PHASE II
ENVIRONMENTAL SITE ASSESSMENT

Commercial Building
216 South College Avenue
Bloomington, IN

July 3, 2019

BCA Project No. 8131/19-146

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BCA Environmental Consultants, LLC
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Prepared For:
City of Bloomington
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Respectfully Submitted by:
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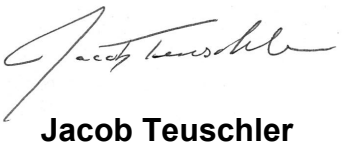

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List of Abbreviations

B(a)p	Benzo(a)pyrene
BCA	BCA Environmental Consultants, LLC
BGS	Below Ground Surface
CAC	Also, CA&C - Coal Ash & Cinders
CAHs	Chlorinated Aliphatic Hydrocarbons
CrVI	Hexavalent chromium
CVOCs	Chlorinated Volatile Organic Compounds
EM	Electromagnetic
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
GPM	Gallons per Minute
GPR	Ground Penetrating Radar
GPS	Global Positioning System
GW	Groundwater
HASP	Health and Safety Plan
HDPE	High Density Polyethylene
IDEM	Indiana Department of Environmental Management
LCS	Laboratory Control Standard
mg/kg	milligrams per kilogram
MS/MSD	Matrix Spike/Matrix Spike Duplicate
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated biphenyl
PID	Photo-Ionization Detector
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RCG	Remediation Closure Guide
RCG ESL	Excavation Screening Level (Soil)
RCG ISL	Commercial/Industrial Direct Contact Screening Level (Soil)
RCG MTGW	Migration to Groundwater Screening Level (Soil)
RCG RSL	Residential Direct Contact Screening Levels (Soil)
RCG RGSL	Residential Groundwater Screening Level (Groundwater)
RCG VESL	Vapor Exposure Screening Levels (Soil Gas, Indoor Air)
RCG VIGWSL	Vapor Intrusion Groundwater Screening Levels
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
RPD	Relative Percent Difference
RoW	Right of Way
SAP	Sampling and Analysis Plan
SLs	Screening Levels
SOP	Standard Operating Procedures
SVOCs	Semi-Volatile Organic Compounds
ug/kg	micrograms per kilogram
ug/L	micrograms per Liter
USCS	Unified Soil Classification System
USTs	Underground Storage Tanks
VFC	IDEM Virtual File Cabinet
VOCs	Volatile Organic Compounds
WHPA	Well Head Protection Area

1.0 INTRODUCTION

BCA Environmental Consultants, LLC (BCA) was requested by Mr. Brian Payne, Assistant Director, Office of Economic and Sustainable Development, City of Bloomington, Indiana to perform a Phase II Environmental Site Assessment (ESA) of the commercial building property located at 216 S. College Ave. in Bloomington, IN (Subject Site). This report is prepared for the City of Bloomington and is funded through a U.S. EPA Brownfield Assessment Grant to the City of Bloomington (Cooperative Agreement No. BF-00E02280). The following report presents the information obtained during the investigation and provides conclusions and recommendations based on the information.

The Subject Site is comprised of three (3) parcels totaling approximately 1.7 acres of land that is situated within the City of Bloomington. The surrounding area is mixed use commercial and municipal properties. The Subject Site is located on the west side of College Avenue between 3rd and 4th Streets (**Figure 1**). The Subject Site is currently occupied.

A Phase I ESA of the Subject Site was conducted for the City of Bloomington by BCA and was dated May 29, 2019. The Phase I ESA was funded through the U.S. EPA Brownfield Assessment Grant to the City of Bloomington. The Phase I ESA identified the following recognized environmental conditions (RECs) at the Subject Site:

- The historical presence of a rail spur on the western portion of the Subject Site along with coal storage piles.
- The historical presence of two gasoline filling stations that operated on the north-central and north-eastern portions of the Subject Site from the 1920s through at least the late 1940s.
- The historical presence of two (2) battery and ignition service stations in the north-central portion of the Subject Site from the 1920s through at least the late 1940s;
- Vulcanizing activities, reported to historically have been present on the Subject Site;
- The presence of a trench drain and suspected oil/water separator (or grease trap) observed on the northwest portion of the Subject Site..

The purpose of the Phase II ESA was to implement the recommendations of the Phase I ESA and investigate the identified RECs to confirm the presence or absence of contaminants. The scope of work was not sufficient to determine the extent and magnitude of contamination, if it is present.

2.0 METHODOLOGY

The investigation procedures will follow BCA's Bloomington Quality Assurance Project Plan and Field Standard Operating Procedures (QAPP and Field SOP) and those recommended by the IDEM 2012 Remediation Closure Guide (RCG), regulations and industry-accepted practices. Investigation results are compared to RCG residential closure levels (RCLs) and industrial closure levels (ICLs) from the RCG Appendix A, Table A-6: 2019 Screening Levels.

2.1 Sampling and Analysis Plan and Health and Safety Plan

A site-specific SAP and HASP were prepared for the Subject Site prior to Phase II site activities and were approved by the EPA Region V Brownfield Program. Unless otherwise noted, the plan and procedures followed the SAP. A copy of the SAP and HASP is provided in **Appendix A**.

2.2 Geophysical Survey

A limited geophysical survey was conducted for BCA by American Locating Service at the Subject Site on May 13, 2019, prior to commencing drilling activities, to identify the locations of any unknown and buried utilities. The survey included GPR scans of areas of interest and near the proposed borings to identify any potential buried utility or other sub-surface anomalies. All detected utilities and all linear anomalies were marked with marking paint as possible utility locations. The suspected former UST locations were also marked with paint. The identified subsurface utilities and former UST locations are included on **Figure 2**.

2.3 Drilling Methods

The locations of the borings were selected based on information obtained from the Phase I ESA (BCA 2019) as most likely to be impacted by the identified RECs. The soil probes were advanced by Enviro-Dynamics of Hebron, Indiana using a track-mounted Geoprobe direct-push probe system. The soil probes were installed in 5-foot long sections using a 2.5-inch diameter hollow steel sampling rod that contained a clear acetate liner. The rods were pushed into the soil or driven with a hydraulic hammer. A soil core encased in the disposable acetate liner was advanced through the substratum. The liners allowed the collection of continuous, relatively undisturbed soil cores, minimizing cross-contamination between both stratigraphic horizons and probe locations. The liners containing the soil cores were extracted from the sample rods and were split in the field and sampled by BCA via the screening process described below. The soil was then logged in accordance with the USCS. Specific soil descriptions, screening results and corresponding depths are included on the soil boring logs in **Appendix B**.

Boring locations were recorded by means of a Trimble Nomad 900G sub-3-meter accuracy (Post-processed) GPS receiver. GPS coordinate data table is presented in **Appendix C**.

2.4 Soil Sampling

The subsurface field investigation was conducted May 16th, 2019 for the purpose of determining subsurface environmental conditions on the property.

A total of five (5) soil probes (SP-1 – SP-5) were driven throughout the Subject Site. All probes were designated for groundwater sampling and were to be driven to refusal or into first groundwater at depths of 11 to 25 feet bgs. The probes were placed as indicated on the attached site map (**Figure 2**) with adjustments from the SAP based on site conditions, utility locations, and observations made by BCA personnel upon conducting the utility locate and arrival at the Subject Site.

Soil cores were collected continuously throughout the depth of each of the probes. The soil cores were field screened and logged as described below, and two (2) soil samples from each probe were analyzed for VOCs; at least two (2) samples from each probe for SVOCs/PAHs and 14 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium and zinc) and hexavalent chromium. If soil screening did not suggest the presence of VOCs, then soil from the vadose (smear) zone or from the deepest soil probe interval were selected for VOC analysis.

2.5 Soil Vapor Screening

Soil cores collected in acetate liners via the direct-push probing rig were field screened for organic vapors via headspace analysis (i.e. vapor screening). The acetate liners were split open and immediately scanned with a RAE Systems MiniRAE 3000 PID equipped with a 10.6eV bulb calibrated on 100 ppm isobutylene span gas. A representative soil type or the soil horizon with the highest PID reading was collected by means of U.S EPA SW-846 Method 5035a for VOC analysis.

2.6 Groundwater Sampling

Groundwater was sampled from each of the designated probes where measurable amounts of groundwater was encountered using sampling techniques described below. Groundwater samples were analyzed for VOCs, SVOCs/PAHs, 14 metals and hexavalent chromium. Field filtered groundwater samples were collected for follow-up analysis based on the results of the unfiltered samples. Follow-up analysis consisted of one (1) field

filtered sample was analyzed for one metal and one (1) field filtered sample was analyzed for two metals.

Groundwater samples were collected by use of temporary 1" PVC sampling points with 5-foot screens placed in the three (3) boreholes (SP-1, SP-2 & SP-3), and 10-foot screens placed in two (2) boreholes (SP-4 & SP-5). Four (4) probes were driven past first groundwater.

Soil probe SP-2 encountered refusal twice before achieving a depth of 8.2 feet when refusal (possibly due to bedrock) was encountered. The temporary sampling point in SP-2 was left overnight, but no groundwater was encountered. SP-1 hit refusal at a depth of 13.34 feet; SP-3 was driven to a depth of 10.38 feet; SP-4 was driven to a depth of 10.92 feet; SP-5 was driven to a depth of 18.76 feet.

Temporary groundwater sampling points were left for at least 4 hours before sampling. With the exceptions described below, groundwater was purged and sampled following the IDEM Micro-Purge (Low-Flow) Sampling Option (reformatted June 6, 2012) to the extent possible. Field parameters (Temperature, Conductivity, Dissolved Oxygen, pH, and Oxygen Reduction Potential) were monitored and recorded at each sampling point during purging until at least three (3) parameters have stabilized. Micro-Purge sampling was conducted with dedicated HDPE tubing and a non-contact stainless steel submersible bladder pump equipped with a polyethylene bladder. If groundwater monitoring parameters did not stabilize, a sample was collected regardless, and a note recorded in the sample log. Field filtered samples were collected by passing the groundwater through a dedicated, disposable in-line 10-micron (um) cartridge filter. Approximately 1.5 to 1.75 gallons of water was purged prior to sampling the groundwater at each location. Groundwater sampling logs are included in **Appendix D**.

Low-Flow Sampling Exceptions:

Due to shallow refusal in SP-2 no groundwater water was encountered in this location. Also, due to poor recharge in SP-3, measured water levels were below the top of the bladder pump, preventing water level readings from being taken during low-flow purging. The sample point went dry while purging, so the sample point was given time to recharge and pumped dry a second time. SP-3 was sampled after being pumped dry twice. The total drawdown from static level at SP-1 and SP-5 was greater than 0.10 foot (due to only moderate permeability), but otherwise the probes met low-flow conditions.

3.0 RESULTS

Soil descriptions and the results of field screening are presented on the soil boring logs in **Appendix B**. Groundwater sample logs with field parameters are presented in **Appendix D**. The analytical laboratory reports and chain-of-custody forms are presented in **Appendix E**, and laboratory results are summarized in Section 3.3 – 3.4 below and in **Tables 1 - 8**.

3.1 Physical Setting/Subsurface Conditions

As estimated from the U.S. Geologic Survey 7.5 Minute Series Topographic Quadrangle Map for Bloomington, Indiana (2013; C.I. = 10 feet), the elevation of the Subject Site is approximately 750 feet above mean sea level, relative to the North American Vertical Datum of 1988. The Subject Site is situated on relatively level terrain. Surface drainage in the overall area of the Subject Site is generally to the south-southeast toward Clear Creek located 0.4 miles south southeast of the Subject Site. However, surface drainage at the Subject Site flows to the adjacent streets and municipal storm water system.

3.1.1 Soils

The soil under the Subject Site is mapped as belonging to one (1) soil type:

- Udorthents are human-altered and human-transported (HAHT) soils and materials. HAHT soils include those intentionally and substantially modified by humans for specific purposes (e.g., terraced agriculture, building support, mining, transportation, etc.). They do not include soils modified through standard agricultural practices (such as shallow plowing, liming, and fertilization) or farmed soils with unintended wind and water erosion (Web Soil Survey).

3.1.2 Surficial Geology

The area of the Subject Site is underlain by approximately 5 to 15 feet of unconsolidated deposits that lie on Mississippian age bedrock (Fenelon, et al, 1994). Total thickness of unconsolidated deposits overlying bedrock in Monroe County is commonly reported as 6 to 25 feet. The unconsolidated sediments consist of Terra Rossa – red, clayey regolith, 5 to 50 feet thick, over limestone of Middle Mississippian age.

3.1.3 Bedrock Geology

The Subject Site and surrounding area lie within the Mitchell Plateau physiographic unit within the Southern Hills and Lowlands regional physiographic province (Gray, 2000). The Mitchell Plateau is bounded by the older rocks of Norman Upland on the east and the younger rocks of the Crawford Upland to the west. The Mitchell Plateau (also referred to as the Mitchell Plain) is a karst area in Indiana of relatively low relief. An extensive underlying cave system developed in Mississippian age limestone bedrock. Surface

drainage is rare due to most streams in the area disappearing into caves or joints within the rock.

Bedrock at the Subject Site is reported to be the Mississippian-aged Sanders Group (that includes the Harrodsburg and Salem Limestones). The Sanders Group consists of a variety of carbonate rocks in complex facies relationships. The Ramp Creek and Muldraugh Formations at the base of the group are dominantly a mixture of fine-grained dolomite and limestone. Cherty and siliceous intervals are common, and minor amounts of siltstone and shale are present. Above that interval in the Harrodsburg Limestone, well-cemented bioclastic calcarenites and calcirudites are dominant over argillaceous limestone, dolosiltites, and shale. The abundance of geodes and chert decreases upward in the group. The Salem Limestone except for the Somerset Shale Member at its base is dominated by porous calcarenite, although it contains a wide variety of other kinds of limestone. (IGWS)

3.1.4 Hydrology

Surface Water

The Subject Site lies within the East Fork White River basin, which has a total drainage area of 5,746 square miles in south-central Indiana. In general, drainage of the Mitchell Plain (including the Subject Site) in Monroe County is considerably different from the rest of the basin; most runoff quickly leaves the surface by entering sinkholes and becoming part of the ground-water system. In the streams that do flow across the Mitchell Plain, some surface water is intercepted by swallow holes and diverted underground into either the groundwater system or subterranean channels. (Gray, 2000) Surface water drainage from the Subject Site flows south towards Clear Creek, located 0.4 mile to the south-southeast.

Unconsolidated Aquifer System

The Subject Site lies in the Dissected Till and Residuum / Unglaciated Southern Hills and Lowlands Aquifer System. Total thickness of unconsolidated deposits overlying bedrock is commonly 6 to 25 feet. Clay material dominates this unconsolidated aquifer system; however, discontinuous sand or gravel deposits are reported. These deposits are commonly 1 to 3 feet thick. Because of low permeability of surface materials, this system is not considered very susceptible to contamination from surface sources. (Maier, 2003)

Bedrock Aquifer System

The Blue River and Sanders Groups occur as the uppermost bedrock aquifer system over most of the west-central portion of Monroe County. Depth to bedrock is generally between 5 and 30 feet. The Blue River and Sanders Groups Aquifer System is not regarded as a major ground-water resource in the county. Static water levels range from 0 feet to 197 feet below land surface but generally between 15 and 75 feet below surface. Areas of shallow bedrock, especially where joints, fractures, and solution features are

present, may allow contamination. These conditions warrant considering the aquifer system as a whole to be susceptible to contaminants introduced at and near land surface. (Maier, 2003)

The City of Bloomington is served by a public water supply. A report pertaining to the adjacent Indiana Gas Company site to the west suggest the groundwater flow direction is to the southeast. (VFC Document #47437557). Based on environmental reports for other nearby sites, local groundwater flow around the Subject Site is to the south-southeast. However, depths of bedrock encountered during the investigation the groundwater at the Subject Site indicate a bedrock slope to the east .

Regional groundwater flow of the area is predominately to the south-southwest in general conformance with surface topography/drainage and the regional attitude of underlying bedrock.

3.1.5 Subject Site Physical Observations

Based on probes advanced on the Subject Site, the soils consist of mostly clays to various depths of 8 – 12 feet bgs. Clays with sandy clay intervals were encountered at depths between 12 – 18 feet. In at least one boring (SP-1) a (more permeable) thin (0.5') layer of clayey sand was encountered above (presumed bedrock) refusal. Bedrock and/or refusal was encountered in all sampling points. Depth to bedrock/refusal was reported between 8.21 ft bgs and 18.76 ft bgs. The bedrock beneath the Subject Site is highly variable in depth between locations. Static water level readings from the temporary groundwater sample points averaged 8.38 feet bgs.

3.2 Laboratory Analysis of Samples

Laboratory analyses were conducted by LSAI Laboratories LLC and PACE Analytical Laboratories of Indianapolis, Indiana. All soil and groundwater samples were stored on ice and/or refrigerated until couriered to the lab. All soil VOC samples were stored on ice immediately after collection and frozen within 24 hours of sampling. Analytical laboratory reports and chain-of-custody documents are included in **Appendix E**.

Not including QA/QC samples, a total of nine (9) soil samples were analyzed for VOCs by EPA SW-846 method 5035A/8260; twelve (12) for SVOCs/PAHs by method 8270/SIM; eleven (11) for 14 metals by method 6010 and 7471. Based upon the initial metals results, six (6) additional samples were analyzed for arsenic (6010).

Not including QA/QC samples, a total of four (4) groundwater samples were analyzed for VOCs by EPA Method 8260, four (4) for SVOCs/PAHs by EPA Method 8270/SIM, and four (4) for 14 metals by methods 6010, 6020, 7470, and three (3) for hexavalent chromium (CrVI) by method 7199. Based on the initial results, one (1) field filtered groundwater sample was analyzed for arsenic (6010) and one (1) field filtered groundwater sample was analyzed for arsenic and lead (6010).

QA/QC samples included both field and laboratory samples. One (1) soil and groundwater field duplicate and MS/MSD samples were collected and analyzed for VOCs, SVOCs/PAHs, 14 metals, and CrVI. Laboratory QA/QC included method blanks, LCS, and internal surrogate standards. For results of QA/QC sampling and analysis see “Data Assessment” in Sections 3.3 and 3.4 below.

3.3 Soil Results

Analytical laboratory reports are included in **Appendix E** and the soil sample analytical results are summarized in **Tables 1 – 4** and on **Figure 3**. Detected analytical concentrations were compared to IDEM’s RCG RSL, ISL, ESL and MTGW soil screening levels (Remediation Closure Guide, Appendix A, Table A-6: 2019 Screening Levels).

VOCs:

One to two soil samples from each of the five (5) probes were selected for analysis for full range VOCs.

Benzene exceeded the RCG MTGW (0.051 mg/kg) in the samples from:

SP-4 (8-9’) (0.819 mg/kg)
SP-4 (9-10.5’) (0.200 mg/kg)
SP-5 (9-11’) (0.100 mg/kg)
SP-5 (9-11’) DUP (0.105 mg/kg)

SP-5 (11-13') (0.177 mg/kg)

Naphthalene exceeded the RCG MTGW (0.11 mg/kg) in the sample from:
SP-4 (8-9') (0.342 mg/kg)

1,2,4-Trimethylbenzene exceeded the RCG MTGW (1.6 mg/kg) in the sample from:
SP-4 (8-9') (12.5 mg/kg)

1,3,5-Trimethylbenzene exceeded the RCG MTGW (1.7 mg/kg) in the sample from:
SP-4 (8-9') (3.59 mg/kg)

PAHs:

Two (2) soil samples from SP-1, SP-2, and SP-3 and three (3) samples from SP-4 and SP-5 were analyzed for PAHs.

Naphthalene exceeded the RCG MTGW (0.11 mg/kg) in the samples from:
SP-1 (3-5') (0.234 mg/kg)
SP-1 (5-7') (0.315 mg/kg)
SP-4 (6-8') (0.221 mg/kg)
SP-4 (8-9') (0.121 mg/kg)
SP-4 (9-10.5') (0.20 mg/kg)
SP-5 (11-13') (0.144 mg/kg)

SVOCs:

Two (2) soil samples from SP-1, SP-2, and SP-3 and three (3) samples from SP-4 and SP-5 were analyzed for SVOCs.

All SVOCs were either below the RCG SLs or were not detected.

Metals:

Two (2) soil samples from SP-1 and SP-2, three (3) from SP-5, and five (5) from SP-3 and SP-4 were analyzed for 14 metals.

Arsenic exceeded the RCG RSL (9.5 mg/kg) in the samples from:
SP-1 (3-5') (12.0 mg/kg)
SP-2 (2-4') (14.2 mg/kg)
SP-3 (2-4') (13.6 mg/kg)
SP-4 (2-4') (18.5 mg/kg)
SP-4 (4-6') (15.1 mg/kg)

Thallium exceeded the RCG RSL (1.1 mg/kg) in the sample from:

SP-1 (3-5') (1.6 mg/kg)

Arsenic exceeded the RCG MTGW SL (5.9 mg/kg) in the samples from:

SP-1 (5-7') (8.2 mg/kg)
SP-3 (0-2') (6.3 mg/kg)
SP-3 (4-6') (8.4 mg/kg)
SP-4 (0-2') (7.7 mg/kg)
SP-4 (6-8') (8.6 mg/kg)
SP-5 (0-2') (6.1 mg/kg)
SP-5 (0-2') DUP (7.5 mg/kg)
SP-5 (2-4') (7.7 mg/kg)
SP-5 (6-8') (6.6 mg/kg)

All other analyzed metals were either below the RCG SLs or were not detected.

Data Assessment:

QA/QC samples collected during the soil sampling included field duplicates, MS/MSD samples and a trip blank. No field equipment blank was collected since only single-use disposable supplies contacted the soil samples. The trip blank was analyzed for VOCs only, while the field duplicates and MS/MSD samples were analyzed for VOCs by method 8260, SVOCs/PAHs by method 8270/SIM, and 14 metals by methods 6010 and 7471. No analytes were detected in the trip blank.

For all but eleven (11) VOCs, fifteen (15) PAHs, and twelve (12) metals both the sample and duplicate were below the detection limit, equating to zero percent (0%) relative percent difference (RPD). For detections in soil field duplicates, the relative percent difference (RPD) ranged from 5% to 139% for 11 VOCs, 36% to 197% for 15 PAHs, and 2% to 162% for 11 metals. Of the duplicate detections, six (6) VOCs and seven (7) metals detections were greater than five times the reporting limit (>5 x RL); including seven (7) detections that had a field duplicate RPD greater than the notice limit of 50% for soil. Thus, 46% of the analyte detections >5 x RL were below the notice limit which does not meets the EPA DQO of at 75%. Thus, the non-homogeneity commonly observed in soil samples affects this sample set.

The MS/MSD sample results were generally within control limits. Some metals analytes were outside control limits due to elevated sample concentrations relative to spike levels or due to sample non-homogeneity common in soil samples. Naphthalene in the VOC range had low recovery suggesting low bias of the sample results. Naphthalene in the PAHs range analysis were higher than the VOC range and should be taken as more reliable. Where outside control limits parameters were confirmed by other QA/QC measures or were for analytes that were not detected or were far below the screening levels. Low antimony recovery suggests that antimony results should be considered

estimated and may be biased low. Laboratory QA/QC samples (method blanks, LCS and surrogate spikes) were within control limits or confirmed by other QA/QC measures.

A Level III QA/QC data package is included with the lab report in **Appendix E**.

3.4 Groundwater Results

Groundwater sample analytical results are summarized in **Tables 5 – 8** and on **Figure 4**. Detected analytical concentrations were compared to IDEM's RCG Residential Groundwater Screening Levels (Remediation Closure Guide, Appendix A, Table A-6: 2019 Screening Levels).

VOCs:

Groundwater samples obtained from four (4) probe locations were analyzed for full range VOCs.

Benzene exceeded the RCG VIGWSL ISL (120 ug/L) in the sample from:
SP-4 (183 ug/L)

Benzene exceeded the RCG VIGWSL RSL (28 ug/L) in the samples from:
SP-5 (34.0 ug/L)
SP-5 DUP (36.1 ug/L)

1-Methylnaphthalene exceeded the RCG RSL (11 ug/L) in the sample from:
SP-4 (12.4 ug/L)

Naphthalene exceeded the RCG RSL (1.7 ug/L) in the sample from:
SP-4 (9.4 ug/L)

No other VOCs were detected above the RCG SLs in the groundwater samples.

PAHs:

Groundwater samples obtained from four (4) probe locations were analyzed for PAHs.

Naphthalene exceeded the RCG RSL (1.7 ug/L) in the sample from:
SP-4 (8.0 ug/L)

No other PAHs were detected above the RCG SLs in any of the groundwater samples.

SVOCs:

Groundwater samples obtained from four (4) probe locations were analyzed for SVOCs.

No SVOCs were detected in any of the groundwater samples.

Metals:

Groundwater samples from four (4) probe locations were analyzed for 14 metals while three (3) probe locations were analyzed for CrVI.

Arsenic exceeded the RCG RGSL (10.0 ug/L) in the samples from:

SP-4 (14.9 ug/L)
SP-5 (12.4 ug/L)
SP-5 DUP (12.1 ug/L)

The field filtered samples from SP-4 and SP-5 was analyzed for arsenic by method 6010. Arsenic was below the RCG RSL in the field filtered sample from SP-4. Arsenic exceeded the RCG RGSL (10.0 ug/L) in the sample from:

SP-5 Field Filtered (10.2 ug/L)

Lead exceeded the RCG RGSL (15.0 ug/L) in the samples from:

SP-3 (33.2 ug/L)
SP-4 (26.4 ug/L)

The field filtered sample from SP-4 was analyzed for lead by method 6010. Due to poor recharge in SP-3, no field filtered sample was obtained for analysis. Lead was below the RCG RSL in the field filtered sample from SP-4.

All other metals were either below the RCG RSLs or were not detected.

Data Assessment:

QA/QC samples collected during groundwater sampling included field duplicates, MS/MSD samples, equipment blanks and a trip blank. The field duplicate, MS/MSD and equipment blanks were analyzed for VOCs by EPA method 8260, SVOCs/PAHs by method 8270/SIM, 14 metals by method 6010, 6020 or 7470, and CrVI by method 7199. The trip blank was analyzed for VOCs only. No VOCs were detected in the trip blank and equipment blank. Trace levels of CrVI were detected in the equipment blank but were below the RCG screening level. Also, naphthalene and zinc were detected in the equipment blank far below the RSL and were flagged by the laboratory as “J-flag”; meaning the estimated concentration is above the adjusted method detection limit and below the adjusted reporting limit.

For all but four (4) VOCs, four (4) PAHs, and seven (7) metals analytes were below detection limits in both the sample and the field duplicate, equating to a zero percent relative difference (0% RPD). For the groundwater duplicate detections, the RPD varied from 1.6% to 7.8% for VOCs, 21% to 122% for PAHs, and 0.2% to 22% for metals. Of the duplicate detections, two (2) VOCs (benzene and isopropyl benzene), two (2) PAHs (1-Methylnaphthalene and 2-Methylnaphthalene), and two (2) metals (barium and nickel) were greater than five times the reporting limit (>5 x RL). Of the six (6) detections >5 x RL, the field duplicate did not have an RPD greater than the notice level of 35%. Thus, 100% of the analyte detections >5 x RL were below the notice limit which meets the DQO

of 75%. Therefore, no indication of non-homogeneity in the groundwater samples was observed.

The overall precision of the sample set may also be evaluated by determining the average RPD of all duplicates with detections >5 x RL. The average RPD of the analyte detections >5 x RL is 11%. These data indicate good precision for the groundwater analyses.

The groundwater MS/MSD sample results were generally within control limits. Where out of control limits, parameters were confirmed by other QA/QC measures and were for parameters not detected in the samples, or if detected, were far below the RCG SLs. Laboratory QA/QC included method blanks, LCS, and surrogate spikes. Laboratory QA/QC results were within control limits.

A Level III QA/QC data package is included with the lab report in **Appendix E**.

4.0 DISCUSSION and CONCLUSIONS

Soil and groundwater sampling for this Phase II ESA was conducted on May 16 and 17, 2019 for the purpose of determining subsurface conditions throughout of the Subject Site. The subsurface investigation included advancing five (5) soil and groundwater probes on the Subject Site at locations that were the most likely to be impacted by the RECs identified in the 2019 Phase I ESA. Soil samples were collected from each boring location, and groundwater was sampled from four (4) probe locations. Soil samples from the probes were analyzed for VOCs, SVOCs/PAHs and 14 Metals. Groundwater samples from the probes were analyzed for VOCs, SVOCs/PAHs, 14 Metals and CrVI.

Laboratory analyses of the submitted samples confirm that the Subject Site soils and groundwater have been impacted by on-site sources. No analytes were found above IDEM RCG SLs except those discussed below.

Soil VOCs – Soil Migration to Groundwater

Soil results show low levels of petroleum constituents (benzene, naphthalene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene) above RCG Soil MTGW in the smear zones at SB-4 (8-10.5') and at SB-5 (9-13'). The highest concentrations of petroleum constituents were detected in areas the 2019 Phase I ESA indicated as likely former petroleum UST pits. This suggests the source is likely from on-site historical uses of the property.

Soil PAHs

Naphthalene exceeds RCG Soil MTGW in shallow samples from SP-1 (3-5') and SP-1 (5-7'). Due to the historical nature of the Subject Site and the shallow depths of these contaminants, the source is likely from on-site historical usage of the property. Naphthalene exceeds RCG Soil MTGW in samples from SP-4 (6-10.5') and SP-5 (11-13'). Due to these sample points being in close proximity to likely former petroleum UST pit areas, the source of contamination is likely on-site and from historical uses of the property.

Soil Metals

Arsenic exceeds the RCG RSL in the shallower sample intervals at SP-1, SP-2, SP-3, and SP-4. Arsenic exceeds the RCG Soil MTGW in SP-1 (5-7'), SP-3 (0-2'), SP-3 (4-6'), SP-4 (0-2'), SP-4 (6-8'), SP-5 (0-2'), SP-5 (0-2') DUP, SP-5 (2-4'), and SP-5 (6-8'). However, the average arsenic concentrations of all 18 soil samples (8.6 mg/kg) and the average of all nine (9) shallow (0-2' and 2-4') soil samples (9.46 mg/kg) are both less than the RCG RSL (9.5 mg/kg) but do exceed the RCG MTGW SL (5.9 mg/kg). Levels of arsenic decreased in deeper samples at SP-3 and SP-4 indicating that arsenic present at shallower depth may not be migrating into deeper soils.

Thallium exceeded the RCG RSL (1.1 mg/kg) in one sample at SP-1 (3-5') at 1.6 mg/kg. This may from historical use of the property and the fill material that was observed in this section of the subsurface. However, that average of all 10 soil samples to a depth of five (5) feet is 0.79 mg/kg which is well below the RSL.

Levels of arsenic up to 9.5 mg/kg (or more) are commonly due to background (USGS 1984), while higher concentrations detected may be due to urban fill or historical activities. Elevated levels of thallium may be due to urban fill or historical site activities. Almost all of the Subject Site is either paved with asphalt/concrete or covered by a building, preventing direct contact and minimizing rainwater infiltration.

Groundwater VOCs

VOCs were found to exceed RGSLs in groundwater samples collected from the Subject Site.

Specifically:

- Benzene exceeded the RCG VIGWSL ISL in the sample from SP-4.
- Benzene exceeded the RCG VIGWSL RSL in the samples from SP-5 and SP-5 Dup.
- 1-Methylnaphthalene and Naphthalene exceeded the RCG RSL in the sample from SP-4.

Benzene, 1-Methylnaphthalene, and Naphthalene are all common petroleum constituents. As mentioned previously and in the 2019 Phase I ESA there was a historical on-site filling station with likely USTs. For this reason, the source is likely from historical on-site sources. The extent of this contamination is unknown.

Groundwater PAHs

Naphthalene exceeded the RCG RSL in one groundwater sample from SP-4. Other PAHs were detected mostly in SP-4 and SP-5 samples, but none exceeded the RCG RSLs.

Groundwater Metals

Arsenic was found above the RGSL in the unfiltered samples collected from SP-4, SP-5, and SP-5 DUP. The filtered sample for SP-5 exceeded the RCG RSL for arsenic. Sediment in the groundwater samples, even the filtered sample of SP-5, may have caused the elevated levels of arsenic. However, given the presence in shallow soil, it cannot be ruled out that the arsenic in SP-5 could be leaching from the soil and dissolving into the groundwater.

Lead exceeded the RCG RSL in the samples from SP-3 and SP-4. The sample from SP-4 had some level of sediment and the filtered sample was below the detection limits for lead. It is likely that the elevated lead in SP-4 is due to suspended sediments in the

groundwater and very little or none is likely to be dissolved in the groundwater. No filtered sample was collected from SP-3 due to poor recharge; however, it is likely that the elevated lead is from suspended sediments in the groundwater and very little or none is likely to be dissolved in the groundwater.

Conclusions:

Based on the discussion above, BCA draws the following conclusions:

Groundwater at the Subject Site has been impacted by petroleum constituents, likely from historical on-site activities/source(s), specifically the former filling station(s). The groundwater probes, SP-4 and SP-5, located on the northeastern section of the Subject Site were most effected. It is unknown if any petroleum constituents have migrated off the Subject Site.

There does not appear to be a potential for vapor migration exposure for the Subject Site or within the surrounding area from the locations sampled. Groundwater was encountered in the temporary wells from 7.46 – 8.95 feet bgs and the samples that exceed the residential and commercial VIGWSL are covered by an asphalt parking lot and at distance from occupied structures. However, the extent of impacts have not been delineated.

Soil arsenic is above the MTGW and RSL and thallium is above the RSL. However, the averages for arsenic and thallium in the shallow soil and for all soil are below the RSLs and are likely mostly due to background. Almost all of the Subject Site is either paved with asphalt/concrete or covered by a building, preventing direct contact and minimizing rainwater infiltration. There is some potential that some of the metals impacts are from urban fill. Groundwater detections arsenic and lead above the RGSLs are likely due to sediment. However, the possibility cannot be completely ruled out that impacts were present and due to migration of arsenic from shallow soils.

5.0 RECOMMENDATIONS

Based on the results of this Phase II ESA conducted at the Subject Site located at 216 South College Avenue in Bloomington, Indiana, BCA recommends:

- Further Investigation of the petroleum constituents on-site and off-site.
- Restrict future land-use through an Environmental Restrictive Covenant (ERC) or another tool to eliminate potential exposure pathways to impacted soil and groundwater.

6.0 REFERENCES

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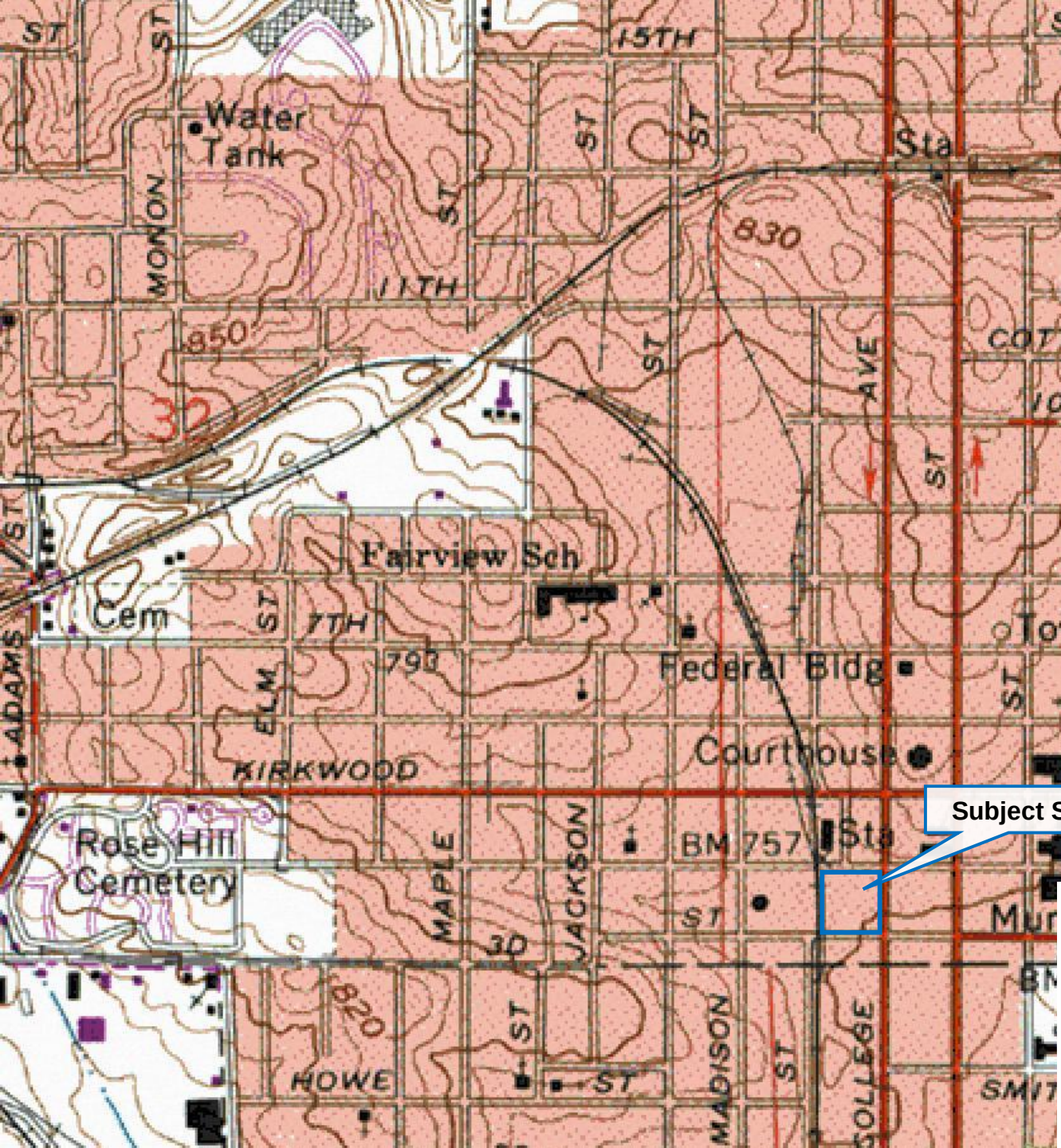
Figures

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN



BCA Environmental Consultants, LLC
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INDIANAPOLIS, IN 46256
317-578-4233

APPROXIMATE SCALE: NTS

DRAWN BY: RAM

DATE: 4/29/2019

BCA PROJECT NO.: 19-132

DRAWING TITLE: Site Location

PROJECT LOCATION: Commercial Building
216 S. College Avenue
Bloomington, Indiana

FIGURE 1

314 W. 4th
308 W. 4th
Grass
Grass
B-Line Trail
217 W. Kirkwood
210 W 4th
120 S. College
122 S. College
122 S. Walnut
Parking Lot
122 S. Walnut
Possible TCE Plume
W. 4th Street
W. 4th Street
S. College Avenue
Walkway - Bridge
W. 4th Street
Grass
Parking Lot
Former MGP Site
B-Line Trail
Parking Lot
SP-1
Former Coal Piles / CAC
Former Oil-Water Separator
Subject Site
216 S. College
Former Fuel Stations
SP-5
Possible UST Pits
SP-4
201 S. College
109 W. 4th
205 S. Madison
Parking Lot
Parking Lot
209 S. College
Parking Garage
Property Boundary
SP-3
211 S. College
Parking Lot
SP-2
Parking Lot
222 S. Walnut
Parking Lot
W. 3rd Street
W. 3rd Street
W. 3rd Street
S. College Avenue
0
25
50
100
Grass
B-Line Trail
302 S. College
302 S. Walnut
Parking Lot

BCA Environmental Consultants, LLC
7202 E. 87th Street, Suite 110
Indianapolis, IN 46256
317-578-4233

DATE: 6/13/19
SCALE: 1" = 50'
DRAWING TITLE: Site Map
PROJECT LOCATION: 216 S. College Avenue Bloomington, Indiana
DRAWN BY: JMT
BCA SITE NO. 8131
FIGURE 2

314 W. 4th
308 W. 4th
Grass
Grass
B-Line Trail
217 W. Kirkwood
210 W 4th
120 S. College
122 S. College
Parking Lot
122 S. Walnut
Walkway - Bridge
W. 4th Street
S. College Avenue
109 W. 4th
Parking Garage
Possible TCE Plume
W. 4th Street
Grass
Parking Lot
Former MGP Site
B-Line Trail
Parking Lot
Former Coal Piles / CAC
Former Oil-Water Separator
Former Fuel Stations
Possible UST Pits
Parking Lot
205 S. Madison
Parking Lot
Subject Site
216 S. College
Property Boundary
Parking Lot
B-Line Trail
W. 3rd Street
B-Line Trail
Grass
Parking Lot
302 S. College
211 S. College
302 S. Walnut

SP-1 5/16/2019

VOCs	
All VOCs (6-7')	BDL
VOCs	
All VOCs (10-11')	BDL
PAHs	
Naph (3-5')	0.234
Naph (5-7')	0.315
All Other PAHs	<RCG SLs
SVOCs	
All SVOCs (3-5')	<RCG SLs
All SVOCs (5-7')	<RCG SLs
Metals	
Arsenic (3-5')	12.0
Arsenic (5-7')	8.2
Thalllium (3-5')	1.6
All Other Metals	<RCG SLs

SP-2 5/16/2019

VOCs	
All VOCs (2-4')	<RCG SLs
PAHs	
All PAHs (0-2')	BDL
All PAHs (2-4')	<RCG SLs
SVOCs	
All SVOCs (0-2')	BDL
All SVOCs (2-4')	BDL
Metals	
All Metals (0-2')	<RCG SLs
Arsenic (2-4')	14.2
All Other Metals	<RCG SLs

SP-3 5/16/2019

VOCs	
All VOCs (7-9')	BDL
All VOCs (9-10.5')	BDL
PAHs	
All PAHs (0-2')	<RCG SLs
All PAHs (2-4')	<RCG SLs
SVOCs	
All SVOCs (0-2')	BDL
All SVOCs (2-4')	BDL
Metals	
Arsenic (0-2')	6.3
Arsenic (2-4')	14.2
Arsenic (4-6')	8.4
Arsenic (6-8')	4.2
Arsenic (8-10.5')	5.2
All Other Metals	<RCG SLs

SP-5 5/16/2019

VOCs	
Benzene (9-11')	0.100
Benzene (9-11' DUP)	0.105
Benzene (11-13')	0.177
All Other VOCs	<RCG SLs
PAHs	
Naph (11-13')	0.144
Naph (11-13' DUP)	0.0148
All Other PAHs	<RCG SLs
SVOCs	
All SVOCs	BDL
Metals	
Arsenic (0-2')	7.7
Arsenic (0-2' DUP)	18.5
Arsenic (2-4')	15.1
Arsenic (6-8')	8.6
All Other Metals	<RCG SLs

SP-4 5/16/2019

VOCs	
Benzene (8-9')	0.819
Benzene (9-10.5')	0.200
Naph (8-9')	0.342
1,2,4Trimethyl Ben. (8-9')	12.5
1,3,5Trimethyl Ben. (8-9')	3.59
All Other VOCs	<RCG SLs
PAHs	
Naph (6-8')	0.221
Naph (8-9)	0.121
All Other PAHs	<RCG SLs
SVOCs	
All SVOCs	BDL
Metals	
Arsenic (0-2')	7.7
Arsenic (2-4')	18.5
Arsenic (4-6')	15.1
Arsenic (6-8')	8.6
Arsenic (8-10.5')	4.2
All Other Metals	<RCG SLs

Legend

- SB-1 Boring Locations, May 2019
- Sample Exceeds RCG RSL
- Sample Exceeds RCG ISL
- Sample Exceeds RCG ESL
- Sample Exceeds RCG MTGW
- Sample Location <RCG SL or BDL (See Tables)

BDL = Below Detection Limits
RCG = Remediation Closure Guide
RSL = Residential Screening Level
ISL = Industrial Screening Level
ESL = Excavation Screening Level
MTGW = Migration to Groundwater
NA = Not Analyzed
All soil results are reported in milligrams per kilogram (mg/kg)

0 25 50 100

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Indianapolis, IN 46256
317-578-4233

DATE: 6/13/19
SCALE: 1" = 50'

DRAWING TITLE: Soil Analytical Results

PROJECT LOCATION: 216 S. College Avenue, Bloomington, Indiana

DRAWN BY: JMT
BCA SITE NO. 8131

FIGURE 3

314 W. 4th
308 W. 4th
Grass
Grass
B-Line Trail
217 W. Kirkwood
210 W 4th
120 S. College
122 S. College
122 S. Walnut
Parking Lot
122 S. Walnut
Walkway - Bridge
W. 4th Street
Possible TCE Plume
W. 4th Street
W. 4th Street
Grass
Parking Lot
Former MGP Site
B-Line Trail
Parking Lot
Former Coal Piles / CAC
Former Oil-Water Separator
Former Fuel Stations
Possible UST Pits
Parking Lot
201 S. College
109 W. 4th
205 S. Madison
Parking Lot
Subject Site
216 S. College
Parking Lot
209 S. College
Parking Garage
Property Boundary
211 S. College
Parking Lot
Parking Lot
W. 3rd Street
W. 3rd Street
S. College Avenue
302 S. Walnut
Grass
Parking Lot
B-Line Trail
302 S. College

SP-1 5/17/2019

VOCs	BDL
PAHs	BDL
SVOCs	BDL
Metals	<RCG SLs

SP-5 5/17/2019

VOCs	
Benzene	34.0
Benzene (DUP)	36.1
All Other VOCs	<RCG SLs
PAHs	<RCG SLs
SVOCs	BDL
Metals	
Arsenic	12.4
Arsenic (DUP)	12.1
Arsenic (Filtered)	10.2
All Other Metals	<RCG SLs

SP-4 5/17/2019

VOCs	
Benzene	183
1-methylnaph	12.4
Naph	9.4
All Other VOCs	<RCG SLs
PAHs	
Naph	8.0
All Other PAHs	<RCG SLs
SVOCs	BDL
Metals	
Arsenic	14.9
Arsenic (Filtered)	4.7 J
Lead	26.4
All Other Metals	<RCG SLs

