	X	X	X	X	X	X	X				
<u>MW19</u>	<u>-052020</u>		<u>10:10</u>								X	X	X	X	X	X	X	X	X				
<u>GW101</u>	<u>-052020</u>										X	X	X	X	X	X	X	X	X				
<u>GWFB02</u>	<u>-052020</u>		<u>14:30</u>															X					
<u>GWTB02</u>	<u>-052020</u>										X												
SHORT HOLD																							
Turnaround Time (TAT) Requested (please Standard <u>Standard</u> Rush _____)										Relinquished by: <u>[Signature]</u>		Date: <u>5/24/20</u>		Time: <u>15:20</u>		Received by: <u>Kornel</u>		Date: <u>5/20/20</u>		Time: <u>15:20</u>			
(Rush TAT is subject to laboratory approval and surcharge.)										Relinquished by: <u>[Signature]</u>		Date: <u>5/20/20</u>		Time: <u>18:30</u>		Received by: <u>Kyara Knordle</u>		Date: <u>5/120</u>		Time: <u>18:30</u>			
Requested TAT in business days: _____										Relinquished by: <u>[Signature]</u>		Date: <u>5/20/20</u>		Time: <u>22:30</u>		Received by: <u>[Signature]</u>		Date: <u>20/05/20</u>		Time: <u>22:30</u>			
E-mail address: <u>WYKA@LANCAN.COM</u> <u>JLEWIS@LANCAN.COM</u>										Relinquished by: <u>[Signature]</u>		Date: <u>21/05/20</u>		Time: <u>01:00</u>		Received by: _____		Date: _____		Time: _____			
Data Package Options (circle if required)										Relinquished by: _____		Date: _____		Time: _____		Received by: <u>[Signature]</u>		Date: <u>5/21/20</u>		Time: <u>01:00</u>			
Type I (EPA Level 3 Equivalent/non-CLP)				Type VI (Raw Data Only)				Type III (Reduced non-CLP)				NJ DKQP TX TRRP-13				MA MCP CT RCP							
NYSDEC Category A or <u>B</u>										EDD Required? <u>Yes</u> No		If yes, format: <u>EWIS</u>		Site-Specific QC (MS/MSD/Dup)? <u>Yes</u> No		Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____		Temperature upon receipt: <u>5.4-8.7C</u>					

2-6 IR11

5-2 IR11

3-1 IR11

[Signature]



2100197

Client: Langan

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/21/2020
 Number of Packages: 2 Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	No
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Carolyn Cyms

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	Water	46730060WS	5.7	IR	Wet	Y	Bagged	N
2	Water	46730060WS	5.4	IR	Wet	Y	Bagged	N

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
MW19_052020	no ID at all	3 unlabeled vials presumed to be MW19 by process of elimination.

General Comments: also rec'd vials for GWFB02_052020 but no VOCs marked on the coc are they needed?

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Langan Eng & Env Services
21 Penn Plaza
360 West 31st Street
8th Floor
New York NY 10001-2727

Report Date: June 02, 2020 11:14

Project: 35 Commercial Street/170229024

Account #: 45208
Group Number: 2100848
SDG: CMS13
PO Number: 170229024
State of Sample Origin: NY

Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan
Electronic Copy To Langan

Attn: Julia Leung
Attn: Data Management
Attn: Woo Kim
Attn: Reid Balkind

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MW13N_051620 Groundwater	05/16/2020 13:40	1321423
MW13N_051620 Duplicate Groundwater	05/16/2020 13:40	1321424

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 35 Commercial Street/170229024
ELLE Group #: 2100848

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: MW13N_051620 Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1321423
ELLE Group #: 2100848
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submission Date/Time: 05/28/2020 16:41
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS13-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		SW-846 8082A	mg/l	mg/l	mg/l	
10591	PCB-1016	12674-11-2	N.D. D1	0.00011	0.00053	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00011	0.00053	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00021	0.00053	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00011	0.00053	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00011	0.00053	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00011	0.00053	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00016	0.00053	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00011	0.00053	1

Sample Comments

State of New York Certification No. 10670
This sample was originally submitted to the laboratory on 05/16/20 at 19:50. We received authorization for further testing on 05/28/20.
This sample was filtered in lab for PCBs.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10591	7 PCBs + Total Water	SW-846 8082A	1	201500003A	06/01/2020 08:57	Covenant Mutuku	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201500003A	05/30/2020 00:47	Laura Duquette	1

*=This limit was used in the evaluation of the final result

Sample Description: MW13N_051620 Duplicate Groundwater
35 Commercial Street/170229024

Langan Eng & Env Services
ELLE Sample #: GW 1321424
ELLE Group #: 2100848
Matrix: Groundwater