SP-3 5/17/2019

VOCs	<RCG SLs
PAHs	<RCG SLs
SVOCs	BDL
Metals	
Lead	33.2
All Other Metals	<RCG SLs

SP-2 5/17/2019
No Sample Collected

Legend

- SB-1 Boring Locations, May 2019
- Sample Exceeds RCG RGSL
- Exceeds RCG VESL - Residential
- Exceeds RCG VESL - Commercial

RCG = Remediation Closure Guidance
RSL = Residential Groundwater Screening Level
VESL = Vapor Exposure Screening Level
BDL = Below Detection Limits
Groundwater results are reported in micrograms per Liter (ug/L)

0 25 50 100

BCA Environmental Consultants, LLC
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Indianapolis, IN 46256
317-578-4233

DATE: 6/13/19
SCALE: 1" = 50'
DRAWING TITLE: Groundwater Analytical Results
PROJECT LOCATION: 216 S. College Avenue Bloomington, Indiana
DRAWN BY: JMT
BCA SITE NO. 8131
FIGURE 4

Tables

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN

Table 1
Soil Analytical Results - VOCs

Sample ID	Collected Date	Units	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chloromethane	cis-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	n-Hexane	Isopropylbenzene (Cumene)	p-isopropyltoluene	Methylene Chloride	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	n-Propylbenzene	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	Xylene (Total)	Other VOCs
		CAS Number	67-64-1	71-43-2	104-51-8	135-98-8	98-06-6	75-15-0	74-87-3	156-59-2	78-87-5	100-41-4	110-54-3	98-82-8	99-87-6	75-09-2	90-12-0	91-57-6	91-20-3	103-65-1	127-18-4	108-88-3	79-01-6	95-63-6	108-67-8	75-01-4	1330-20-7	Varies
RCG Residential Screening Level*		**mg/kg**	**85000**	**17**	**110**	**150**	**180**	**740**	**150**	**220**	**14**	**81**	**140**	**270**	**---**	**490**	**250**	**340**	**53**	**260**	**110**	**820**	**5.7**	**290**	**180**	**0.83**	**260**	Varies
RCG Commercial/Industrial Screening Level*		**mg/kg**	**100000**	**51**	**110**	**150**	**180**	**740**	**460**	**2300**	**44**	**250**	**140**	**270**	**---**	**3200**	**390**	**3000**	**170**	**260**	**170**	**820**	**19**	**290**	**180**	**17**	**260**	Varies
RCG Excavation Screening Level*		**mg/kg**	**100000**	**1800**	**110**	**150**	**180**	**740**	**1300**	**2400**	**370**	**480**	**140**	**270**	**---**	**3300**	**390**	**6800**	**3100**	**260**	**170**	**820**	**95**	**290**	**180**	**1300**	**260**	Varies
RCG Soil Migration to GW Screening Level*		**mg/kg**	**57**	**0.051**	**64**	**120**	**31**	**4.8**	**0.98**	**0.41**	**0.033**	**16**	**210**	**15**	**---**	**0.025**	**1.2**	**3.7**	**0.11**	**25**	**0.045**	**14**	**0.036**	**1.6**	**1.7**	**0.014**	**200**	Varies
216 S. College - 2019 Phase II ESA																												
SP-1 (6-7)	5/16/2019 12:35	mg/kg	< 3.84	< 0.0320	< 0.0320	< 0.0320	< 0.0320	< 0.160	< 0.0320	< 0.0320	< 0.160	< 0.160	< 0.320	< 0.0320	< 0.0320	< 0.640	< 0.0320	< 0.0320	< 0.0320	< 0.0320	< 0.0320	< 0.160	< 0.160	< 0.0320	< 0.0320	< 0.0320	< 0.320	BDL
SP-1 (10-11)	5/16/2019 12:30	mg/kg	< 0.163	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0068	< 0.0014	< 0.0014	< 0.0068	< 0.0068	< 0.0135	< 0.0014	< 0.0014	< 0.0271	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0068	< 0.0068	< 0.0014	< 0.0014	< 0.0014	< 0.0136	BDL
SP-2 (2-4)	5/16/2019 10:00	mg/kg	< 0.127	**0.0059**	< 0.0011	< 0.0011	< 0.0011	< 0.0053	< 0.0011	< 0.0011	< 0.0053	< 0.0053	< 0.0106	< 0.0011	< 0.0011	< 0.0212	< 0.0011	< 0.0011	**0.0019**	< 0.0011	< 0.0011	**0.0066**	< 0.0053	**0.0038**	**0.0015**	< 0.0011	< 0.0106	BDL
SP-3 (7-9)	5/16/2019 10:40	mg/kg	< 3.67	< 0.0305	< 0.0305	< 0.0305	< 0.0305	< 0.153	< 0.0305	< 0.0305	< 0.153	< 0.153	< 0.305	< 0.0305	< 0.0305	< 0.611	< 0.0305	< 0.0305	< 0.0305	< 0.0305	< 0.0305	< 0.153	< 0.153	< 0.0305	< 0.0305	< 0.0305	< 0.306	BDL
SP-3 (9-10.5)	5/16/2019 10:45	mg/kg	< 3.76	< 0.0313	< 0.0313	< 0.0313	< 0.0313	< 0.157	< 0.0313	< 0.0313	< 0.157	< 0.157	< 0.313	< 0.0313	< 0.0313	< 0.627	< 0.0313	< 0.0313	< 0.0313	< 0.0313	< 0.0313	< 0.157	< 0.157	< 0.0313	< 0.0313	< 0.0313	< 0.314	BDL
SP-4 (8-9)	5/16/2019 11:50	mg/kg	< 3.78	**0.819**	**0.962**	**0.568**	< 0.0315	< 0.157	< 0.0315	< 0.0315	< 0.157	**10.1**	**31.6**	**2.19**	**0.619**	< 0.629	**0.229**	**0.794**	**0.342**	**2.41**	< 0.0315	< 0.157	< 0.157	**12.5**	**3.59**	< 0.0315	**5.25**	BDL
SP-4 (9-10.5)	5/16/2019 11:55	mg/kg	< 3.72	**0.200**	**0.514**	**0.343**	< 0.0310	< 0.155	< 0.0310	< 0.0310	< 0.155	**1.3**	**23.7**	**0.86**	**0.30**	< 0.619	**0.0978**	**0.291**	**0.0746**	**0.969**	< 0.0310	< 0.155	< 0.155	**0.503**	**0.322**	< 0.0310	**0.709**	BDL
SP-5 (9-11)	5/16/2019 11:20	mg/kg	< 3.69	**0.100**	**0.214**	**0.208**	< 0.0307	< 0.154	< 0.0307	< 0.0307	< 0.154	< 0.154	**4.15**	**0.509**	**0.273**	< 0.614	< 0.0307	**0.0753**	< 0.0307	**0.515**	< 0.0307	< 0.154	< 0.154	**0.0833**	**0.0852**	< 0.0307	< 0.308	BDL
SB-5 (9-11) DUP	5/16/2019 11:20	mg/kg	< 3.58	**0.105**	**0.478**	**0.436**	< 0.0299	< 0.149	< 0.0299	< 0.0299	< 0.149	< 0.149	**18.9**	**1.11**	**0.473**	< 0.597	**0.0667**	**0.146**	< 0.0299	**0.885**	< 0.0299	< 0.149	< 0.149	< 0.0299	**0.0572**	< 0.0299	< 0.298	BDL
SP-5 (11-13)	5/16/2019 11:25	mg/kg	< 4.27	**0.177**	< 0.0356	< 0.0356	< 0.0356	< 0.178	< 0.0356	< 0.0356	< 0.178	< 0.178	< 0.356	< 0.0356	< 0.0356	< 0.712	< 0.0356	< 0.0356	< 0.0356	< 0.0356	< 0.0356	< 0.178	< 0.178	< 0.0356	< 0.0356	< 0.0356	< 0.356	BDL
TB-1	5/16/2019 0:00	mg/kg	< 0.120	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.0100	< 0.0010	< 0.0010	< 0.0200	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.0010	< 0.0010	< 0.0010	< 0.0100	BDL
Field Duplicate RPD (SB-2 (5-6') & Dup)**		%	0%	5%	76%	71%	0%	0%	0%	0%	0%	0%	128%	74%	54%	0%	125%	64%	0%	53%	0%	0%	0%	139%	39%	0%	0%	NA

Notes:
Samples analyzed using EPA SW-846 Method 8260
mg/kg = milligrams per kilogram
VOCs = Volatile Organic Compounds
BDL - Below Detection Limits
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary `
**RPD = relative percent difference =ABS((X-Y)/((X+Y)/2)) --- if values are below Reporting Limit, then the RPD is considered 0%

Table 2
Soil Analytical Results - PAHs

Sample ID	Collected Date	Units	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
		CAS Number	83-32-9	208-96-8	120-12-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	53-70-3	206-44-0	86-73-7	193-39-5	90-12-0	91-57-6	91-20-3	85-01-8	129-00-0
RCG Residential Screening Level*		**mg/kg**	**5000**	**---**	**25000**	**15**	**1.5**	**15**	**---**	**150**	**1500**	**1.5**	**3400**	**3400**	**15**	**250**	**340**	**53**	**---**	**2500**
RCG Commercial/Industrial Screening Level*		**mg/kg**	**45000**	**---**	**100000**	**210**	**21**	**210**	**---**	**2100**	**21000**	**21**	**30000**	**30000**	**210**	**390**	**3000**	**170**	**---**	**23000**
RCG Excavation Screening Level*		**mg/kg**	**100000**	**---**	**100000**	**12000**	**500**	**12000**	**---**	**10000**	**100000**	**1200**	**68000**	**68000**	**12000**	**390**	**6800**	**3100**	**---**	**51000**
RCG Soil Migration to GW Screening Level*		**mg/kg**	**110**	**---**	**1200**	**2.1**	**4.7**	**60**	**---**	**590**	**1800**	**19**	**1800**	**110**	**200**	**1.2**	**3.7**	**0.11**	**---**	**260**
216 S. College - 2019 Phase II ESA																				
SP-1 (3-5)	05/16/2019 12:40	mg/kg	**0.301**	**0.0868**	**0.761**	**1.98**	**1.40**	**1.55**	**0.81**	**1.24**	**2.27**	**0.428**	**4.46**	**0.27**	**0.814**	**0.249**	**0.282**	**0.234**	**3.25**	**4.2**
SP-1 (5-7)	05/16/2019 12:45	mg/kg	**0.149**	**0.0333**	**0.30**	**0.268**	**0.106**	**0.108**	**0.0626**	**0.0828**	**0.322**	**0.0179 J**	**0.486**	**0.207**	**0.0341**	**0.562**	**0.565**	**0.315**	**1.23**	**0.515**
SP-2 (0-2)	05/16/2019 10:00	mg/kg	<0.0013	<0.0015	<0.0015	<0.0015	<0.0018	<0.0021	<0.0022	<0.0020	<0.0018	<0.0021	<0.0027	<0.0013	<0.0020	<0.0011	<0.0011	<0.0010	<0.0019	0.0029 J
SP-2 (2-4)	05/16/2019 10:05	mg/kg	**0.0612**	**0.134**	**0.155**	**0.294**	**0.349**	**0.255**	**0.243**	**0.215**	**0.334**	**0.106**	**0.385**	<0.0068	**0.221**	**0.0226 J**	**0.0236 J**	**0.0363**	**0.0974**	**0.983**
SP-3 (0-2)	05/16/2019 10:25	mg/kg	<0.0148	**0.0239 J**	**0.0593**	**0.38**	**0.40**	**0.441**	**0.406**	**0.346**	**0.488**	**0.107**	**0.724**	<0.0148	**0.337**	<0.0121	<0.0124	<0.0118	**0.196**	**0.786**
SP-3 (2-4)	05/16/2019 10:30	mg/kg	<0.0016	<0.0019	<0.0018	<0.0019	<0.0023	<0.0026	<0.0027	<0.0024	<0.0022	<0.0027	<0.0033	<0.0016	<0.0025	<0.0013	<0.0013	**0.0041 J**	**0.0027 J**	<0.0026
SP-4 (6-8)	05/16/2019 12:00	mg/kg	**0.0044 J**	<0.0019	**0.0066**	**0.0083**	<0.0022	<0.0025	<0.0027	<0.0024	**0.0146**	<0.0026	**0.0115**	**0.0074**	**<0.0024**	**0.672**	**1.39**	**0.221**	**0.0222**	**0.0148**
SP-4 (8-9)	05/16/2019 12:05	mg/kg	<0.0016	<0.0018	<0.0018	**0.0027 J**	<0.0022	<0.0025	<0.0027	<0.0024	**0.0043 J**	<0.0026	**0.0041 J**	**0.0024 J**	<0.0024	**0.195**	**0.398**	**0.121**	**0.0074**	**0.0050 J**
SP-4 (9-10.5)	05/16/2019 12:10	mg/kg	<0.0016	<0.0018	**0.0034 J**	**0.0065**	<0.0022	<0.0025	<0.0027	<0.0024	**0.0119**	<0.0026	**0.0096**	**0.0058 J**	<0.0024	**0.314**	**0.592**	**0.20**	**0.0178**	**0.0119**
SP-5 (6-8)	05/16/2019 11:37	mg/kg	<0.0015	<0.0018	<0.0018	<0.0018	<0.0022	<0.0025	<0.0026	<0.0023	<0.0021	<0.0025	<0.0032	<0.0015	<0.0024	<0.0013	<0.0013	<0.0012	<0.0023	<0.0025
SP-5 (9-11)	05/16/2019 11:30	mg/kg	**0.0063 J**	<0.0020	**0.0059 J**	**0.0096**	**0.0029 J**	**0.0040 J**	<0.0028	**0.0032 J**	**0.0139**	<0.0027	**0.0172**	**0.0112**	<0.0026	**0.395**	**0.469**	<0.0013	**0.0291**	**0.0207**
SP-5 (11-13)	05/16/2019 11:35	mg/kg	**0.0376**	**0.011**	**0.041**	**0.0222**	**0.0063 J**	**0.0081**	<0.0031	**0.0066 J**	**0.0226**	<0.0031	**0.134**	**0.0894**	<0.0028	**0.0274**	**0.0389**	**0.144**	**0.179**	**0.11**
SP-5 (11-13) DUP	05/16/2019 11:35	mg/kg	<0.0016	<0.0019	<0.0019	<0.0019	<0.0023	<0.0026	<0.0028	<0.0025	<0.0022	<0.0027	<0.0034	<0.0016	<0.0025	**0.019**	**0.0213**	**0.0148**	<0.0024	<0.0026
Field Duplicate RPD (SB-5 11-13' & Dup)**		%	191.7%	168.2%	190.9%	183.6%	138.3%	144.7%	0.0%	136.3%	181.4%	0.0%	195.0%	196.5%	0.0%	36.2%	58.5%	162.7%	197.3%	195.3%

Notes:
Samples analyzed using EPA SW-846 Method 8270 and 8270 SIM
mg/kg = milligrams per kilogram
ppm - parts per million
PAHs - Polynuclear Aromatic Hydrocarbons
SVOCs = Semi-volatile organic compounds
BDL - Below Detection Limits
<SL - Below RCG Screening Levels
Blank cells = Not Analyzed
--- No value given in the Remediation Closure Guide
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2019
**RPD = relative percent difference =ABS((X-Y)/((X+Y)/2)) --- if both values are below Reporting Limit, then the RPD is considered 0%

Table 3
Soil Analytical Results - SVOCs

Sample ID	Collected Date	Units	Benzyl alcohol	4-Bromophenylphenyl ether	Butylbenzylphthalate	4-Chloro-3-methylphenol	4-Chloroaniline	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether	bis(2-chloro 1-methyl ethyl) ether	2-Chloronaphthalene	2-Chlorophenol	4-Chlorophenylphenyl ether	Dibenzofuran	3,3'-Dichlorobenzidine	2,4-Dichlorophenol	Diethylphthalate	2,4-Dimethylphenol	Dimethylphthalate	Di-n-butylphthalate	4,6-Dinitro-2-methylphenol
	CAS Number		100-51-6	101-55-3	85-68-7	59-50-7	106-47-8	111-91-1	111-44-4	108-60-1	91-58-7	95-57-8	7005-72-3	132-64-9	91-94-1	120-83-2	84-66-2	105-67-9	131-11-3	84-74-2	534-52-1
RCG Residential Screening Level*		**mg/kg**	**8800**	**---**	**4100**	**8800**	**38**	**270**	**3.2**	**1000**	**6700**	**550**	**---**	**100**	**17**	**270**	**71000**	**1800**	**---**	**8800**	**7.1**
RCG Commercial/Industrial Screening Level*		**mg/kg**	**82000**	**---**	**12000**	**82000**	**110**	**2500**	**10**	**1000**	**60000**	**5800**	**---**	**1000**	**51**	**2500**	**100000**	**16000**	**---**	**82000**	**66**
RCG Excavation Screening Level*		**mg/kg**	**100000**	**---**	**100000**	**100000**	**6000**	**5200**	**810**	**1000**	**100000**	**9800**	**---**	**1900**	**2700**	**5200**	**100000**	**34000**	**---**	**100000**	**140**
RCG Soil Migration to GW Screening Level*		**mg/kg**	**9.7**	**---**	**46**	**33**	**0.031**	**0.27**	**0.00074**	**5.2**	**77**	**1.8**	**---**	**2.9**	**0.17**	**0.45**	**120**	**8.5**	**---**	**45**	**0.051**
216 S. College - 2019 Phase II ESA																					
SP-1 (3-5)	05/16/2019 12:40	mg/kg	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	**0.494**	<0.394	<0.197	<0.197	<0.197	<0.197	<0.197	<0.394
SP-1 (5-7)	05/16/2019 12:45	mg/kg	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	**0.238 J**	<0.408	<0.204	<0.204	<0.204	<0.204	<0.204	<0.408
SP-2 (0-2)	05/16/2019 10:00	mg/kg	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.339	<0.170	<0.170	<0.170	<0.170	<0.170	<0.339
SP-2 (2-4)	05/16/2019 10:05	mg/kg	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.357	<0.178	<0.178	<0.178	<0.178	<0.178	<0.357
SP-3 (0-2)	05/16/2019 10:25	mg/kg	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.390	<0.195	<0.195	<0.195	<0.195	<0.195	<0.390
SP-3 (2-4)	05/16/2019 10:30	mg/kg	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.422	<0.211	<0.211	<0.211	<0.211	<0.211	<0.422
SP-4 (6-8)	05/16/2019 12:00	mg/kg	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.412	<0.206	<0.206	<0.206	<0.206	<0.206	<0.412
SP-4 (8-9)	05/16/2019 12:05	mg/kg	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.409	<0.204	<0.204	<0.204	<0.204	<0.204	<0.409
SP-4 (9-10.5)	05/16/2019 12:10	mg/kg	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.408	<0.204	<0.204	<0.204	<0.204	<0.204	<0.408
SP-5 (6-8)	05/16/2019 11:37	mg/kg	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.405	<0.202	<0.202	<0.202	<0.202	<0.202	<0.405
SP-5 (9-11)	05/16/2019 11:30	mg/kg	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.436	<0.218	<0.218	<0.218	<0.218	<0.218	<0.436
SP-5 (11-13)	05/16/2019 11:35	mg/kg	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.484	<0.242	<0.242	<0.242	<0.242	<0.242	<0.484
SP-5 (11-13) DUP	05/16/2019 11:35	mg/kg	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.428	<0.214	<0.214	<0.214	<0.214	<0.214	<0.428
Field Duplicate RPD (SB-5 11-13' & Dup)**		%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Notes:
Samples analyzed using EPA SW-846 Method 8270 and 8270 SIM
mg/kg = milligrams per kilogram
ppm - parts per million
PAHs - Polynuclear Aromatic Hydrocarbons
SVOCs = Semi-volatile organic compounds
BDL - Below Detection Limits
--- No value given in the Remediation Closure Guide
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2019
**RPD = relative percent difference =ABS((X-Y)/((X+Y)/2)) --- if both values are below Reporting Limit, then the RPD is considered 0%

Table 3
Soil Analytical Results - SVOCs

2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	Di-n-octylphthalate	bis(2-Ethylhexyl)phthalate	Hexachloro-1,3-butadiene	Hexachlorobenzene	Hexachlorocyclo-pentadiene	Hexachloroethane	Isophorone	2-Methylphenol (o-Cresol)	3-Methylphenol (m Cresol)	4-Methylphenol (p Cresol)	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-Nitroso-di-n-propylamine	N-Nitroso-diphenylamine	Pentachlorophenol	Phenol	2,4,5-Trichloro- phenol	2,4,6-Trichloro- phenol
51-28-5	121-14-2	606-20-2	117-84-0	117-81-7	87-68-3	118-74-1	77-47-4	67-72-1	78-59-1	95-48-7	108-39-4	106-44-5	88-74-4	99-09-2	100-01-6	98-95-3	88-75-5	100-02-7	621-64-7	86-30-6	87-86-5	108-95-2	95-95-4	88-06-2
180	**24**	**5**	**880**	**550**	**17**	**2.9**	**2.5**	**25**	**8000**	**4500**	**4500**	**8800**	**880**	**---**	**350**	**71**	**---**	**---**	**1.1**	**1500**	**14**	**27000**	**8800**	**88**
1600	**74**	**15**	**8200**	**1600**	**17**	**9.6**	**7.5**	**80**	**24000**	**41000**	**41000**	**82000**	**8000**	**---**	**1100**	**220**	**---**	**---**	**3.3**	**4700**	**40**	**100000**	**82000**	**820**
3400	**3400**	**520**	**18000**	**34000**	**17**	**630**	**16**	**1100**	**100000**	**87000**	**87000**	**100000**	**18000**	**---**	**7000**	**3100**	**---**	**---**	**180**	**100000**	**2600**	**100000**	**100000**	**1800**
0.87	**0.065**	**0.013**	**1100**	**29**	**0.054**	**0.25**	**3.1**	**0.04**	**5.2**	**15**	**15**	**30**	**1.6**	**---**	**0.32**	**0.018**	**---**	**---**	**0.0017**	**13**	**0.028**	**67**	**81**	**0.23**
<0.955	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.394	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.198	<0.197	<0.197	<0.955	<0.197	<0.197	<0.955	<0.197	<0.197	<0.197
<0.990	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.408	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.205	<0.204	<0.204	<0.990	<0.204	<0.204	<0.990	<0.204	<0.204	<0.204
<0.823	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.339	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170	<0.171	<0.170	<0.170	<0.823	<0.170	<0.170	<0.823	<0.170	<0.170	<0.170
<0.865	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.357	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.178	<0.180	<0.178	<0.178	<0.865	<0.178	<0.178	<0.865	<0.178	<0.178	<0.178
<0.945	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.390	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.195	<0.196	<0.195	<0.195	<0.945	<0.195	<0.195	<0.945	<0.195	<0.195	<0.195
<1.02	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.422	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.211	<0.212	<0.211	<0.211	<1.02	<0.211	<0.211	<1.02	<0.211	<0.211	<0.211
<0.998	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.412	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.207	<0.206	<0.206	<0.998	<0.206	<0.206	<0.998	<0.206	<0.206	<0.206
<0.991	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.409	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.206	<0.204	<0.204	<0.991	<0.204	<0.204	<0.991	<0.204	<0.204	<0.204
<0.990	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.408	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.204	<0.205	<0.204	<0.204	<0.990	<0.204	<0.204	<0.990	<0.204	<0.204	<0.204
<0.981	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.405	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.203	<0.202	<0.202	<0.981	<0.202	<0.202	<0.981	<0.202	<0.202	<0.202
<1.06	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.436	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.219	<0.218	<0.218	<1.06	<0.218	<0.218	<1.06	<0.218	<0.218	<0.218
<1.17	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.484	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.242	<0.244	<0.242	<0.242	<1.17	<0.242	<0.242	<1.17	<0.242	<0.242	<0.242
<1.04	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.428	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.214	<0.215	<0.214	<0.214	<1.04	<0.214	<0.214	<1.04	<0.214	<0.214	<0.214
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table 4
Soil Analytical Results - Metals

Sample ID	Collected Date	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium Total	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		CAS Number	7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-66-6
RCG Residential Screening Level*		**mg/kg**	**43**	**9.5**	**21000**	**220**	**99**	**---**	**4300**	**400**	**3.1**	**2100**	**550**	**550**	**1.1**	**32000**
RCG Commercial/Industrial Screening Level*		**mg/kg**	**470**	**30**	**100000**	**2300**	**980**	**---**	**47000**	**800**	**3.1**	**22000**	**5800**	**5800**	**12**	**100000**
RCG Excavation Screening Level*		**mg/kg**	**790**	**920**	**100000**	**3800**	**1900**	**---**	**79000**	**1000**	**3.1**	**38000**	**9800**	**9800**	**20**	**100000**
RCG Soil Migration to GW Screening Level*		**mg/kg**	**5.4**	**5.9**	**1700**	**63**	**7.5**	**1000000**	**920**	**270**	**2.1**	**510**	**5.3**	**16**	**2.9**	**7500**
216 S. College - 2019 Phase II ESA																
SP-1 (3-5)	05/16/2019 12:40	mg/kg	<0.25	**12.0**	**72.6**	**0.91**	**0.18 J**	**13.6**	**17.8**	**16.3**	**0.11 J**	**17**	**0.64 J**	<0.30	**1.6**	**37**
SP-1 (5-7)	05/16/2019 12:45	mg/kg	<0.27	**8.2**	**49.1**	**1.4**	**0.13 J**	**8.7**	**37.2**	**43.9**	**0.13 J**	**19.1**	**1.2**	<0.32	**0.95 J**	**49.9**
SP-2 (0-2)	05/16/2019 10:00	mg/kg	<0.24	**0.97 J**	**42.2**	<0.020	**0.37 J**	**7.1**	**2.2**	**2.1**	<0.10	**8.6**	<0.37	**0.68**	<0.24	**22**
SP-2 (2-4)	05/16/2019 10:05	mg/kg	<0.25	**14.2**	**75.2**	**0.46 J**	**0.26 J**	**15.8**	**9.1**	**14.7**	<0.11	**11.2**	<0.38	<0.29	**0.86 J**	**33.1**
SP-3 (0-2)	05/16/2019 10:25	mg/kg	<0.26	**6.3**	**301**	**0.51 J**	**0.34 J**	**13.3**	**17.6**	**96.5**	**0.59**	**13.2**	<0.40	<0.30	**0.83 J**	**97.4**
SP-3 (2-4)	05/16/2019 10:30	mg/kg	<0.28	**13.6**	**72.8**	**0.77**	**0.13 J**	**19.2**	**22.1**	**20**	<0.12	**15.8**	<0.44	<0.33	**1.1 J**	**49.8**
SP-3 (4-6)	5/16/2019 10:33	mg/kg	--	**8.4**	--	--	--	--	--	--	--	--	--	--	--	--
SP-3 (6-8)	5/16/2019 10:35	mg/kg	--	**4.2**	--	--	--	--	--	--	--	--	--	--	--	--
SP-3 (8-10.5)	5/16/2019 10:40	mg/kg	--	**5.2**	--	--	--	--	--	--	--	--	--	--	--	--
SP-4 (0-2)	05/16/2019 12:15	mg/kg	<0.26	**7.7**	**187**	**0.6**	**0.63**	**17.3**	**16.3**	**44.7**	**0.15 J**	**12.8**	**0.50 J**	<0.31	**0.72 J**	**111**
SP-4 (2-4)	05/16/2019 12:20	mg/kg	<0.28	**18.5**	**98.4**	**0.91**	**0.18 J**	**22.5**	**26.4**	**15.1**	<0.12	**15.9**	<0.44	<0.33	**0.84 J**	**57.4**
SP-4 (4-6)	5/16/2019 12:25	mg/kg	--	**15.1**	--	--	--	--	--	--	--	--	--	--	--	--
SP-4 (6-8)	5/16/2019 12:00	mg/kg	--	**8.6**	--	--	--	--	--	--	--	--	--	--	--	--
SP-4 (8-10.5)	5/16/2019 12:07	mg/kg	--	**4.2**	--	--	--	--	--	--	--	--	--	--	--	--
SP-5 (0-2)	05/16/2019 11:40	mg/kg	**0.23 J**	**6.1**	**147**	**0.54**	**0.20 J**	**14.9**	**12.1**	**107**	**0.85**	**9.3**	<0.35	<0.27	**0.59 J**	**57.5**
SP-5 (0-2) DUP	05/16/2019 11:40	mg/kg	<0.23	**7.5**	**136**	**0.66**	**0.14 J**	**13.9**	**116**	**95.3**	**1.0**	**10.5**	<0.36	<0.27	**0.60 J**	**74.1**
SP-5 (2-4)	05/16/2019 11:45	mg/kg	<0.27	**7.7**	**91.6**	**0.67**	**0.099 J**	**15.1**	**11.8**	**17.8**	**0.42**	**11.4**	<0.42	<0.32	**0.54 J**	**49.4**
SP-5 (6-8)	05/16/2019 11:37	mg/kg	<0.27	**6.6**	**118**	**1.1**	**0.16 J**	**32.3**	**13.5**	**14**	<0.11	**15**	<0.41	<0.31	**0.50 J**	**57.3**
Field Duplicate RPD (SB-5 0-2' & Dup)**		%	67%	21%	8%	20%	35%	7%	162%	12%	16%	12%	0%	0%	2%	25%

Notes:
Samples alyzed using EPA Method 6010 and Method 7471
mg/kg = milligrams per kilogram
ppm - parts per million
Blank cells = Not Analyzed
--- No value given in the Remediation Closure Guide
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2019
**RPD = relative percent difference =ABS((X-Y)/((X+Y)/2)) --- if both values are below Reporting Limit, then the RPD is considered 0%

Table 5
Groundwater Analytical Results - VOCs

Sample ID	Collected Date	Units	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	n-Hexane	Isopropylbenzene (Cumene)	Methylene Chloride	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	n-Propylbenzene	Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	Xylene (Total)	Other VOCs
	CAS Number		67-64-1	71-43-2	104-51-8	135-98-8	67-66-3	156-59-2	100-41-4	110-54-3	98-82-8	75-09-2			91-20-3	103-65-1	127-18-4	108-88-3	79-01-6	95-63-6	108-67-8	75-01-4	1330-20-7	Varies
RCG Residential Groundwater Screening Level *		ug/L	**14000**	**5**	**1000**	**2000**	**80**	**70**	**700**	**1500**	**450**	**5**	**11**	**36**	**1.7**	**660**	**5**	**1000**	**5**	**56**	**60**	**2**	**10,000**	**Varies**
Vapor Exposure GW Screening Level - Residential		ug/L	**---**	**28**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**110**	**---**	**110**	**---**	**9.1**	**---**	**---**	**2.1**	**---**	**Varies**
Vapor Exposure GW Screening Level - Com/Ind		ug/L	**---**	**120**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**460**	**---**	**470**	**---**	**38**	**---**	**---**	**35**	**---**	**Varies**
216 S. College - 2019 Phase II ESA																								
SP-1	5/17/2019 11:45	ug/L	< 120	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 10	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 10	BDL
SP-3	5/17/2019 13:10	ug/L	< 120	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 10	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**11.4**	< 5.0	< 1.0	< 1.0	< 1.0	< 10	BDL
SP-4	5/17/2019 13:45	ug/L	< 120	**183**	**5.8**	**4.4**	< 1.0	< 1.0	**244**	**164**	**35.4**	< 20	**12.4**	**35.2**	**9.4**	**43.3**	< 1.0	< 5.0	< 5.0	**41.2**	**16.7**	< 1.0	**72.6**	BDL
SP-5	5/17/2019 10:23	ug/L	< 120	**34.0**	< 1.0	**1.5**	< 1.0	< 1.0	< 5.0	< 10	**6.4**	< 20	< 1.0	< 1.0	< 1.0	**4.0**	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 10	BDL
SP-5 (Dup)	5/17/2019 10:23	ug/L	< 120	**36.1**	< 1.0	**1.4**	< 1.0	< 1.0	< 5.0	< 10	**6.3**	< 20	< 1.0	< 1.0	< 1.0	**3.7**	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 10	BDL
EB-1	5/17/2019 14:50	ug/L	< 120	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 10	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 10	BDL
TB-1	5/17/2019 0:00	ug/L	< 120	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 10	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 10	BDL
Field Duplicate RPD (SP-5 & Dup)**		%	0.0%	**6.0%**	0.0%	**6.9%**	0.0%	0.0%	0.0%	0.0%	**1.6%**	0.0%	0.0%	0.0%	0.0%	**7.8%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes:
Samples analyzed using EPA SW-846 Method 5030B/8260
ug/L = micrograms per liter
VOCs = Volatile Organic Compounds
BDL = Below Detection Limits
J - Identification of the analyte is acceptable, the reported value is an estimated concentration since it is above the adjusted method detection limit and below the adjusted reporting limit.
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2
**RPD = relative percent difference = ABS((X-Y)/((X+Y)/2)) --- if both values are below Re

Table 6
Groundwater Analytical Results - PAHs

Sample ID	Collected Date	Units	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
	CAS Number		83-32-9	208-96-8	120-12-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	53-70-3	206-44-0	86-73-7	193-39-5	90-12-0	91-57-6	91-20-3	85-01-8	129-00-0
RCG Residential Groundwater Screening Level *		ug/L	**530**	**---**	**1800**	**0.3**	**0.2**	**2.5**	**---**	**25**	**250**	**0.25**	**800**	**290**	**2.5**	**11**	**36**	**1.7**	**---**	**120**
Vapor Exposure GW Screening Level - Residential		ug/L	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**110**	**---**	**---**
Vapor Exposure GW Screening Level - Com/Ind		ug/L	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**460**	**---**	**---**
216 S. College - 2019 Phase II ESA																				
SP-1	05/17/2019 11:45	ug/L	<0.032	<0.045	<0.040	<0.042	<0.043	<0.038	<0.029	<0.042	<0.056	<0.032	<0.029	<0.044	<0.031	<0.045	<0.044	<0.053	<0.052	<0.034
SP-3	05/17/2019 13:10	ug/L	<0.032	<0.045	<0.040	<0.042	<0.043	<0.038	<0.029	<0.042	<0.056	<0.032	<0.029	<0.044	<0.031	**0.065 J**	0.071 J	<0.053	<0.052	<0.034
SP-4	05/17/2019 13:45	ug/L	<0.032	<0.045	<0.040	<0.042	<0.043	<0.038	<0.029	<0.042	<0.056	<0.032	<0.029	**0.080 J**	<0.031	**10.6**	**18.1**	**8.0**	**0.11 J**	<0.034
SP-5	05/17/2019 10:23	ug/L	**0.066 J**	<0.045	<0.040	<0.042	<0.043	<0.038	<0.029	<0.042	<0.056	<0.032	<0.029	<0.044	<0.031	**0.38 J**	**0.31 J**	<0.053	<0.052	<0.034
SP-5 DUP	05/17/2019 10:23	ug/L	<0.032	<0.045	<0.040	<0.042	<0.043	<0.038	<0.029	<0.042	<0.056	<0.032	<0.029	<0.044	<0.031	**0.47 J**	**0.39 J**	<0.053	**0.053 J**	<0.034
EQ Blank	05/17/2019 14:50	ug/L	<0.032	<0.045	<0.040	<0.042	<0.043	<0.038	<0.029	<0.042	<0.056	<0.032	<0.029	<0.044	<0.031	<0.045	<0.044	**0.096 J**	<0.052	<0.034
Field Duplicate RPD (SP-5 & Dup)**		%	**122.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**21.2%**	**22.9%**	**0.0%**	**68.4%**	**0.0%**

Notes:
Samples analyzed using EPA SW-846 Method 8270 SIM
ug/L -- micrograms per kilogram
ppb - parts per billion
PAHs - Polynuclear Aromatic Hydrocarbons
BDL - Below Detection Limits
--- No value given in the Remediation Closure Guide
J - Identification of the analyte is acceptable, the reported value is an estimated concentration since it is above the adjusted method detection limit and below the adjusted reporting limit.
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2019
**RPD = relative percent difference = ABS((X-Y)/((X+Y)/2)) --- if both values are below Reporting Limit, then the RPD is considered 0%
-- or Blank cells = Not Analyzed

Table 7
Groundwater Analytical Results - SVOCS

Sample ID	Collected Date	Units	Benzyl alcohol	4-Bromophenylphenyl ether	Butylbenzylphthalate	4-Chloro-3-methylphenol	4-Chloroaniline	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether	bis(2-chloro 1-methyl ethyl) ether	2-Chloronaphthalene	2-Chlorophenol	4-Chlorophenylphenyl ether	Dibenzofuran	3,3'-Dichlorobenzidine	2,4-Dichlorophenol	Diethylphthalate	2,4-Dimethylphenol	Dimethylphthalate	Di-n-butylphthalate	4,6-Dinitro-2-methylphenol
		CAS Number	100-51-6	101-55-3	85-68-7	59-50-7	106-47-8	111-91-1	111-44-4	108-60-1	91-58-7	95-57-8	7005-72-3	132-64-9	91-94-1	120-83-2	84-66-2	105-67-9	131-11-3	84-74-2	534-52-1
RCG Residential Groundwater Screening Level *		ug/L	**2000**	**---**	**160**	**1400**	**3.7**	**59**	**0.14**	**710**	**750**	**91**	**---**	**7.9**	**1.3**	**46**	**15000**	**360**	**---**	**900**	**1.5**
216 S. College - 2019 Phase II ESA																					
SP-1	05/17/2019 11:45	ug/L	<2.4	<3.0	<4.2	<2.9	<2.2	<2.6	<2.2	<2.5	<4.1	<2.7	<3.8	<3.6	<3.5	<2.5	<2.5	<3.9	<2.5	<3.1	<4.9
SP-3	05/17/2019 13:10	ug/L	<2.4	<3.0	<4.2	<2.9	<2.2	<2.6	<2.2	<2.5	<4.1	<2.7	<3.8	<3.6	<3.5	<2.5	<2.5	<3.9	<2.5	<3.1	<4.9
SP-4	05/17/2019 13:45	ug/L	<2.4	<3.0	<4.2	<2.9	<2.2	<2.6	<2.2	<2.5	<4.1	<2.7	<3.8	<3.6	<3.5	<2.5	<2.5	<3.9	<2.5	<3.1	<4.9
SP-5	05/17/2019 10:23	ug/L	<2.4	<3.0	<4.2	<2.9	<2.2	<2.6	<2.2	<2.5	<4.1	<2.7	<3.8	<3.6	<3.5	<2.5	<2.5	<3.9	<2.5	<3.1	<4.9
SP-5 DUP	05/17/2019 10:23	ug/L	<2.4	<3.0	<4.2	<2.9	<2.2	<2.6	<2.2	<2.5	<4.1	<2.7	<3.8	<3.6	<3.5	<2.5	<2.5	<3.9	<2.5	<3.1	<4.9
EQ Blank	05/17/2019 14:50	ug/L	<2.4	<3.0	<4.2	<2.9	<2.2	<2.6	<2.2	<2.5	<4.1	<2.7	<3.8	<3.6	<3.5	<2.5	<2.5	<3.9	<2.5	<3.1	<4.9
Field Duplicate RPD (SP-5 & Dup)**		%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes:
Samples analyzed using EPA SW-846 Method 8270 SIM
ug/L -- micrograms per kilogram
ppb - parts per billion
SVOCs - Semi Volatile Organic Compounds
BDL - Below Detection Limits
--- No value given in the Remediation Closure Guide
J - Identification of the analyte is acceptable, the reported value is an estimated concentration since it is above the adjusted method detection limit and below the adjusted reporting limit.
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2019
**RPD = relative percent difference = ABS((X-Y)/((X+Y)/2)) --- if both values are below Reporting Limit, then the RPD is considered 0%
-- or Blank cells = Not Analyzed

Table 7
Groundwater Analytical Results - SVOCS

2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	Di-n-octylphthalate	bis(2-Ethylhexyl)phthalate	Hexachloro-1,3-butadiene	Hexachlorobenzene	Hexachlorocyclo- pentadiene	Hexachloroethane	Isophorone	2-Methylphenol (o-Cresol)	3-Methylphenol (m Cresol)	4-Methylphenol (p Cresol)	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-Nitroso-di-n-propylamine	N-Nitroso- diphenylamine	Pentachlorophenol	Phenol	2,4,5-Trichloro- phenol	2,4,6-Trichloro- phenol
51-28-5	121-14-2	606-20-2	117-84-0	117-81-7	87-68-3	118-74-1	77-47-4	67-72-1	78-59-1	95-48-7	108-39-4	106-44-5	88-74-4	99-09-2	100-01-6	98-95-3	88-75-5	100-02-7	621-64-7	86-30-6	87-86-5	108-95-2	95-95-4	88-06-2
39	**2.4**	**0.49**	**200**	**6**	**1.4**	**1**	**50**	**3.3**	**780**	**930**	**930**	**1900**	**190**	**---**	**38**	**1.4**	**---**	**---**	**0.11**	**120**	**1**	**5800**	**1200**	**12**
<3.8	<2.6	<3.4	<6.2	<4.4	<3.0	<2.7	<2.5	<2.6	<2.2	<2.7	<2.5	<2.5	<2.5	<3.0	<2.8	<2.4	<2.8	<2.5	<2.6	<2.5	<1.9	<1.7	<2.9	<3.2
<3.8	<2.6	<3.4	<6.2	<4.4	<3.0	<2.7	<2.5	<2.6	<2.2	<2.7	<2.5	<2.5	<2.5	<3.0	<2.8	<2.4	<2.8	<2.5	<2.6	<2.5	<1.9	<1.7	<2.9	<3.2
<3.8	<2.6	<3.4	<6.2	<4.4	<3.0	<2.7	<2.5	<2.6	<2.2	<2.7	<2.5	<2.5	<2.5	<3.0	<2.8	<2.4	<2.8	<2.5	<2.6	<2.5	<1.9	<1.7	<2.9	<3.2
<3.8	<2.6	<3.4	<6.2	<4.4	<3.0	<2.7	<2.5	<2.6	<2.2	<2.7	<2.5	<2.5	<2.5	<3.0	<2.8	<2.4	<2.8	<2.5	<2.6	<2.5	<1.9	<1.7	<2.9	<3.2
<3.8	<2.6	<3.4	<6.2	<4.4	<3.0	<2.7	<2.5	<2.6	<2.2	<2.7	<2.5	<2.5	<2.5	<3.0	<2.8	<2.4	<2.8	<2.5	<2.6	<2.5	<1.9	<1.7	<2.9	<3.2
<3.8	<2.6	<3.4	<6.2	<4.4	<3.0	<2.7	<2.5	<2.6	<2.2	<2.7	<2.5	<2.5	<2.5	<3.0	<2.8	<2.4	<2.8	<2.5	<2.6	<2.5	<1.9	<1.7	<2.9	<3.2
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 8
Groundwater Analytical Results - Metals

Sample ID	Collected Date	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium VI (field filtered)	Chromium (Total)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
	CAS Number		7440-36-0	7440-38-2	7440-39-3	7440-41-7	7440-43-9	18540-29-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7440-02-0	7782-49-2	7440-22-4	7440-28-0	7440-66-6
RCG Residential Groundwater Screening Level *		ug/L	6	10	2000	4	5	0.35	100	1300	15	2	390	50	94	2	6000
216 S. College - 2019 Phase II ESA																	
SP-1	05/17/2019 11:45	ug/L	<3.3	**8.2 J**	**276**	<0.24	<0.44	**0.22 J**	<1.1	<2.7	<3.5	<0.069	**3.7 J**	<5.2	<1.2	<0.040	**3.5 J**
SP-3	05/17/2019 13:10	ug/L	**3.9 J**	**10.0 J**	**203**	**1.6 J**	**1.3 J**	--	**44.6**	**18.1**	**33.2**	<0.069	**29.4**	<5.2	<1.2	**0.18 J**	**69.2**
SP-4	05/17/2019 13:45	ug/L	<3.3	**14.9**	**607**	**1.2 J**	**0.73 J**	**0.053 J**	**22.7**	**24.3**	**26.4**	<0.069	**18.0**	<5.2	<1.2	**0.22 J**	**68.1**
SP-4 FIELD FILTERED	05/17/2019 13:45	ug/L	--	**4.7 J**	--	--	--	--	--	--	**3.7 J**	--	--	--	--	--	--
SP-5	05/17/2019 10:23	ug/L	<3.3	**12.4**	**459**	<0.24	**0.58 J**	**0.12**	**2.8 J**	<2.7	<3.5	<0.069	**5.8 J**	<5.2	<1.2	<0.040	**12.7 J**
SP-5 DUP	05/17/2019 10:23	ug/L	<3.3	**12.1**	**460**	<0.24	**0.59 J**	**0.10**	**3.4 J**	<2.7	<3.5	<0.069	**6.8 J**	<5.2	<1.2	<0.040	**15.7 J**
SP-5 FIELD FILTERED	05/17/2019 10:23	ug/L	--	**10.2**	--	--	--	--	--	--	--	--	--	--	--	--	--
EQ Blank	05/17/2019 14:50	ug/L	<3.3	<4.3	<0.66	<0.24	<0.44	**0.14**	<1.1	<2.7	<3.5	<0.069	<1.0	<5.2	<1.2	<0.040	**1.6 J**
Field Duplicate RPD (SB-GW-1 & Dup)**		%	0.0%	**2.4%**	**0.2%**	0.0%	**1.7%**	**21.5%**	**19.4%**	0.0%	0.0%	0.0%	**15.9%**	0.0%	0.0%	0.0%	**21.1%**

Notes:
Samples analyzed using EPA Method 6010 (Metals)
ug/L -- micrograms per Liter
ppb - parts per billion
-- or Blank cells = Not Analyzed
--- No value given in the Remediation Closure Guide
J - Identification of the analyte is acceptable, the reported value is an estimated concentration since it is above the adjusted method detection limit and below the adjusted reporting limit.
* Remediation Closure Guide, Appendix A, Table A-6: Screening Level Summary Table - 2019
**RPD = relative percent difference = ABS((X-Y)/((X+Y)/2)) --- if both values are below Reporting Limit, then the RPD is considered 0%

Appendix A

Sampling and Analysis Plan and Health and Safety Plan

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN

SAMPLING AND ANALYSIS PLAN
PHASE II ENVIRONMENTAL SITE ASSESSMENT

Commercial Building
216 S. College Avenue
Bloomington, Indiana 47404
Cooperative Agreement # BF - 00E02280 – 0
BCA Project No. 8131/19-146
May 13, 2019

1.0 BACKGROUND AND PURPOSE

The Subject Site is a commercial office building property located at 216 S. College Avenue in Bloomington, Indiana. The current building occupants include the Campus Costume Store (retail) and Hilliard Lyons (wealth advisors). The Subject Site is comprised of three (3) parcels of land identified by two (2) parcel numbers (# 53-05-33-310-240.000-005 and # 53-05-33-310-243.000-005) totaling approximately 1.7 acres of land that is situated in the City of Bloomington, Monroe County, Indiana. The Site is located on the south side of West 4th Street, on the north side of West 3rd Street and on the west side of South College Avenue. The surrounding area is a mix of commercial and municipal properties. The B-Line multi-use trail runs along the western property boundary. The large parcel (with the commercial building) on Subject Site is currently owned by Rbowa LLC. The two (2) small parcels located near the northeast portion of the Subject Site is owned by Thomas Sicks & Nancy Held. The City of Bloomington is in the process of acquiring the Subject Site for redevelopment purposes.

A Phase I Environmental Site Assessment (ESA) of the Subject Site was conducted for the City of Bloomington by BCA Environmental Consultants, LLC (BCA). The Phase I ESA was funded through an U.S. EPA Brownfield Assessment Grant to the City of Bloomington (Cooperative Agreement BF- 00E02280). The Phase I ESA identified the following recognized environmental conditions (RECs):

Onsite:

- Two (2) former gas stations in the northeast quadrant of the Subject Site;
- A trench drain with an apparent oil-water separator (or grease trap) located just outside the northwest corner of the onsite building;
- Historical rail spur and coal piles along the western border of the property (mostly beneath the current building).

Offsite:

- Former manufactured gas plant (MGP) across the B-Line trail to the west of the Subject Site;
- Former LUST site (currently the Wonderlab museum) diagonally to the northwest of the Subject Site;
- Possible TCE plume that was identified on the 304 Kirkwood property (the Foundry, located approximately 440 feet north-northwest) and may run south to approximately ½ block west of the Subject Site.

The purpose of the Phase II ESA is to implement the recommendations of the Phase I ESA and investigate areas of potential environmental impact to confirm the presence or absence of contaminants. The scope of work proposed herein would not be sufficient to determine the extent and magnitude of contamination, if it is present.

2.0 SCOPE OF WORK

The investigation procedures will follow BCA's Bloomington Quality Assurance Project Plan and Field Standard Operating Procedures (QAPP and Field SOP) and those recommended by the IDEM 2012 Remediation Closure Guide (RCG), regulations and industry-accepted practices. Investigation results will be compared to RCG residential closure levels (RCLs) and industrial closure levels (ICLs) from the RCG Appendix A, Table A-6: 2019 Screening Levels.

2.1 Phase II Environmental Site Assessment

The potential environmental concerns identified in the Phase I are included in section 1.0 above.

Soil and groundwater samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds/polynuclear aromatic hydrocarbons (SVOCs/PAHs), hexavalent chromium (CrVI) and 14 metals.

2.1.1 Geophysical Survey

A limited geophysical survey will be conducted at the site in an attempt to identify the locations of the former USTs and any unknown and buried utilities. The survey will consist of ground penetrating radar (GPR) scans of the area around the proposed borings to identify any potential buried utility or other sub-surface anomaly, and to determine the presence or absence of the former UST associated with the Subject Site. Any linear anomalies will be marked and mapped as possible utility locations.

2.1.2 Soil/Groundwater Boring Investigation

Boring and sample logs from other sub-surface investigations in the area (CTP Parking lot & the Showers) indicate bedrock has been encountered at depths ranging from 8 to 13 feet below ground surface (bgs), sometimes with a thin saturated layer above the bedrock. A total of five (5) soil probes will be driven throughout the Subject Site: all to refusal, 5 feet past first groundwater or 25 feet bgs, whichever is shallower. The probes will be placed on the site as indicated on the attached site map (**Figure 1**) with adjustments based on site conditions, utility locations, and observations made by BCA personnel upon arrival at the site.

Probe SP-1 will be located in the northwest portion of the Subject Site near the

suspected oil/water separator. This probe will also evaluate potential impacts from the former rail spur in that area, as well as potential impacts from off-site contaminant sources upgradient to the west, northwest, and north.

Probe SP-2 will be located in the southwest portion of the Subject Site in the suspected historical coal storage area. This probe will also evaluate potential impacts from off-site contaminant sources upgradient to the west and northwest, particularly the former MGP site adjoining to the west of the Subject Site.

Probe SP-3 will be located in the southeast portion of the Subject Site to evaluate potential impacts from the former battery service stations and vulcanizing operations in the central portion of the property, as well as to evaluate potential impacts from off-site contaminant sources cross-gradient to the east.

Two (2) probes (SP-4 and SP-5) will be located near the suspected former USTs or UST pit(s) as identified by a GPR survey and historical maps, to assess soil and groundwater conditions around or near the former USTs. Soil and groundwater samples will be collected from each designated boring and analyzed as indicated below.

Soil samples will be collected continuously throughout the depth of each of the probes. The soil samples will be field screened as described below, and two (2) soil samples from each probe will be analyzed for VOCs, SVOCs/PAHs, and 14 metals. Specifically, soil samples for VOC analysis will be collected from an interval where field screening suggests the presence of volatiles and at bottom interval or from the vadose (smear) zone of the probes.

Deeper soil samples (2-4, 4-6, 6-8 feet bgs etc.) from each probe will also be collected and retained for potential follow-up analysis for metals. Up to five (5) soil samples may be analyzed for up to four (4) four metals each, to determine the depth of impact or whether contaminants are migrating from shallow soils. The three (3) soil samples with the highest total chromium concentrations will be analyzed for CrVI by EPA Method 7199.

If soil screening does not suggest the presence of contamination, then the first soil sample interval from the surface and the interval at or below the tank bottoms (about 6 to 10’ bgs) in each probe (as applicable) will be selected for analysis for VOCs, SVOCs/PAHs and metals as indicated for probes SB-4 to SB-5.

Groundwater will be sampled from each of the probes where measurable amounts of groundwater is encountered, using temporary 1" PVC sampling points with 5' of screen and micro-purge (low-flow) sampling techniques as described below. Groundwater samples from each of the probes will be analyzed for VOCs, SVOCs/PAHs, and 14 metals. Filtered groundwater samples will be collected from each location and up to five (5) filtered samples will be analyzed for up to four (4) metals that exceed the groundwater screening levels in the unfiltered samples. Filtered groundwater samples also will be collected and held for follow-up analysis of up to five (5) samples for CrVI via EPA method 7199.

2.2 Field Methods

The approved Field Standard Operating Procedures for the project will be used for all tasks. The placement of probes will be as indicated in the attached site map (**Figure 1**).

Probes will be advanced by means of direct push probing. Probes will be advanced continuously by utilizing 4- or 5-foot long macro-bore rods equipped with an acetate inner liner. Soil cores will be screened in the field with a photo-ionization detector (PID) and logged in accordance with the Unified Soil Classification System (USCS). Field evidence of contamination (PID, olfactory or visible staining) will be noted. Soil samples will be selected for laboratory analysis based on the field screening results, position in the soil column or other evidence of contamination. Soil samples for VOC analysis will be collected using EPA method 5035A with Terracore™ samplers and 40 mL VOA bottles containing distilled water and methanol preservative and will be frozen within 48 hours of collection.

Locally, shallow groundwater likely flows with the surface contour to the south-southeast toward a nearby buried stream channel. It is anticipated that a thin saturated zone will be encountered above bedrock which is anticipated at 8 to 13 ft. bgs. If groundwater is not initially apparent, the boring will be allowed to sit overnight and will be checked again to determine if groundwater has accumulated. Groundwater samples will be collected by use of temporary 1" PVC sampling points with 5' screens, placed in selected boreholes. Groundwater will be purged and sampled following the IDEM Micro-Purge (Low-Flow) Sampling Option (reformatted June 6, 2012) to the extent possible. Field parameters (Temperature, Conductivity, Dissolved Oxygen, pH, and Oxygen Reduction Potential) will be monitored in each temporary sampling point during purging until at least three (3) parameters have stabilized. Micro-Purge sampling will be conducted with a non-contact stainless steel submersible bladder pump. If groundwater

monitoring parameters cannot be stabilized, a sample will be collected regardless, and a note will be recorded in the field book. If filtered samples are to be analyzed (see above) they will be collected by passing the groundwater through an in-line 10-micron (um) cartridge filter. Groundwater samples to be analyzed for CrVI will be collected in approved laboratory-provided EPA method 7199 kits.

If groundwater flow parameters will not support Low Flow sampling (slow recharge rate, low water levels, etc.), Low Flow will be suspended, and other methods (peristaltic pump or bailer) will be utilized to collect a sample after the probe is purged dry several times and allowed to recover for sufficient sample volume to be collected.

All probe locations will be located by means of a mapping grade (3-meter accuracy, Post Processed) GPS device.

Soil cuttings and purge water from groundwater sampling will be drummed and held on-site. Following laboratory testing, the drum(s) will be transported for disposal, if appropriate. Cost projections are based on disposal of two (2) 55-gallon drums.

For further information on field methods see the Field Standard Operating Procedures, notably Sections 1.2 Soil Sampling and 1.3 Groundwater Sampling.

2.3 Laboratory Methods

An analysis summary is provided in **Table 1**. The analytes and methods utilized for this project include:

VOCs = volatile organic compounds. Analysis by EPA Method 8260.

SVOCs/PAHs = Semi-volatile organic Compounds & polynuclear aromatic hydrocarbons. Analysis by EPA Method 8270SIM.

14 Metals = antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc. Analysis by EPA Method 6010B, 7470, 7471.

4 Metals = Field Filtered – Follow-up analysis. Metals to be determined.

CrVI = hexavalent chromium (low level soil). Analysis by EPA Method SW-846/7199A.

CrVI = hexavalent chromium (low level water). Analysis by EPA Method SW-846/7199.

2.4 Quality Control

Quality control samples are collected and analyzed to assess the quality of the data resulting from the field sampling program. Quality control samples and laboratory reports will meet the requirements of the IDEM guidance. Equipment blanks will be collected for this project if groundwater samples are collected with non-disposable equipment and will include one (1) for each day of groundwater sampling. Two (2) trip blanks (one (1) for soil and one (1) for water) will be submitted for the project (for VOCs only). Field duplicate samples of each matrix are collected at the rate of one (1) per 20 investigative samples for each analytical method. Matrix spikes and matrix spike duplicates (MS/MSD) are collected at a rate of one (1) per 20 investigative samples per sample matrix for each analytical method. For this project, one (1) equipment blank for the groundwater sampling equipment, one (1) duplicate sample, and one (1) MS/MSD sample for each analytical method will be collected for groundwater; and one (1) duplicate sample and one (1) MS/MSD sample for each analytical method will be collected for soil. The laboratory will include a DQO Level III report package.

2.5 Decontamination

Sampling equipment utilized at the site will be decontaminated using a non-phosphate detergent wash and tap water rinse prior to and following the collection of each sample to reduce the potential for cross contamination. All other procedures used to decontaminate equipment will be documented. Where ever practical, disposable sampling equipment will be used to eliminate the need for decontamination.

2.6 Report

Observations and data generated by the field investigation will be summarized in a bound report for submittal to the Client. The report will contain a detailed explanation and documentation of sample locations and collection procedures. The analytical data will be summarized, and conclusions discussed to the extent possible. The need for additional investigation or remediation of the parcel will also be discussed, if appropriate.

3.0 COST

The cost of providing these Phase II ESA services will be $32,328 which will be invoiced monthly on a percent complete basis. The cost of providing these services is based on the fee schedule and direct expense rates established in the executed contract between BCA and the City of Bloomington. Any modifications to the scope of this SAP will be invoiced per the contract terms following approval by the EPA and the City.

SITE HEALTH AND SAFETY PLAN

Commercial Building, 216 S. College St., Bloomington, Indiana

1.0 GENERAL PROJECT INFORMATION

Prime Contractor:	**BCA Environmental Consultants, LLC**
Client:	**City of Bloomington**
Subject Site Name:	**Commercial Building**
Site Address:	**216 S. College, Bloomington, IN**
Principal: **Project Manager:**	**John Kilmer** **Jacob Teuschler**
Date of Plan:	**May 14, 2019**

SITE DESCRIPTION

Type of Facility (describe):	**Commercial Building**
Active or Closed/Abandoned:	**Active**
Describe surface features (buildings, paved or unpaved, overhead/underground utilities):	**3 parcels, 1.7 acres, w/ one (1) building, paved lot, overhead utilities**
List any site access restrictions:	**None**
Surrounding neighborhood description:	**Commercial / Municipal**

SITE ACTIVITIES - The site activities covered by this HASP include those checked in the box below:

Site Activity	Soil Borings	Groundwater Probe Installation	Soil / Purge Water Disposal	Soil Excavation	Soil Sampling
Assessment					
Investigation	**X**	**X**	**X**		**X**
Remediation					

EMERGENCY PHONE NUMBERS

POSITION	NAME	CONTACT
Safety Officer	**Jacob Teuschler**	**© (765) 686-2414**
Field Manager	**Jacob Teuschler**	**© (765) 686-2414**
Field Technician	**Rod Manny**	**© (765) 413-4750**
Industrial Services	**To be determined**	**To be determined**
Subcontractors: List all names of Subcontractors	**TBD**	**TBD**
Hospital Name	**IU Health Bloomington Hospital**	
Hospital Address	**601 W 2nd Street, Bloomington**	
Hospital Phone	**(812) 353-5252**	
Directions to nearest Hospital	**See attached map**	
Fire and Emergency	**Call 911**	
EPA Hotline:	**1-800- 621-3191**	

2.0. INTRODUCTION/SCOPE OF WORK

This plan provides health and safety guidelines for site investigation and remediation activities conducted by BCA Environmental Consultants, LLC (BCA) to protect on-site personnel, visitors and the public from physical harm and exposure to hazardous materials and/or wastes. The procedures and guidelines contained herein are based on the best available information at the time of the plan's preparation. Specific requirements may be revised if new information is received, or site conditions change. It is the responsibility of the field personnel to evaluate the site work conditions and if in doubt about safety or an operation, request assistance from the Site Safety Officer. Compliance with this plan is mandatory for all on-site BCA personnel and subcontractors.

Operations at the site may require additional tasks not identified in the preparation of this health and safety plan (HASP). Before performing any task not covered in this HASP a revision must be prepared and approved by the Site Safety Officer (SSO).

2.1 Scope of Work

Scope of work for the investigation at the site includes:

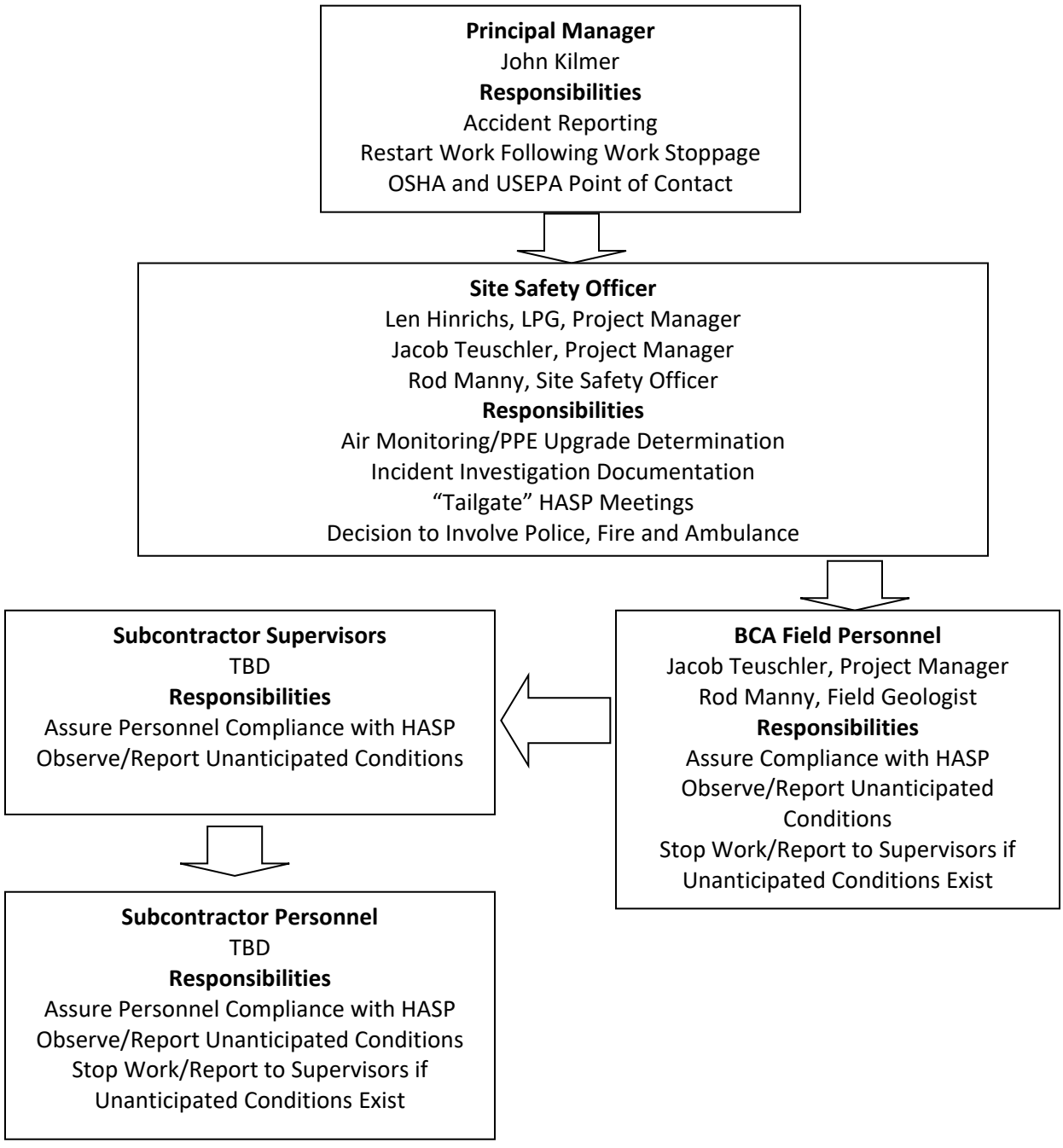
- Utility locate
- Geophysical Survey
- Install soil/groundwater probes
- Sample soil
- Sample groundwater

3.0 PERSONNEL CONTACT INFORMATION AND PHONE NUMBERS

The BCA SSO will have the authority to alter work practices, stop work, and/or allocate resources to mitigate unsafe work practices. All personnel have the authority to stop any work practice that may endanger site personnel or the general public. Restarting work will be done in consultation with the SSO. The following personnel and subcontractor resources will be used on this site:

POSITION	NAME	CONTACT
Safety Officer	**Jacob Teuschler**	**© (765) 686-2414**
Field Manager	**Jacob Teuschler**	**© (765) 427-0471**
Field Technician	**Rod Manny**	**© (765) 686-2414**
Excavation Services	**To be determined**	**To be determined**
Remediation Services	**To be determined**	**To be determined**
Subcontractors: List all names of subcontractors to be used for site activities	**To be determined**	**To be determined**

TABLE OF AUTHORITY



4.0 EMERGENCY INFORMATION/RESPONSE

The purpose of this section is to provide the on-site user with contact and location information to be used in case of an emergency response situation. In case of an emergency on-site, **CALL 911** first and **NOTIFY** the site operator (if available). Then contact the BCA project manager and Site Safety Officer for this site.

EMERGENCY PHONE NUMBERS

Hospital Name	**IU Health Bloomington Hospital**
Hospital Address	**601 W 2nd Street, Bloomington**
Hospital Phone Number	**(812) 353-5252**
Directions to nearest Hospital	See attached map
Fire and Emergency	Call 911
EPA Hotline:	1-800- 621-3191
National Response Center	1-800-424-8802
TSCA HOTLINE	1-800-424-9065
Poison Control Center	1-800-382-9097
CHEMTREC	1-800-424-9300
National Pesticide Center	1-800-858-7378

5.0 STANDARD EMERGENCY PROCEDURES

5.1 Hazard Communication

Any organization wishing to bring any hazardous material onto any BCA-controlled work site must first provide a copy of the item's Material Safety Data Sheet (MSDS) to the Site Safety Officer for approval and filing (the Site Safety Officer will maintain copies of all MSDSs on site). MSDSs may not be available for locally-obtained products, in which case some alternate form of product hazard documentation will be acceptable. All personnel shall be briefed on the hazards of any chemical product they use and shall be aware of and have access to all MSDSs. All containers on site shall be properly labeled to indicate their contents. Labeling on any containers not intended for single-day, individual use shall contain additional information indicating potential health and safety hazards (flammability, reactivity, etc.).

The Hazard Communication standard (29 CFR 1910.1200) has been provided to employees, and a written copy is on file at BCA's office.

5.2 Confined Space Entry

There is no expectation that a confined space will be entered during this project.

6.0. PERSONNEL TRAINING RECORDS

All personnel working within the exclusion zone are required to have 40-hour HAZWOPPER training and be current with refresher training in accordance with 29CFR 1910.120.

7.0 KNOWN OR ANTICIPATED HAZARDS

7.1 General Safety Rules

Housekeeping

During site activities, work areas will be continuously policed for identification of excess trash and unnecessary debris. Excess debris and trash will be collected and stored in an appropriate container (e.g., plastic trash bags, garbage can, roll-off bin) prior to disposal. At no time will debris or trash be intermingled with waste PPE or contaminated materials.

Smoking, Eating, or Drinking

Smoking, eating and drinking will not be permitted inside any controlled work area at any time. Field workers will first wash hands and face immediately after leaving controlled work areas (and always prior to eating or drinking). Consumption of alcoholic beverages is prohibited at any BCA-controlled site.

Personal Hygiene

The following personal hygiene requirements will be observed:

Water Supply: A water supply adhering to the following requirements will be utilized:

- An adequate supply of potable water will be available for field personnel consumption.
- Potable water can be provided in the form of water bottles, canteens, water coolers, or drinking fountains. Where drinking fountains are not available, individual-use cups will be provided as well as adequate disposal containers. Potable water containers will be properly identified in order to distinguish them from non-potable water sources.
- Non-potable water may be used for hand washing and cleaning activities. Nonpotable water will not be used for drinking purposes. All containers of non-potable water will be marked with a label stating:

Non-Potable Water
Not Intended for Drinking Water Consumption

Toilet Facilities:

- A minimum of one toilet will be provided for every 20 personnel on site, with separate toilets maintained for each sex except where there are less than 5 total personnel on site. For mobile crews where work activities and locations permit transportation to nearby toilet facilities on-site facilities are not required.

Washing Facilities:

- Employees will be provided washing facilities (e.g., buckets with water and Alconox) at each work location. The use of water and hand soap (or similar substance) will required by all employees following exit from the Exclusion Zone, prior to breaks, and at the end of daily work activities.

Buddy System

All field personnel will use the buddy system when working within any controlled work area. Personnel belonging to another organization on site can serve as "buddies" for BCA personnel. Under no circumstances will any employee be present alone in a controlled work area.

7.2 Heat and Cold Stress

Heat and cold stress may vary based upon work activities, PPE/clothing selection, geographical locations, and weather conditions. To reduce the potential of developing heat/cold stress, be aware of the signs and symptoms of heat/cold stress and watch fellow employees for signs of heat/cold stress.

Heat stress can be a significant field site hazard, particularly for non-acclimated personnel operating in a hot, humid environment. Site personnel will be instructed in the identification of a heat stress victim, the first-aid treatment procedures for the victim and the prevention of heat stress casualties. Work-rest cycles will be determined, and the appropriate measures taken to prevent heat stress.

7.3 Responding to Heat-Related Illness

The guidance below will be used in identifying and treating heat-related illness.

Heat- Related Illness	Description	First Aid
Mild Heat Strain	The mildest form of heat-related illness. Victims exhibit irritability, lethargy, and significant sweating. The victim may complain of headache or nausea. This is the initial stage of overheating, and prompt action at this point may prevent more severe heat-related illness from occurring.	• Provide the victim with a work break during which he/she may relax, remove any excess protective clothing, and drink cool fluids. • If an air-conditioned spot is available, this is an ideal break location. • Once the victim shows improvement, he/she may resume working; however, the work pace should be moderated to prevent recurrence of the symptoms.
Heat Exhaustion	Usually begins with muscular weakness and cramping, dizziness, staggering gait, and nausea. The victim will have pale, clammy moist skin and may perspire profusely. The pulse is weak and fast and the victim may faint unless they lie down. The bowels may move Involuntarily.	• Immediately remove the victim from the work area to a shady or cool area with good air circulation (avoid drafts or sudden chilling). • Remove all protective outerwear. • Call a physician. • Treat the victim for shock. (Make the victim lie down, raise his or her feet 6–12 inches, and keep him or her cool by loosening all clothing).
Heat Stroke	The most serious of heat illness, heat stroke represents the collapse of the body's cooling mechanisms. As a result, body temperature may rise to 104 degrees Fahrenheit or higher. As the victim progresses toward heat stroke, symptoms such as headache, dizziness, nausea can be noted, and the skin is observed to be dry, red, and hot. Sudden collapse and loss of consciousness follows quickly and death is imminent if exposure continues. Heat stroke can occur suddenly	• Immediately evacuate the victim to a cool and shady area. • Remove all protective outerwear and as much personal clothing as decency permits. • Lay the victim on his or her back with the feet slightly elevated. • Apply cold wet towels or ice bags to the head, armpits, and thighs. • Sponge off the bare skin with cool water or rubbing alcohol, if available. • The main objective is to cool without chilling the victim. • Give no stimulants or hot drinks. • Since heat stroke is a severe medical condition requiring professional medical attention, emergency medical help should be summoned immediately to provide onsite treatment of the victim and proper transport to a medical facility.

8.0 PHYSICAL HAZARDS AND MITIGATION PROCEDURES

Safe work practices in compliance with OSHA standards and this document will be used at all times. The first aid kit and fire extinguisher are to be on site at all times. The following table lists the anticipated hazards and the associated safety rules for proper control.

Hazard Description	Potential Result	Control Measure
Tool Handling	Cuts, contusions, bruises	Wear gloves, steel-toed boots and safety glasses
Vehicle Traffic	Impact, getting struck by vehicle	Set up safety cones around well being sampled. Communicate activities with any onsite personnel. Wear reflective vest. Use truck or van as a shield if possible. Set up snow fence for each location where pedestrian walkways are affected and cover all openings or secure with snow fence during all breaks or overnight.
Heat/Cold	Heat stress/frostbite	Heat: Take frequent breaks and drink plenty of fluids. Watch for signs/symptoms of heat stress (fainting, dizziness, excessive sweating) Cold: Wear several layers of clothing, do not work in excessive cold, take frequent breaks.
Slip, trip and fall	Bruising, sprained ankle/foot/knee	Be aware of surroundings and practice good housekeeping measures around the site area to minimize items that pose a trip hazard.
Splash	Exposure to contaminants in the groundwater – dermal and/or eye	Wear gloves and safety glasses during purging of well and sample collection.
Hazardous Energy Control	Personal injury, electrocution	Use lockout/tagout controls to ensure that hazardous energy sources (electrical) are controlled prior to valve removal activities, including electrical and water pressure. All underground utilities should be marked prior to intrusive activities. A site walk-through should identify all overhead power lines.
Heavy Equipment	Struck by	Keep aware of the location of heavy equipment at all times. If overhead activities are taking place (drilling, digging) hard hats will be used.
Fire and Explosion	Flammable vapors from petroleum may ignite	Monitor for the presence of flammable vapors with an explosimeter. Fire extinguishers should be available. Evacuate the area immediately, call 911 and evaluate the situation.
Noise/Hearing Protection	Active drilling and other processes may exceed noise exposure standard of 85 decibels	Wear appropriate hearing protection.
Biological Hazards	Poisonous vegetation and/or stinging/biting insects or animals	Keep aware of surroundings and if bite or sting takes place seek first aid and/or medical attention

9.0. CHEMICAL HAZARDS POTENTIALLY ON SITE

9.1 Waste Characterization

Potential hazards for each of the tasks presented below are assessed. As work items are being performed, continued monitoring and observation will be used to determine if conditions change. Site Safety Officer will be responsible for continued assessment, and work practice modification in the event that unsafe work practices are observed. The following site activities are anticipated:

- Install groundwater probes
- Sample soil
- Sample groundwater

9.2 Hazard Evaluation

Chemicals of Concern: Identify all chemicals that are present or suspected to be present on site and the maximum concentrations detected in soil or water.

Chemical Name	TLV/PEL (8-hour TWA exposure limit for inhalation exposure in breathing zone)	Maximum Concentration in Soil (mg/kg or ppm)	Maximum Concentration in Water (mg/l or ppm)	Health Hazard/Comments
VOCs	Varies	TBD	TBD	Varies
SVOCs/PAHs	Varies	TBD	TBD	Varies
Metals	Varies	TBD	TBD	Varies

Is free product onsite? __ Yes __No __X_ Unsure

Will work tasks be performed inside buildings/enclosures? _ __ Yes _X_ No

Is there evidence that contaminants present could cause vapor problems in structures on-site? __Yes __ No _X_ Unsure

If Yes, is building mechanically ventilated? ___Yes ___No _X_ Unsure

10.0 BIOLOGICAL HAZARDS AND MITIGATION PROCEDURES

Contact with animals, insects, and plants can cause injury and illness to personnel. Care must be taken to ensure that these types of injuries are avoided. Some examples of biological hazards include:

- Wild animals, such as snakes, raccoons, squirrels, and rats. These animals not only can bite and scratch, but can carry transmittable diseases (e.g., rabies). Avoid the animals whenever possible. If bitten, go to the nearest medical facility.

- Insects such as mosquitoes, ticks, bees, and wasps. Mosquitoes can potentially carry and transmit the West Nile Virus or Eastern Equine Encephalitis (EEE). Ticks can transmit Lyme disease or Rocky Mountain Spotted Fever. Bees and wasps can sting by injecting venom, which causes some individuals to experience anaphylactic shock (an extreme allergic reaction). Whenever you will enter areas that provide a habitat for insects (e.g., grass areas, woods), wear light-colored clothing, long pants and shirt, and spray exposed skin areas with a DEET-containing repellent. Keep away from high grass wherever possible. Keep your eyes and ears open for bee and wasp nests. If bitten by insects, see a doctor if there is any question of an allergic reaction.

- Plants such as poison ivy and poison oak can cause severe rashes on exposed skin. Be careful where you walk, wear long pants, and minimize touching exposed skin with your hands after walking through thickly vegetated areas until after you have thoroughly washed your hands with soap and water.

11.0 ADDITIONAL HAZARDS

The following daily log should be filled out whenever an unexpected hazard is encountered. Include injuries, PPE used, or work stoppages caused by unsafe conditions.

Hazard Observed	Date	Observed by (Print Name)	Mitigation Taken/PPE Used

12.0 LIST OF FIELD ACTIVITIES

The following is a list of filed activities anticipated for this project:

- The first field activity in this investigation will be utility location. Because this is not an invasive activity, this Site Health and Safety Plan will not be applied to the utility locating contractor.

- Pre-marking groundwater probe locations will be performed by BCA. This is also not an invasive activity and no hazards are anticipated.

- Geophysical Survey. This is not an invasive activity and no hazards are anticipated. This activity will be performed by a subcontractor and overseen by BCA.

- Groundwater probe installation. This activity will be performed by BCA in the pre-marked areas.

- Groundwater sampling. This activity will be performed by BCA.

- Soil sampling. This activity will be performed by BCA.

13.0 SITE DESCRIPTION

Type of Facility (describe):	Warehouse
Type of Facility (describe):	**Commercial Building**
Active or Closed/Abandoned:	**Active**
Describe surface features (buildings, paved or unpaved, overhead/underground utilities):	**3 parcels, 1.7 acres, w/ one (1) building, paved lot, overhead utilities**
List any site access restrictions:	**None**

14.0 PERSONNEL PROTECTIVE GEAR/ENGINEERING CONTROLS

14.1 Personnel Protective Gear

Level D:

Soil concentrations in previous investigations are not expected to cause health risks if handled carefully. Sampling can be performed using modified Level D protection. The following items are needed for modified Level D.

- Hard hat (for overhead hazard activities)
- Steel-toe work boots
- Coveralls and/or long pants with short sleeved shirts (at a minimum)
- Eye protection when a splash hazard exists
- Hearing protection during active drilling or other loud operations
- Nitrile gloves for sampling and/or contact with soil and groundwater.

Modifications:

Modifications to this level of protection will be made if site conditions and/or contamination levels warrant an upgrade in protection level.

Level C:

If site conditions warrant, an upgrade to level C will be made if air monitoring equipment indicates respiratory protection is required. Air-purifying respirators with organic vapor cartridges will be used in this situation. The MSDS for that substance shall be consulted to determine the appropriate personal protective equipment (i.e. chemical resistant coveralls/gloves, chemical goggles, respiratory protection).

Surveillance Equipment and Materials:

Photo Ionization Detector

Work Limitations (Time of Day, etc.):

All sampling operations will be conducted during daylight hours. No smoking or eating during soil handling procedures.

14.1.1 PPE Donning and Doffing Information

The following information is to provide field personnel with helpful hints that, when applied, make donning and doffing of PPE a safe and manageable task:

- Never cut disposable booties from your feet with basic utility knives. This has resulted in workers cutting through the booty and the underlying sturdy leather work boot, resulting in significant cuts to the legs/ankles. Recommend using a pair of scissors or a package/letter opener (cut above and parallel with the work boot) to start a cut in the edge of the booty, then proceed by manually tearing the material down to the sole of the booty for easy removal.

- When applying duct tape to PPE interfaces (wrist, lower leg, around respirator, etc.) and zippers, leave approximately one inch at the end of the tape to fold over onto

  itself. This will make it much easier to remove the tape by providing a small handle to grab while still wearing gloves. Without this fold, trying to pull up the tape end with multiple gloves on may be difficult and result in premature tearing of the PPE.

- Have a "buddy" check your ensemble to ensure proper donning before entering controlled work areas. Without mirrors, the most obvious discrepancies can go unnoticed and may result in a potential exposure situation.

- Never perform personal decontamination with a pressure washer.

14.2 Medical Surveillance Requirements

All personnel must have completed the appropriate medical monitoring requirements as specified in 29 CFR 1910.120. Documentation of medical monitoring is the responsibility of each employer.

14.3 Engineering Control

The engineering control to prevent pedestrian/general population from exposure to hazards at the work site is Site Control.

14.3.1 Site Control Measures

Site controls establish the hazardous area perimeter and prevent access or exposure by unauthorized personnel or the public. The site map is attached to the Field Instructions and is incorporated as part of the HASP. The "buddy system" is to be used throughout those site operations that require it.

Site Entry Procedures: Notify property owner before mobilizing to the site.

Perimeter establishment/identification: Area of site east of the building will be work zone perimeter. See site map and field instructions attached.

An exclusion zone, contamination reduction zone and support zone will be identified for each site activity.

14.3.2 Emergency First Aid Procedures

If eye irritation, nausea, vomiting, dizziness, unusual odors or any other unusual mental or physical sensations are noticed, seek medical assistance.

Inhalation: Move person to fresh air, seek medical assistance.
Ingestion: Do not induce vomiting, seek medical attention.
Eyes: Flush with copious amounts of water.
Skin: Wash with soap and water.

15.0 AIR MONITORING REQUIREMENTS

Where VOC's are present, all soil samples will be field screened for semi-volatile organics using a photoionization detector (PID). During soil sample collection, it is expected that headspace gasses will be below the action level. However, during the course of soil sampling, if headspace gasses exceed 100 ppm, breathing zone monitoring will be conducted. If volatile gasses are detected in the breathing zone, the work activities work will stop and breathing zone gasses will be monitored using the PID or one of the other detectors outlined below. Further work may be conducted after elimination of all ignition sources, increasing the monitoring frequency, or elevating the level of PPE.

Instrumentation Available for Higher Level Air Monitoring:

INSTRUMENT	MANUFACTURER/MODEL*	SUBSTANCES DETECTED
Photo Ionization Detector (PID)	**RAE Systems mini-RAE Photovac Microtip HNu Model Hnu (10.2 eV Lamp)**	**Petroleum Hydrocarbons Organic Solvents**
Flame Ionization Detector (FID)	**Foxboro**	**Petroleum Hydrocarbons Organic Solvents**
Combustible Gas Indicator (CGI) May Be Combined with Individual or Multi-gas Detectors.	**TBD**	**Explosivity**
Individual Gas Detectors	**TBD**	**Oxygen (O_2) Carbon Monoxide (CO) Hydrogen Sulfide (H_2S) Cyanide Gases (CN^-)**
Particulate Monitor	**MIE Model PDM-3 mini-RAM**	**Aerosols, mist, dust, and fumes**
Colorimetric Detector Tubes	**Sensidyne Draeger**	**Benzene 0.5–10 ppm**

16.0 DECONTAMINATION PROCEDURES

Decontamination Procedures:

Contamination may result from walking through contaminated soils or liquids, splashing liquids during sampling, or use of or contact with contaminated equipment.

Decontamination procedures for the following tasks will be observed onsite:

- **Soil Probe Sampling**: Dedicated, disposable equipment will be used to the extent practicable. If non-dedicated equipment is used, it will be decontaminated with a detergent wash and distilled water rinse before and between sampling.

- **Groundwater Sampling**: All non-dedicated equipment will be decontaminated with a detergent wash and distilled water rinse before and between sampling.

- **Shallow Soil Sampling**: When a hand auger is used during soil sampling, it will be decontaminated with a detergent wash and distilled water rinse before and between sampling.

- **PPE**: All contaminated, disposable clothing will be properly bagged for disposal and left onsite for proper disposal. The PPE may be added to the soil drums for disposal.

17.0 WASTE STORAGE/DISPOSAL

Investigation-derived Material Disposal:

The purge and decontamination water, and disposable protective gear are to be placed in 55 - gallon drums, labeled and stored on site pending the receipt of the laboratory analysis. Free product and contaminated water must remain on-site until the proper disposal method is determined.

The drums of investigative waste will be hauled by a contractor who will be subject to the provisions of this site health and safety plan. Waste disposal will be performed in a manor appropriate to the waste characteristic identified by waste profiling.

17.1 Spill Containment Program

No anticipated spills or releases of hazardous chemicals are associated with this project. Any spills will be contained and drummed for proper disposal.

18.0 DOCUMENTS EXPECTED TO BE COMPLETED

The Site Safety Officer will maintain a master Site Health and Safety Plan which will be updated with the Daily Log (Section 11.0) and daily sign in sheets. In the event that site conditions warrant updating this Site Health and Safety Plan, updated sections will be appended to this plan. The master Site Health and Safety Plan will be archived in the project file at the offices of BCA for ten years following the end of the project.

Other documents which will be maintained include field books, boring logs, groundwater sampling sheets, contractor provided MSDSs, and correspondence.

19.0 APPROVALS

I, the undersigned, attest that I am familiar with the contents of this Health and Safety Plan and do agree to administrate the procedures described herein.

Plan Prepared by: _____ Date: 5/14/2019

Plan Approved by: _____ Date: 5/14/2019

Health and Safety Officer: _____ Date: 5/14/2019

20.0 EMPLOYEE ACKNOWLEDGMENT

The designated BCA employee shall be responsible for informing all individuals entering the exclusion zone of the contents of this plan, and ensuring each person signs the employee acknowledgment form. By signing this form, individuals are recognizing the hazards present on site and the policies and procedures required to minimize exposure or adverse affects of these hazards.

I have read the site health and safety plan and have been briefed and fully understand all of the following aspects of the project:

Hazards associated with the project:

1. Personal protective equipment;
2. Emergency procedures/contacts;
3. Project team-member responsibilities; and,
4. Work zones and decontamination procedures.

I have undergone medical monitoring and have been respirator fit-tested in the last year.

Form must be signed each day on site.