Project Name: 35 Commercial Street/170229024

Submittal Date/Time: 05/28/2020 16:41
Collection Date/Time: 05/16/2020 13:40
SDG#: CMS13-02FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		SW-846 8082A	mg/l	mg/l	mg/l	
10591	PCB-1016	12674-11-2	N.D. D1	0.00011	0.00053	1
10591	PCB-1221	11104-28-2	N.D. D1	0.00011	0.00053	1
10591	PCB-1232	11141-16-5	N.D. D1	0.00021	0.00053	1
10591	PCB-1242	53469-21-9	N.D. D1	0.00011	0.00053	1
10591	PCB-1248	12672-29-6	N.D. D1	0.00011	0.00053	1
10591	PCB-1254	11097-69-1	N.D. D1	0.00011	0.00053	1
10591	PCB-1260	11096-82-5	N.D. D1	0.00016	0.00053	1
10591	Total PCBs ¹	1336-36-3	N.D.	0.00011	0.00053	1

Sample Comments

State of New York Certification No. 10670

This sample was originally submitted to the laboratory on 05/16/20 at 19:50. We received authorization for further testing on 05/28/20.

This sample was filtered in lab for PCBs.

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10591	7 PCBs + Total Water	SW-846 8082A	1	201500003A	06/01/2020 09:07	Covenant Mutuku	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	201500003A	05/30/2020 00:47	Laura Duquette	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/02/2020 11:14

Group Number: 2100848

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/l	MDL** mg/l	LOQ mg/l
Batch number: 201500003A	Sample number(s): 1321423-1321424		
PCB-1016	N.D.	0.00010	0.00050
PCB-1221	N.D.	0.00010	0.00050
PCB-1232	N.D.	0.00020	0.00050
PCB-1242	N.D.	0.00010	0.00050
PCB-1248	N.D.	0.00010	0.00050
PCB-1254	N.D.	0.00010	0.00050
PCB-1260	N.D.	0.00015	0.00050
Total PCBs	N.D.	0.00010	0.00050

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 201500003A	Sample number(s): 1321423-1321424								
PCB-1016	0.00501	0.00377	0.00501	0.00412	75	82	60-117	9	30
PCB-1260	0.00501	0.00435	0.00501	0.00456	87	91	57-134	5	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7 PCBs + Total Water
Batch number: 201500003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1321423	60	76	65	81
1321424	58	78	62	83
Blank	58	55	64	60
LCS	43	61	47	68
LCSD	39	62	43	67
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Langan Eng & Env Services
Reported: 06/02/2020 11:14

Group Number: 2100848

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



Group Number(s):

2044869
2100818
AP13100 (3)
6/20/20

Client: Lanagn, DPC

Delivery and Receipt Information

Delivery Method: ELLE Courier Arrival Date: 05/16/2020
 Number of Packages: 7 Number of Projects: 4
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* All Temperatures in °C.

Cooler #	Matrix	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples	
									Collected Same	Day as Receipt?
1	Water	46730061WS	20.6	IR	Wet	Y	Bagged	Y	Y	Y
2	Water	46730061WS	6.0	IR	Wet	Y	Bagged	N	N	N
3	Water	46730061WS	12.1	IR	Wet	Y	Bagged	Y	Y	Y
4	Water	46730061WS	4.1	IR	Wet	Y	Bagged	N	N	N
5	Water	46730061WS	8.2	IR	Wet	Y	Bagged	Y	Y	Y
6	Soil	46730061WS	-0.2	IR	Wet	Y	Bagged	N	N	N
7	Soil	46730061WS	4.2	IR	Wet	Y	Bagged	N	N	N

General Comments: Samples not frozen.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

APPENDIX J

Completed Fish and Wildlife Resources Impact Analysis Decision Key

Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key		If YES Go to:	If NO Go to:
1.	Is the site or area of concern a discharge or spill event?	13	2
2.	Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	13	3
3.	Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation?	4	9
4.	Does the site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5
5.	Has the contamination gone off-site?	6	14
6.	Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7	14
7.	Are the site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8
8.	Does contamination exist at concentrations that could exceed ecological impact SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14
9.	Does the site or any adjacent or downgradient property contain any of the following resources? i. Any endangered, threatened or special concern species or rare plants or their habitat ii. Any DEC designated significant habitats or rare NYS Ecological Communities iii. Tidal or freshwater wetlands iv. Stream, creek or river v. Pond, lake, lagoon vi. Drainage ditch or channel vii. Other surface water feature viii. Other marine or freshwater habitat ix. Forest x. Grassland or grassy field xi. Parkland or woodland xii. Shrubby area xiii. Urban wildlife habitat xiv. Other terrestrial habitat	11	10
10.	Is the lack of resources due to the contamination?	3.10.1	14
11.	Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14	12
12.	Does the site have widespread surface soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	12
13.	Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact DEC for information regarding endangered species.)	Section 3.10.1	14
14.	No Fish and Wildlife Resources Impact Analysis needed.		