Signature:_____ Date:_____

Signature:_____ Date:_____

Signature:_____ Date:_____

Signature:_____ Date:_____

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Signature:_____ Date:_____

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Appendix B

Soil Boring Logs

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN

BCA Environmental Consultants, LLC
7202 E 87th Street, Suite 110
Indianapolis, IN 46256

BORING LOG

Borehole ID: SP-1
Sheet 1 of 1

Project Name 216 S. College Ave.	**Project Number** 19-146	**Site Address** 216 South College Ave. Bloomington, IN 47404	**Location** 216 South College Ave. Bloomington, IN 47404
Drilling Company Enviro-Dynamics	**Driller** Rob	**Ground Elevation**	**Total Drilled Depth** 13.34'
Drilling Equip Geoprobe 6712DT	**Drilling Method** Direct Push	**Borehole Dia** 2.5"	**Date Drilling Started/Completed** 5/16/2019 — 5/16/2019
Type of Sampling Device 5' Acetate Sleeve		**Water Level (bgs)** 7.62'	
		Logged By: R. Manny	**Checked by/Date** J. Teuschler 6-28-19

Location Description
Easting 540098.913 Northing 4335235.843

Depth	Interval	Description	Sample Recovery	PID ppm	Remarks
0		Concrete			
		Fine-Medium Brown Sand			
		Gravel and Fine Sand Gray	30%	0.0	
		Black Sand and Gravel/Brick Fill		0.0	
5				0.0	Moist @6-7' VOC's Sampled @ 6-7'
		Stiff Brown Clay (CL)	30%		Smear Zone @ 7'
		Soft Gray Clay (CL)		0.0	
10					VOC's Sampled @ 10-11'
		Stiff Brown Clay (CL)	100%	0.0	
		Soft Brown Clay (CL)			
		Tan Clayey Sand		0.0	
		BTH 13.34' Installed 1" pvc temporary well w/ 10' slotted screen. Collected GW sample. Removed temporary casing and backfilled w/ bentonite.			Refusal @ 13'
15					
20					
25					

BCA Environmental Consultants, LLC
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Indianapolis, IN 46256

BORING LOG

Borehole ID: SP-2
Sheet 1 of 1

Project Name 216 S. College Ave.	**Project Number** 19-146	**Site Address** 216 South College Ave. Bloomington, IN 47404	**Location** 216 South College Ave. Bloomington, IN 47404
Drilling Company Enviro-Dynamics	**Driller** Rob	**Ground Elevation**	**Total Drilled Depth** 8.21'
Drilling Equip Geoprobe 6712DT	**Drilling Method** Direct Push	**Borehole Dia** 2.5"	**Date Drilling Started/Completed** 5/16/2019 — 5/16/2019
Type of Sampling Device 5' Acetate Sleeve		**Water Level (bgs)** Dry	
		Logged By: R. Manny	**Checked by/Date** J. Teuschler 6-28-19

Location Description
Easting 540095.661 Northing 4335167.717

Depth	Interval	Description	Sample Recovery	PID ppm	Remarks
0		Asphalt	60%	0.0	
		Gravel Fill w/ some Fines		1.8	VOC's Sampled @ 2-3'
		Fine - Med. Brown Sand		0.0	
		Brown Clay w/ Gravel			
5		Pulverized Concrete	2%	0.0	
		Concrete & Rock Fragments			Refusal @ 7.5'
10		**BTH 8.21'** Installed 1" pvc temporary well w/ 5' slotted screen. Removed temporary casing and backfilled w/ bentonite.			
15					
20					
25					

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Indianapolis, IN 46256

BORING LOG

Borehole ID: SP-3
Sheet 1 of 1

Project Name 216 S. College Ave.	**Project Number** 19-146	**Site Address** 216 South College Ave. Bloomington, IN 47404	**Location** 216 South College Ave. Bloomington, IN 47404
Drilling Company Enviro-Dynamics	**Driller** Rob	**Ground Elevation**	**Total Drilled Depth** 10.38'
Drilling Equip Geoprobe 6712DT	**Drilling Method** Direct Push	**Borehole Dia** 2.5"	**Date Drilling Started/Completed** 5/16/2019 — 5/16/2019
Type of Sampling Device 5' Acetate Sleeve		**Water Level (bgs)** 9.68'	
		Logged By: R. Manny	**Checked by/Date** J. Teuschler 6-28-19

Location Description
Easting 540159.978 Northing 4335178.352

Depth	Interval	Description	Sample Recovery	PID ppm	Remarks
0		Asphalt			
		Soft Brown Clay, some CAC and Gravel		0.0	
		Very Stiff Brown/Orange Clay (CL)	95%	0.0	
5		Very Stiff Brown/Orange Clay (CL) w/ Gravel	100%	0.0	VOC's Sampled @ 7-9'
				0.0	Smear Zone @ 9'
10		Brown Sandy Clay	100%	0.0	VOC's Sampled @ 9-10.5'
		BTH 10.38'			Refusal @ 10.5'
		Installed 1" pvc temporary well w/ 5' slotted screen. Collected GW sample. Removed temporary casing and backfilled w/ bentonite.			
15					
20					
25					

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Indianapolis, IN 46256

BORING LOG

Borehole ID: SP-4
Sheet 1 of 1

Project Name 216 S. College Ave.	**Project Number** 19-146	**Site Address** 216 South College Ave. Bloomington, IN 47404	**Location** 216 South College Ave. Bloomington, IN 47404
Drilling Company Enviro-Dynamics	**Driller** Rob	**Ground Elevation**	**Total Drilled Depth** 10.92
Drilling Equip Geoprobe 6712DT	**Drilling Method** Direct Push	**Borehole Dia** 2.5"	**Date Drilling Started/Completed** 5/16/2019 — 5/16/2019
Type of Sampling Device 5' Acetate Sleeve		**Water Level (bgs)** 8.61'	
		Logged By: R. Manny	**Checked by/Date** J. Teuschler 6-28-19

Location Description
Easting 540160.876 Northing 4335218.34

Depth	Interval	Description	Sample Recovery	PID ppm	Remarks
0		Asphalt, Stiff Clay Fill, Brick Fragments	85%	0.0	
				2.5	
		Stiff Brown/Green Clay (CL)		10.5	
5				129.0	
		Stiff Brown Clay (CL) Mottled Gray, Odor	100%	168.0	
				1217.0	VOC's Sampled @ 8-9'
					VOC's Sampled @ 9-10.5'
10		Stiff Gray Clay (CL), Odor	85%	190.0	Smear Zone @ 10.5'
		Black Clay - Staining, Odor		245.0	
		BTH 10.92'			Refusal @ 11'
		Installed 1" pvc temporary well w/ 5' slotted screen. Collected GW sample. Removed temporary casing and backfilled w/ bentonite.			
15					
20					
25					

BCA Environmental Consultants, LLC
7202 E 87th Street, Suite 110
Indianapolis, IN 46256

BORING LOG

Borehole ID: SP-5
Sheet 1 of 1

Project Name 216 S. College Ave.	**Project Number** 19-146	**Site Address** 216 South College Ave. Bloomington, IN 47404	**Location** 216 South College Ave. Bloomington, IN 47404
Drilling Company Enviro-Dynamics	**Driller** Rob	**Ground Elevation**	**Total Drilled Depth** 18.76'
Drilling Equip Geoprobe 6712DT	**Drilling Method** Direct Push	**Borehole Dia** 2.5"	**Date Drilling Started/Completed** 5/16/2019 — 5/16/2019
Type of Sampling Device 5' Acetate Sleeve		**Water Level (bgs)** 7.60'	
		Logged By: R. Manny	**Checked by/Date** J. Teuschler 6-28-19

Location Description
Easting 540162.187 Northing 4335234.099

Depth	Interval	Description	Sample Recovery	PID ppm	Remarks
0		Asphalt, Gravel Fill, w/ Sand and Brick			
		Soft Brown Clay (CL)	75%	0.0	
5		Stiff Brown Clay (CL)		0.0	
		Soft Dark Brown Clay (CL) Mottled Gray, Odor	100%	925.0	VOC's Sampled @ 9-11'
10				1258.0	Smear Zone @ 11.5'
		Soft Greenish Brown Clay (CL)	80%		VOC's Sampled @ 11-13'
15			75%	5.0	
				5.0	
		BTH 18.76'			Refusal @ 18.5'
20		Installed 1" pvc temporary well w/ 10' slotted screen. Collected GW sample. Removed temporary casing and backfilled w/ bentonite.			
25					

Appendix C

GPS Data

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN

GPS Data Table

Site/Facility Name: **Commercial Building**
Site Location: **216 S College Ave**
Site/Facility ID:
OLQ Program:
Purpose of Data Collection: Soil/Groundwater Sample Locations

Data Collector Name: Jacob Teuschler
Data Processor Name: David Scovel, LPG

Projection: UTM Zone 16N
Datum: NAD 83 (CORS96)
Units: Meters
GPS Reciever Brand/Model: Nomad 900 G
Reciever Type: Mapping Grade GPS

Point Type	Name	Depth Feet	Refusal (Bedrock)	Groundwater Obtained	Description/Notes	Max PDOP	Correction Method	Instrument	Date	Time	Total Positions	Vert Precision	Horiz Precision	Standard Deviation	Easting meters	Northing meters	HAE meters
Probes	SP- 1	13.5	Yes	Yes		65	Postprocessed Code	Nomad	5/17/2019	01:08:39pm	313	2.2	3.9	1.023502	540098.913	4335235.843	233.957
Probes	SP- 2	8.25	Yes	No		5.8	Postprocessed Code	Nomad	5/17/2019	01:15:57pm	301	1.6	2.6	2.12389	540095.661	4335167.717	232.352
Probes	SP- 3	10.5	Yes	Yes		6.6	Postprocessed Code	Nomad	5/17/2019	01:22:14pm	301	1.3	2.8	2.345951	540159.978	4335178.352	231.324
Probes	SP- 4	11	Yes	Yes		11	Postprocessed Code	Nomad	5/17/2019	01:28:06pm	1380	1.3	3.1	1.944073	540160.876	4335218.340	231.514
Probes	SP- 5	18.75	Yes	Yes		2.3	Postprocessed Code	Nomad	5/17/2019	02:11:53pm	301	1.2	2.2	0.769328	540162.187	4335234.099	229.396

NAD83 (CORS96)
Horizontal
Continuously Operating Reference Stations Readjustment of NAD 83

Appendix D

Groundwater Sampling Logs

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN

Groundwater Sampling Logs

Site Name: Commercial Building
Site Address: 216 South College Ave., Bloomington, IN
BCA Project Number: 19-146
IDEM Site Number:
Sampled By: Rod Manny, Jacob Teuschler
Sampling Equipment: Geotech stainless steel .625 Bladder Pump - disposable poly dual tube - In-Situ SmarTROLL MP Sonde
*Dedicated disposable tubing in all wells

Sample Location	GW Starting Depth	Estimated Flow Rate	Pump Start Time	Temperature Deg F	Specific Conductivity mS/cm	Dissolved Oxygen mg/L	pH	ORP mV	Sample Date	Total Well Depth	Top of Well Screen	Well Screen Length	Pump Intake Depth	Notes
SP-1	7.62	360 mL/min	11:27						5/17/2019	13.34	3.34	10.00	10.84	VOCs, SVOCs, PAHs, 14 Metals, CrVI
	8.80		11:30	60.34	3.495	0.30	7.38	-119.4						1.75 gal. purged
	8.80		11:33	60.32	3.437	0.22	7.38	-122.5						Clear / Odorless
	8.82		11:36	60.24	3.399	0.18	7.38	-124.6						
	8.92		11:39	60.35	3.359	0.16	7.38	-126.3						
	8.92		11:42	60.46	3.332	0.15	7.38	-127.5						
	8.92		11:45	60.48	3.297	0.14	7.38	-128.5	Sampled					

SP-2 Dry hole.

SP-3 Unable to support low flow due to poor recharge. Pumped dry twice. Sampled @1310 on 5/17/2019 for VOCs, SVOCs, PAHs, and Metals. Clear / Odorless

SP-4 Unable to support low flow due to poor recharge. Pumped dry twice. Sampled @1345 on 5/17/2019 for VOCs, SVOCs, PAHs, 14 Metals, and CrVI. Clear / Strong Odor

SP-5	7.60	150 mL/min	9:53						5/17/2019	18.76	8.76	10.00	13.76	VOCs, SVOCs, PAHs, 14 Metals, CrVI
	8.06		9:56	63.61	2.408	0.35	7.36	-65.4						1.5 gal.purged
	8.22		9:59	63.69	2.374	0.27	7.12	-50.9						Slightly Cloudy / Strong Odor
	8.33		10:02	63.55	2.426	0.2	7.05	-62.3						
	8.36		10:05	63.68	2.465	0.18	7.04	-75.6						
	8.39		10:08	63.78	2.498	0.16	7.04	-87.2						
	8.42		10:11	63.75	2.515	0.14	7.06	-97.3						
	8.35		10:14	64.02	2.527	0.13	7.06	-102.8						
	8.35		10:17	64.76	2.532	0.13	7.07	-107.4						
	8.34		10:20	64.93	2.525	0.12	7.07	-109.6						
	8.33		10:23	65.22	2.513	0.12	7.07	-110	Sampled					

Appendix E

Analytical Laboratory Reports

Phase II
Commercial Building
216 S College Avenue
Bloomington, IN

LSAI Labs, LLC
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Indianapolis IN 46250
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Lab Solutions for AnalyticalTesting & Issues

Bruce Carter and Associates
7202 East 87th St. STE 110
Indianapolis, IN 46256

June 4, 2019

Client Project Name: 19-146 / Bloomington

Dear Client,

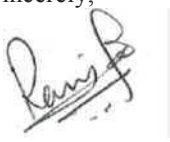
We are pleased to provide the attached analytical report(s) for the samples received May 20, 2019. All testing was performed as requested on the enclosed chain of custody. All methods cited were executed in full compliance with local, state, and EPA regulations. All control data met QA/QC criteria as outlined in EPA methodology. Please review the flag sections for any and all deviations from the Quality Control Data and Procedures.

LSAI Labs utilized the following EPA methodologies to perform the volatile organics (VOCs) assay in soil. Preservation technique referenced in table 4-1 of SW-846; sample preparation via 5035A; and sample analysis was performed using GC/MS via 8260B.

Please contact me with any questions, concerns, or comments regarding the attached analytical report.

Thank you for your business. We are committed to providing Lab Solutions and Services for your upcoming Analytical Testing needs and Issues.

Sincerely,



Ranjani Muralidharan, Ph.D.

Laboratory Manager
LSAI Labs, LLC

UDOH Lab Code: IN018112018-8

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FLAGS & DEFINITIONS

FLAGS & QUALIFIERS

B	Analyte detected in the blank
C	Result confirmed by reanalysis
DF	Dilution Factor: represents factor applied to sample aliquot due to a dilution 1 - reported result is a 2X dilution; 2 - reported result is a 5X dilution; 3 – reported result is a 10X dilution; 4 – reported result is a 20X dilution; 5 – reported result is a 25X dilution; 6 – reported result is a 50X dilution; 7 – reported result is a 100X dilution; 8 – reported result is a 250X dilution; 9 – reported result is a 500X dilution; 10 – reported result is a 1000X dilution; 11 – reported result is a 2500X dilution .
E	Concentration exceeds calibration range
J	Estimated value J1. ≥ Method Detection Limit (MDL) & < Limit of Quantitation (LOQ) or Reporting Limit (RL) J2. Estimated due to presence of interference
U	Analyzed for but not detected
N	Indicates presumptive evidence of a compound
P	Post-analysis pH measurement indicates insufficient VOA sample preservation.
R	Recovery outside control limits
R1	RPD value outside control limits
Rd	Duplicate analysis outside control limits

DEFINITIONS

RL: Reporting Limit
LCS: Laboratory Control Sample
MS: Matrix Spike
DUP: Sample Duplicate
ND: none detected
ppm: parts per million
TNI: The NELAC Institute
BMQL: Below Minimum Quantitation Level
LCS (D): Laboratory Control Sample Duplicate
MSD: Matrix Spike Duplicate
RPD: Relative Percent Difference
MPN: Most Probable Number
ppb: parts per billion
S: Surrogate

Note: A critical step involved in environmental analysis is the sample collection. It is required by the client that the submitted sample is truly representative of the replicate(s) and/or bulk material.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-1 (6-7)	Sample Collection Date/Time:	5/16/2019	12:35
LSAI Sample ID:	19-2863	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	20:38
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.84	3.84	5
Acrolein	< 0.0320	0.0320	5
Acrylonitrile	< 0.0320	0.0320	5
Benzene	< 0.0320	0.0320	5
Bromobenzene	< 0.0320	0.0320	5
Bromochloromethane	< 0.0320	0.0320	5
Bromodichloromethane	< 0.0320	0.0320	5
Bromoform	< 0.160	0.160	5
Bromomethane	< 0.160	0.160	5
n-Butanol	< 0.160	0.160	5
2-Butanone (MEK)	< 0.320	0.320	5
n-Butylbenzene	< 0.0320	0.0320	5
sec-Butylbenzene	< 0.0320	0.0320	5
tert-Butylbenzene	< 0.0320	0.0320	5
Carbon Disulfide	< 0.160	0.160	5
Carbon Tetrachloride	< 0.0320	0.0320	5
Chlorobenzene	< 0.0320	0.0320	5
Chloroethane (Ethyl Chloride)	< 0.160	0.160	5
2-Chloroethylvinylether	< 1.60	1.60	5
Chloroform	< 0.0320	0.0320	5
Chloromethane	< 0.0320	0.0320	5
2-Chlorotoluene	< 0.0320	0.0320	5
4-Chlorotoluene	< 0.0320	0.0320	5
1,2-Dibromo-3-chloropropane	< 0.160	0.160	5
Dibromochloromethane	< 0.0320	0.0320	5
1,2-Dibromoethane (EDB)	< 0.0320	0.0320	5
Dibromomethane	< 0.0320	0.0320	5
1,2-Dichlorobenzene	< 0.0320	0.0320	5

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LSAI SAMPLE ID continued 19-2863

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0320	0.0320	5
1,4-Dichlorobenzene	< 0.0320	0.0320	5
trans-1,4-Dichloro-2-butene	< 0.160	0.160	5
Dichlorodifluoromethane	< 0.0320	0.0320	5
1,1-Dichloroethane	< 0.0320	0.0320	5
1,2-Dichloroethane	< 0.0320	0.0320	5
1,1-Dichloroethene	< 0.0320	0.0320	5
cis-1,2-Dichloroethene	< 0.0320	0.0320	5
trans-1,2-Dichloroethene	< 0.160	0.160	5
1,2-Dichloropropane	< 0.160	0.160	5
1,3-Dichloropropane	< 0.0320	0.0320	5
2,2-Dichloropropane	< 0.0320	0.0320	5
1,1-Dichloropropene	< 0.160	0.160	5
1,3-Dichloropropene	< 0.160	0.160	5
Ethylbenzene	< 0.160	0.160	5
Ethylmethacrylate	< 0.0320	0.0320	5
Hexachloro-1,3-butadiene	< 0.160	0.160	5
n-Hexane	< 0.320	0.320	5
2-Hexanone	< 0.320	0.320	5
Iodomethane	< 0.160	0.160	5
Isopropylbenzene (Cumene)	< 0.0320	0.0320	5
p-Isopropyltoluene	< 0.0320	0.0320	5
Methylene chloride	< 0.640	0.640	5
4-Methyl-2-pentanone (MIBK)	< 0.0320	0.0320	5
Methyl tert-butyl ether (MTBE)	< 0.160	0.160	5
1-Methylnaphthalene	< 0.0320	0.0320	5
2-Methylnaphthalene	< 0.0320	0.0320	5
Naphthalene	< 0.0320	0.0320	5
n-Propylbenzene	< 0.0320	0.0320	5
Styrene	< 0.0320	0.0320	5
1,1,1,2-Tetrachloroethane	< 0.0320	0.0320	5
1,1,2,2-Tetrachloroethane	< 0.0320	0.0320	5
Tetrachloroethene	< 0.0320	0.0320	5
Toluene	< 0.160	0.160	5
1,2,3-Trichlorobenzene	< 0.0320	0.0320	5
1,2,4-Trichlorobenzene	< 0.0320	0.0320	5
1,1,1-Trichloroethane	< 0.160	0.160	5
1,1,2-Trichloroethane	< 0.0320	0.0320	5
Trichloroethene	< 0.160	0.160	5

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LSAI SAMPLE ID continued 19-2863

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.160	0.160	5
1,2,3-Trichloropropane	< 0.160	0.160	5
1,2,4-Trimethylbenzene	< 0.0320	0.0320	5
1,3,5-Trimethylbenzene	< 0.0320	0.0320	5
Vinyl acetate	< 0.320	0.320	5
Vinyl chloride	< 0.0320	0.0320	5
Xylene M&P	< 0.160	0.160	5
Xylene Ortho	< 0.160	0.160	5
Total Xylenes	< 0.320	0.320	5
Percent Solids	78.10%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery	
Dibromofluoromethane	151%	R
1,2-Dichloroethane-d4	72.1%	
Toluene-d8	81.0%	
4-bromofluorobenzene	114%	

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-1 (10-11)	Sample Collection Date/Time:	5/16/2019	12:30
LSAI Sample ID:	19-2864	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/29/2019	22:39
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 0.163	0.163	
Acrolein	< 0.0014	0.0014	
Acrylonitrile	< 0.0014	0.0014	
Benzene	< 0.0014	0.0014	
Bromobenzene	< 0.0014	0.0014	
Bromochloromethane	< 0.0014	0.0014	
Bromodichloromethane	< 0.0014	0.0014	
Bromoform	< 0.0068	0.0068	
Bromomethane	< 0.0068	0.0068	
n-Butanol	< 0.0068	0.0068	
2-Butanone (MEK)	< 0.0135	0.0135	
n-Butylbenzene	< 0.0014	0.0014	
sec-Butylbenzene	< 0.0014	0.0014	
tert-Butylbenzene	< 0.0014	0.0014	
Carbon Disulfide	< 0.0068	0.0068	
Carbon Tetrachloride	< 0.0014	0.0014	
Chlorobenzene	< 0.0014	0.0014	
Chloroethane (Ethyl Chloride)	< 0.0068	0.0068	
2-Chloroethylvinylether	< 0.0677	0.0677	
Chloroform	< 0.0014	0.0014	
Chloromethane	< 0.0014	0.0014	
2-Chlorotoluene	< 0.0014	0.0014	
4-Chlorotoluene	< 0.0014	0.0014	
1,2-Dibromo-3-chloropropane	< 0.0068	0.0068	
Dibromochloromethane	< 0.0014	0.0014	
1,2-Dibromoethane (EDB)	< 0.0014	0.0014	
Dibromomethane	< 0.0014	0.0014	
1,2-Dichlorobenzene	< 0.0014	0.0014	

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LSAI SAMPLE ID continued 19-2864

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0014	0.0014	
1,4-Dichlorobenzene	< 0.0014	0.0014	
trans-1,4-Dichloro-2-butene	< 0.0068	0.0068	
Dichlorodifluoromethane	< 0.0014	0.0014	
1,1-Dichloroethane	< 0.0014	0.0014	
1,2-Dichloroethane	< 0.0014	0.0014	
1,1-Dichloroethene	< 0.0014	0.0014	
cis-1,2-Dichloroethene	< 0.0014	0.0014	
trans-1,2-Dichloroethene	< 0.0068	0.0068	
1,2-Dichloropropane	< 0.0068	0.0068	
1,3-Dichloropropane	< 0.0014	0.0014	
2,2-Dichloropropane	< 0.0014	0.0014	
1,1-Dichloropropene	< 0.0068	0.0068	
1,3-Dichloropropene	< 0.0068	0.0068	
Ethylbenzene	< 0.0068	0.0068	
Ethylmethacrylate	< 0.0014	0.0014	
Hexachloro-1,3-butadiene	< 0.0068	0.0068	
n-Hexane	< 0.0135	0.0135	
2-Hexanone	< 0.0135	0.0135	
Iodomethane	< 0.0068	0.0068	
Isopropylbenzene (Cumene)	< 0.0014	0.0014	
p-Isopropyltoluene	< 0.0014	0.0014	
Methylene chloride	< 0.0271	0.0271	
4-Methyl-2-pentanone (MIBK)	< 0.0014	0.0014	
Methyl tert-butyl ether (MTBE)	< 0.0068	0.0068	
1-Methylnaphthalene	< 0.0014	0.0014	
2-Methylnaphthalene	< 0.0014	0.0014	
Naphthalene	< 0.0014	0.0014	
n-Propylbenzene	< 0.0014	0.0014	
Styrene	< 0.0014	0.0014	
1,1,1,2-Tetrachloroethane	< 0.0014	0.0014	
1,1,2,2-Tetrachloroethane	< 0.0014	0.0014	
Tetrachloroethene	< 0.0014	0.0014	
Toluene	< 0.0068	0.0068	
1,2,3-Trichlorobenzene	< 0.0014	0.0014	
1,2,4-Trichlorobenzene	< 0.0014	0.0014	
1,1,1-Trichloroethane	< 0.0068	0.0068	
1,1,2-Trichloroethane	< 0.0014	0.0014	
Trichloroethene	< 0.0068	0.0068	

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LSAI SAMPLE ID continued 19-2864

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.0068	0.0068	
1,2,3-Trichloropropane	< 0.0068	0.0068	
1,2,4-Trimethylbenzene	< 0.0014	0.0014	
1,3,5-Trimethylbenzene	< 0.0014	0.0014	
Vinyl acetate	< 0.0135	0.0135	
Vinyl chloride	< 0.0014	0.0014	
Xylene M&P	< 0.0068	0.0068	
Xylene Ortho	< 0.0068	0.0068	
Total Xylenes	< 0.0136	0.0136	
Percent Solids	73.82%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	76.4%
1,2-Dichloroethane-d4	111%
Toluene-d8	88.1%
4-bromofluorobenzene	96.5%

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-2 (2-4)	Sample Collection Date/Time:	5/16/2019	10:00
LSAI Sample ID:	19-2865	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/29/2019	22:58
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 0.127	0.127	
Acrolein	< 0.0011	0.0011	
Acrylonitrile	< 0.0011	0.0011	
Benzene	0.0059	0.0011	
Bromobenzene	< 0.0011	0.0011	
Bromochloromethane	< 0.0011	0.0011	
Bromodichloromethane	< 0.0011	0.0011	
Bromoform	< 0.0053	0.0053	
Bromomethane	< 0.0053	0.0053	
n-Butanol	< 0.0053	0.0053	
2-Butanone (MEK)	< 0.0106	0.0106	
n-Butylbenzene	< 0.0011	0.0011	
sec-Butylbenzene	< 0.0011	0.0011	
tert-Butylbenzene	< 0.0011	0.0011	
Carbon Disulfide	< 0.0053	0.0053	
Carbon Tetrachloride	< 0.0011	0.0011	
Chlorobenzene	< 0.0011	0.0011	
Chloroethane (Ethyl Chloride)	< 0.0053	0.0053	
2-Chloroethylvinylether	< 0.0530	0.0530	
Chloroform	< 0.0011	0.0011	
Chloromethane	< 0.0011	0.0011	
2-Chlorotoluene	< 0.0011	0.0011	
4-Chlorotoluene	< 0.0011	0.0011	
1,2-Dibromo-3-chloropropane	< 0.0053	0.0053	
Dibromochloromethane	< 0.0011	0.0011	
1,2-Dibromoethane (EDB)	< 0.0011	0.0011	
Dibromomethane	< 0.0011	0.0011	
1,2-Dichlorobenzene	< 0.0011	0.0011	

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LSAI SAMPLE ID continued 19-2865

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0011	0.0011	
1,4-Dichlorobenzene	< 0.0011	0.0011	
trans-1,4-Dichloro-2-butene	< 0.0053	0.0053	
Dichlorodifluoromethane	< 0.0011	0.0011	
1,1-Dichloroethane	< 0.0011	0.0011	
1,2-Dichloroethane	< 0.0011	0.0011	
1,1-Dichloroethene	< 0.0011	0.0011	
cis-1,2-Dichloroethene	< 0.0011	0.0011	
trans-1,2-Dichloroethene	< 0.0053	0.0053	
1,2-Dichloropropane	< 0.0053	0.0053	
1,3-Dichloropropane	< 0.0011	0.0011	
2,2-Dichloropropane	< 0.0011	0.0011	
1,1-Dichloropropene	< 0.0053	0.0053	
1,3-Dichloropropene	< 0.0053	0.0053	
Ethylbenzene	< 0.0053	0.0053	
Ethylmethacrylate	< 0.0011	0.0011	
Hexachloro-1,3-butadiene	< 0.0053	0.0053	
n-Hexane	< 0.0106	0.0106	
2-Hexanone	< 0.0106	0.0106	
Iodomethane	< 0.0053	0.0053	
Isopropylbenzene (Cumene)	< 0.0011	0.0011	
p-Isopropyltoluene	< 0.0011	0.0011	
Methylene chloride	< 0.0212	0.0212	
4-Methyl-2-pentanone (MIBK)	< 0.0011	0.0011	
Methyl tert-butyl ether (MTBE)	< 0.0053	0.0053	
1-Methylnaphthalene	< 0.0011	0.0011	
2-Methylnaphthalene	< 0.0011	0.0011	
Naphthalene	0.0019	0.0011	
n-Propylbenzene	< 0.0011	0.0011	
Styrene	< 0.0011	0.0011	
1,1,1,2-Tetrachloroethane	< 0.0011	0.0011	
1,1,2,2-Tetrachloroethane	< 0.0011	0.0011	
Tetrachloroethene	< 0.0011	0.0011	
Toluene	0.0066	0.0053	
1,2,3-Trichlorobenzene	< 0.0011	0.0011	
1,2,4-Trichlorobenzene	< 0.0011	0.0011	
1,1,1-Trichloroethane	< 0.0053	0.0053	
1,1,2-Trichloroethane	< 0.0011	0.0011	
Trichloroethene	< 0.0053	0.0053	

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LSAI SAMPLE ID continued 19-2865

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.0053	0.0053	
1,2,3-Trichloropropane	< 0.0053	0.0053	
1,2,4-Trimethylbenzene	0.0038	0.0011	
1,3,5-Trimethylbenzene	0.0015	0.0011	
Vinyl acetate	< 0.0106	0.0106	
Vinyl chloride	< 0.0011	0.0011	
Xylene M&P	0.0067	0.0053	
Xylene Ortho	< 0.0053	0.0053	
Total Xylenes	< 0.0106	0.0106	
Percent Solids	94.28%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	130%
1,2-Dichloroethane-d4	94.8%
Toluene-d8	65.7%
4-bromofluorobenzene	92.6%

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-3 (7-9)	Sample Collection Date/Time:	5/16/2019	10:40
LSAI Sample ID:	19-2866	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	18:25
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.67	3.67	5
Acrolein	< 0.0305	0.0305	5
Acrylonitrile	< 0.0305	0.0305	5
Benzene	< 0.0305	0.0305	5
Bromobenzene	< 0.0305	0.0305	5
Bromochloromethane	< 0.0305	0.0305	5
Bromodichloromethane	< 0.0305	0.0305	5
Bromoform	< 0.153	0.153	5
Bromomethane	< 0.153	0.153	5
n-Butanol	< 0.153	0.153	5
2-Butanone (MEK)	< 0.305	0.305	5
n-Butylbenzene	< 0.0305	0.0305	5
sec-Butylbenzene	< 0.0305	0.0305	5
tert-Butylbenzene	< 0.0305	0.0305	5
Carbon Disulfide	< 0.153	0.153	5
Carbon Tetrachloride	< 0.0305	0.0305	5
Chlorobenzene	< 0.0305	0.0305	5
Chloroethane (Ethyl Chloride)	< 0.153	0.153	5
2-Chloroethylvinylether	< 1.53	1.53	5
Chloroform	< 0.0305	0.0305	5
Chloromethane	< 0.0305	0.0305	5
2-Chlorotoluene	< 0.0305	0.0305	5
4-Chlorotoluene	< 0.0305	0.0305	5
1,2-Dibromo-3-chloropropane	< 0.153	0.153	5
Dibromochloromethane	< 0.0305	0.0305	5
1,2-Dibromoethane (EDB)	< 0.0305	0.0305	5
Dibromomethane	< 0.0305	0.0305	5
1,2-Dichlorobenzene	< 0.0305	0.0305	5

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LSAI SAMPLE ID continued 19-2866

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0305	0.0305	5
1,4-Dichlorobenzene	< 0.0305	0.0305	5
trans-1,4-Dichloro-2-butene	< 0.153	0.153	5
Dichlorodifluoromethane	< 0.0305	0.0305	0
1,1-Dichloroethane	< 0.0305	0.0305	5
1,2-Dichloroethane	< 0.0305	0.0305	5
1,1-Dichloroethene	< 0.0305	0.0305	5
cis-1,2-Dichloroethene	< 0.0305	0.0305	5
trans-1,2-Dichloroethene	< 0.153	0.153	5
1,2-Dichloropropane	< 0.153	0.153	5
1,3-Dichloropropane	< 0.0305	0.0305	5
2,2-Dichloropropane	< 0.0305	0.0305	5
1,1-Dichloropropene	< 0.153	0.153	5
1,3-Dichloropropene	< 0.153	0.153	5
Ethylbenzene	< 0.153	0.153	5
Ethylmethacrylate	< 0.0305	0.0305	5
Hexachloro-1,3-butadiene	< 0.153	0.153	5
n-Hexane	< 0.305	0.305	5
2-Hexanone	< 0.305	0.305	5
Iodomethane	< 0.153	0.153	5
Isopropylbenzene (Cumene)	< 0.0305	0.0305	5
p-Isopropyltoluene	< 0.0305	0.0305	5
Methylene chloride	< 0.611	0.611	5
4-Methyl-2-pentanone (MIBK)	< 0.0305	0.0305	5
Methyl tert-butyl ether (MTBE)	< 0.153	0.153	5
1-Methylnaphthalene	< 0.0305	0.0305	5
2-Methylnaphthalene	< 0.0305	0.0305	5
Naphthalene	< 0.0305	0.0305	5
n-Propylbenzene	< 0.0305	0.0305	5
Styrene	< 0.0305	0.0305	5
1,1,1,2-Tetrachloroethane	< 0.0305	0.0305	5
1,1,2,2-Tetrachloroethane	< 0.0305	0.0305	5
Tetrachloroethene	< 0.0305	0.0305	5
Toluene	< 0.153	0.153	5
1,2,3-Trichlorobenzene	< 0.0305	0.0305	5
1,2,4-Trichlorobenzene	< 0.0305	0.0305	5
1,1,1-Trichloroethane	< 0.153	0.153	5
1,1,2-Trichloroethane	< 0.0305	0.0305	5
Trichloroethene	< 0.153	0.153	5

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LSAI SAMPLE ID continued 19-2866

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.153	0.153	5
1,2,3-Trichloropropane	< 0.153	0.153	5
1,2,4-Trimethylbenzene	< 0.0305	0.0305	5
1,3,5-Trimethylbenzene	< 0.0305	0.0305	5
Vinyl acetate	< 0.305	0.305	5
Vinyl chloride	< 0.0305	0.0305	5
Xylene M&P	< 0.153	0.153	5
Xylene Ortho	< 0.153	0.153	5
Total Xylenes	< 0.306	0.306	5
Percent Solids	81.84%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	98.5%
1,2-Dichloroethane-d4	97.0%
Toluene-d8	85.9%
4-bromofluorobenzene	86.7%

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CERTIFICATE OF ANALYSIS

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Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-3 (9-10.5)	Sample Collection Date/Time:	5/16/2019	10:45
LSAI Sample ID:	19-2867	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	18:43
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.76	3.76	5
Acrolein	< 0.0313	0.0313	5
Acrylonitrile	< 0.0313	0.0313	5
Benzene	< 0.0313	0.0313	5
Bromobenzene	< 0.0313	0.0313	5
Bromochloromethane	< 0.0313	0.0313	5
Bromodichloromethane	< 0.0313	0.0313	5
Bromoform	< 0.157	0.157	5
Bromomethane	< 0.157	0.157	5
n-Butanol	< 0.157	0.157	5
2-Butanone (MEK)	< 0.313	0.313	5
n-Butylbenzene	< 0.0313	0.0313	5
sec-Butylbenzene	< 0.0313	0.0313	5
tert-Butylbenzene	< 0.0313	0.0313	5
Carbon Disulfide	< 0.157	0.157	5
Carbon Tetrachloride	< 0.0313	0.0313	5
Chlorobenzene	< 0.0313	0.0313	5
Chloroethane (Ethyl Chloride)	< 0.157	0.157	5
2-Chloroethylvinylether	< 1.57	1.57	5
Chloroform	< 0.0313	0.0313	5
Chloromethane	< 0.0313	0.0313	5
2-Chlorotoluene	< 0.0313	0.0313	5
4-Chlorotoluene	< 0.0313	0.0313	5
1,2-Dibromo-3-chloropropane	< 0.157	0.157	5
Dibromochloromethane	< 0.0313	0.0313	5
1,2-Dibromoethane (EDB)	< 0.0313	0.0313	5
Dibromomethane	< 0.0313	0.0313	5
1,2-Dichlorobenzene	< 0.0313	0.0313	5

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LSAI SAMPLE ID continued 19-2867

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0313	0.0313	5
1,4-Dichlorobenzene	< 0.0313	0.0313	5
trans-1,4-Dichloro-2-butene	< 0.157	0.157	5
Dichlorodifluoromethane	< 0.0313	0.0313	5
1,1-Dichloroethane	< 0.0313	0.0313	5
1,2-Dichloroethane	< 0.0313	0.0313	5
1,1-Dichloroethene	< 0.0313	0.0313	5
cis-1,2-Dichloroethene	< 0.0313	0.0313	5
trans-1,2-Dichloroethene	< 0.157	0.157	5
1,2-Dichloropropane	< 0.157	0.157	5
1,3-Dichloropropane	< 0.0313	0.0313	5
2,2-Dichloropropane	< 0.0313	0.0313	5
1,1-Dichloropropene	< 0.157	0.157	5
1,3-Dichloropropene	< 0.157	0.157	5
Ethylbenzene	< 0.157	0.157	5
Ethylmethacrylate	< 0.0313	0.0313	5
Hexachloro-1,3-butadiene	< 0.157	0.157	5
n-Hexane	< 0.313	0.313	5
2-Hexanone	< 0.313	0.313	5
Iodomethane	< 0.157	0.157	5
Isopropylbenzene (Cumene)	< 0.0313	0.0313	5
p-Isopropyltoluene	< 0.0313	0.0313	5
Methylene chloride	< 0.627	0.627	5
4-Methyl-2-pentanone (MIBK)	< 0.0313	0.0313	5
Methyl tert-butyl ether (MTBE)	< 0.157	0.157	5
1-Methylnaphthalene	< 0.0313	0.0313	5
2-Methylnaphthalene	< 0.0313	0.0313	5
Naphthalene	< 0.0313	0.0313	5
n-Propylbenzene	< 0.0313	0.0313	5
Styrene	< 0.0313	0.0313	5
1,1,1,2-Tetrachloroethane	< 0.0313	0.0313	5
1,1,2,2-Tetrachloroethane	< 0.0313	0.0313	5
Tetrachloroethene	< 0.0313	0.0313	5
Toluene	< 0.157	0.157	5
1,2,3-Trichlorobenzene	< 0.0313	0.0313	5
1,2,4-Trichlorobenzene	< 0.0313	0.0313	5
1,1,1-Trichloroethane	< 0.157	0.157	5
1,1,2-Trichloroethane	< 0.0313	0.0313	5
Trichloroethene	< 0.157	0.157	5

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LSAI SAMPLE ID continued 19-2867

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.157	0.157	5
1,2,3-Trichloropropane	< 0.157	0.157	5
1,2,4-Trimethylbenzene	< 0.0313	0.0313	5
1,3,5-Trimethylbenzene	< 0.0313	0.0313	5
Vinyl acetate	< 0.313	0.313	5
Vinyl chloride	< 0.0313	0.0313	5
Xylene M&P	< 0.157	0.157	5
Xylene Ortho	< 0.157	0.157	5
Total Xylenes	< 0.314	0.314	5
Percent Solids	79.80%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	102%
1,2-Dichloroethane-d4	104%
Toluene-d8	84.9%
4-bromofluorobenzene	86.4%

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-4 (8-9)	Sample Collection Date/Time:	5/16/2019	11:50
LSAI Sample ID:	19-2868	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	14:32
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.78	3.78	5
Acrolein	< 0.0315	0.0315	5
Acrylonitrile	< 0.0315	0.0315	5
Benzene	0.819	0.0315	5
Bromobenzene	< 0.0315	0.0315	5
Bromochloromethane	< 0.0315	0.0315	5
Bromodichloromethane	< 0.0315	0.0315	5
Bromoform	< 0.157	0.157	5
Bromomethane	< 0.157	0.157	5
n-Butanol	< 0.157	0.157	5
2-Butanone (MEK)	< 0.315	0.315	5
n-Butylbenzene	0.962	0.0315	5
sec-Butylbenzene	0.568	0.0315	5
tert-Butylbenzene	< 0.0315	0.0315	5
Carbon Disulfide	< 0.157	0.157	5
Carbon Tetrachloride	< 0.0315	0.0315	5
Chlorobenzene	< 0.0315	0.0315	5
Chloroethane (Ethyl Chloride)	< 0.157	0.157	5
2-Chloroethylvinylether	< 1.57	1.57	5
Chloroform	< 0.0315	0.0315	5
Chloromethane	< 0.0315	0.0315	5
2-Chlorotoluene	< 0.0315	0.0315	5
4-Chlorotoluene	< 0.0315	0.0315	5
1,2-Dibromo-3-chloropropane	< 0.157	0.157	5
Dibromochloromethane	< 0.0315	0.0315	5
1,2-Dibromoethane (EDB)	< 0.0315	0.0315	5
Dibromomethane	< 0.0315	0.0315	5
1,2-Dichlorobenzene	< 0.0315	0.0315	5

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LSAI SAMPLE ID continued 19-2868

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0315	0.0315	5
1,4-Dichlorobenzene	< 0.0315	0.0315	5
trans-1,4-Dichloro-2-butene	< 0.157	0.157	5
Dichlorodifluoromethane	< 0.0315	0.0315	5
1,1-Dichloroethane	< 0.0315	0.0315	5
1,2-Dichloroethane	< 0.0315	0.0315	5
1,1-Dichloroethene	< 0.0315	0.0315	5
cis-1,2-Dichloroethene	< 0.0315	0.0315	5
trans-1,2-Dichloroethene	< 0.157	0.157	5
1,2-Dichloropropane	< 0.157	0.157	5
1,3-Dichloropropane	< 0.0315	0.0315	5
2,2-Dichloropropane	< 0.0315	0.0315	5
1,1-Dichloropropene	< 0.157	0.157	5
1,3-Dichloropropene	< 0.157	0.157	5
Ethylbenzene	10.1	0.157	5
Ethylmethacrylate	< 0.0315	0.0315	5
Hexachloro-1,3-butadiene	< 0.157	0.157	5
n-Hexane	31.6	0.315	5
2-Hexanone	< 0.315	0.315	5
Iodomethane	< 0.157	0.157	5
Isopropylbenzene (Cumene)	2.19	0.0315	5
p-Isopropyltoluene	0.619	0.0315	5
Methylene chloride	< 0.629	0.629	5
4-Methyl-2-pentanone (MIBK)	< 0.0315	0.0315	5
Methyl tert-butyl ether (MTBE)	< 0.157	0.157	5
1-Methylnaphthalene	0.229	0.0315	5
2-Methylnaphthalene	0.794	0.0315	5
Naphthalene	0.342	0.0315	5
n-Propylbenzene	2.41	0.0315	5
Styrene	< 0.0315	0.0315	5
1,1,1,2-Tetrachloroethane	< 0.0315	0.0315	5
1,1,2,2-Tetrachloroethane	< 0.0315	0.0315	5
Tetrachloroethene	< 0.0315	0.0315	5
Toluene	< 0.157	0.157	5
1,2,3-Trichlorobenzene	< 0.0315	0.0315	5
1,2,4-Trichlorobenzene	< 0.0315	0.0315	5
1,1,1-Trichloroethane	< 0.157	0.157	5
1,1,2-Trichloroethane	< 0.0315	0.0315	5
Trichloroethene	< 0.157	0.157	5

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LSAI SAMPLE ID continued 19-2868

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.157	0.157	5
1,2,3-Trichloropropane	< 0.157	0.157	5
1,2,4-Trimethylbenzene	12.5	0.0315	5
1,3,5-Trimethylbenzene	3.59	0.0315	5
Vinyl acetate	< 0.315	0.315	5
Vinyl chloride	< 0.0315	0.0315	5
Xylene M&P	5.25	0.157	5
Xylene Ortho	< 0.157	0.157	5
Total Xylenes	5.25	0.314	5
Percent Solids	79.46%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	76.3%
1,2-Dichloroethane-d4	83.8%
Toluene-d8	97.1%
4-bromofluorobenzene	83.1%

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-4 (9-10.5)	Sample Collection Date/Time:	5/16/2019	11:55
LSAI Sample ID:	19-2869	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	14:51
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.72	3.72	5
Acrolein	< 0.0310	0.0310	5
Acrylonitrile	< 0.0310	0.0310	5
Benzene	0.200	0.0310	5
Bromobenzene	< 0.0310	0.0310	5
Bromochloromethane	< 0.0310	0.0310	5
Bromodichloromethane	< 0.0310	0.0310	5
Bromoform	< 0.155	0.155	5
Bromomethane	< 0.155	0.155	5
n-Butanol	< 0.155	0.155	5
2-Butanone (MEK)	< 0.310	0.310	5
n-Butylbenzene	0.514	0.0310	5
sec-Butylbenzene	0.343	0.0310	5
tert-Butylbenzene	< 0.0310	0.0310	5
Carbon Disulfide	< 0.155	0.155	5
Carbon Tetrachloride	< 0.0310	0.0310	5
Chlorobenzene	< 0.0310	0.0310	5
Chloroethane (Ethyl Chloride)	< 0.155	0.155	5
2-Chloroethylvinylether	< 1.55	1.55	5
Chloroform	< 0.0310	0.0310	5
Chloromethane	< 0.0310	0.0310	5
2-Chlorotoluene	< 0.0310	0.0310	5
4-Chlorotoluene	< 0.0310	0.0310	5
1,2-Dibromo-3-chloropropane	< 0.155	0.155	5
Dibromochloromethane	< 0.0310	0.0310	5
1,2-Dibromoethane (EDB)	< 0.0310	0.0310	5
Dibromomethane	< 0.0310	0.0310	5
1,2-Dichlorobenzene	< 0.0310	0.0310	5

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LSAI SAMPLE ID continued 19-2869

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0310	0.0310	5
1,4-Dichlorobenzene	< 0.0310	0.0310	5
trans-1,4-Dichloro-2-butene	< 0.155	0.155	5
Dichlorodifluoromethane	< 0.0310	0.0310	5
1,1-Dichloroethane	< 0.0310	0.0310	5
1,2-Dichloroethane	< 0.0310	0.0310	5
1,1-Dichloroethene	< 0.0310	0.0310	5
cis-1,2-Dichloroethene	< 0.0310	0.0310	5
trans-1,2-Dichloroethene	< 0.155	0.155	5
1,2-Dichloropropane	< 0.155	0.155	5
1,3-Dichloropropane	< 0.0310	0.0310	5
2,2-Dichloropropane	< 0.0310	0.0310	5
1,1-Dichloropropene	< 0.155	0.155	5
1,3-Dichloropropene	< 0.155	0.155	5
Ethylbenzene	1.30	0.155	5
Ethylmethacrylate	< 0.0310	0.0310	5
Hexachloro-1,3-butadiene	< 0.155	0.155	5
n-Hexane	23.7	0.310	5
2-Hexanone	< 0.310	0.310	5
Iodomethane	< 0.155	0.155	5
Isopropylbenzene (Cumene)	0.860	0.0310	5
p-Isopropyltoluene	0.300	0.0310	5
Methylene chloride	< 0.619	0.619	5
4-Methyl-2-pentanone (MIBK)	< 0.0310	0.0310	5
Methyl tert-butyl ether (MTBE)	< 0.155	0.155	5
1-Methylnaphthalene	0.0978	0.0310	5
2-Methylnaphthalene	0.291	0.0310	5
Naphthalene	0.0746	0.0310	5
n-Propylbenzene	0.969	0.0310	5
Styrene	< 0.0310	0.0310	5
1,1,1,2-Tetrachloroethane	< 0.0310	0.0310	5
1,1,2,2-Tetrachloroethane	< 0.0310	0.0310	5
Tetrachloroethene	< 0.0310	0.0310	5
Toluene	< 0.155	0.155	5
1,2,3-Trichlorobenzene	< 0.0310	0.0310	5
1,2,4-Trichlorobenzene	< 0.0310	0.0310	5
1,1,1-Trichloroethane	< 0.155	0.155	5
1,1,2-Trichloroethane	< 0.0310	0.0310	5
Trichloroethene	< 0.155	0.155	5

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LSAI SAMPLE ID continued 19-2869

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.155	0.155	5
1,2,3-Trichloropropane	< 0.155	0.155	5
1,2,4-Trimethylbenzene	0.503	0.0310	5
1,3,5-Trimethylbenzene	0.322	0.0310	5
Vinyl acetate	< 0.310	0.310	5
Vinyl chloride	< 0.0310	0.0310	5
Xylene M&P	0.709	0.155	5
Xylene Ortho	< 0.155	0.155	5
Total Xylenes	0.709	0.310	5
Percent Solids	80.73%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	89.1%
1,2-Dichloroethane-d4	86.1%
Toluene-d8	85.4%
4-bromofluorobenzene	88.8%

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-5 (9-11)	Sample Collection Date/Time:	5/16/2019	11:20
LSAI Sample ID:	19-2870	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	16:05
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.69	3.69	5
Acrolein	< 0.0307	0.0307	5
Acrylonitrile	< 0.0307	0.0307	5
Benzene	0.100	0.0307	5
Bromobenzene	< 0.0307	0.0307	5
Bromochloromethane	< 0.0307	0.0307	5
Bromodichloromethane	< 0.0307	0.0307	5
Bromoform	< 0.154	0.154	5
Bromomethane	< 0.154	0.154	5
n-Butanol	< 0.154	0.154	5
2-Butanone (MEK)	< 0.307	0.307	5
n-Butylbenzene	0.214	0.0307	5
sec-Butylbenzene	0.208	0.0307	5
tert-Butylbenzene	< 0.0307	0.0307	5
Carbon Disulfide	< 0.154	0.154	5
Carbon Tetrachloride	< 0.0307	0.0307	5
Chlorobenzene	< 0.0307	0.0307	5
Chloroethane (Ethyl Chloride)	< 0.154	0.154	5
2-Chloroethylvinylether	< 1.54	1.54	5
Chloroform	< 0.0307	0.0307	5
Chloromethane	< 0.0307	0.0307	5
2-Chlorotoluene	< 0.0307	0.0307	5
4-Chlorotoluene	< 0.0307	0.0307	5
1,2-Dibromo-3-chloropropane	< 0.154	0.154	5
Dibromochloromethane	< 0.0307	0.0307	5
1,2-Dibromoethane (EDB)	< 0.0307	0.0307	5
Dibromomethane	< 0.0307	0.0307	5
1,2-Dichlorobenzene	< 0.0307	0.0307	5

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LSAI SAMPLE ID continued 19-2870

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0307	0.0307	5
1,4-Dichlorobenzene	< 0.0307	0.0307	5
trans-1,4-Dichloro-2-butene	< 0.154	0.154	5
Dichlorodifluoromethane	< 0.0307	0.0307	5
1,1-Dichloroethane	< 0.0307	0.0307	5
1,2-Dichloroethane	< 0.0307	0.0307	5
1,1-Dichloroethene	< 0.0307	0.0307	5
cis-1,2-Dichloroethene	< 0.0307	0.0307	5
trans-1,2-Dichloroethene	< 0.154	0.154	5
1,2-Dichloropropane	< 0.154	0.154	5
1,3-Dichloropropane	< 0.0307	0.0307	5
2,2-Dichloropropane	< 0.0307	0.0307	5
1,1-Dichloropropene	< 0.154	0.154	5
1,3-Dichloropropene	< 0.154	0.154	5
Ethylbenzene	< 0.154	0.154	5
Ethylmethacrylate	< 0.0307	0.0307	5
Hexachloro-1,3-butadiene	< 0.154	0.154	5
n-Hexane	4.15	0.307	5
2-Hexanone	< 0.307	0.307	5
Iodomethane	< 0.154	0.154	5
Isopropylbenzene (Cumene)	0.509	0.0307	5
p-Isopropyltoluene	0.273	0.0307	5
Methylene chloride	< 0.614	0.614	5
4-Methyl-2-pentanone (MIBK)	< 0.0307	0.0307	5
Methyl tert-butyl ether (MTBE)	< 0.154	0.154	5
1-Methylnaphthalene	< 0.0307	0.0307	5
2-Methylnaphthalene	0.0753	0.0307	5
Naphthalene	< 0.0307	0.0307	5
n-Propylbenzene	0.515	0.0307	5
Styrene	< 0.0307	0.0307	5
1,1,1,2-Tetrachloroethane	< 0.0307	0.0307	5
1,1,2,2-Tetrachloroethane	< 0.0307	0.0307	5
Tetrachloroethene	< 0.0307	0.0307	5
Toluene	< 0.154	0.154	5
1,2,3-Trichlorobenzene	< 0.0307	0.0307	5
1,2,4-Trichlorobenzene	< 0.0307	0.0307	5
1,1,1-Trichloroethane	< 0.154	0.154	5
1,1,2-Trichloroethane	< 0.0307	0.0307	5
Trichloroethene	< 0.154	0.154	5

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LSAI SAMPLE ID continued 19-2870

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.154	0.154	5
1,2,3-Trichloropropane	< 0.154	0.154	5
1,2,4-Trimethylbenzene	0.0833	0.0307	5
1,3,5-Trimethylbenzene	0.0852	0.0307	5
Vinyl acetate	< 0.307	0.307	5
Vinyl chloride	< 0.0307	0.0307	5
Xylene M&P	< 0.154	0.154	5
Xylene Ortho	< 0.154	0.154	5
Total Xylenes	< 0.308	0.308	5
Percent Solids	81.39%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	89.4%
1,2-Dichloroethane-d4	86.1%
Toluene-d8	94.0%
4-bromofluorobenzene	89.0%

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SB-5(9-11)DUP	Sample Collection Date/Time:	5/16/2019	11:20
LSAI Sample ID:	19-2871	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	16:24
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 3.58	3.58	5
Acrolein	< 0.0299	0.0299	5
Acrylonitrile	< 0.0299	0.0299	5
Benzene	0.105	0.0299	5
Bromobenzene	< 0.0299	0.0299	5
Bromochloromethane	< 0.0299	0.0299	5
Bromodichloromethane	< 0.0299	0.0299	5
Bromoform	< 0.149	0.149	5
Bromomethane	< 0.149	0.149	5
n-Butanol	< 0.149	0.149	5
2-Butanone (MEK)	< 0.299	0.299	5
n-Butylbenzene	0.478	0.0299	5
sec-Butylbenzene	0.436	0.0299	5
tert-Butylbenzene	< 0.0299	0.0299	5
Carbon Disulfide	< 0.149	0.149	5
Carbon Tetrachloride	< 0.0299	0.0299	5
Chlorobenzene	< 0.0299	0.0299	5
Chloroethane (Ethyl Chloride)	< 0.149	0.149	5
2-Chloroethylvinylether	< 1.49	1.49	5
Chloroform	< 0.0299	0.0299	5
Chloromethane	< 0.0299	0.0299	5
2-Chlorotoluene	< 0.0299	0.0299	5
4-Chlorotoluene	< 0.0299	0.0299	5
1,2-Dibromo-3-chloropropane	< 0.149	0.149	5
Dibromochloromethane	< 0.0299	0.0299	5
1,2-Dibromoethane (EDB)	< 0.0299	0.0299	5
Dibromomethane	< 0.0299	0.0299	5
1,2-Dichlorobenzene	< 0.0299	0.0299	5

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LSAI SAMPLE ID continued 19-2871

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0299	0.0299	5
1,4-Dichlorobenzene	< 0.0299	0.0299	5
trans-1,4-Dichloro-2-butene	< 0.149	0.149	5
Dichlorodifluoromethane	< 0.0299	0.0299	5
1,1-Dichloroethane	< 0.0299	0.0299	5
1,2-Dichloroethane	< 0.0299	0.0299	5
1,1-Dichloroethene	< 0.0299	0.0299	5
cis-1,2-Dichloroethene	< 0.0299	0.0299	5
trans-1,2-Dichloroethene	< 0.149	0.149	5
1,2-Dichloropropane	< 0.149	0.149	5
1,3-Dichloropropane	< 0.0299	0.0299	5
2,2-Dichloropropane	< 0.0299	0.0299	5
1,1-Dichloropropene	< 0.149	0.149	5
1,3-Dichloropropene	< 0.149	0.149	5
Ethylbenzene	< 0.149	0.149	5
Ethylmethacrylate	< 0.0299	0.0299	5
Hexachloro-1,3-butadiene	< 0.149	0.149	5
n-Hexane	18.9	0.299	5
2-Hexanone	< 0.299	0.299	5
Iodomethane	< 0.149	0.149	5
Isopropylbenzene (Cumene)	1.11	0.0299	5
p-Isopropyltoluene	0.473	0.0299	5
Methylene chloride	< 0.597	0.597	5
4-Methyl-2-pentanone (MIBK)	< 0.0299	0.0299	5
Methyl tert-butyl ether (MTBE)	< 0.149	0.149	5
1-Methylnaphthalene	0.0667	0.0299	5
2-Methylnaphthalene	0.146	0.0299	5
Naphthalene	< 0.0299	0.0299	5
n-Propylbenzene	0.885	0.0299	5
Styrene	< 0.0299	0.0299	5
1,1,1,2-Tetrachloroethane	< 0.0299	0.0299	5
1,1,2,2-Tetrachloroethane	< 0.0299	0.0299	5
Tetrachloroethene	< 0.0299	0.0299	5
Toluene	< 0.149	0.149	5
1,2,3-Trichlorobenzene	< 0.0299	0.0299	5
1,2,4-Trichlorobenzene	< 0.0299	0.0299	5
1,1,1-Trichloroethane	< 0.149	0.149	5
1,1,2-Trichloroethane	< 0.0299	0.0299	5
Trichloroethene	< 0.149	0.149	5

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LSAI SAMPLE ID continued 19-2871

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.149	0.149	5
1,2,3-Trichloropropane	< 0.149	0.149	5
1,2,4-Trimethylbenzene	< 0.0299	0.0299	5
1,3,5-Trimethylbenzene	0.0572	0.0299	5
Vinyl acetate	< 0.299	0.299	5
Vinyl chloride	< 0.0299	0.0299	5
Xylene M&P	< 0.149	0.149	5
Xylene Ortho	< 0.149	0.149	5
Total Xylenes	< 0.298	0.298	5
Percent Solids	83.71%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	83.9%
1,2-Dichloroethane-d4	82.6%
Toluene-d8	87.6%
4-bromofluorobenzene	85.3%

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	SP-3 (11-13)	Sample Collection Date/Time:	5/16/2019	11:25
LSAI Sample ID:	19-2872	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	30MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	17:27
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 4.27	4.27	5
Acrolein	< 0.0356	0.0356	5
Acrylonitrile	< 0.0356	0.0356	5
Benzene	0.177	0.0356	5
Bromobenzene	< 0.0356	0.0356	5
Bromochloromethane	< 0.0356	0.0356	5
Bromodichloromethane	< 0.0356	0.0356	5
Bromoform	< 0.178	0.178	5
Bromomethane	< 0.178	0.178	5
n-Butanol	< 0.178	0.178	5
2-Butanone (MEK)	< 0.356	0.356	5
n-Butylbenzene	< 0.0356	0.0356	5
sec-Butylbenzene	< 0.0356	0.0356	5
tert-Butylbenzene	< 0.0356	0.0356	5
Carbon Disulfide	< 0.178	0.178	5
Carbon Tetrachloride	< 0.0356	0.0356	5
Chlorobenzene	< 0.0356	0.0356	5
Chloroethane (Ethyl Chloride)	< 0.178	0.178	5
2-Chloroethylvinylether	< 1.78	1.78	5
Chloroform	< 0.0356	0.0356	5
Chloromethane	< 0.0356	0.0356	5
2-Chlorotoluene	< 0.0356	0.0356	5
4-Chlorotoluene	< 0.0356	0.0356	5
1,2-Dibromo-3-chloropropane	< 0.178	0.178	5
Dibromochloromethane	< 0.0356	0.0356	5
1,2-Dibromoethane (EDB)	< 0.0356	0.0356	5
Dibromomethane	< 0.0356	0.0356	5
1,2-Dichlorobenzene	< 0.0356	0.0356	5

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LSAI SAMPLE ID continued 19-2872

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0356	0.0356	5
1,4-Dichlorobenzene	< 0.0356	0.0356	5
trans-1,4-Dichloro-2-butene	< 0.178	0.178	5
Dichlorodifluoromethane	< 0.0356	0.0356	5
1,1-Dichloroethane	< 0.0356	0.0356	5
1,2-Dichloroethane	< 0.0356	0.0356	5
1,1-Dichloroethene	< 0.0356	0.0356	5
cis-1,2-Dichloroethene	< 0.0356	0.0356	5
trans-1,2-Dichloroethene	< 0.178	0.178	5
1,2-Dichloropropane	< 0.178	0.178	5
1,3-Dichloropropane	< 0.0356	0.0356	5
2,2-Dichloropropane	< 0.0356	0.0356	5
1,1-Dichloropropene	< 0.178	0.178	5
1,3-Dichloropropene	< 0.178	0.178	5
Ethylbenzene	< 0.178	0.178	5
Ethylmethacrylate	< 0.0356	0.0356	5
Hexachloro-1,3-butadiene	< 0.178	0.178	5
n-Hexane	< 0.356	0.356	5
2-Hexanone	< 0.356	0.356	5
Iodomethane	< 0.178	0.178	5
Isopropylbenzene (Cumene)	< 0.0356	0.0356	5
p-Isopropyltoluene	< 0.0356	0.0356	5
Methylene chloride	< 0.712	0.712	5
4-Methyl-2-pentanone (MIBK)	< 0.0356	0.0356	5
Methyl tert-butyl ether (MTBE)	< 0.178	0.178	5
1-Methylnaphthalene	< 0.0356	0.0356	5
2-Methylnaphthalene	< 0.0356	0.0356	5
Naphthalene	< 0.0356	0.0356	5
n-Propylbenzene	< 0.0356	0.0356	5
Styrene	< 0.0356	0.0356	5
1,1,1,2-Tetrachloroethane	< 0.0356	0.0356	5
1,1,2,2-Tetrachloroethane	< 0.0356	0.0356	5
Tetrachloroethene	< 0.0356	0.0356	5
Toluene	< 0.178	0.178	5
1,2,3-Trichlorobenzene	< 0.0356	0.0356	5
1,2,4-Trichlorobenzene	< 0.0356	0.0356	5
1,1,1-Trichloroethane	< 0.178	0.178	5
1,1,2-Trichloroethane	< 0.0356	0.0356	5
Trichloroethene	< 0.178	0.178	5

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LSAI SAMPLE ID continued 19-2872

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.178	0.178	5
1,2,3-Trichloropropane	< 0.178	0.178	5
1,2,4-Trimethylbenzene	< 0.0356	0.0356	5
1,3,5-Trimethylbenzene	< 0.0356	0.0356	5
Vinyl acetate	< 0.356	0.356	5
Vinyl chloride	< 0.0356	0.0356	5
Xylene M&P	< 0.178	0.178	5
Xylene Ortho	< 0.178	0.178	5
Total Xylenes	< 0.356	0.356	5
Percent Solids	70.26%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	95.1%
1,2-Dichloroethane-d4	88.3%
Toluene-d8	94.5%
4-bromofluorobenzene	91.5%

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Rod Manny	
Sample Field ID:	TB-1	Sample Collection Date/Time:		
LSAI Sample ID:	19-2873	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5035A	Analysis Date/Time:	5/30/2019	1:32
Sample Matrix:	Soil	Analyst:	DJD	

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Acetone	< 0.120	0.120	
Acrolein	< 0.0010	0.0010	
Acrylonitrile	< 0.0010	0.0010	
Benzene	< 0.0010	0.0010	
Bromobenzene	< 0.0010	0.0010	
Bromochloromethane	< 0.0010	0.0010	
Bromodichloromethane	< 0.0010	0.0010	
Bromoform	< 0.0050	0.0050	
Bromomethane	< 0.0050	0.0050	
n-Butanol	< 0.0050	0.0050	
2-Butanone (MEK)	< 0.0100	0.0100	
n-Butylbenzene	< 0.0010	0.0010	
sec-Butylbenzene	< 0.0010	0.0010	
tert-Butylbenzene	< 0.0010	0.0010	
Carbon Disulfide	< 0.0050	0.0050	
Carbon Tetrachloride	< 0.0010	0.0010	
Chlorobenzene	< 0.0010	0.0010	
Chloroethane (Ethyl Chloride)	< 0.0050	0.0050	
2-Chloroethylvinylether	< 0.0500	0.0500	
Chloroform	< 0.0010	0.0010	
Chloromethane	< 0.0010	0.0010	
2-Chlorotoluene	< 0.0010	0.0010	
4-Chlorotoluene	< 0.0010	0.0010	
1,2-Dibromo-3-chloropropane	< 0.0050	0.0050	
Dibromochloromethane	< 0.0010	0.0010	
1,2-Dibromoethane (EDB)	< 0.0010	0.0010	
Dibromomethane	< 0.0010	0.0010	
1,2-Dichlorobenzene	< 0.0010	0.0010	

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Indianapolis, IN 46250
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LSAI SAMPLE ID continued 19-2873

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
1,3-Dichlorobenzene	< 0.0010	0.0010	
1,4-Dichlorobenzene	< 0.0010	0.0010	
trans-1,4-Dichloro-2-butene	< 0.0050	0.0050	
Dichlorodifluoromethane	< 0.0010	0.0010	
1,1-Dichloroethane	< 0.0010	0.0010	
1,2-Dichloroethane	< 0.0010	0.0010	
1,1-Dichloroethene	< 0.0010	0.0010	
cis-1,2-Dichloroethene	< 0.0010	0.0010	
trans-1,2-Dichloroethene	< 0.0050	0.0050	
1,2-Dichloropropane	< 0.0050	0.0050	
1,3-Dichloropropane	< 0.0010	0.0010	
2,2-Dichloropropane	< 0.0010	0.0010	
1,1-Dichloropropene	< 0.0050	0.0050	
1,3-Dichloropropene	< 0.0050	0.0050	
Ethylbenzene	< 0.0050	0.0050	
Ethylmethacrylate	< 0.0010	0.0010	
Hexachloro-1,3-butadiene	< 0.0050	0.0050	
n-Hexane	< 0.0100	0.0100	
2-Hexanone	< 0.0100	0.0100	
Iodomethane	< 0.0050	0.0050	
Isopropylbenzene (Cumene)	< 0.0010	0.0010	
p-Isopropyltoluene	< 0.0010	0.0010	
Methylene chloride	< 0.0200	0.0200	
4-Methyl-2-pentanone (MIBK)	< 0.0010	0.0010	
Methyl tert-butyl ether (MTBE)	< 0.0050	0.0050	
1-Methylnaphthalene	< 0.0010	0.0010	
2-Methylnaphthalene	< 0.0010	0.0010	
Naphthalene	< 0.0010	0.0010	
n-Propylbenzene	< 0.0010	0.0010	
Styrene	< 0.0010	0.0010	
1,1,1,2-Tetrachloroethane	< 0.0010	0.0010	
1,1,2,2-Tetrachloroethane	< 0.0010	0.0010	
Tetrachloroethene	< 0.0010	0.0010	
Toluene	< 0.0050	0.0050	
1,2,3-Trichlorobenzene	< 0.0010	0.0010	
1,2,4-Trichlorobenzene	< 0.0010	0.0010	
1,1,1-Trichloroethane	< 0.0050	0.0050	
1,1,2-Trichloroethane	< 0.0010	0.0010	
Trichloroethene	< 0.0050	0.0050	

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Lab Solutions for AnalyticalTesting & Issues

LSAI SAMPLE ID continued 19-2873

Analyte	Results (mg/kg)	Reporting Limit (mg/kg)	Flags
Trichlorofluoromethane	< 0.0050	0.0050	
1,2,3-Trichloropropane	< 0.0050	0.0050	
1,2,4-Trimethylbenzene	< 0.0010	0.0010	
1,3,5-Trimethylbenzene	< 0.0010	0.0010	
Vinyl acetate	< 0.0100	0.0100	
Vinyl chloride	< 0.0010	0.0010	
Xylene M&P	< 0.0050	0.0050	
Xylene Ortho	< 0.0050	0.0050	
Total Xylenes	< 0.0100	0.0100	
Percent Solids	100.00%	0.005%	

All results reported on a dry weight basis.

QA/QC

Surrogates	% Recovery
Dibromofluoromethane	104%
1,2-Dichloroethane-d4	62.6%
Toluene-d8	67.0%
4-bromofluorobenzene	66.2%

LSAI LABS, LLC Chain of Custody Record

8444 Castlewood Drive, Suite 800, Indianapolis, IN 46250/ T:(317) 284 1033/ F: (317) 284 1129/ admin@lsailabs.com

Client Information:	
Company Name	BCA
Contact Name	J. TEUSCHLER
Address	7202 E 87th
City	Indianapolis
State & Zip	Indiana
Phone Number	317-578-4233
Email	JTEUSCHLER@BCA CONSULTANTS.com
Project ID	19-146
Site Name	216 College
Site Location	Bloomington

Billing Information: ELTF / Non-ELTF

Other Comments:

TAT: (Standard) 7 business days)

Rush: 1 day / 2 days / 3 days

Rush TAT will incur a surcharge

Sampler's Name: Thad Manny

Sampler's Signature:

Required QC Level: Level II / (III) / IV

Shipping Method: (Drop-off) / Picked / UPS / FedEx / Airborne / Other:

LSAI Quote#

LSAI PO#

Sample Integrity Notes

- Samples Received on Ice: Yes/No
- Cooler Temp: 2.9 °C
- Samples Intact? Yes / No
- Vials free of head-space: Yes/No/N/A
- Other comments:

Page 1 of 1

Matrix Code

DW =	Drinking Water
WW =	Waste Wateer
GW =	Ground Water
SO =	Soil
EF =	Effluent
SOL =	Solid
Other =	

Which Regulations Apply:
NPDES / RECAP / RISC / RCG / POTW / STATE / USDA / FDA / Other

Sample ID / Description		Collection Information				Container		Preservative	Requested Tests								
Client ID	LSAI ID	Date	Time	Grab / Composite	Matrix	Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO_3, H_2SO_4, NaOH, NaHSO4	VOC's								
SP-1 (6-7)	19-2863	5-16-19	1235	G	SO	4	V	5035 kit	X								
SP-1 (10-11)	19-2864	"	1230	"	"	4	V	"	X								
SP-2 (2-4)	19-2865	"	1000	"	"	4	V	"	X								
SP-3 (7-9)	19-2866	"	1040	"	"	4	V	"	X								
SP-3 (9-10.5)	19-2867	"	1045	"	"	12	V	"	X	MS/MSD							
SP-4 (8-9)	19-2868	"	1150	"	"	4	V	"	X								
SP-4 (9-10.5)	19-2869	"	1155	"	"	4	V	"	X								
SP-5 (9-11)	19-2870	"	1120	"	"	4	V	"	X								
SP-5 (9-11) DUP	19-2871	"	1120	"	"	4	V	"	X								
SP-5 (11-13)	19-2872	"	1125	"	"	4	V	"	X								
TB-1	19-2873					4	V		X								
MS	19-2874								X								
Comments: MSD	19-2875								X								

	Relinquished by	Date	Time	Received By	Date	Time	Comments:
1	Thad Manny	5/20/19	1241	PFS	5/20/19	12:41	
2							
3							

LSAI LABORATORIES
Lab Solutions for AnalyticalTesting & Issues

SAMPLE CONDITION UPON RECEPTION

Customer: BCA COC Date 5/20/19 Project # 19-146

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Customer ☐ LSAI ☐ Other _____
Tracking #: _____

Custody Seal on Cooler: ☐ Yes ☒ No Seal Intact: ☐ Yes ☐ No

Temperature 2.9°C Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process begun

Logged in by: (Date and Initial) MC 5/20/19		**Comments**
Chain of Custody Present	☒ Yes ☐ No ☐ N/A	
Chain of Custody Properly Filled Out	☒ Yes ☐ No ☐ N/A	
Chain of Custody Relinquished	☒ Yes ☐ No ☐ N/A	
Sampler Name and Signatory on COC	☒ Yes ☐ No ☐ N/A	
Adherence to Holding Times	☒ Yes ☐ No ☐ N/A	
Rush Turn Around Time Requested	☐ Yes ☒ No ☐ N/A	
Containers Intact	☒ Yes ☐ No ☐ N/A	
Sample Labels Match COC	☒ Yes ☐ No ☐ N/A	
Sample Labels Legible	☒ Yes ☐ No ☐ N/A	
Samples Preserved Properly	☒ Yes ☐ No ☐ N/A	
Headspace in VOA vials (> pea size)	☐ Yes ☐ No ☒ N/A	soil samples only
Trip Blank Present	☒ Yes ☐ No ☐ N/A	
Sufficient Volume for Requested Tests	☒ Yes ☐ No ☐ N/A	
Correct Containers Used	☒ Yes ☐ No ☐ N/A	

Deviations from above needing customer notification? ☐ Yes ☒ No

Description _____

_____

Person Contacted _____ Date/Time _____

QF-4.9.1 Enacted ☐ Yes ☐ No

Level III QA/QC Checklist

Analytical Method	8260B
Extraction Method (If applicable)	5035A
LSAI Batch I.D.	28MAY2019/30MAY2019
Sequence Log	✓
Reporting Limits	✓
Initial Calibration Data:	
Calibration Curve	VOC-DA-23MAY2019
Initial Calibration Raw Data	✓
Initial Calibration RF Summary	✓
Initial Calibration Second Source Check	✓
Tune Data	✓
Continuing Calibration Verification (CCV) Data:	
CCV Raw Data	✓
CCV Summary	✓
Tune Data	✓
Quality Control Data:	
Method Blank (MBLANK)	✓
Laboratory Control Standard (LCS)	✓
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	✓

The contents of this report packet have been reviewed for completeness and accuracy regarding LSAI & methodology requirements.

Signature of Approval: Dmk Dm

2019 May 29 1800 Sequence Log .LOG

Starting sequence Wed May 29 18:00:29 2019

Instrument Name: VOA MSD
Sequence File: C:\msdchem\1\sequence\2019_MAY_28_1801.S
Comment:
Operator: PS
Data Path: C:\MSDCHEM\1\DATA\28MAY2019\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
94)	Sample	74	19-2853	8260B	19-2853
95)	Sample	75	19-2854	8260B	19-2854
96)	Sample	76	19-2855	8260B	19-2855
97)	Sample	77	19-2856	8260B	19-2856
98)	Sample	78	19-2857	8260B	19-2857
99)	Sample	71	19-2850-ms		
	Datafile		19-2850-ms		
	Method		8260B		
100)	Sample	71	19-2850-msd		
	Datafile		19-2850-msd		
	Method		8260B		
101)	Sample	79	LCS-5	8260B	LCS-5
102)	Sample	80	LCS-5a	8260B	LCS-5a
103)	Sample	88	sb-5	8260B	sb-5
104)	Sample	1	MB-5	8260B	MB-5
105)	Sample	2	CCV-SO-5	8260B	CCV-SO-5
106)	Sample	3	MB-SO-5	8260B	MB-SO-5
107)	Sample	4	19-2863	8260B	19-2863
108)	Sample	5	19-2864	8260B	19-2864
109)	Sample	6	19-2865	8260B	19-2865
110)	Sample	7	19-2866	8260B	19-2866
111)	Sample	8	19-2867	8260B	19-2867
112)	Sample	9	19-2868	8260B	19-2868
113)	Sample	10	19-2869	8260B	19-2869
114)	Sample	11	19-2870	8260B	19-2870
115)	Sample	12	19-2871	8260B	19-2871
116)	Sample	13	19-2872	8260B	19-2872
117)	Sample	14	19-2873	8260B	19-2873
118)	Sample	15	19-2874-MS		
	Datafile		19-2874-MS		
	Method		8260B		
119)	Sample	16	19-2875-MSD		
	Datafile		19-2875-MSD		
	Method		8260B		
120)	Sample	17	LCS-SO-6	8260B	LCS-SO-6
121)	Sample	20	19-2683	8260B	19-2683

Sequence completed Thu May 30 03:01:54 2019

C:\MSDCHEM\1\DATA\28MAY2019\2019 May 29 1800 Quality Log.LOG
C:\MSDCHEM\1\DATA\28MAY2019\2019 May 29 1800 Sequence Log .LOG

Starting sequence Thu May 30 12:38:21 2019

Instrument Name: VOA MSD
Sequence File: C:\msdchem\1\sequence\30may2019.S
Comment:
Operator: PS
Data Path: C:\MSDCHEM\1\DATA\30MAY2019\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Sample	1	CCV-1	8260B	CCV-1
2)	Sample	1	CCV-1A	8260B	CCV-1A
3)	Sample	2	SP-1	8260B	SP-1
4)	Sample	3	MB-1	8260B	MB-1

Sequence completed Thu May 30 13:52:17 2019

C:\MSDCHEM\1\DATA\30MAY2019\2019 May 30 1238 Quality Log.LOG
C:\MSDCHEM\1\DATA\30MAY2019\2019 May 30 1238 Sequence Log .LOG
Starting sequence Thu May 30 14:19:30 2019

Instrument Name: VOA MSD
Sequence File: C:\msdchem\1\sequence\30may2019.S
Comment:
Operator: PS
Data Path: C:\MSDCHEM\1\DATA\30MAY2019\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
5)	Sample	3	19-2868	8260B	19-2868x25
6)	Sample	4	19-2869	8260B	19-2869x25
Sequence Table edit performed Thu May 30 16:04:46 2019					
7)	Sample	5	19-2870	8260B	19-2870x25
Sequence Table edit performed Thu May 30 16:21:22 2019					
8)	Sample	6	19-2871	8260B	19-2871x25
Sequence Table edit performed Thu May 30 17:26:57 2019					
9)	Sample	7	19-2872	8260B	19-2872x25
10)	Sample	1	19-2864x25		
	Datafile		19-2864x25		
	Method		8260B		
11)	Sample	2	19-2865x25		
	Datafile		19-2865x25		
	Method		8260B		
12)	Sample	3	19-2866x25		
	Datafile		19-2866x25		
	Method		8260B		
13)	Sample	4	19-2867x25		
	Datafile		19-2867x25		
	Method		8260B		
14)	Sample	8	19-2874-MSx25		
	Datafile		19-2874-MSx25		
	Method		8260B		
15)	Sample	9	19-2875-MSDx25		
	Datafile		19-2875-MSDx25		
	Method		8260B		
16)	Sample	10	ccv-so-1	8260B	ccv-so-1
17)	Sample	11	mb-so-1	8260B	mb-so-1
18)	Sample	12	19-2873x1		
	Datafile		19-2873x1		
	Method		8260B		
19)	Sample	13	19-2863x1		
	Datafile		19-2863x1		
	Method		8260B		
20)	Sample	14	CCV-2	8260B	CCV-2
21)	Sample	14	CCV-2a	8260B	CCV-2a
22)	Sample	88	sb-2	8260B	sb-2
23)	Sample	15	MB-2	8260B	MB-2
24)	Sample	16	19-2819	8260B	19-2819
25)	Sample	16	19-2819X10		
	Datafile		19-2819X10		
	Method		8260B		
26)	Sample	17	19-2820	8260B	19-2820
27)	Sample	17	19-2820-ms		
	Datafile		19-2820-ms		
	Method		8260B		
28)	Sample	17	19-2820-msd		
	Datafile		19-2820-msd		

```
      Method           8260B
  29) Sample       18  19-2821   8260B     19-2821
  30) Sample       18  19-2821X10
      Datafile         19-2821X10
      Method           8260B
  31) Sample       19  19-2822   8260B     19-2822
  32) Sample       20  19-2823   8260B     19-2823
  33) Sample       21  19-2824   8260B     19-2824
  34) Sample       22  19-2825   8260B     19-2825
  35) Sample       23  19-2826   8260B     19-2826
  36) Sample       24  19-2827   8260B     19-2827
  37) Sample       25  19-2828   8260B     19-2828
  38) Sample       26  19-2829   8260B     19-2829
  39) Sample       26  19-2829X10
      Datafile         19-2829X10
      Method           8260B
  40) Sample       27  19-2830   8260B     19-2830
  41) Sample       28  19-2831   8260B     19-2831
  42) Sample       28  19-2831X10
      Datafile         19-2831X10
      Method           8260B
  43) Sample       29  CCV-3     8260B     CCV-3
  44) Sample       29  CCV-3a    8260B     CCV-3a
  45) Sample       88  sb-3      8260B     sb-3
  46) Sample       30  MB-3      8260B     MB-3
  47) Sample       31  19-2832   8260B     19-2832
  48) Sample       32  19-2833   8260B     19-2833
  49) Sample       33  19-2834   8260B     19-2834
Sequence Table edit performed Fri May 31 10:42:05 2019
  50) Sample       34  19-2835   8260B     19-2835
  51) Sample       35  19-2836   8260B     19-2836
  52) Sample       36  19-2837   8260B     19-2837
  53) Sample       37  19-2838   8260B     19-2838
  54) Sample       38  19-2839   8260B     19-2839
  55) Sample       38  19-2839X10
      Datafile         19-2839X10
      Method           8260B
  56) Sample        1  19-2784X25
      Datafile         19-2784X25
      Method           8260B
  57) Sample       39  19-2840   8260B     19-2840
  58) Sample       39  19-2840X10
      Datafile         19-2840X10
      Method           8260B
  59) Sample       40  19-2841   8260B     19-2841
  60) Sample       41  19-2858   8260B     19-2858
  61) Sample       42  19-2859   8260B     19-2859
  62) Sample       43  19-2860   8260B     19-2860
  63) Sample        1  19-2753-CONFIRMATION
      Datafile         19-2753-CONFIRMATION
      Method           8260B
  64) Sample       44  19-2861   8260B     19-2861
  65) Sample       44  19-2861X25
      Datafile         19-2861X25
      Method           8260B

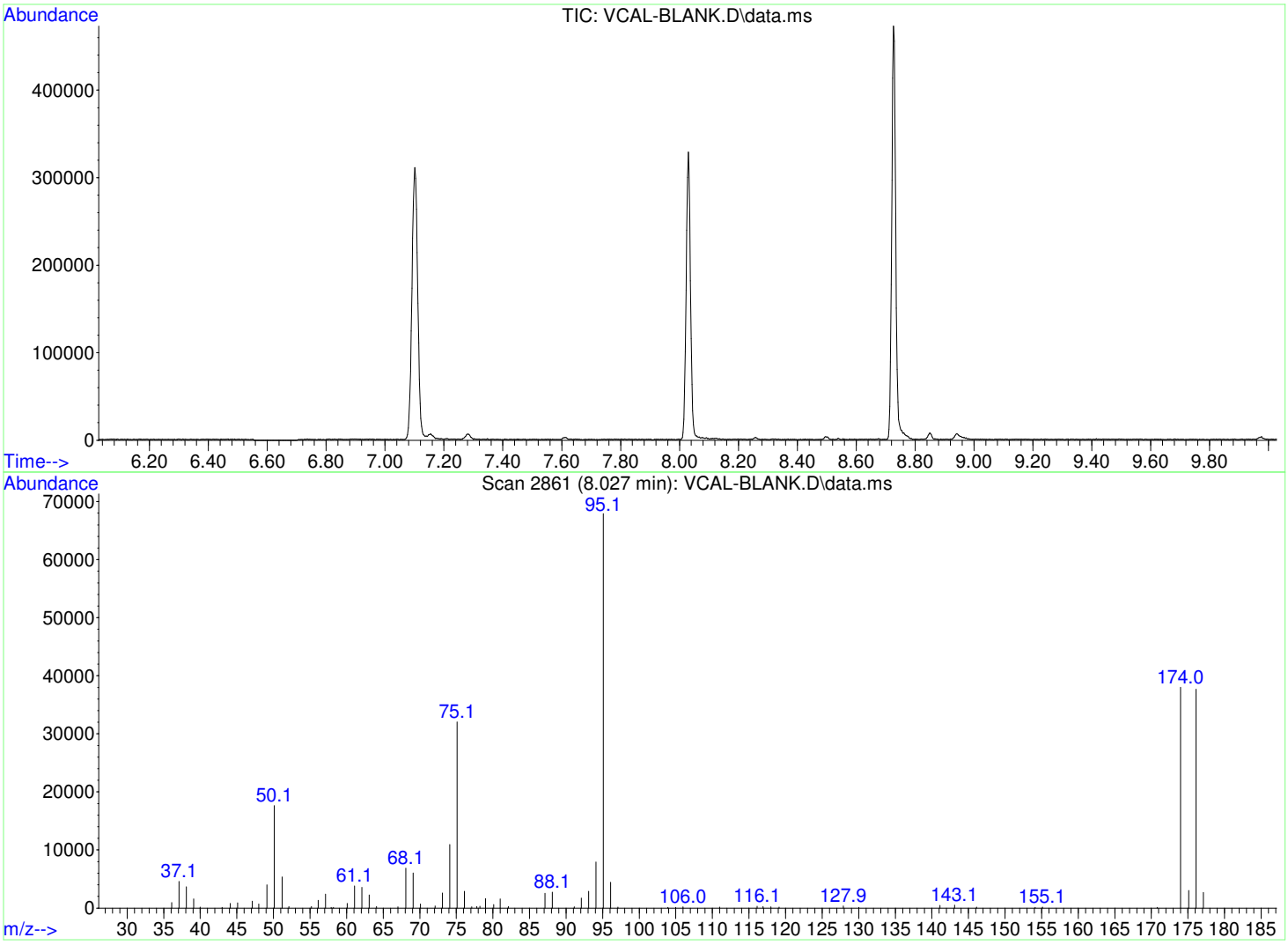
Fri May 31 15:53:53 2019
    Fatal sequence error detected.


     C:\MSDCHEM\1\DATA\30MAY2019\2019 May 30 1419 Quality Log.LOG
     C:\MSDCHEM\1\DATA\30MAY2019\2019 May 30 1419 Sequence Log .LOG
```

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : VCAL-BLANK.D
Acq On : 23 May 2019 3:55 pm
Operator : DJD
Sample : VCAL-BLANK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Title : VOC
Last Update : Fri May 24 11:00:55 2019



Spectrum Information: Scan 2861

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.0	17648	PASS
75	95	30	60	47.1	32032	PASS
95	95	100	100	100.0	67944	PASS
96	95	5	9	6.5	4436	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	56.0	38016	PASS
175	174	5	9	7.9	3013	PASS
176	174	95	101	99.1	37664	PASS
177	176	5	9	7.2	2719	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : VCAL-BLANK.D
Acq On : 23 May 2019 3:55 pm
Operator : DJD
Sample : VCAL-BLANK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 24 11:02:39 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 11:00:55 2019
Response via : Initial Calibration

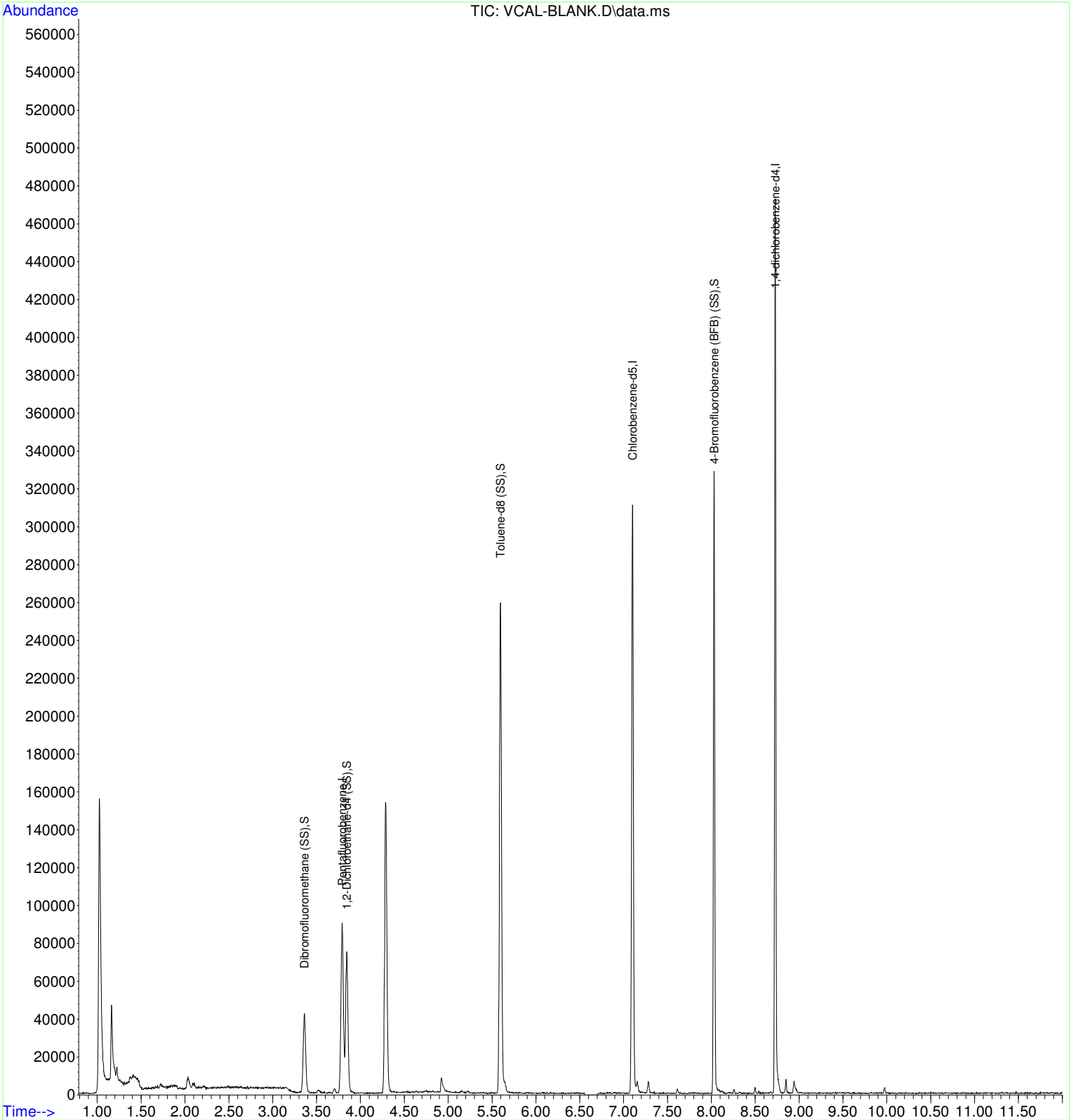
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.793	168	51244	50.00	ppb	0.00
42) Chlorobenzene-d5	7.102	117	119355	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.729	152	63427	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.362	111	25142	50.75	ppb	0.00
Spiked Amount 50.000			Recovery = 101.50%			
32) 1,2-Dichloroethane-d4 ...	3.845	102	7329	54.64	ppb	0.00
Spiked Amount 50.000			Recovery = 109.28%			
44) Toluene-d8 (SS)	5.597	98	147258	46.03	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.06%			
63) 4-Bromofluorobenzene (...	8.031	174	43853	41.99	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.98%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : VCAL-BLANK.D
Acq On : 23 May 2019 3:55 pm
Operator : DJD
Sample : VCAL-BLANK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 24 11:02:39 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 11:00:55 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V001.D
Acq On : 23 May 2019 10:03 pm
Operator : DJD
Sample : V001
Misc :
ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 24 10:09:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.794	168	53143	50.00	ppb		0.01
42) Chlorobenzene-d5	7.102	117	110655	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	62834m	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.363	111	24829	49.80	ppb		0.00
Spiked Amount 50.000			Recovery = 99.60%				
32) 1,2-Dichloroethane-d4 ...	3.847	102	6775	55.37	ppb		0.00
Spiked Amount 50.000			Recovery = 110.74%				
44) Toluene-d8 (SS)	5.598	98	133612	51.44	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.88%				
63) 4-Bromofluorobenzene (...	8.033	174	43649m	53.93	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 107.86%				
Target Compounds							Qvalue
3) Chloromethane	1.204	50	5328	1.69	ppb	#	49
4) Vinyl Chloride	1.227	62	6397	4.08	ppb	#	100
5) Bromomethane	1.374	94	917m	2.11	ppb		
6) Chloroethane	1.411	64	441m	1.28	ppb		
7) Trichlorofluoromethane	1.462	101	165m	1.18	ppb		
8) Carbon disulfide	1.746	76	252m	1.46	ppb		
9) 1,1-Dichloroethene	1.726	96	420m	5.18	ppb		
12) Methylene Chloride	2.043	84	591m	2.66	ppb		
13) Acetone	2.096	58	419m	5.34	ppb		
14) trans-1,2-Dichloroethene	2.128	61	465m	1.37	ppb		
17) Chloroprene (2-Chloro-...	2.513	53	939m	1.46	ppb		
18) 1,1-Dichloroethane	2.533	63	613m	1.03	ppb		
19) Acrylonitrile	2.513	53	939m	1.46	ppb		
22) 2,2-Dichloropropane	3.044	77	394m	1.75	ppb		
24) Chloroform	3.200	83	993m	1.48	ppb		
25) Carbon tetrachloride	3.293	117	468m	1.18	ppb		
26) 1,1,1-Trichloroethane	3.366	97	751m	1.30	ppb		
28) 1,1-Dichloropropene	3.472	75	531m	1.39	ppb		
29) 2-Butanone	3.522	43	3455	2.84	ppb	#	62
30) Benzene	3.705	78	3227	2.06	ppb	#	50
31) Methacrylonitrile*	3.791	41	1323m	1.06	ppb		
33) 1,2-Dichloroethane	3.909	62	1342	1.42	ppb	#	1
34) Trichloroethene	4.244	130	547m	1.34	ppb		
37) 1,2-Dichloropropane	4.747	63	988m	1.50	ppb		
39) Methyl methacrylate	5.008	41	1776	0.97	ppb	#	26
43) Toluene	5.647	91	4304	2.14	ppb	#	87
45) Tetrachloroethene	6.010	164	496m	1.37	ppb		
49) Ethyl methacrylate	6.283	69	1209	0.98	ppb	#	37
51) 1,3-Dichloropropane	6.500	76	1147m	1.00	ppb		
53) 2-Hexanone	6.912	43	2153	1.06	ppb	#	36
54) Chlorobenzene	7.115	112	1557m	1.06	ppb		
55) Ethyl benzene	7.155	91	4808	2.24	ppb	#	82
57) MP Xylene	7.284	91	7243m	4.26	ppb		
58) O Xylene	7.611	91	3374m	1.65	ppb		
59) Styrene	7.656	104	1767	1.06	ppb	#	32
61) Isopropylbenzene (Cumene)	7.845	105	3331m	1.70	ppb		
64) Bromobenzene	8.091	156	632m	1.20	ppb		
65) cis-1,4-Dichloro-2-butene	8.096	53	431m	1.01	ppb		
66) n-Propylbenzene	8.127	91	3136m	2.08	ppb		
68) 2-Chlorotoluene	8.218	91	2315	1.95	ppb	#	53
69) 1,2,3-Trichloropropane	8.263	75	1113	1.19	ppb	#	29
70) 1,3,5-Trimethylbenzene	8.260	105	3214	2.09	ppb	#	75

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V001.D
Acq On : 23 May 2019 10:03 pm
Operator : DJD
Sample : V001
Misc :
ALS Vial : 37 Sample Multiplier: 1

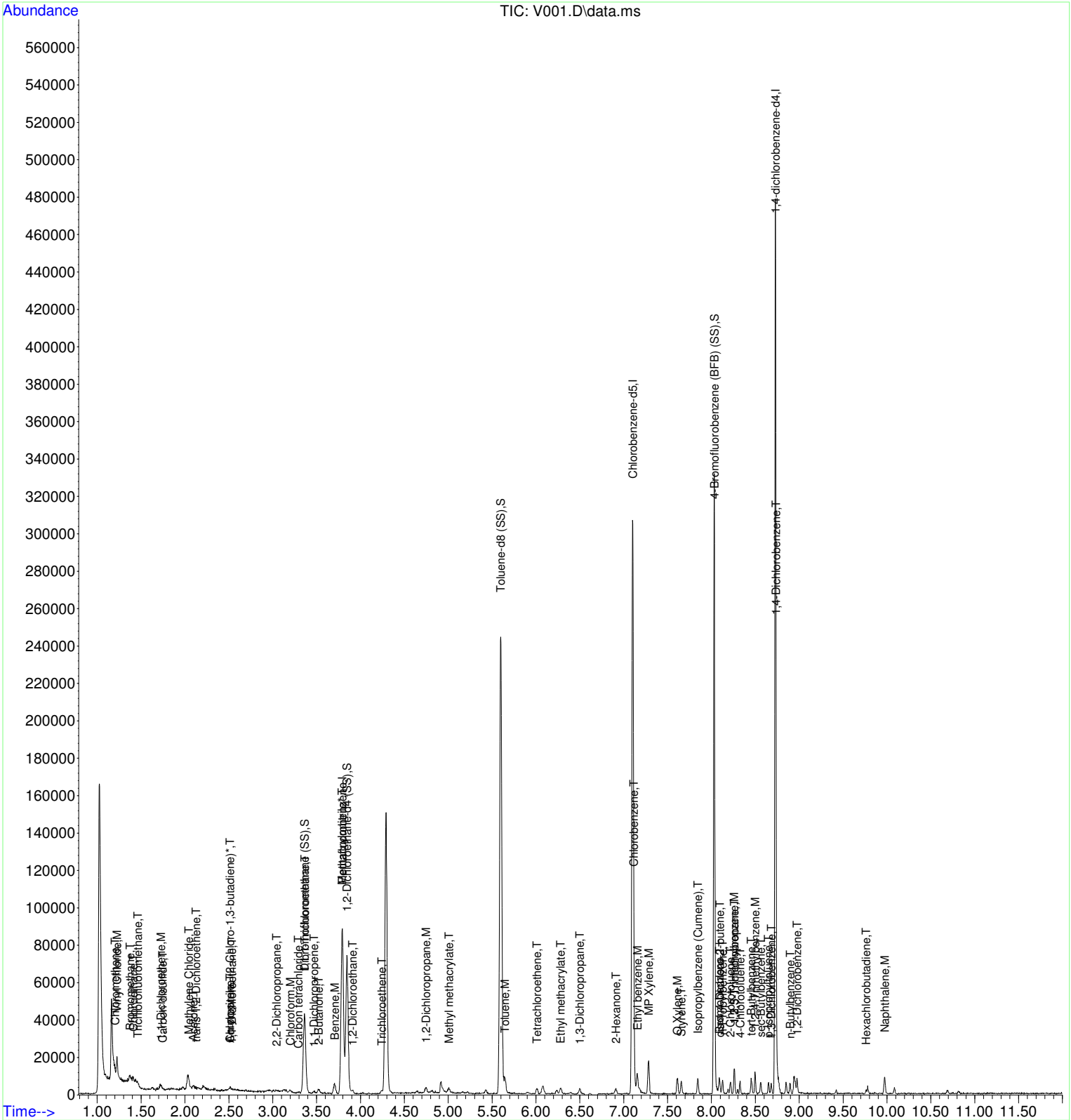
Quant Time: May 24 10:09:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
72) 4-Chlorotoluene	8.328	91	2170m	1.73	ppb		
73) tert-Butylbenzene	8.454	119	2207	1.73	ppb	#	79
75) 1,2,4-Trimethylbenzene	8.498	105	3518	2.04	ppb	#	71
76) sec-Butylbenzene	8.561	105	2794	2.02	ppb	#	59
77) p-Isopropyltoluene	8.651	119	2130	1.68	ppb	#	51
78) 1,3-Dichlorobenzene	8.682	146	1023m	1.07	ppb		
79) 1,4-Dichlorobenzene	8.735	146	1143m	1.15	ppb		
80) n-Butylbenzene	8.896	91	1948m	1.83	ppb		
81) 1,2-Dichlorobenzene	8.977	146	1329	1.11	ppb	#	28
83) Hexachlorobutadiene	9.762	225	333m	1.20	ppb		
85) Naphthalene	9.975	128	4490m	1.32	ppb		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V001.D
Acq On : 23 May 2019 10:03 pm
Operator : DJD
Sample : V001
Misc :
ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 24 10:09:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V010.D
Acq On : 23 May 2019 10:22 pm
Operator : DJD
Sample : V010
Misc :
ALS Vial : 38 Sample Multiplier: 1

Quant Time: May 24 09:20:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.792	168	47545	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	103064	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	58263	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.361	111	21966	55.03	ppb		0.00
Spiked Amount 50.000			Recovery = 110.06%				
32) 1,2-Dichloroethane-d4 ...	3.845	102	5853	52.68	ppb		0.00
Spiked Amount 50.000			Recovery = 105.36%				
44) Toluene-d8 (SS)	5.597	98	124363	46.93	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.86%				
63) 4-Bromofluorobenzene (...	8.032	174	41116	43.68	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 87.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.101	85	13534	19.39	ppb	#	94
3) Chloromethane	1.208	50	31716	16.35	ppb		95
4) Vinyl Chloride	1.227	62	24861	25.34	ppb	#	100
5) Bromomethane	1.369	94	5033	19.68	ppb	#	92
6) Chloroethane	1.412	64	3602	13.79	ppb	#	100
7) Trichlorofluoromethane	1.460	101	2477	15.83	ppb	#	73
8) Carbon disulfide	1.745	76	2757	4.30	ppb	#	92
9) 1,1-Dichloroethene	1.721	96	1763	6.63	ppb	#	38
10) Iodomethane	1.808	142	1357	6.81	ppb	#	37
12) Methylene Chloride	2.040	84	3035	7.30	ppb	#	21
13) Acetone	2.097	58	1378	11.13	ppb	#	67
14) trans-1,2-Dichloroethene	2.127	61	5421	6.03	ppb		81
15) n-Hexane	2.155	57	2568	6.70	ppb	#	79
17) Chloroprene (2-Chloro-...	2.510	53	11120	7.28	ppb	#	81
18) 1,1-Dichloroethane	2.533	63	7726	6.96	ppb	#	91
19) Acrylonitrile	2.510	53	11120	7.28	ppb	#	45
21) cis-1,2-Dichloroethene	2.955	61	7068	7.28	ppb	#	75
22) 2,2-Dichloropropane	3.042	77	4586	7.01	ppb	#	56
23) Bromochloromethane	3.132	130	1945	5.79	ppb	#	1
24) Chloroform	3.196	83	9077	8.59	ppb		93
25) Carbon tetrachloride	3.294	117	5534	8.34	ppb		92
26) 1,1,1-Trichloroethane	3.364	97	7700	8.42	ppb		94
28) 1,1-Dichloropropene	3.472	75	6370	7.60	ppb	#	80
29) 2-Butanone	3.522	43	13098	13.14	ppb	#	62
30) Benzene	3.703	78	22901	11.35	ppb		88
31) Methacrylonitrile*	3.790	41	12270	10.19	ppb		92
33) 1,2-Dichloroethane	3.908	62	11599	10.84	ppb	#	89
34) Trichloroethene	4.242	130	5747	8.97	ppb		89
35) Dibromomethane	4.647	93	3961	8.83	ppb	#	83
36) n-Butanol	4.686	56	740m	110.27	ppb		
37) 1,2-Dichloropropane	4.745	63	9553	9.53	ppb	#	88
38) Bromodichloromethane	4.815	83	8016	8.58	ppb		90
39) Methyl methacrylate	5.004	41	17661	9.85	ppb	#	78
41) cis-1,3-Dichloropropene	5.427	75	10099	8.58	ppb	#	74
43) Toluene	5.646	91	30641	10.27	ppb		96
45) Tetrachloroethene	6.009	164	5938	7.76	ppb	#	76
46) 4-Methyl-2-pentanone (...	6.072	43	25152	8.22	ppb		94
47) trans-1,3-Dichloropropene	6.083	75	10071	7.27	ppb	#	72
48) 1,1,2-Trichloroethane	6.237	97	7136	7.93	ppb	#	87
49) Ethyl methacrylate	6.280	69	13869	8.04	ppb	#	55
50) Dibromochloromethane	6.398	129	5481	6.10	ppb	#	82
51) 1,3-Dichloropropane	6.499	76	13023	7.94	ppb	#	58

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V010.D
Acq On : 23 May 2019 10:22 pm
Operator : DJD
Sample : V010
Misc :
ALS Vial : 38 Sample Multiplier: 1

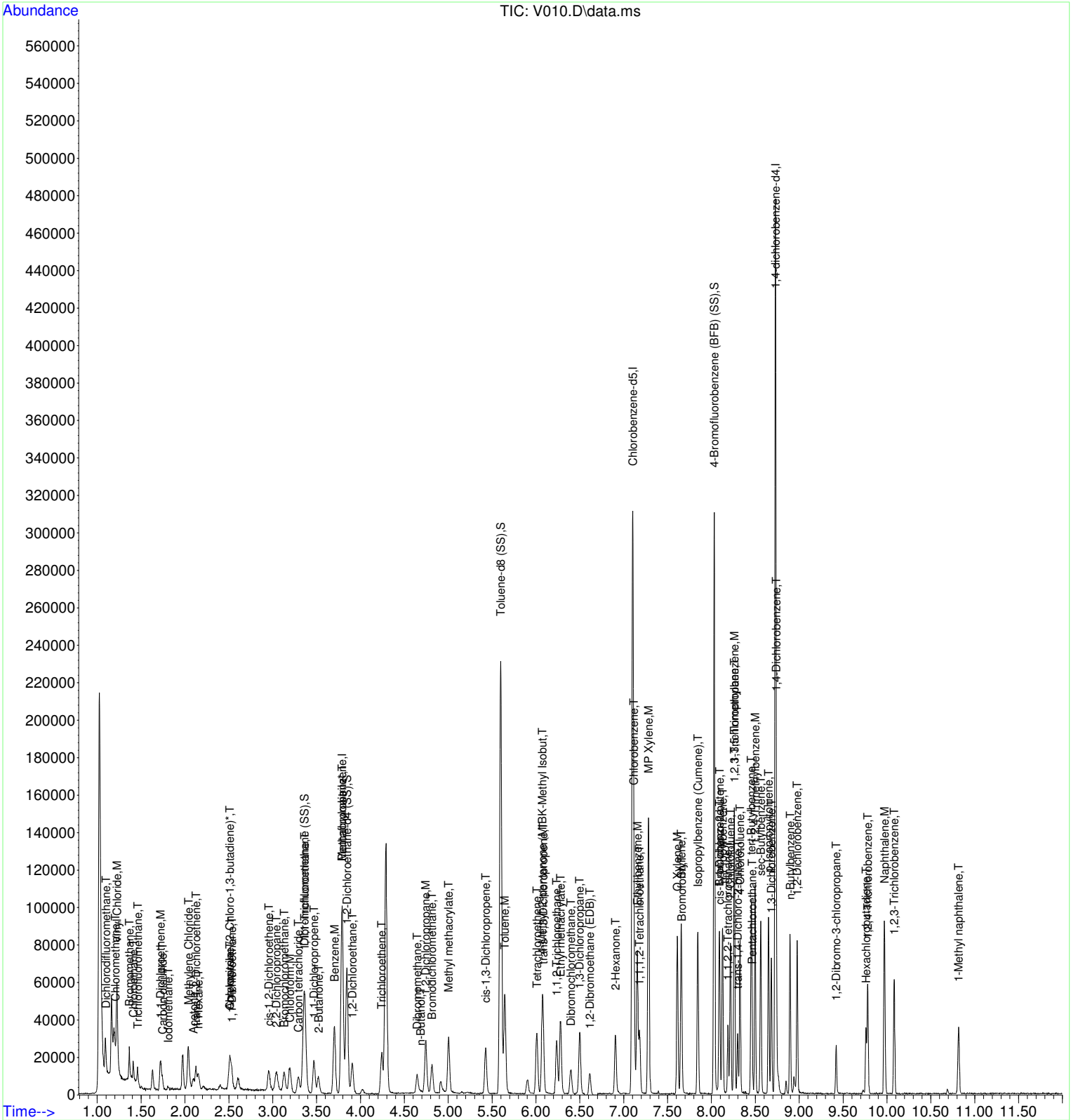
Quant Time: May 24 09:20:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.614	107	7814	11.02	ppb	#	98
53) 2-Hexanone	6.907	43	19367	7.72	ppb		91
54) Chlorobenzene	7.115	112	19052	7.41	ppb		84
55) Ethyl benzene	7.155	91	37757	9.67	ppb		95
56) 1,1,1,2-Tetrachloroethane	7.181	131	6011	6.99	ppb		90
57) MP Xylene	7.282	91	59472	18.09	ppb		95
58) O Xylene	7.612	91	32145	9.23	ppb		97
59) Styrene	7.656	104	22064	6.58	ppb		91
60) Bromoform	7.662	173	4050	6.97	ppb		93
61) Isopropylbenzene (Cumene)	7.844	105	35331	8.72	ppb		98
64) Bromobenzene	8.091	156	7623	6.57	ppb	#	69
65) cis-1,4-Dichloro-2-butene	8.093	53	5343	8.16	ppb	#	77
66) n-Propylbenzene	8.126	91	40066	7.01	ppb		97
67) 1,1,2,2-Tetrachloroethane	8.188	83	10552	5.94	ppb		98
68) 2-Chlorotoluene	8.217	91	27353	8.07	ppb		95
69) 1,2,3-Trichloropropane	8.262	75	12920	7.78	ppb		95
70) 1,3,5-Trimethylbenzene	8.259	105	31566	9.65	ppb		96
71) trans-1,4-Dichloro-2-b...	8.298	53	5018	7.34	ppb	#	78
72) 4-Chlorotoluene	8.325	91	27096m	7.25	ppb		
73) tert-Butylbenzene	8.454	119	26534	6.67	ppb		89
74) Pentachloroethane	8.463	167	1998	4.56	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.498	105	32942	9.17	ppb		97
76) sec-Butylbenzene	8.562	105	36682	6.71	ppb		96
77) p-Isopropyltoluene	8.652	119	29631	6.37	ppb		96
78) 1,3-Dichlorobenzene	8.683	146	14563	5.98	ppb		95
79) 1,4-Dichlorobenzene	8.738	146	14738m	5.71	ppb		
80) n-Butylbenzene	8.895	91	26696	5.51	ppb		96
81) 1,2-Dichlorobenzene	8.978	146	15669	5.86	ppb		96
82) 1,2-Dibromo-3-chloropr...	9.422	157	3146	6.84	ppb	#	70
83) Hexachlorobutadiene	9.760	225	4591	4.49	ppb		98
84) 1,2,4-Trichlorobenzene	9.780	180	10186	4.84	ppb		99
85) Naphthalene	9.972	128	43799	8.08	ppb		95
86) 1,2,3-Trichlorobenzene	10.082	180	11505	5.62	ppb		98
88) 1-Methyl naphthalene	10.816	142	12273	4.23	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V010.D
Acq On : 23 May 2019 10:22 pm
Operator : DJD
Sample : V010
Misc :
ALS Vial : 38 Sample Multiplier: 1

Quant Time: May 24 09:20:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V050.D
Acq On : 23 May 2019 10:42 pm
Operator : DJD
Sample : V050
Misc :
ALS Vial : 39 Sample Multiplier: 1

Quant Time: May 24 09:20:48 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.791	168	48865	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	104840	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	63694	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.360	111	22548	54.96	ppb		0.00
Spiked Amount 50.000			Recovery = 109.92%				
32) 1,2-Dichloroethane-d4 ...	3.845	102	6213	54.41	ppb		0.00
Spiked Amount 50.000			Recovery = 108.82%				
44) Toluene-d8 (SS)	5.597	98	126770	47.03	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.06%				
63) 4-Bromofluorobenzene (...	8.032	174	44480	43.22	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.44%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.101	85	68019	99.71	ppb	#	98
3) Chloromethane	1.207	50	152967	82.12	ppb		97
4) Vinyl Chloride	1.227	62	106717	105.83	ppb	#	100
5) Bromomethane	1.368	94	20334	77.36	ppb	#	99
6) Chloroethane	1.411	64	17557	66.57	ppb	#	100
7) Trichlorofluoromethane	1.458	101	12937	80.47	ppb		97
8) Carbon disulfide	1.737	76	14919	22.67	ppb	#	99
9) 1,1-Dichloroethene	1.713	96	7496	27.41	ppb	#	50
10) Iodomethane	1.809	142	9850m	42.63	ppb		
12) Methylene Chloride	2.038	84	12228	28.64	ppb	#	24
13) Acetone	2.099	58	5377	42.27	ppb	#	66
14) trans-1,2-Dichloroethene	2.124	61	27622	29.88	ppb		84
15) n-Hexane	2.149	57	14540	36.90	ppb	#	97
17) Chloroprene (2-Chloro-...	2.507	53	58865	37.51	ppb	#	92
18) 1,1-Dichloroethane	2.531	63	38779	33.97	ppb	#	98
19) Acrylonitrile	2.507	53	58865	37.51	ppb	#	52
21) cis-1,2-Dichloroethene	2.954	61	32120	32.20	ppb		86
22) 2,2-Dichloropropane	3.042	77	20185	30.03	ppb	#	83
23) Bromochloromethane	3.131	130	7474	21.65	ppb	#	1
24) Chloroform	3.196	83	37394	34.43	ppb		94
25) Carbon tetrachloride	3.292	117	32864	48.20	ppb		98
26) 1,1,1-Trichloroethane	3.362	97	43774	46.58	ppb		97
28) 1,1-Dichloropropene	3.470	75	33808	39.23	ppb		87
29) 2-Butanone	3.522	43	55377	54.06	ppb	#	66
30) Benzene	3.702	78	116583	56.21	ppb		90
31) Methacrylonitrile*	3.790	41	61435	50.09	ppb		93
33) 1,2-Dichloroethane	3.907	62	61746	56.15	ppb	#	92
34) Trichloroethene	4.242	130	30571	46.45	ppb		91
35) Dibromomethane	4.647	93	21261	46.12	ppb	#	87
36) n-Butanol	4.691	56	3709	537.75	ppb	#	81
37) 1,2-Dichloropropane	4.744	63	49219	47.77	ppb	#	93
38) Bromodichloromethane	4.815	83	45098	46.96	ppb		91
39) Methyl methacrylate	5.004	41	91987	50.16	ppb	#	80
41) cis-1,3-Dichloropropene	5.427	75	59055	48.82	ppb	#	80
43) Toluene	5.646	91	155126	51.13	ppb		95
45) Tetrachloroethene	6.009	164	33751	43.37	ppb	#	72
46) 4-Methyl-2-pentanone (...	6.072	43	133435	42.89	ppb		92
47) trans-1,3-Dichloropropene	6.083	75	58181	41.27	ppb	#	77
48) 1,1,2-Trichloroethane	6.237	97	38927	42.53	ppb	#	90
49) Ethyl methacrylate	6.281	69	74257	42.34	ppb	#	57
50) Dibromochloromethane	6.399	129	34538	37.80	ppb		95
51) 1,3-Dichloropropane	6.499	76	71063	42.60	ppb	#	63

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V050.D
Acq On : 23 May 2019 10:42 pm
Operator : DJD
Sample : V050
Misc :
ALS Vial : 39 Sample Multiplier: 1

Quant Time: May 24 09:20:48 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

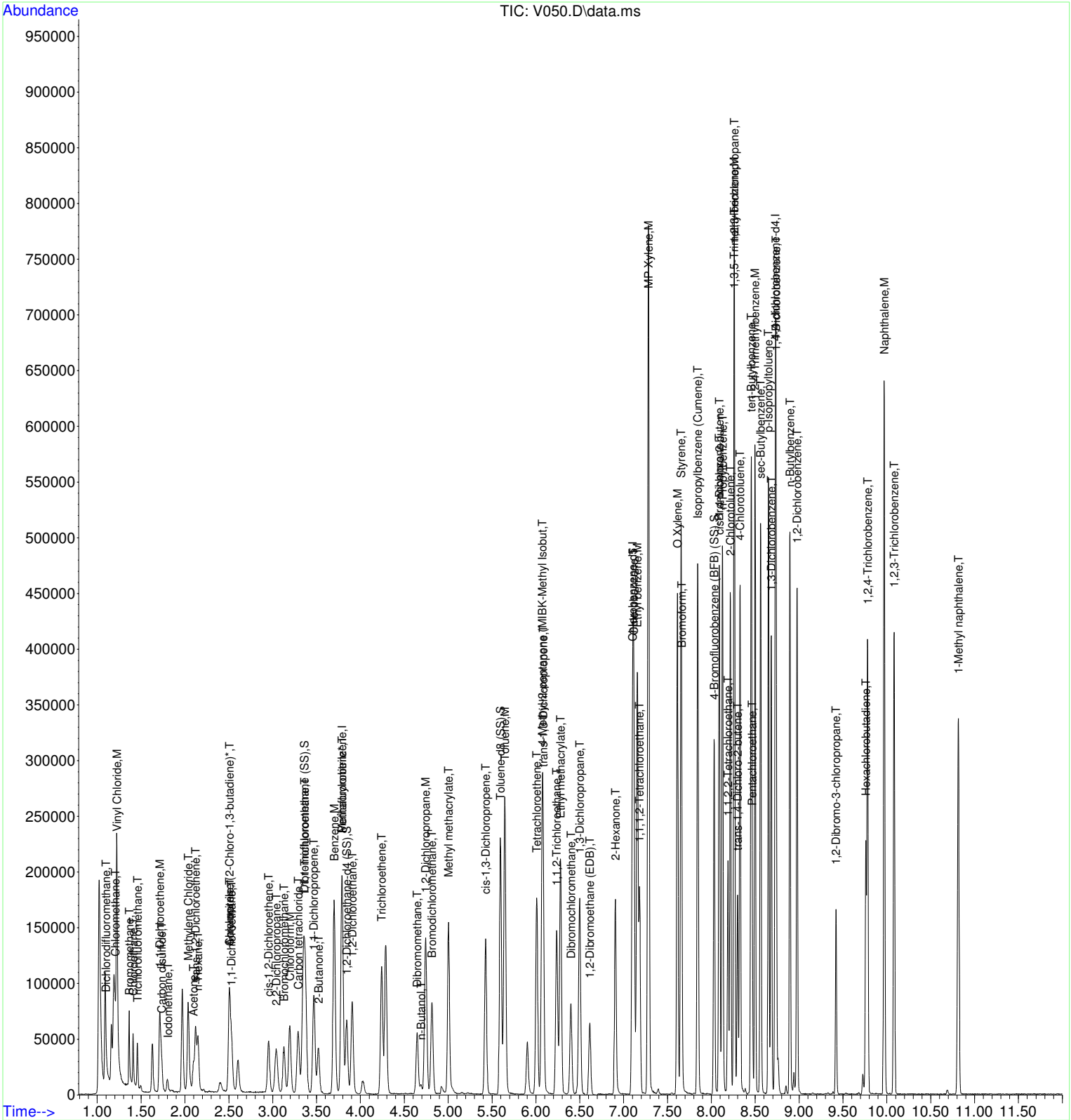
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.614	107	42775	59.30	ppb	#	98
53) 2-Hexanone	6.906	43	104293	40.89	ppb		91
54) Chlorobenzene	7.116	112	105059	40.18	ppb		91
55) Ethyl benzene	7.155	91	200497	50.48	ppb		94
56) 1,1,1,2-Tetrachloroethane	7.182	131	34305	39.23	ppb		95
57) MP Xylene	7.282	91	313831	93.82	ppb		96
58) O Xylene	7.612	91	171870	48.53	ppb		97
59) Styrene	7.656	104	126460	37.05	ppb		93
60) Bromoform	7.663	173	26336	41.03	ppb		98
61) Isopropylbenzene (Cumene)	7.845	105	193517	46.93	ppb		98
64) Bromobenzene	8.091	156	44370	34.98	ppb	#	78
65) cis-1,4-Dichloro-2-butene	8.093	53	27542	38.47	ppb		85
66) n-Propylbenzene	8.127	91	232738	37.24	ppb		98
67) 1,1,2,2-Tetrachloroethane	8.188	83	59853	30.80	ppb		99
68) 2-Chlorotoluene	8.217	91	145857	39.38	ppb		97
69) 1,2,3-Trichloropropane	8.264	75	66649m	36.71	ppb		
70) 1,3,5-Trimethylbenzene	8.260	105	170005	47.69	ppb		97
71) trans-1,4-Dichloro-2-b...	8.298	53	28605	38.28	ppb	#	81
72) 4-Chlorotoluene	8.326	91	151252	37.04	ppb		98
73) tert-Butylbenzene	8.454	119	147586	33.92	ppb		91
74) Pentachloroethane	8.464	167	12577	25.16	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.498	105	181920	46.40	ppb		96
76) sec-Butylbenzene	8.562	105	206159	34.51	ppb		96
77) p-Isopropyltoluene	8.652	119	169805	33.39	ppb		97
78) 1,3-Dichlorobenzene	8.683	146	87112	32.71	ppb		97
79) 1,4-Dichlorobenzene	8.738	146	86462	30.65	ppb		94
80) n-Butylbenzene	8.895	91	159764	30.15	ppb		96
81) 1,2-Dichlorobenzene	8.978	146	93874	32.10	ppb		97
82) 1,2-Dibromo-3-chloropr...	9.422	157	21394	42.58	ppb	#	82
83) Hexachlorobutadiene	9.760	225	28534	25.53	ppb		99
84) 1,2,4-Trichlorobenzene	9.780	180	72184	31.36	ppb		98
85) Naphthalene	9.971	128	279930	47.21	ppb		96
86) 1,2,3-Trichlorobenzene	10.082	180	79629	35.56	ppb		98
88) 1-Methyl naphthalene	10.814	142	118320	37.32	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V050.D
Acq On : 23 May 2019 10:42 pm
Operator : DJD
Sample : V050
Misc :
ALS Vial : 39 Sample Multiplier: 1

Quant Time: May 24 09:20:48 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V100.D
Acq On : 23 May 2019 11:01 pm
Operator : DJD
Sample : V100
Misc :
ALS Vial : 40 Sample Multiplier: 1

Quant Time: May 24 10:16:42 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.789	168	60291	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	115996	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	74534	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.358	111	26153	46.24	ppb		0.00
Spiked Amount 50.000			Recovery = 92.48%				
32) 1,2-Dichloroethane-d4 ...	3.843	102	7182	51.74	ppb		0.00
Spiked Amount 50.000			Recovery = 103.48%				
44) Toluene-d8 (SS)	5.596	98	140650	51.66	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.32%				
63) 4-Bromofluorobenzene (...	8.032	174	53700	55.93	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 111.86%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.100	85	120642	291.17	ppb	#	97
3) Chloromethane	1.205	50	281534	88.78	ppb		96
4) Vinyl Chloride	1.225	62	186342	128.19	ppb	#	100
5) Bromomethane	1.366	94	37981	86.37	ppb	#	99
6) Chloroethane	1.409	64	31780	90.59	ppb	#	100
7) Trichlorofluoromethane	1.455	101	23194	198.81	ppb		96
8) Carbon disulfide	1.728	76	31674	162.17	ppb	#	87
9) 1,1-Dichloroethene	1.706	96	15760	171.46	ppb	#	64
10) Iodomethane	1.798	142	20563	119.17	ppb	#	94
12) Methylene Chloride	2.035	84	25727	105.78	ppb	#	52
13) Acetone	2.101	58	8616	96.78	ppb	#	43
14) trans-1,2-Dichloroethene	2.119	61	52217	135.49	ppb		86
15) n-Hexane	2.143	57	26748m	Below Cal			
17) Chloroprene (2-Chloro-...	2.503	53	97899	133.78	ppb	#	92
18) 1,1-Dichloroethane	2.529	63	70260	104.27	ppb	#	99
19) Acrylonitrile	2.503	53	97899	133.78	ppb	#	52
21) cis-1,2-Dichloroethene	2.951	61	75295	119.08	ppb		92
22) 2,2-Dichloropropane	3.038	77	49313	193.54	ppb		87
23) Bromochloromethane	3.128	130	19133	91.29	ppb	#	1
24) Chloroform	3.193	83	90828	119.57	ppb		97
25) Carbon tetrachloride	3.288	117	67525	150.32	ppb		98
26) 1,1,1-Trichloroethane	3.359	97	89205	136.24	ppb		99
28) 1,1-Dichloropropene	3.467	75	72616	167.59	ppb		94
29) 2-Butanone	3.521	43	105817	84.66	ppb	#	66
30) Benzene	3.699	78	235604	132.72	ppb		93
31) Methacrylonitrile*	3.789	41	116161	90.59	ppb		94
33) 1,2-Dichloroethane	3.905	62	119267	111.26	ppb	#	92
34) Trichloroethene	4.240	130	65298	140.74	ppb		95
35) Dibromomethane	4.645	93	43885	105.83	ppb		93
36) n-Butanol	4.695	56	7637	84.76	ppb	#	90
37) 1,2-Dichloropropane	4.743	63	97473	130.10	ppb	#	95
38) Bromodichloromethane	4.814	83	92629	106.37	ppb		93
39) Methyl methacrylate	5.004	41	173587	92.28	ppb	#	81
41) cis-1,3-Dichloropropene	5.426	75	119201	121.31	ppb	#	84
43) Toluene	5.645	91	308853	146.18	ppb		96
45) Tetrachloroethene	6.008	164	70882	174.97	ppb	#	79
46) 4-Methyl-2-pentanone (...	6.073	43	249476	87.57	ppb		93
47) trans-1,3-Dichloropropene	6.083	75	117666	118.44	ppb	#	83
48) 1,1,2-Trichloroethane	6.237	97	77475	108.83	ppb		92
49) Ethyl methacrylate	6.281	69	143913	111.23	ppb	#	62
50) Dibromochloromethane	6.399	129	75029	95.00	ppb		96
51) 1,3-Dichloropropane	6.499	76	139169	115.60	ppb	#	69

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V100.D
Acq On : 23 May 2019 11:01 pm
Operator : DJD
Sample : V100
Misc :
ALS Vial : 40 Sample Multiplier: 1

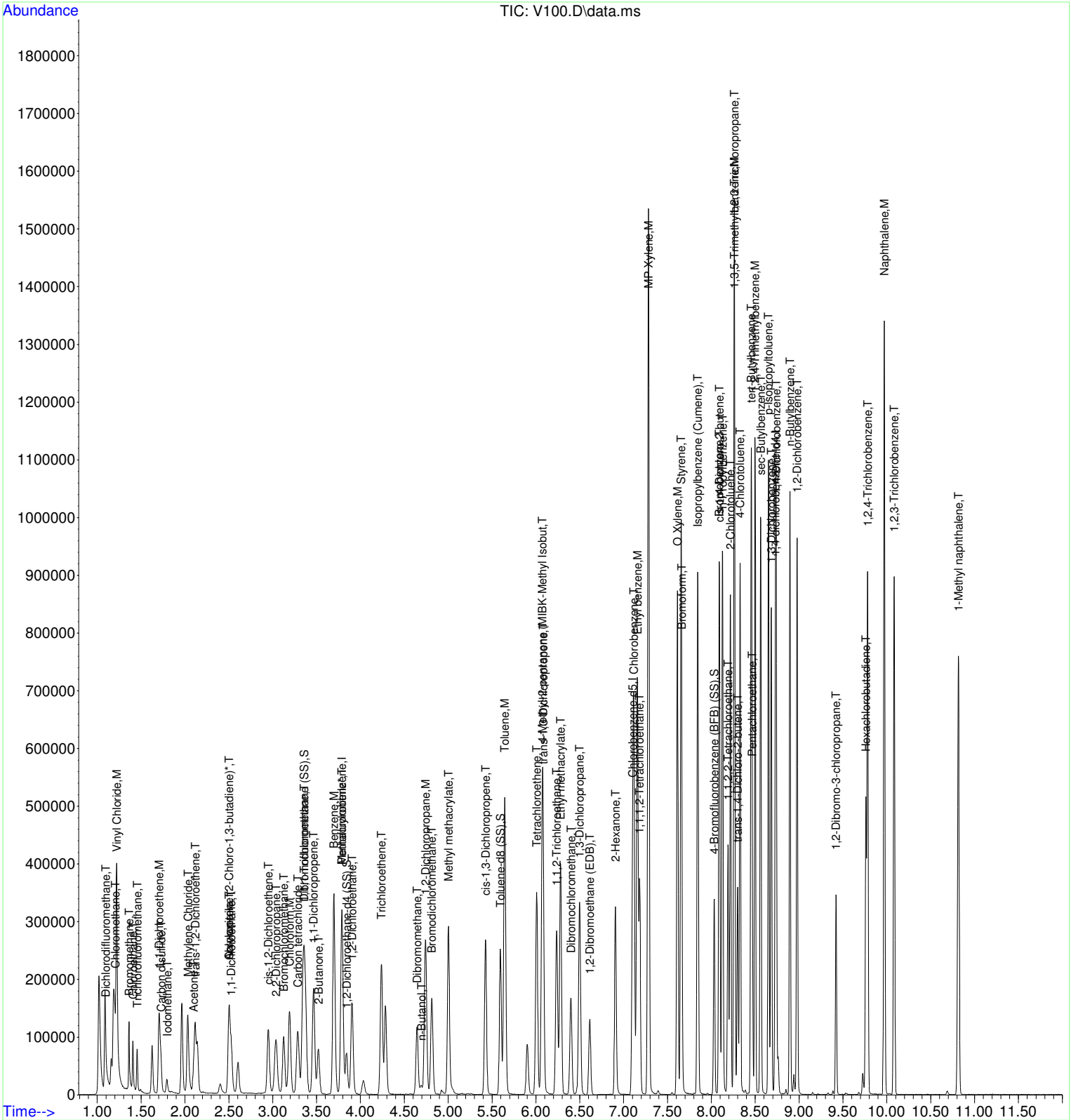
Quant Time: May 24 10:16:42 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.614	107	86925	104.67	ppb	#	98
53) 2-Hexanone	6.907	43	198674	93.07	ppb		91
54) Chlorobenzene	7.116	112	214914	139.39	ppb		94
55) Ethyl benzene	7.156	91	387940	172.13	ppb		96
56) 1,1,1,2-Tetrachloroethane	7.182	131	73657	108.28	ppb		97
57) MP Xylene	7.283	91	611613	342.76	ppb		96
58) O Xylene	7.612	91	329161	153.91	ppb		98
59) Styrene	7.656	104	249089	142.13	ppb		94
60) Bromoform	7.663	173	62669	100.98	ppb		98
61) Isopropylbenzene (Cumene)	7.845	105	381053	185.04	ppb		98
64) Bromobenzene	8.091	156	94823	151.79	ppb	#	89
65) cis-1,4-Dichloro-2-butene	8.093	53	55031	121.90	ppb	#	85
66) n-Propylbenzene	8.127	91	453361	253.55	ppb		99
67) 1,1,2,2-Tetrachloroethane	8.189	83	127627	105.81	ppb		99
68) 2-Chlorotoluene	8.217	91	283005	201.03	ppb		99
69) 1,2,3-Trichloropropane	8.263	75	127897	115.40	ppb		97
70) 1,3,5-Trimethylbenzene	8.261	105	331545	213.26	ppb		97
71) trans-1,4-Dichloro-2-b...	8.298	53	55168	108.42	ppb	#	86
72) 4-Chlorotoluene	8.327	91	294617	198.09	ppb		99
73) tert-Butylbenzene	8.455	119	301317	199.63	ppb		94
74) Pentachloroethane	8.465	167	33809	115.80	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.499	105	355751	194.85	ppb		97
76) sec-Butylbenzene	8.562	105	407991	248.05	ppb		96
77) p-Isopropyltoluene	8.652	119	344241	229.34	ppb		97
78) 1,3-Dichlorobenzene	8.683	146	191467	169.37	ppb		98
79) 1,4-Dichlorobenzene	8.738	146	196193	165.76	ppb		99
80) n-Butylbenzene	8.895	91	313862	248.53	ppb		97
81) 1,2-Dichlorobenzene	8.978	146	208185	145.97	ppb		99
82) 1,2-Dibromo-3-chloropr...	9.422	157	49077	107.77	ppb		94
83) Hexachlorobutadiene	9.761	225	68484	207.31	ppb		99
84) 1,2,4-Trichlorobenzene	9.780	180	168359	182.83	ppb		99
85) Naphthalene	9.972	128	597906	148.19	ppb		97
86) 1,2,3-Trichlorobenzene	10.082	180	181624	180.05	ppb		98
88) 1-Methyl naphthalene	10.815	142	273301	153.34	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V100.D
Acq On : 23 May 2019 11:01 pm
Operator : DJD
Sample : V100
Misc :
ALS Vial : 40 Sample Multiplier: 1

Quant Time: May 24 10:16:42 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V150PPB.D
Acq On : 23 May 2019 5:31 pm
Operator : DJD
Sample : V150PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 23 17:49:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Thu May 23 17:49:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.785	168	58648	50.00	ppb		0.00
42) Chlorobenzene-d5	7.101	117	107306	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	67039	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.355	111	27230	51.01	ppb		0.00
Spiked Amount 50.000			Recovery = 102.02%				
32) 1,2-Dichloroethane-d4 ...	3.840	102	7187	53.09	ppb		0.00
Spiked Amount 50.000			Recovery = 106.18%				
44) Toluene-d8 (SS)	5.594	98	134462	51.75	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.50%				
63) 4-Bromofluorobenzene (...	8.031	174	45944	49.55	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.10%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.100	85	50666	40.78	ppb	#	98
3) Chloromethane	1.204	50	121150	40.69	ppb		96
4) Vinyl Chloride	1.225	62	75825	59.33	ppb	#	100
5) Bromomethane	1.365	94	17039	52.83	ppb	#	99
6) Chloroethane	1.408	64	12911	39.84	ppb	#	100
7) Trichlorofluoromethane	1.453	101	8057	41.15	ppb		94
8) Carbon disulfide	1.719	76	14294	19.11	ppb	#	88
9) 1,1-Dichloroethene	1.696	96	6777	21.68	ppb	#	79
10) Iodomethane	1.795	142	7699	39.30	ppb	#	96
12) Methylene Chloride	2.030	84	11116	22.68	ppb	#	67
13) Acetone	2.107	58	3540	24.26	ppb	#	81
14) trans-1,2-Dichloroethene	2.113	61	19406	18.42	ppb		87
15) n-Hexane	2.135	57	10259	23.21	ppb	#	87
17) Chloroprene (2-Chloro-...	2.498	53	42581	23.52	ppb	#	94
18) 1,1-Dichloroethane	2.524	63	31726	24.15	ppb	#	97
19) Acrylonitrile	2.498	53	42581	23.52	ppb	#	51
21) cis-1,2-Dichloroethene	2.947	61	32443	28.15	ppb		96
22) 2,2-Dichloropropane	3.033	77	23563	29.68	ppb		89
23) Bromochloromethane	3.126	130	10374	26.01	ppb	#	1
24) Chloroform	3.189	83	43230	33.81	ppb		100
25) Carbon tetrachloride	3.283	117	30830	37.34	ppb		99
26) 1,1,1-Trichloroethane	3.355	97	39264	35.02	ppb		99
28) 1,1-Dichloropropene	3.462	75	32243	31.89	ppb		97
29) 2-Butanone	3.522	43	47178	38.83	ppb	#	66
30) Benzene	3.695	78	106510	43.08	ppb		95
31) Methacrylonitrile*	3.787	41	48102	36.82	ppb		95
33) 1,2-Dichloroethane	3.902	62	51311	39.46	ppb	#	94
34) Trichloroethene	4.236	130	29643	37.74	ppb		97
35) Dibromomethane	4.643	93	19378	35.45	ppb		93
36) n-Butanol	4.705	56	3481	410.36	ppb	#	1
37) 1,2-Dichloropropane	4.740	63	40972	33.85	ppb	#	90
38) Bromodichloromethane	4.811	83	40007	35.03	ppb		94
39) Methyl methacrylate	5.003	41	70255	35.97	ppb		84
41) cis-1,3-Dichloropropene	5.423	75	50815	35.23	ppb	#	85
43) Toluene	5.643	91	136424	44.39	ppb		96
45) Tetrachloroethene	6.006	164	30067	38.24	ppb		79
46) 4-Methyl-2-pentanone (...	6.072	43	100019	32.14	ppb		94
47) trans-1,3-Dichloropropene	6.081	75	50218	35.04	ppb	#	84
48) 1,1,2-Trichloroethane	6.236	97	33078	35.84	ppb		93
49) Ethyl methacrylate	6.279	69	60780	34.38	ppb	#	64
50) Dibromochloromethane	6.397	129	30961	33.20	ppb		95
51) 1,3-Dichloropropane	6.497	76	57994	34.65	ppb	#	72

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V150PPB.D
Acq On : 23 May 2019 5:31 pm
Operator : DJD
Sample : V150PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

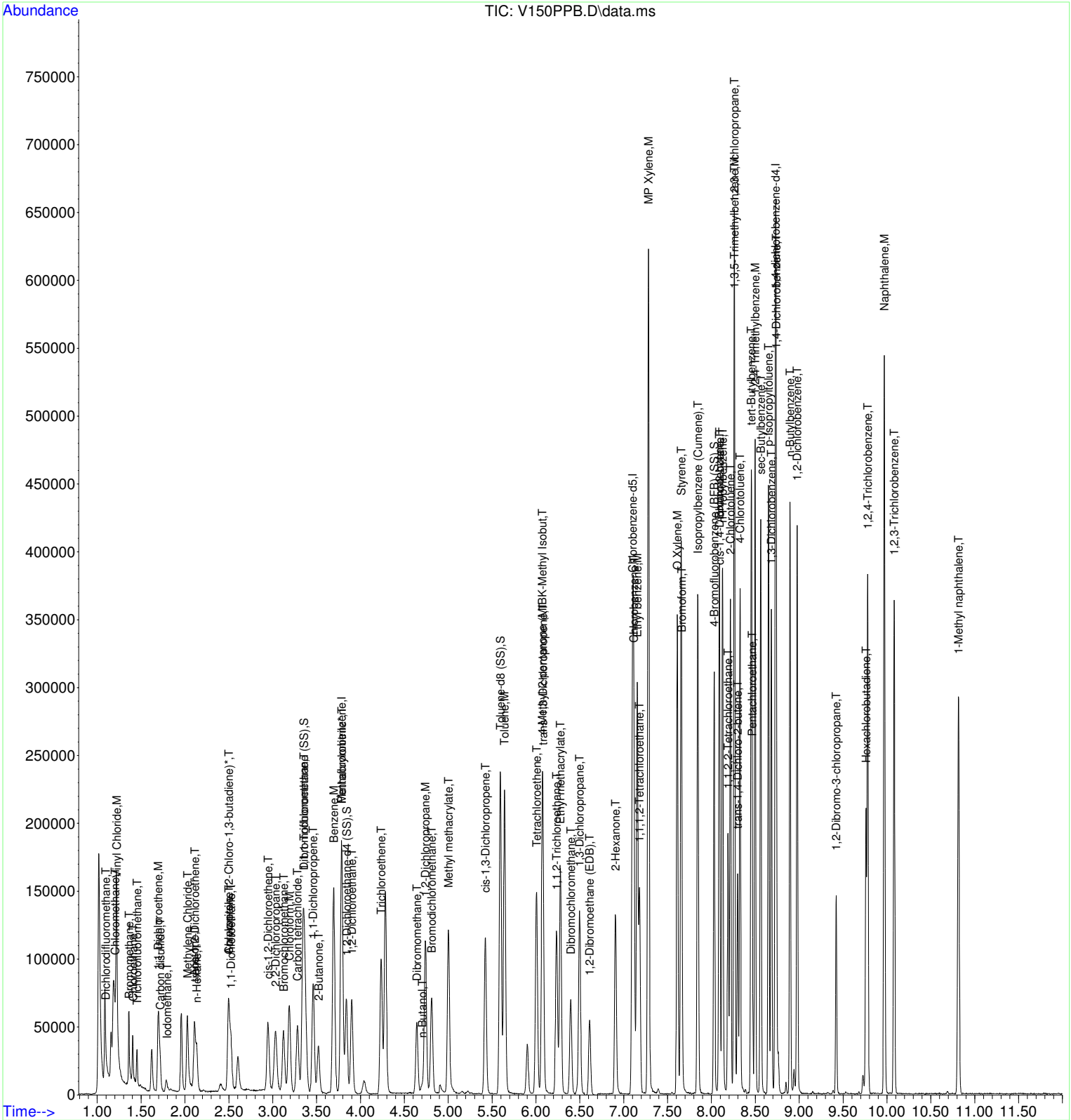
Quant Time: May 23 17:49:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Thu May 23 17:49:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.612	107	36780	49.16	ppb	#	99
53) 2-Hexanone	6.907	43	82220	32.08	ppb		92
54) Chlorobenzene	7.115	112	89140	33.79	ppb		95
55) Ethyl benzene	7.154	91	159986	39.68	ppb		96
56) 1,1,1,2-Tetrachloroethane	7.181	131	29446	32.99	ppb		96
57) MP Xylene	7.282	91	255859	75.38	ppb		97
58) O Xylene	7.611	91	137076	38.08	ppb		98
59) Styrene	7.656	104	105488	30.69	ppb		94
60) Bromoform	7.662	173	23792	37.22	ppb		97
61) Isopropylbenzene (Cumene)	7.844	105	156156	37.10	ppb		98
64) Bromobenzene	8.091	156	37767	29.36	ppb	#	82
65) cis-1,4-Dichloro-2-butene	8.093	53	23763	32.18	ppb		87
66) n-Propylbenzene	8.126	91	188116	29.91	ppb		99
67) 1,1,2,2-Tetrachloroethane	8.189	83	55223	28.00	ppb		98
68) 2-Chlorotoluene	8.217	91	119634	32.02	ppb		99
69) 1,2,3-Trichloropropane	8.263	75	55274	30.14	ppb		96
70) 1,3,5-Trimethylbenzene	8.259	105	138550	44.70	ppb		97
71) trans-1,4-Dichloro-2-b...	8.298	53	24704	32.09	ppb	#	85
72) 4-Chlorotoluene	8.326	91	124664	30.31	ppb		99
73) tert-Butylbenzene	8.454	119	125229	28.35	ppb		94
74) Pentachloroethane	8.464	167	13391	33.21	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.498	105	150036	43.80	ppb		97
76) sec-Butylbenzene	8.561	105	169539	28.11	ppb		96
77) p-Isopropyltoluene	8.651	119	142784	27.71	ppb		97
78) 1,3-Dichlorobenzene	8.683	146	76731	28.30	ppb		98
79) 1,4-Dichlorobenzene	8.738	146	79853	27.86	ppb		95
80) n-Butylbenzene	8.895	91	133857	25.19	ppb		97
81) 1,2-Dichlorobenzene	8.978	146	87118	29.26	ppb		98
82) 1,2-Dibromo-3-chloropr...	9.422	157	18960	36.14	ppb	#	84
83) Hexachlorobutadiene	9.761	225	27306	24.16	ppb		99
84) 1,2,4-Trichlorobenzene	9.780	180	66406	28.21	ppb		98
85) Naphthalene	9.971	128	243633	39.33	ppb		96
86) 1,2,3-Trichlorobenzene	10.082	180	70711	30.86	ppb		100
88) 1-Methyl naphthalene	10.814	142	102381	31.21	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V150PPB.D
Acq On : 23 May 2019 5:31 pm
Operator : DJD
Sample : V150PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 23 17:49:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Thu May 23 17:49:46 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V200.D
Acq On : 23 May 2019 11:21 pm
Operator : DJD
Sample : V200
Misc :
ALS Vial : 41 Sample Multiplier: 1

Quant Time: May 24 09:21:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.786	168	69235	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	124222	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	93701	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.357	111	28253	48.60	ppb		0.00
Spiked Amount 50.000			Recovery =	97.20%			
32) 1,2-Dichloroethane-d4 ...	3.842	102	7978	49.31	ppb		0.00
Spiked Amount 50.000			Recovery =	98.62%			
44) Toluene-d8 (SS)	5.595	98	145216	45.47	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	90.94%			
63) 4-Bromofluorobenzene (...	8.032	174	64896	42.86	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	85.72%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.100	85	204052	230.33	ppb	#	97
3) Chloromethane	1.205	50	505361	226.14	ppb		99
4) Vinyl Chloride	1.225	62	314378	220.04	ppb	#	100
5) Bromomethane	1.366	94	67355	180.86	ppb	#	99
6) Chloroethane	1.407	64	56568	156.13	ppb	#	100
7) Trichlorofluoromethane	1.453	101	38527	169.13	ppb		96
8) Carbon disulfide	1.717	76	62605	67.13	ppb	#	80
9) 1,1-Dichloroethene	1.693	96	30531	78.80	ppb	#	78
10) Iodomethane	1.794	142	48235	118.64	ppb	#	99
12) Methylene Chloride	2.029	84	53159	87.86	ppb	#	72
13) Acetone	2.111	58	20474	113.59	ppb	#	1
14) trans-1,2-Dichloroethene	2.111	61	105010	80.17	ppb		89
15) n-Hexane	2.132	57	53160	95.23	ppb	#	20
17) Chloroprene (2-Chloro-...	2.496	53	209516	94.22	ppb	#	95
18) 1,1-Dichloroethane	2.524	63	150207	92.86	ppb	#	99
19) Acrylonitrile	2.496	53	209516	94.22	ppb	#	51
21) cis-1,2-Dichloroethene	2.947	61	138104	97.73	ppb		96
22) 2,2-Dichloropropane	3.034	77	91509	96.08	ppb		91
23) Bromochloromethane	3.125	130	40480	82.76	ppb	#	1
24) Chloroform	3.192	83	174180	113.19	ppb		99
25) Carbon tetrachloride	3.283	117	138277	143.15	ppb		97
26) 1,1,1-Trichloroethane	3.355	97	174356	130.96	ppb		97
28) 1,1-Dichloropropene	3.463	75	142317	116.56	ppb		95
29) 2-Butanone	3.525	43	192948	132.93	ppb	#	68
30) Benzene	3.696	78	459352	156.32	ppb		96
31) Methacrylonitrile*	3.791	41	207178	121.23	ppb		96
33) 1,2-Dichloroethane	3.904	62	218865	140.47	ppb	#	94
34) Trichloroethene	4.237	130	132219	141.78	ppb		96
35) Dibromomethane	4.644	93	87735	134.31	ppb		97
36) n-Butanol	4.708	56	16288	1666.73	ppb	#	1
37) 1,2-Dichloropropane	4.742	63	179377	122.88	ppb	#	94
38) Bromodichloromethane	4.813	83	182625	134.22	ppb		95
39) Methyl methacrylate	5.004	41	314349	122.00	ppb		83
41) cis-1,3-Dichloropropene	5.425	75	224908	131.23	ppb		88
43) Toluene	5.644	91	592885	164.92	ppb		97
45) Tetrachloroethene	6.008	164	142531	154.56	ppb		90
46) 4-Methyl-2-pentanone (...	6.075	43	463792	125.83	ppb		93
47) trans-1,3-Dichloropropene	6.083	75	227229	136.02	ppb		87
48) 1,1,2-Trichloroethane	6.238	97	152315	140.44	ppb		96
49) Ethyl methacrylate	6.282	69	274717	132.20	ppb	#	68
50) Dibromochloromethane	6.400	129	159260	147.10	ppb		98
51) 1,3-Dichloropropane	6.499	76	261678	132.40	ppb	#	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V200.D
Acq On : 23 May 2019 11:21 pm
Operator : DJD
Sample : V200
Misc :
ALS Vial : 41 Sample Multiplier: 1

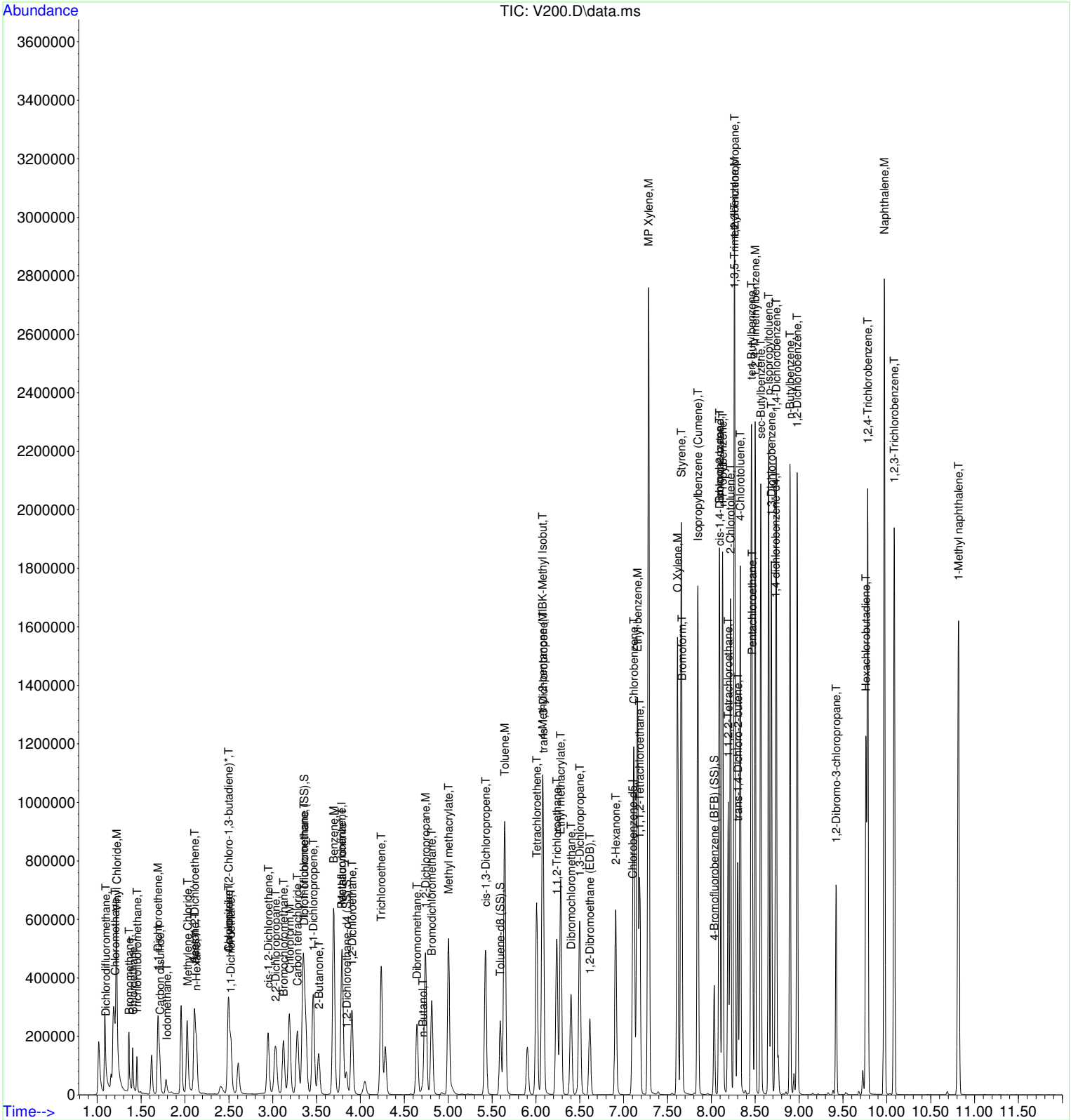
Quant Time: May 24 09:21:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.615	107	173734	203.29	ppb	#	99
53) 2-Hexanone	6.910	43	395320	130.81	ppb		91
54) Chlorobenzene	7.116	112	420102	135.59	ppb		95
55) Ethyl benzene	7.156	91	733197	155.79	ppb		97
56) 1,1,1,2-Tetrachloroethane	7.183	131	151934	146.62	ppb		98
57) MP Xylene	7.284	91	1151035	290.42	ppb		97
58) O Xylene	7.613	91	628007	149.67	ppb		98
59) Styrene	7.657	104	493274	121.98	ppb		95
60) Bromoform	7.665	173	150727	156.12	ppb		99
61) Isopropylbenzene (Cumene)	7.845	105	744876	152.45	ppb		97
64) Bromobenzene	8.092	156	207150	111.00	ppb		95
65) cis-1,4-Dichloro-2-butene	8.094	53	112995	107.28	ppb		90
66) n-Propylbenzene	8.128	91	890039	96.80	ppb		99
67) 1,1,2,2-Tetrachloroethane	8.191	83	296382	103.69	ppb		99
68) 2-Chlorotoluene	8.219	91	561365	103.02	ppb		98
69) 1,2,3-Trichloropropane	8.265	75	268667	100.58	ppb		94
70) 1,3,5-Trimethylbenzene	8.262	105	661573	126.82	ppb		97
71) trans-1,4-Dichloro-2-b...	8.300	53	119311	108.55	ppb		90
72) 4-Chlorotoluene	8.328	91	602632	100.31	ppb		97
73) tert-Butylbenzene	8.456	119	647529	101.17	ppb		97
74) Pentachloroethane	8.466	167	99509	114.31	ppb	#	49
75) 1,2,4-Trimethylbenzene	8.500	105	735158	127.93	ppb		98
76) sec-Butylbenzene	8.563	105	845470	96.21	ppb		96
77) p-Isopropyltoluene	8.653	119	735535	98.31	ppb		97
78) 1,3-Dichlorobenzene	8.684	146	441080	112.59	ppb		96
79) 1,4-Dichlorobenzene	8.739	146	457540	110.26	ppb		96
80) n-Butylbenzene	8.896	91	674898	86.58	ppb		97
81) 1,2-Dichlorobenzene	8.979	146	496192	115.32	ppb		97
82) 1,2-Dibromo-3-chloropr...	9.423	157	111229	150.47	ppb		98
83) Hexachlorobutadiene	9.761	225	174693	106.26	ppb		99
84) 1,2,4-Trichlorobenzene	9.781	180	394434	116.50	ppb		98
85) Naphthalene	9.972	128	1283646	147.16	ppb		98
86) 1,2,3-Trichlorobenzene	10.083	180	408603	124.04	ppb		98
88) 1-Methyl naphthalene	10.815	142	602082	129.10	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V200.D
Acq On : 23 May 2019 11:21 pm
Operator : DJD
Sample : V200
Misc :
ALS Vial : 41 Sample Multiplier: 1

Quant Time: May 24 09:21:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration



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Response Factor Report VOA MSD

Method Path : C:\msdchem\1\methods\
Method File : VOC-DA-23MAY2019.M
Title : VOC
Last Update : Fri May 24 11:00:55 2019
Response Via : Initial Calibration

Calibration Files
1 =BCAL-001PPB.D 10 =BCAL-010PPB.D 50 =BCAL-050PPB.D 100 =BCAL-100PPB.D 200 =BCAL-150PPB.D

		Compound	1	10	50	100	200	Avg	%RSD	R^2
1)	I	Pentafluorobenzene	----------	ISTD	----------					
2)	T	Dichlorodifluo...	0.496	1.477	1.466	1.249	1.156	1.169	34.29	0.999
3)	T	Chloromethane		3.462	3.296	2.915	2.864	3.134	9.30	0.999
4)	M	Vinyl Chloride	2.099	0.967	0.791	0.625	0.569	1.010	62.18	0.997
5)	T	Bromomethane	0.964	0.549	0.438	0.393	0.382	0.545	44.59	0.999
6)	T	Chloroethane	0.463	0.393	0.378	0.329	0.321	0.377	15.26	0.999
7)	T	Trichlorofluor...	0.173	0.270	0.279	0.240	0.218	0.236	18.04	0.999
8)	T	Carbon disulfide	0.265	0.301	0.321	0.328	0.355	0.314	10.68	0.998
9)	M	1,1-Dichloroet...	0.441	0.192	0.162	0.163	0.173	0.226	53.41	0.999
10)	T	Iodomethane	0.053	0.148	0.212	0.213	0.273	0.180	46.60	0.999
11)	T	Acrolein (2-Pr...	0.106	0.098	0.072	0.056	0.051	0.077#	32.06	0.996
12)	T	Methylene Chlo...	0.621	0.331	0.263	0.266	0.301	0.357	42.16	1.000
13)	T	Acetone	0.440	0.150	0.116	0.089	0.116	0.182	79.97	0.993
14)	T	trans-1,2-Dich...	0.489	0.592	0.595	0.541	0.595	0.562	8.40	0.998
15)	T	n-Hexane	0.289	0.280	0.313	0.277	0.301	0.292	5.17	0.998
16)	M	MTBE	1.688	1.227	1.144	0.996	0.991	1.209	23.64	0.999
17)	T	Chloroprene (2...	0.987	1.214	1.268	1.014	1.187	1.134	11.11	0.993
18)	T	1,1-Dichloroet...	0.644	0.843	0.836	0.727	0.851	0.780	11.71	0.994
19)	T	Acrylonitrile	0.987	1.214	1.268	1.014	1.187	1.134	11.11	0.993
20)	T	Vinyl Acetate ...	0.668	1.055	1.385	1.229	1.148	1.097	24.49	0.999
21)	T	cis-1,2-Dichlo...	0.540	0.772	0.692	0.780	0.783	0.713	14.54	0.999
22)	T	2,2-Dichloropr...	0.414	0.501	0.435	0.511	0.519	0.476	10.04	0.998
23)	T	Bromochloromet...	0.057	0.212	0.161	0.198	0.229	0.172	40.18	0.991
24)	M	Chloroform	1.044	0.991	0.806	0.940	0.987	0.954	9.47	0.997
25)	T	Carbon tetrach...	0.492	0.604	0.708	0.699	0.784	0.657	17.09	0.997
26)	T	1,1,1-Trichlor...	0.789	0.841	0.943	0.924	0.988	0.897	8.98	0.999
27)	S	Dibromofluorom...	0.486	0.478	0.468	0.486	0.499	0.483	2.39	
28)	T	1,1-Dichloropr...	0.558	0.695	0.728	0.752	0.806	0.708	13.15	0.999
29)	T	2-Butanone	3.631	1.430	1.193	1.096	1.093	1.689	64.81	1.000
30)	M	Benzene	2.857	2.267	2.047	1.913	1.709	2.159	20.39	0.996
31)	T	Methacrylonitr...	1.390	1.339	1.324	1.203	1.174	1.286	7.24	1.000
32)	S	1,2-Dichloroet...	0.129	0.134	0.132	0.126	0.134	0.131	2.72	
33)	T	1,2-Dichloroet...	1.410	1.186	1.117	1.027	0.918	1.132	16.38	0.995
34)	T	Trichloroethene	0.575	0.627	0.659	0.676	0.749	0.657	9.77	0.997
35)	T	Dibromomethane	0.286	0.432	0.458	0.454	0.497	0.426	19.15	0.998
36)	T	n-Butanol		0.081	0.080	0.079	0.092	0.083#	7.50	1.000
37)	M	1,2-Dichloropr...	1.038	1.043	1.061	1.009	1.016	1.033	2.01	1.000
38)	T	Bromodichlorom...	0.725	0.875	0.972	0.959	1.035	0.913	13.09	1.000
39)	T	Methyl methacr...	1.866	1.928	1.982	1.797	1.781	1.871	4.56	0.999
40)	T	2-Chloroethyl ...	1.142	0.515	0.550	0.531	0.487	0.645	43.21	1.000
41)	T	cis-1,3-Dichlo...	0.913	1.102	1.273	1.234	1.274	1.159	13.32	1.000
42)	I	Chlorobenzene-d5	----------	ISTD	----------					
43)	M	Toluene	1.832	1.429	1.369	1.325	1.260	1.443	15.67	0.999
44)	S	Toluene-d8 (SS)	1.311	1.335	1.338	1.337	1.379	1.340	1.84	
45)	T	Tetrachloroethene	0.247	0.310	0.361	0.379	0.442	0.348	21.09	1.000
46)	T	4-Methyl-2-pen...	1.250	1.312	1.426	1.335	1.437	1.352	5.86	0.999
47)	T	trans-1,3-Dich...	0.404	0.525	0.622	0.630	0.704	0.577	20.03	1.000
48)	T	1,1,2-Trichlor...	0.287	0.372	0.416	0.415	0.472	0.392	17.55	0.996
49)	T	Ethyl methacry...	0.603	0.724	0.794	0.770	0.851	0.748	12.49	0.998
50)	T	Dibromochlorom...	0.201	0.286	0.369	0.402	0.493	0.350	31.90	0.990
51)	T	1,3-Dichloropr...	0.572	0.679	0.760	0.745	0.811	0.713	12.89	0.998
52)	T	1,2-Dibromoeth...	0.335	0.373	0.372	0.368	0.352	0.360	4.53	0.999
53)	T	2-Hexanone	1.073	1.010	1.115	1.063	1.225	1.097	7.32	0.995
54)	T	Chlorobenzene	0.776	0.994	1.123	1.150	1.302	1.069	18.42	0.996
55)	M	Ethyl benzene	1.788	1.736	1.756	1.751	1.671	1.740	2.48	0.999
56)	T	1,1,1,2-Tetrac...	0.207	0.314	0.367	0.394	0.471	0.350	28.04	0.992
57)	M	MP Xylene	1.312	1.375	1.378	1.378	1.308	1.350	2.72	0.999
58)	M	O Xylene	1.306	1.547	1.545	1.517	1.469	1.477	6.81	1.000
59)	T	Styrene	0.881	1.151	1.352	1.333	1.528	1.249	19.64	0.996
60)	T	Bromoform	0.129	0.211	0.282	0.335	0.467	0.285	44.89	1.000
61)	T	Isopropylbenze...	1.166	1.648	1.697	1.708	1.656	1.575	14.59	1.000
62)	I	1,4-dichlorobenzen...	----------	ISTD	----------					
63)	S	4-Bromofluorob...	0.823	0.836	0.827	0.802	0.829	0.823	1.58	

			Untitled						
64)	T	Bromobenzene	0.610	0.756	0.889	0.884	0.982	0.824	17.49	0.997
65)	T	cis-1,4-Dichlo...	0.416	0.530	0.552	0.513	0.536	0.509	10.60	0.999
66)	T	n-Propylbenzene	3.026	3.976	4.661	4.226	4.218	4.022	15.14	0.999
67)	T	1,1,2,2-Tetrac...	0.784	1.047	1.199	1.190	1.405	1.125	20.40	0.994
68)	T	2-Chlorotoluene	2.234	2.714	2.921	2.638	2.661	2.634	9.49	0.999
69)	T	1,2,3-Trichlor...	1.074	1.282	1.335	1.192	1.273	1.231	8.26	0.998
70)	M	1,3,5-Trimethy...	2.320	2.789	2.812	2.647	2.264	2.566	10.10	1.000
71)	T	trans-1,4-Dich...	0.422	0.498	0.573	0.514	0.565	0.514	11.86	0.999
72)	T	4-Chlorotoluene	2.094	2.689	3.029	2.746	2.856	2.683	13.19	0.999
73)	T	tert-Butylbenzene	2.130	2.633	2.956	2.809	3.069	2.719	13.53	0.998
74)	T	Pentachloroethane	0.074	0.198	0.252	0.315	0.472	0.262	55.96	1.000
75)	M	1,2,4-Trimethy...	2.543	2.949	3.019	2.801	2.444	2.751	9.10	1.000
76)	T	sec-Butylbenzene	2.696	3.640	4.129	3.803	4.007	3.655	15.54	0.999
77)	T	p-Isopropyltol...	2.055	2.940	3.401	3.209	3.486	3.018	19.14	0.998
78)	T	1,3-Dichlorobe...	0.987	1.445	1.745	1.785	2.091	1.610	25.88	0.994
79)	T	1,4-Dichlorobe...	1.103	1.463	1.732	1.829	2.169	1.659	24.14	0.993
80)	T	n-Butylbenzene	1.880	2.649	3.200	2.926	3.199	2.771	19.77	0.998
81)	T	1,2-Dichlorobe...	1.282	1.555	1.880	1.941	2.352	1.802	22.52	0.992
82)	T	1,2-Dibromo-3-...	0.224	0.312	0.428	0.458	0.527	0.390	31.02	0.995
83)	T	Hexachlorobuta...	0.321	0.456	0.571	0.638	0.828	0.563	33.93	1.000
84)	T	1,2,4-Trichlor...	0.654	1.011	1.446	1.569	1.869	1.310	36.58	0.993
85)	M	Naphthalene	2.637	3.593	4.470	4.344	4.069	3.823	19.44	0.998
86)	T	1,2,3-Trichlor...	0.723	1.142	1.595	1.693	1.937	1.418	34.11	0.996
87)	T	2-Methyl napht...	0.446	0.735	1.642	1.943	1.974	1.348	52.73	0.998
88)	T	1-Methyl napht...	0.518	1.218	2.370	2.548	2.854	1.901	52.09	0.997

(#) = Out of Range

VOC-DA-23MAY2019.M Fri May 24 11:03:09 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : ICV-3.D
Acq On : 24 May 2019 12:00 am
Operator : DJD
Sample : ICV-3
Misc :
ALS Vial : 9 Sample Multiplier: 1

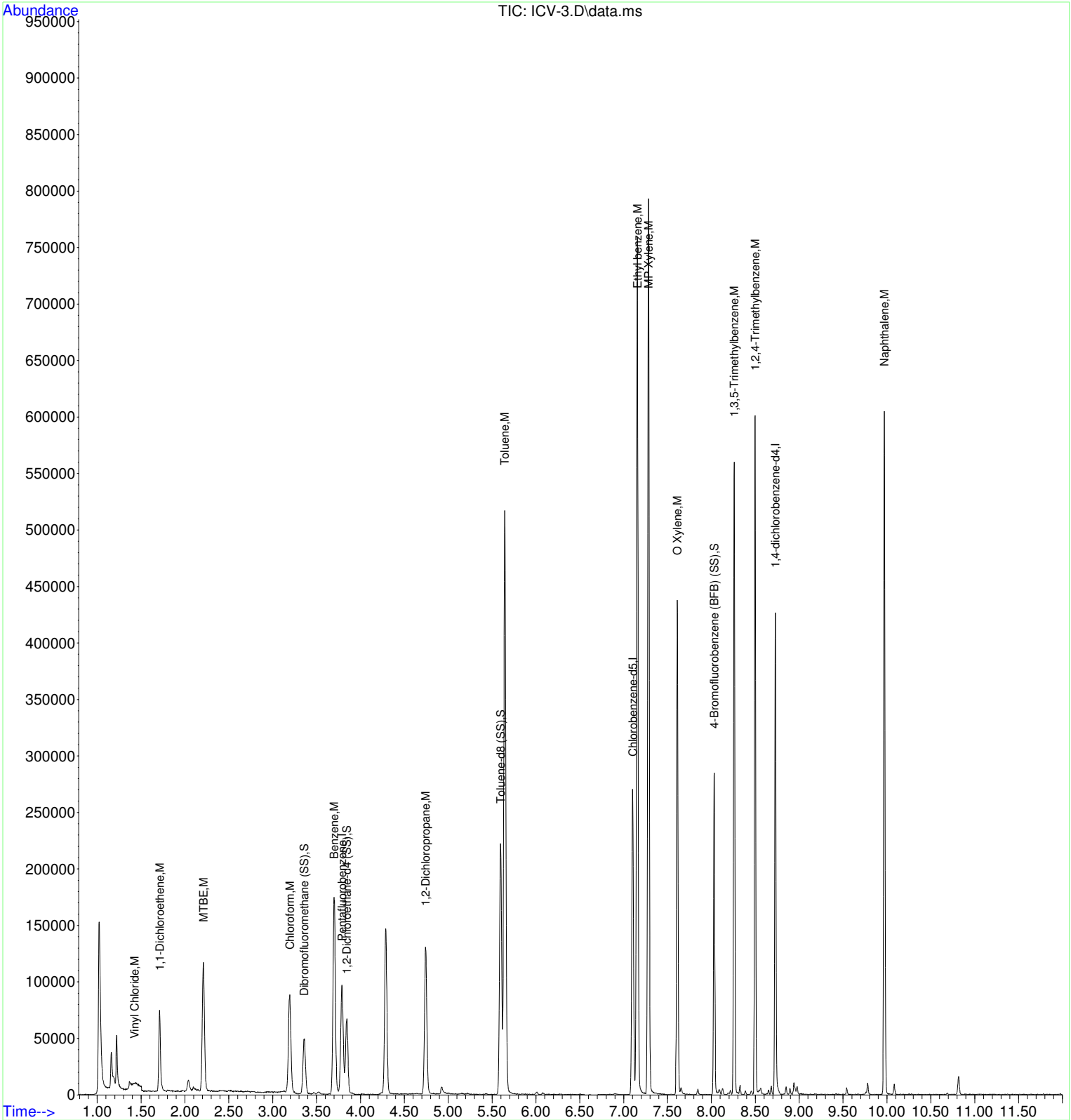
Quant Time: May 24 10:47:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:47:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.791	168	63655	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	104641	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	58400	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.360	111	30937	50.27	ppb		0.00
Spiked Amount 50.000			Recovery = 100.54%				
32) 1,2-Dichloroethane-d4 ...	3.844	102	7353	44.13	ppb		0.00
Spiked Amount 50.000			Recovery = 88.26%				
44) Toluene-d8 (SS)	5.597	98	130505	46.53	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.06%				
63) 4-Bromofluorobenzene (...	8.032	174	44052	45.81	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.62%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.426	62	35818m	39.18	ppb		
9) 1,1-Dichloroethene	1.713	96	13482	62.06	ppb	#	76
16) MTBE	2.210	73	74790	58.76	ppb	#	89
24) Chloroform	3.194	83	59186	47.95	ppb		99
30) Benzene	3.701	78	127167	56.59	ppb		96
37) 1,2-Dichloropropane	4.744	63	49135	37.94	ppb	#	97
43) Toluene	5.646	91	324535	121.36	ppb		97
55) Ethyl benzene	7.155	91	403128	113.96	ppb		97
57) MP Xylene	7.282	91	319965	115.42	ppb		97
58) O Xylene	7.612	91	169949	54.81	ppb		98
70) 1,3,5-Trimethylbenzene	8.259	105	184276	56.31	ppb		89
75) 1,2,4-Trimethylbenzene	8.498	105	193491	55.80	ppb		97
85) Naphthalene	9.971	128	276364	57.16	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : ICV-3.D
Acq On : 24 May 2019 12:00 am
Operator : DJD
Sample : ICV-3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 10:47:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:47:43 2019
Response via : Initial Calibration



Untitled
Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : ICV-3.D
Acq On : 24 May 2019 12:00 am
Operator : DJD
Sample : ICV-3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 10:47:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:47:43 2019
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	137	0.00
4	M	Vinyl Chloride	50.000	39.178	21.6	98	0.20
9	M	1,1-Dichloroethene	50.000	62.062	-24.1	180	0.03
16	M	MTBE	50.000	58.764	-17.5	141	0.00
24	M	Chloroform	50.000	47.950	4.1	158	0.00
27	S	Dibromofluoromethane (SS)	50.000	50.275	-0.5	143	0.00
30	M	Benzene	50.000	56.588	-13.2	134	0.00
32	S	1,2-Dichloroethane-d4 (SS)	50.000	44.131	11.7	120	0.00
37	M	1,2-Dichloropropane	50.000	37.941	24.1	100	0.00
42	I	Chlorobenzene-d5	50.000	50.000	0.0	112	0.00
43	M	Toluene	100.000	121.360	-21.4	131	0.00
44	S	Toluene-d8 (SS)	50.000	46.526	6.9	104	0.00
55	M	Ethyl benzene	100.000	113.958	-14.0	123	0.00
57	M	MP Xylene	100.000	115.419	-15.4	124	0.00
58	M	O Xylene	50.000	54.805	-9.6	118	0.00
62	I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	117	0.00
63	S	4-Bromofluorobenzene (BFB)	50.000	45.808	8.4	107	0.00
70	M	1,3,5-Trimethylbenzene	50.000	56.313	-12.6	131	0.00
75	M	1,2,4-Trimethylbenzene	50.000	55.796	-11.6	128	0.00
85	M	Naphthalene	50.000	57.162	-14.3	124	0.00

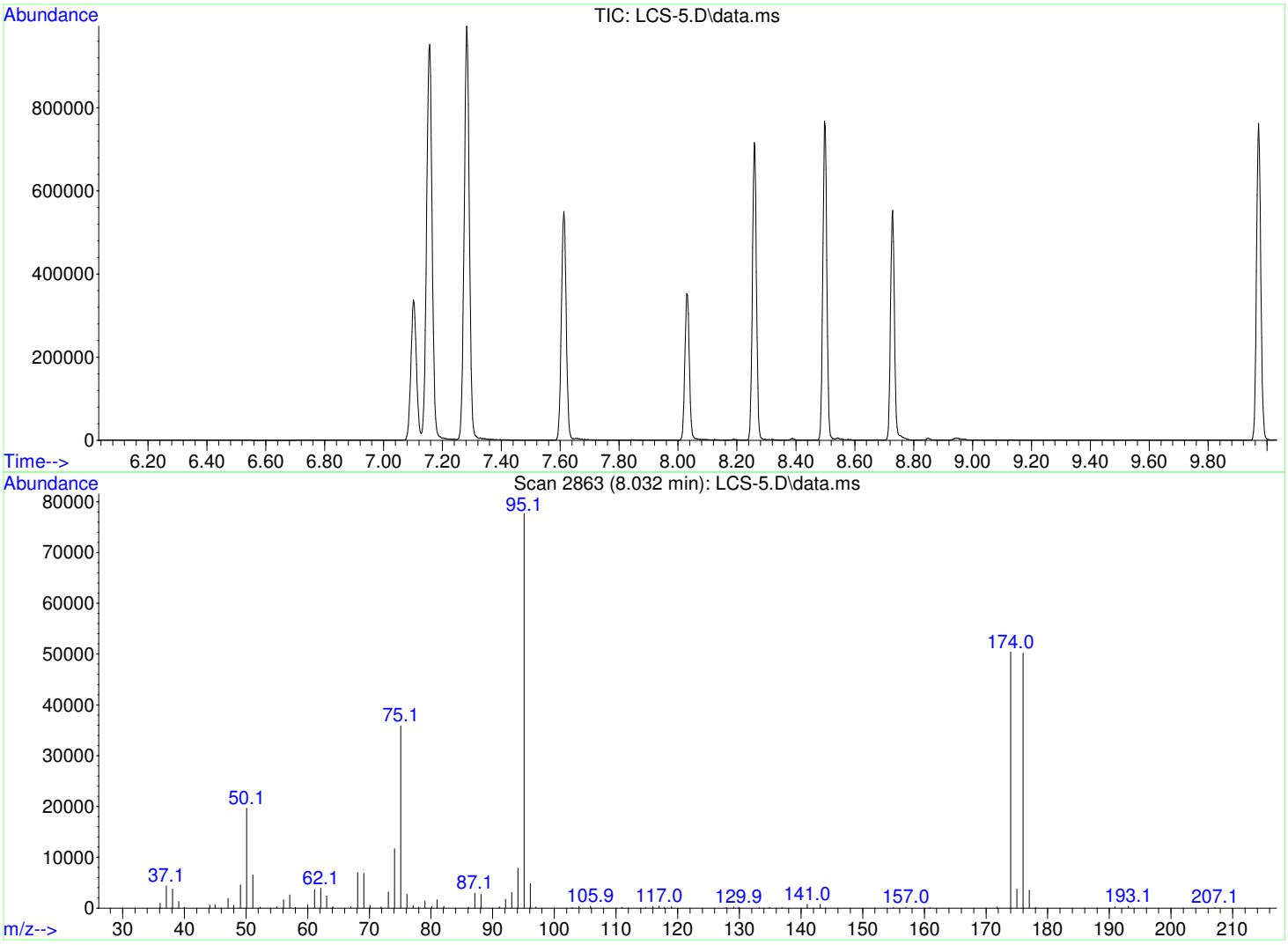
(#) = Out of Range SPCC's out = 0 CCC's out = 0

VOC-DA-23MAY2019.M Fri May 24 10:54:59 2019

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-5.D
Acq On : 29 May 2019 8:22 pm
Operator : PS
Sample : LCS-5
Misc :
ALS Vial : 79 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Title : VOC
Last Update : Mon Jun 03 09:38:56 2019



Spectrum Information: Scan 2863

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.3	19648	PASS
75	95	30	60	46.2	35864	PASS
95	95	100	100	100.0	77680	PASS
96	95	5	9	6.2	4793	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.9	50408	PASS
175	174	5	9	7.4	3734	PASS
176	174	95	101	99.6	50216	PASS
177	176	5	9	7.0	3501	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-5.D
Acq On : 29 May 2019 8:22 pm
Operator : PS
Sample : LCS-5
Misc :
ALS Vial : 79 Sample Multiplier: 1

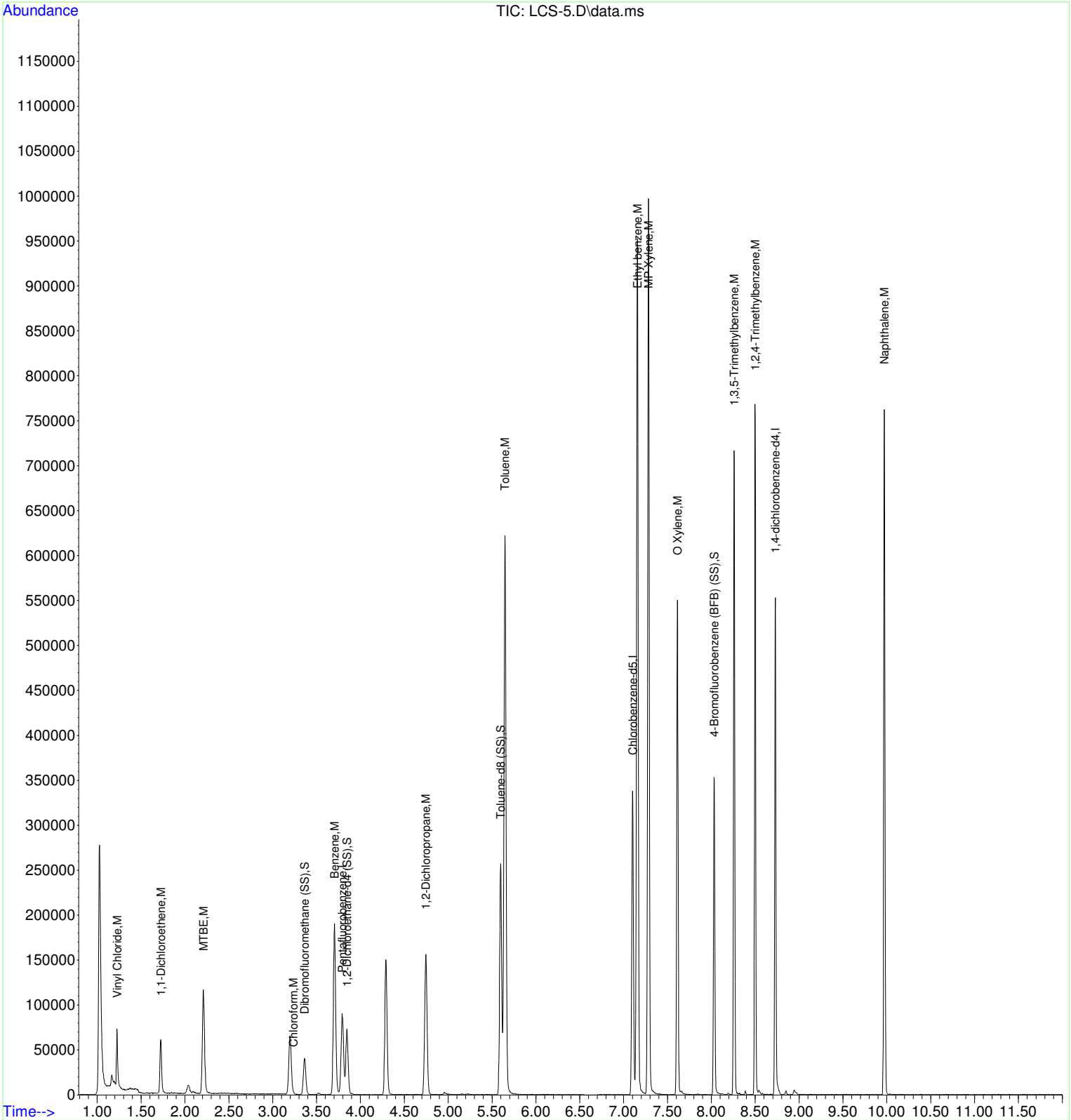
Quant Time: May 30 06:44:31 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.795	168	57098	50.00	ppb		0.01
42) Chlorobenzene-d5	7.103	117	121815	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	74501	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.364	111	24263	43.96	ppb		0.00
Spiked Amount 50.000			Recovery = 87.92%				
32) 1,2-Dichloroethane-d4 ...	3.847	102	6995	46.80	ppb		0.00
Spiked Amount 50.000			Recovery = 93.60%				
44) Toluene-d8 (SS)	5.599	98	145769	44.64	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 89.28%				
63) 4-Bromofluorobenzene (...	8.032	174	51649	42.10	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 84.20%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.230	62	42991	53.43	ppb	#	100
9) 1,1-Dichloroethene	1.726	96	10102	51.84	ppb	#	44
16) MTBE	2.211	73	63129	55.30	ppb	#	89
24) Chloroform	3.235	83	42436m	38.33	ppb		
30) Benzene	3.705	78	123394m	61.21	ppb		
37) 1,2-Dichloropropane	4.747	63	58466	50.33	ppb	#	98
43) Toluene	5.648	91	369357	118.65	ppb		96
55) Ethyl benzene	7.156	91	507292	123.19	ppb		95
57) MP Xylene	7.283	91	396407	122.83	ppb		96
58) O Xylene	7.612	91	210981	58.45	ppb		98
70) 1,3,5-Trimethylbenzene	8.260	105	228973	54.73	ppb		89
75) 1,2,4-Trimethylbenzene	8.499	105	242624	54.77	ppb		97
85) Naphthalene	9.972	128	342530	55.54	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-5.D
Acq On : 29 May 2019 8:22 pm
Operator : PS
Sample : LCS-5
Misc :
ALS Vial : 79 Sample Multiplier: 1

Quant Time: May 30 06:44:31 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Untitled
Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-5.D
Acq On : 29 May 2019 8:22 pm
Operator : PS
Sample : LCS-5
Misc :
ALS Vial : 79 Sample Multiplier: 1

Quant Time: May 30 06:44:31 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	123	0.01
4	M	Vinyl Chloride	50.000	53.430	-6.9	117	0.00
9	M	1,1-Dichloroethene	50.000	51.843	-3.7	135	0.04
16	M	MTBE	50.000	55.298	-10.6	119	0.00
24	M	Chloroform	50.000	38.328	23.3	113	0.05
27	S	Dibromofluoromethane (SS)	50.000	43.957	12.1	112	0.00
30	M	Benzene	50.000	61.215	-22.4	130	0.01
32	S	1,2-Dichloroethane-d4 (SS)	50.000	46.803	6.4	114	0.00
37	M	1,2-Dichloropropane	50.000	50.331	-0.7	119	0.00
42	I	Chlorobenzene-d5	50.000	50.000	0.0	130	0.00
43	M	Toluene	100.000	118.649	-18.6	149	0.00
44	S	Toluene-d8 (SS)	50.000	44.641	10.7	116	0.00
55	M	Ethyl benzene	100.000	123.186	-23.2	155	0.00
57	M	MP Xylene	100.000	122.834	-22.8	154	0.00
58	M	O Xylene	50.000	58.445	-16.9	146	0.00
62	I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	149	0.00
63	S	4-Bromofluorobenzene (BFB)	50.000	42.101	15.8	125	0.00
70	M	1,3,5-Trimethylbenzene	50.000	54.734	-9.5	163	0.00
75	M	1,2,4-Trimethylbenzene	50.000	54.775	-9.5	161	0.00
85	M	Naphthalene	50.000	55.536	-11.1	153	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

VOC-DA-23MAY2019.M Tue Jun 04 14:18:23 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : CCV-SO-5.D
Acq On : 29 May 2019 9:41 pm
Operator : PS
Sample : CCV-SO-5
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

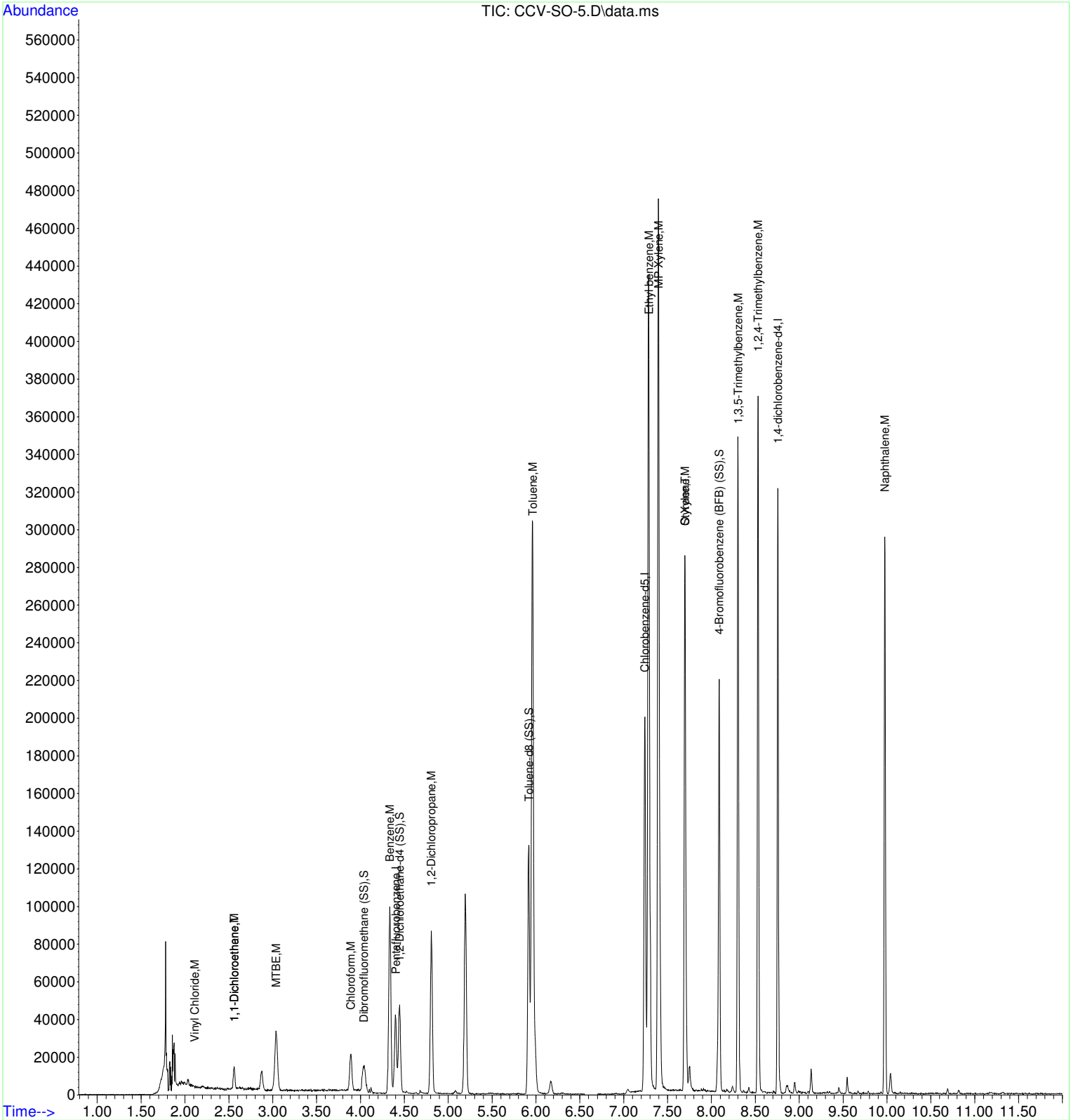
Quant Time: May 30 12:16:07 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.402	168	23695m	50.00	ppb		0.62
42) Chlorobenzene-d5	7.241	117	64560m	50.00	ppb		0.14
62) 1,4-dichlorobenzene-d4	8.757	152	36985	50.00	ppb	#	0.03
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	4.040	111	11497m	50.19	ppb		0.69
Spiked Amount 50.000			Recovery = 100.38%				
32) 1,2-Dichloroethane-d4 ...	4.445	102	4356m	70.23	ppb		0.61
Spiked Amount 50.000			Recovery = 140.46%				
44) Toluene-d8 (SS)	5.919	98	67713m	39.13	ppb		0.33
Spiked Amount 50.000	Range 70 - 130		Recovery = 78.26%				
63) 4-Bromofluorobenzene (...	8.089	174	26754	43.93	ppb		0.06
Spiked Amount 50.000	Range 70 - 130		Recovery = 87.86%				
Target Compounds							Qvalue
4) Vinyl Chloride	2.111	62	3361m	9.50	ppb		
9) 1,1-Dichloroethene	2.561	96	1391m	17.20	ppb		
16) MTBE	3.039	73	14360m	30.31	ppb		
18) 1,1-Dichloroethane	2.560	63	1648	4.21	ppb	#	52
24) Chloroform	3.889	83	7671m	16.70	ppb		
30) Benzene	4.334	78	56031m	66.98	ppb		
37) 1,2-Dichloropropane	4.807	63	14270m	29.60	ppb		
43) Toluene	5.965	91	172953m	104.83	ppb		
55) Ethyl benzene	7.286	91	235048m	107.70	ppb		
57) MP Xylene	7.397	91	200710m	117.35	ppb		
58) O Xylene	7.699	91	112844m	58.98	ppb		
59) Styrene	7.699	104	2313	1.21	ppb	#	1
70) 1,3,5-Trimethylbenzene	8.302	105	113406	54.60	ppb		88
75) 1,2,4-Trimethylbenzene	8.532	105	118326	53.74	ppb		94
85) Naphthalene	9.977	128	119318	38.97	ppb		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : CCV-SO-5.D
Acq On : 29 May 2019 9:41 pm
Operator : PS
Sample : CCV-SO-5
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 30 12:16:07 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-SO-6.D
Acq On : 30 May 2019 2:30 am
Operator : PS
Sample : LCS-SO-6
Misc : SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jun 03 14:55:20 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

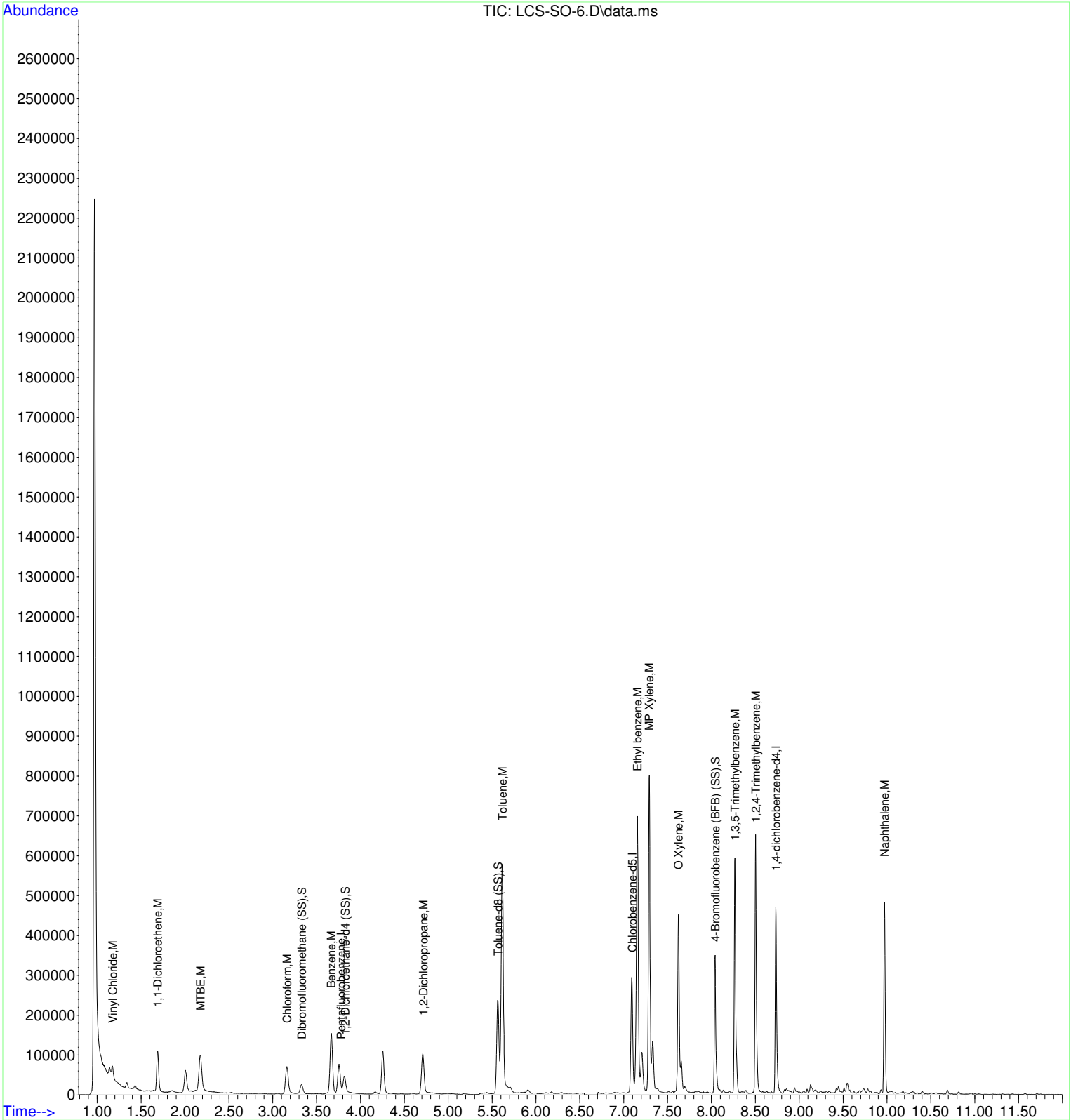
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.778	168	46786m	50.00	ppb		0.00
42) Chlorobenzene-d5	7.098	117	116435m	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.736	152	66478	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.330	111	16528	36.54	ppb		-0.02
Spiked Amount 50.000			Recovery = 73.08%				
32) 1,2-Dichloroethane-d4 ...	3.826	102	4277m	34.92	ppb		-0.01
Spiked Amount 50.000			Recovery = 69.84%				
44) Toluene-d8 (SS)	5.567	98	135915	43.55	ppb		-0.03
Spiked Amount 50.000	Range 70 - 130		Recovery = 87.10%				
63) 4-Bromofluorobenzene (...	8.046	174	47329	43.24	ppb		0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.48%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.177	62	23104m	34.16	ppb		
9) 1,1-Dichloroethene	1.690	96	18433	115.45	ppb	#	27
16) MTBE	2.176	73	55891m	59.75	ppb		
24) Chloroform	3.165	83	45848	50.54	ppb	#	85
30) Benzene	3.669	78	91001	55.10	ppb	#	73
37) 1,2-Dichloropropane	4.717	63	35402m	37.19	ppb		
43) Toluene	5.617	91	363055	122.01	ppb		94
55) Ethyl benzene	7.156	91	418263	106.26	ppb		91
57) MP Xylene	7.291	91	326116	105.72	ppb		94
58) O Xylene	7.625	91	175891	50.98	ppb		96
70) 1,3,5-Trimethylbenzene	8.270	105	211992	56.96	ppb		88
75) 1,2,4-Trimethylbenzene	8.507	105	216349	54.73	ppb		96
85) Naphthalene	9.973	128	205033	37.25	ppb		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-SO-6.D
Acq On : 30 May 2019 2:30 am
Operator : PS
Sample : LCS-SO-6
Misc : SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jun 03 14:55:20 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : MB-5.D
Acq On : 29 May 2019 9:20 pm
Operator : PS
Sample : MB-5
Misc :
ALS Vial : 1 Sample Multiplier: 1

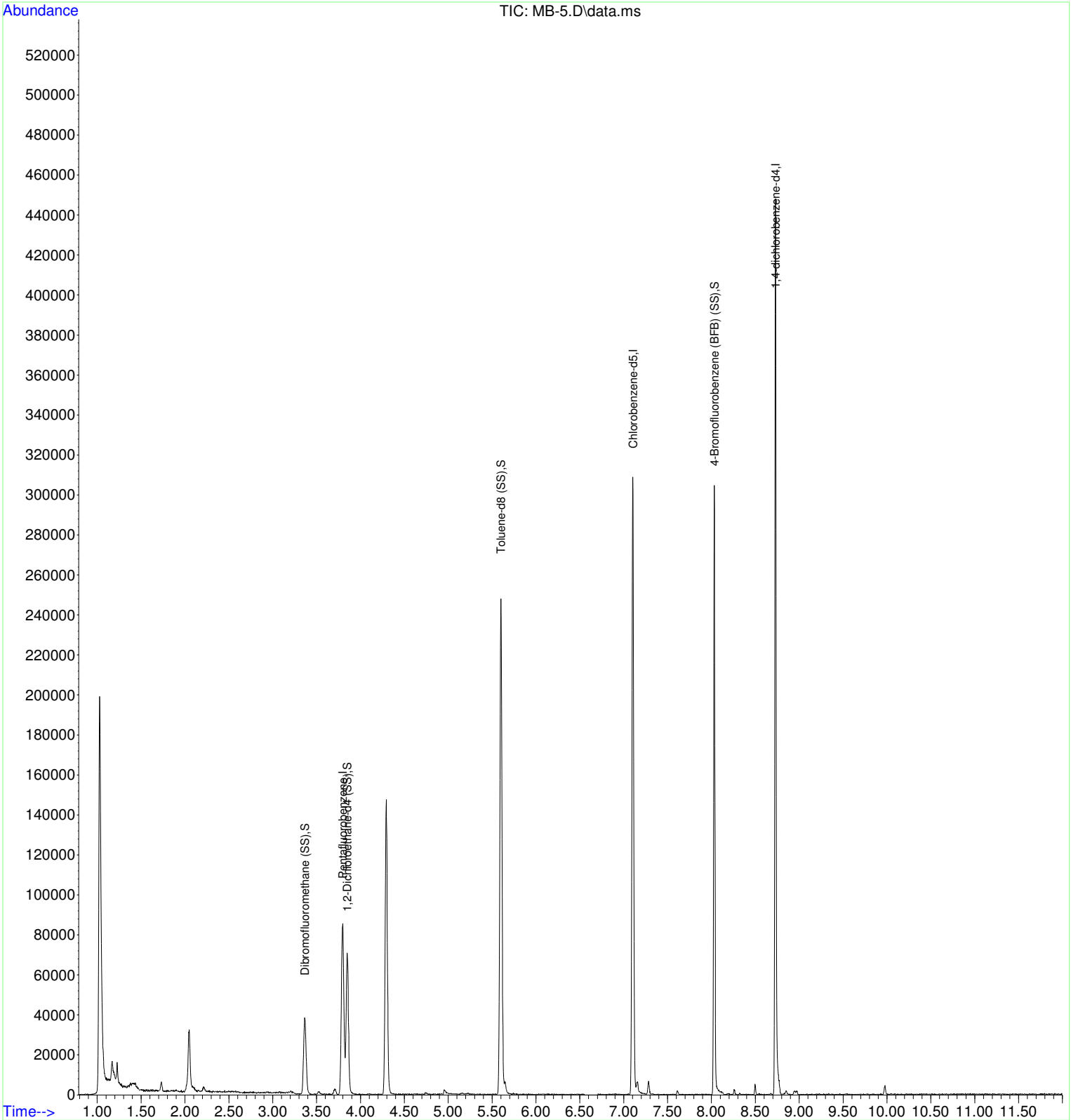
Quant Time: Jun 04 15:35:04 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.798	168	53801	50.00	ppb	0.01
42) Chlorobenzene-d5	7.104	117	116003	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.731	152	64493	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.366	111	24299	46.72	ppb	0.01
Spiked Amount 50.000			Recovery = 93.44%			
32) 1,2-Dichloroethane-d4 ...	3.851	102	6682m	47.45	ppb	0.01
Spiked Amount 50.000			Recovery = 94.90%			
44) Toluene-d8 (SS)	5.601	98	138548	44.56	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 89.12%			
63) 4-Bromofluorobenzene (...	8.033	174	44590	41.99	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.98%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : MB-5.D
Acq On : 29 May 2019 9:20 pm
Operator : PS
Sample : MB-5
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 15:35:04 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : MB-SO-5.D
Acq On : 29 May 2019 10:00 pm
Operator : PS
Sample : MB-SO-5
Misc : SOIL
ALS Vial : 3 Sample Multiplier: 1

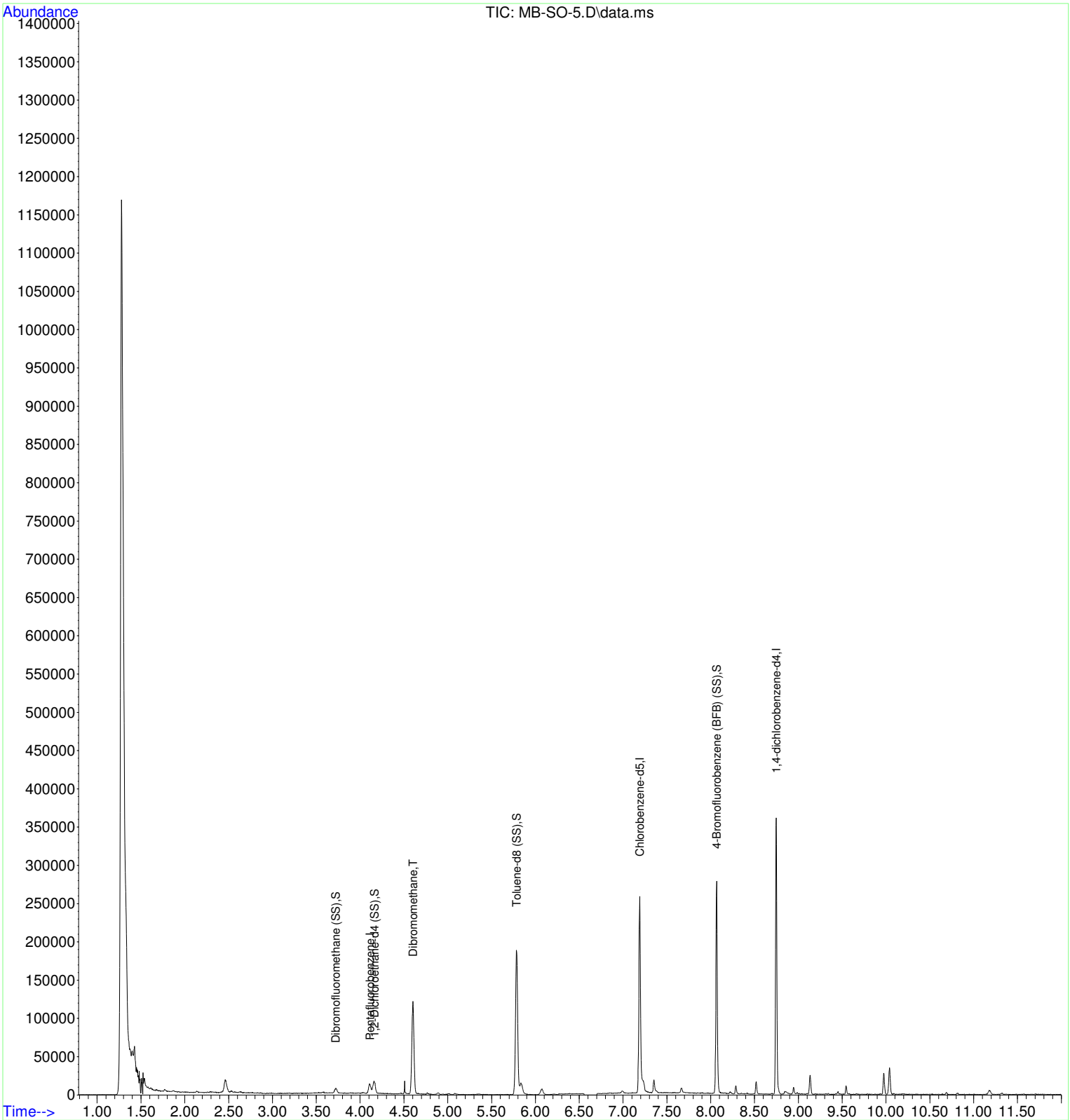
Quant Time: Jun 04 15:35:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.113	168	7152m	50.00	ppb	0.33
42) Chlorobenzene-d5	7.192	117	87346m	50.00	ppb	0.09
62) 1,4-dichlorobenzene-d4	8.747	152	41614	50.00	ppb	# 0.02
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.723	111	3588m	51.90	ppb	0.37
Spiked Amount 50.000			Recovery = 103.80%			
32) 1,2-Dichloroethane-d4 ...	4.163	102	624m	33.33	ppb	0.32
Spiked Amount 50.000			Recovery = 66.66%			
44) Toluene-d8 (SS)	5.786	98	97314m	41.56	ppb	0.19
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.12%			
63) 4-Bromofluorobenzene (...	8.069	174	33673	49.14	ppb	0.04
Spiked Amount 50.000	Range 70 - 130		Recovery = 98.28%			
Target Compounds						Qvalue
35) Dibromomethane	4.603	93	1334	19.15	ppb	# 1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : MB-SO-5.D
Acq On : 29 May 2019 10:00 pm
Operator : PS
Sample : MB-SO-5
Misc : SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 15:35:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

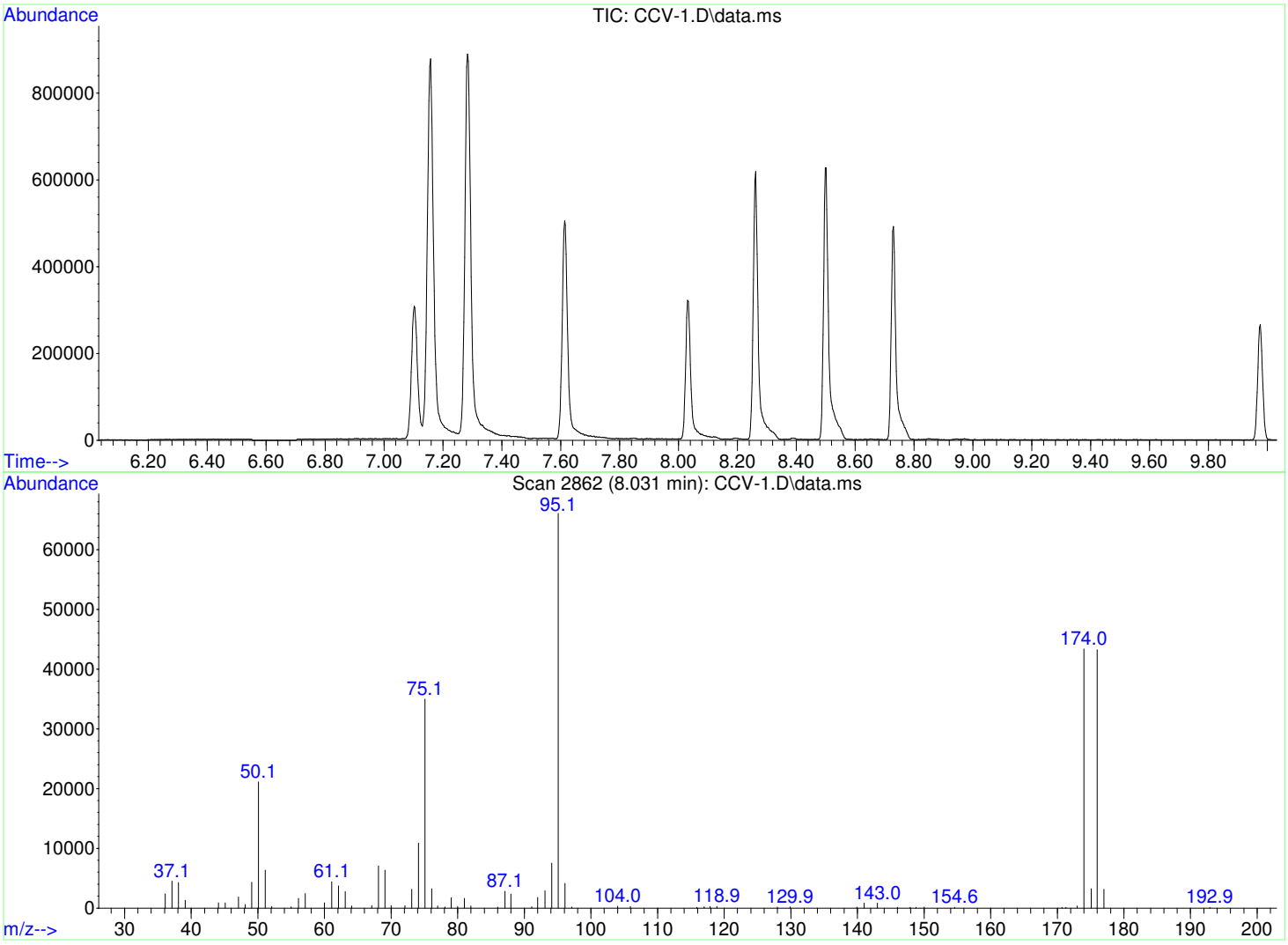


CLPBFB

Data Path : C:\msdchem\1\data\30may2019\
Data File : CCV-1.D
Acq On : 30 May 2019 12:42 pm
Operator : PS
Sample : CCV-1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Title : VOC
Last Update : Mon Jun 03 09:38:56 2019



Spectrum Information: Scan 2862

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	32.0	21104	PASS
75	95	30	60	53.0	34984	PASS
95	95	100	100	100.0	66048	PASS
96	95	5	9	6.2	4108	PASS
173	174	0.00	2	0.8	335	PASS
174	95	50	100	65.6	43360	PASS
175	174	5	9	7.5	3239	PASS
176	174	95	101	99.7	43216	PASS
177	176	5	9	7.2	3123	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\30may2019\
Data File : CCV-1A.D
Acq On : 30 May 2019 1:01 pm
Operator : PS
Sample : CCV-1A
Misc :
ALS Vial : 1 Sample Multiplier: 1

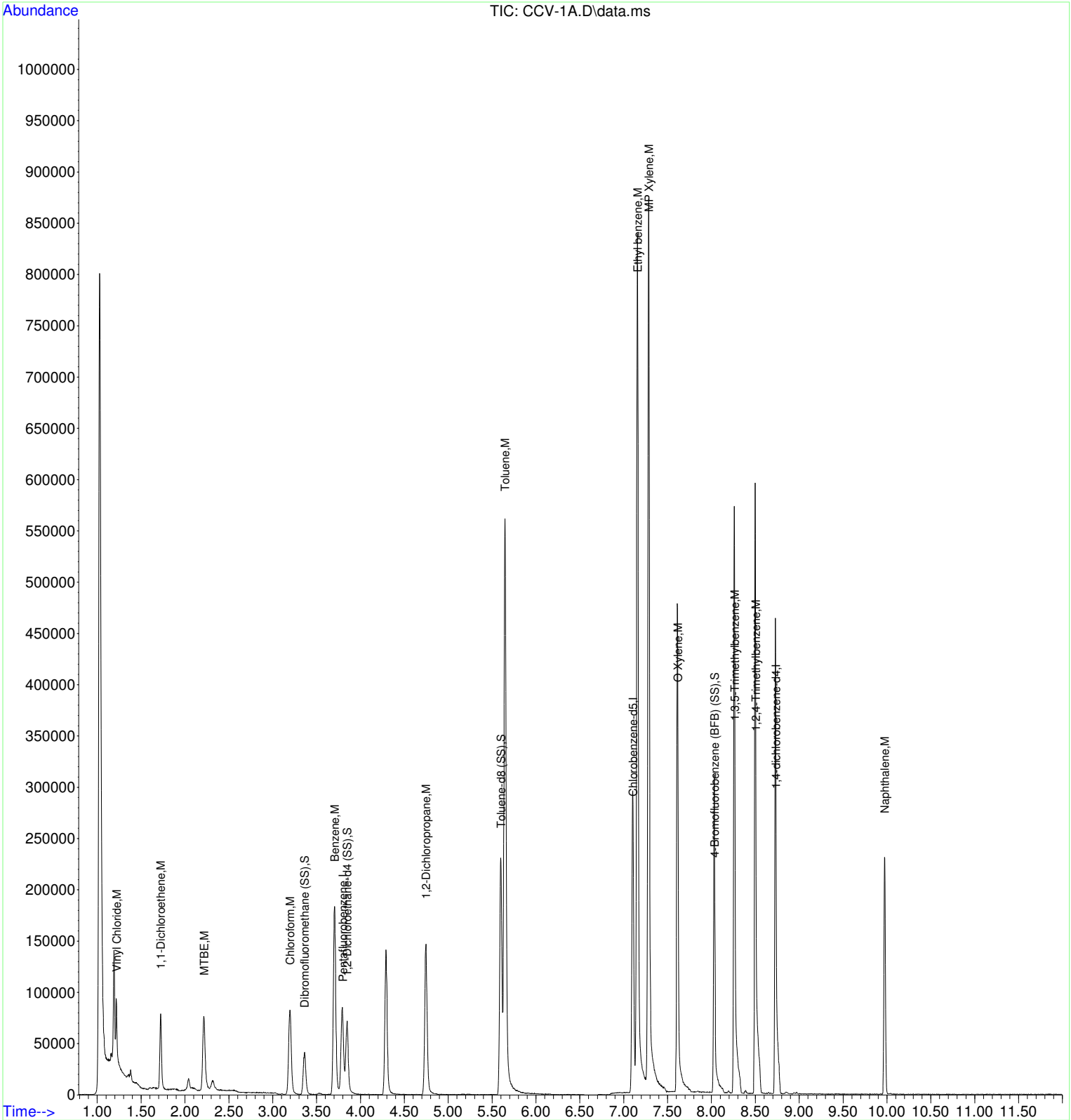
Quant Time: Jun 03 13:29:35 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.801	168	56090m	50.00	ppb	0.02
42) Chlorobenzene-d5	7.106	117	120611	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.734	152	73952	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.363	111	26065	48.07	ppb	0.00
Spiked Amount 50.000			Recovery = 96.14%			
32) 1,2-Dichloroethane-d4 ...	3.848	102	6770	46.11	ppb	0.00
Spiked Amount 50.000			Recovery = 92.22%			
44) Toluene-d8 (SS)	5.601	98	140731	43.53	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 87.06%			
63) 4-Bromofluorobenzene (...	8.038	174	52570	43.17	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.34%			
Target Compounds						Qvalue
4) Vinyl Chloride	1.222	62	37529	47.08	ppb	# 100
9) 1,1-Dichloroethene	1.723	96	11833m	61.82	ppb	
16) MTBE	2.219	73	44184	39.40	ppb	# 83
24) Chloroform	3.198	83	57614	52.97	ppb	97
30) Benzene	3.705	78	123062m	62.15	ppb	
37) 1,2-Dichloropropane	4.748	63	59537	52.17	ppb	# 97
43) Toluene	5.651	91	361595	117.31	ppb	95
55) Ethyl benzene	7.160	91	499448	122.49	ppb	94
57) MP Xylene	7.286	91	382334	119.66	ppb	97
58) O Xylene	7.617	91	211832	59.27	ppb	96
70) 1,3,5-Trimethylbenzene	8.266	105	225892	54.37	ppb	89
75) 1,2,4-Trimethylbenzene	8.505	105	234713	53.28	ppb	97
85) Naphthalene	9.975	128	117785	19.24	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\30may2019\
Data File : CCV-1A.D
Acq On : 30 May 2019 1:01 pm
Operator : PS
Sample : CCV-1A
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 13:29:35 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration



Untitled
Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\30may2019\
Data File : CCV-1A.D
Acq On : 30 May 2019 1:01 pm
Operator : PS
Sample : CCV-1A
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 03 13:29:35 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	116	0.01
4	M	Vinyl Chloride	50.000	47.077	5.8	102	0.00
9	M	1,1-Dichloroethene	50.000	61.818	-23.6	158	0.04
16	M	MTBE	50.000	39.398	21.2	83	0.00
24	M	Chloroform	50.000	52.972	-5.9	154	0.00
27	S	Dibromofluoromethane (SS)	50.000	48.070	3.9	120	0.00
30	M	Benzene	50.000	62.147	-24.3	130	0.01
32	S	1,2-Dichloroethane-d4 (SS)	50.000	46.112	7.8	111	0.00
37	M	1,2-Dichloropropane	50.000	52.174	-4.3	121	0.00
42	I	Chlorobenzene-d5	50.000	50.000	0.0	129	0.00
43	M	Toluene	100.000	117.315	-17.3	146	0.00
44	S	Toluene-d8 (SS)	50.000	43.529	12.9	112	0.00
55	M	Ethyl benzene	100.000	122.492	-22.5	153	0.00
57	M	MP Xylene	100.000	119.656	-19.7	148	0.00
58	M	O Xylene	50.000	59.267	-18.5	147	0.00
62	I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	148	0.00
63	S	4-Bromofluorobenzene (BFB)	50.000	43.169	13.7	127	0.00
70	M	1,3,5-Trimethylbenzene	50.000	54.372	-8.7	161	0.00
75	M	1,2,4-Trimethylbenzene	50.000	53.285	-6.6	156	0.00
85	M	Naphthalene	50.000	19.239	61.5#	53	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

VOC-DA-23MAY2019.M Tue Jun 04 13:07:40 2019

- Low Napthalene recovery,
Napthalene data used from 28MAY2019 run, if applicable.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\30may2019\
Data File : MB-1.D
Acq On : 30 May 2019 1:40 pm
Operator : PS
Sample : MB-1
Misc :
ALS Vial : 3 Sample Multiplier: 1

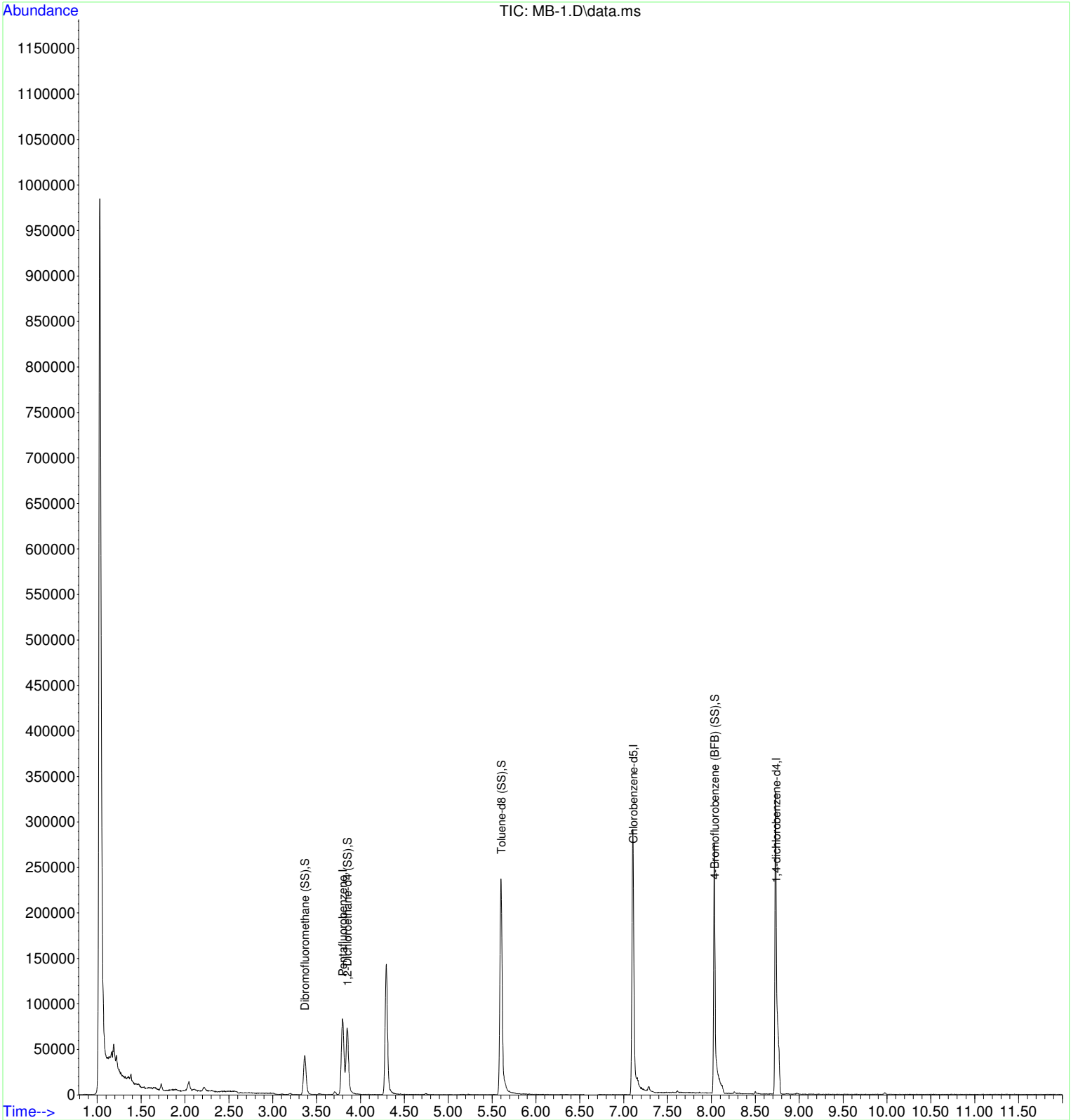
Quant Time: Jun 04 07:43:57 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.799	168	57391	50.00	ppb	0.02
42) Chlorobenzene-d5	7.109	117	124464	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.739	152	66695	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.367	111	27615	49.77	ppb	0.01
Spiked Amount 50.000			Recovery = 99.54%			
32) 1,2-Dichloroethane-d4 ...	3.854	102	7196m	47.90	ppb	0.01
Spiked Amount 50.000			Recovery = 95.80%			
44) Toluene-d8 (SS)	5.605	98	146873	44.02	ppb	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 88.04%			
63) 4-Bromofluorobenzene (...	8.038	174	49269	44.86	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 89.72%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\30may2019\
Data File : MB-1.D
Acq On : 30 May 2019 1:40 pm
Operator : PS
Sample : MB-1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 07:43:57 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2867.D
Acq On : 29 May 2019 11:37 pm
Operator : PS
Sample : 19-2867
Misc : SOIL
ALS Vial : 8 Sample Multiplier: 0.99

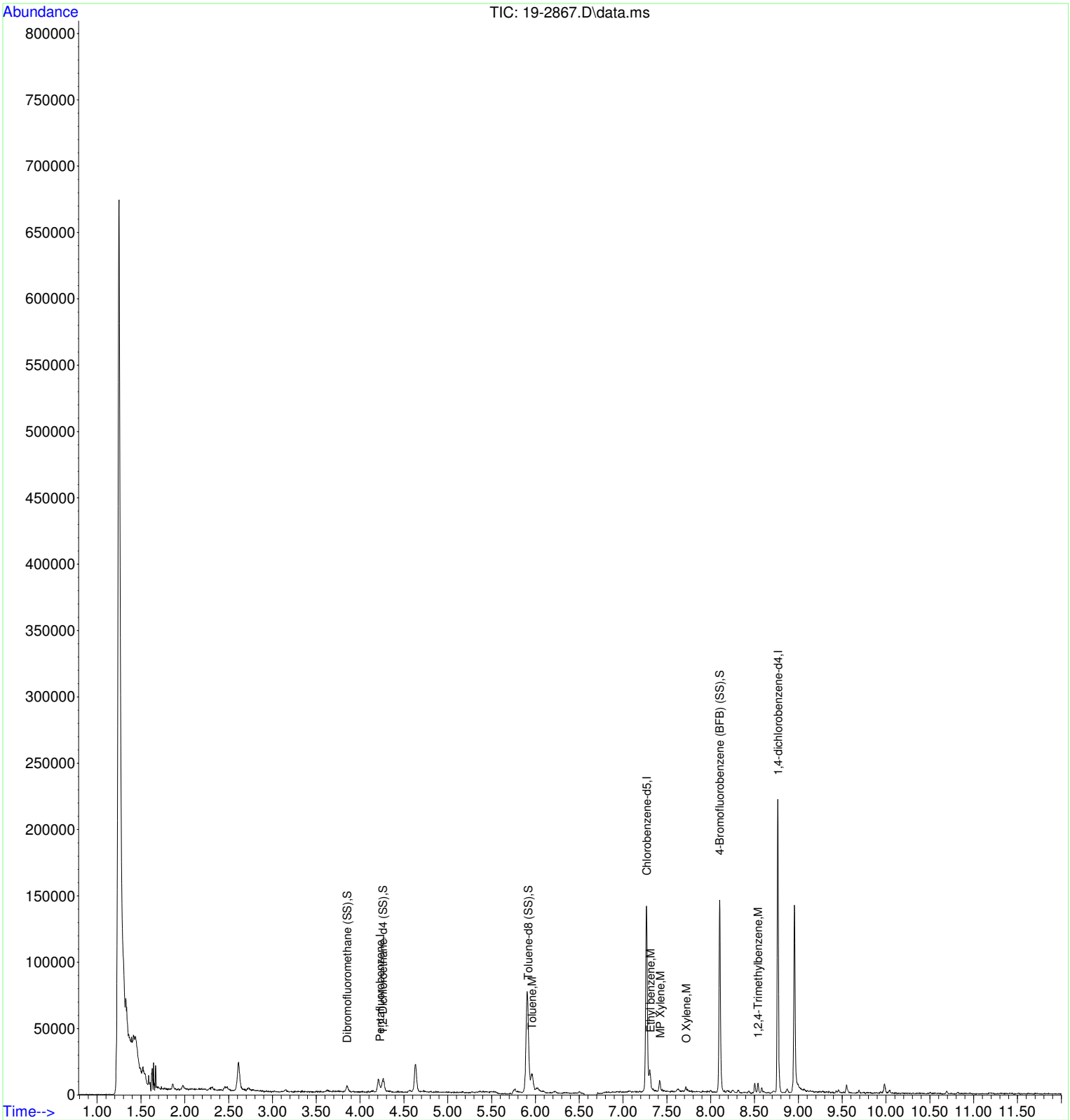
Quant Time: May 30 12:21:13 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.226	168	6592m	50.00	ppb	0.44
42) Chlorobenzene-d5	7.270	117	46516m	50.00	ppb	0.17
62) 1,4-dichlorobenzene-d4	8.765	152	25242	50.00	ppb	# 0.04
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.854	111	2409m	37.80	ppb	0.50
Spiked Amount 50.000			Recovery = 75.60%			
32) 1,2-Dichloroethane-d4 ...	4.261	102	364m	21.10	ppb	0.42
Spiked Amount 50.000			Recovery = 42.20%			
44) Toluene-d8 (SS)	5.919	98	52770m	42.32	ppb	0.33
Spiked Amount 50.000	Range 70 - 130		Recovery = 84.64%			
63) 4-Bromofluorobenzene (...	8.104	174	18399	44.26	ppb	0.07
Spiked Amount 50.000	Range 70 - 130		Recovery = 88.52%			
Target Compounds						Qvalue
43) Toluene	5.962	91	7630m	6.35	ppb	
55) Ethyl benzene	7.313	91	4562m	2.87	ppb	
57) MP Xylene	7.423	91	3741m	3.01	ppb	
58) O Xylene	7.720	91	1509m	1.08	ppb	
75) 1,2,4-Trimethylbenzene	8.541	105	2308	1.43	ppb	# 44

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2867.D
Acq On : 29 May 2019 11:37 pm
Operator : PS
Sample : 19-2867
Misc : SOIL
ALS Vial : 8 Sample Multiplier: 0.99

Quant Time: May 30 12:21:13 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2874-MS.D
Acq On : 30 May 2019 1:51 am
Operator : PS
Sample : 19-2874-MS
Misc : SOIL
ALS Vial : 15 Sample Multiplier: 1

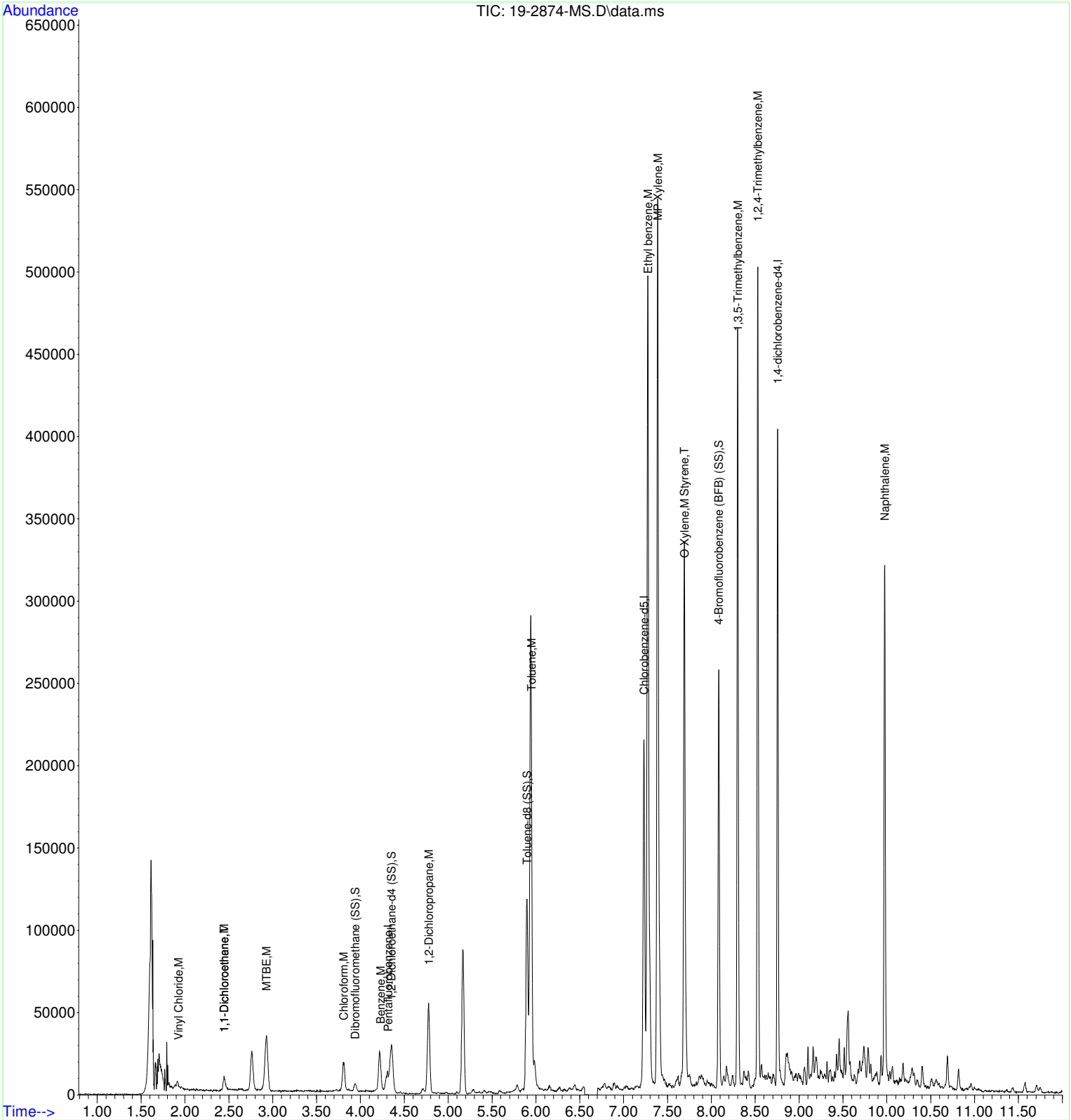
Quant Time: May 30 12:32:03 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.317	168	8150m	50.00	ppb		0.53
42) Chlorobenzene-d5	7.232	117	63673m	50.00	ppb		0.13
62) 1,4-dichlorobenzene-d4	8.755	152	42677	50.00	ppb	#	0.03
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.939	111	2453m	31.13	ppb		0.58
Spiked Amount 50.000			Recovery = 62.26%				
32) 1,2-Dichloroethane-d4 ...	4.352	102	3463m	162.33	ppb		0.51
Spiked Amount 50.000			Recovery = 324.66%				
44) Toluene-d8 (SS)	5.901	98	59830m	35.05	ppb		0.31
Spiked Amount 50.000	Range 70 - 130		Recovery = 70.10%				
63) 4-Bromofluorobenzene (...	8.086	174	29576	42.09	ppb		0.06
Spiked Amount 50.000	Range 70 - 130		Recovery = 84.18%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.927	62	4115m	34.96	ppb		
9) 1,1-Dichloroethene	2.448	96	939m	33.76	ppb		
16) MTBE	2.928	73	16357m	100.38	ppb		
18) 1,1-Dichloroethane	2.447	63	1480	10.98	ppb	#	52
24) Chloroform	3.808	83	7079m	44.79	ppb		
30) Benzene	4.231	78	10377m	36.07	ppb		
37) 1,2-Dichloropropane	4.779	63	11107m	66.99	ppb		
43) Toluene	5.949	91	159647m	98.11	ppb		
55) Ethyl benzene	7.277	91	255236m	118.57	ppb		
57) MP Xylene	7.391	91	219028m	129.84	ppb		
58) O Xylene	7.695	91	125791m	66.67	ppb		
59) Styrene	7.693	104	2467	1.31	ppb	#	1
70) 1,3,5-Trimethylbenzene	8.300	105	139306	58.42	ppb		88
75) 1,2,4-Trimethylbenzene	8.530	105	150004	59.46	ppb		94
85) Naphthalene	9.976	128	122244	34.60	ppb		90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2874-MS.D
Acq On : 30 May 2019 1:51 am
Operator : PS
Sample : 19-2874-MS
Misc : SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 12:32:03 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2875-MSD.D
Acq On : 30 May 2019 2:11 am
Operator : PS
Sample : 19-2875-MSD
Misc : SOIL
ALS Vial : 16 Sample Multiplier: 1

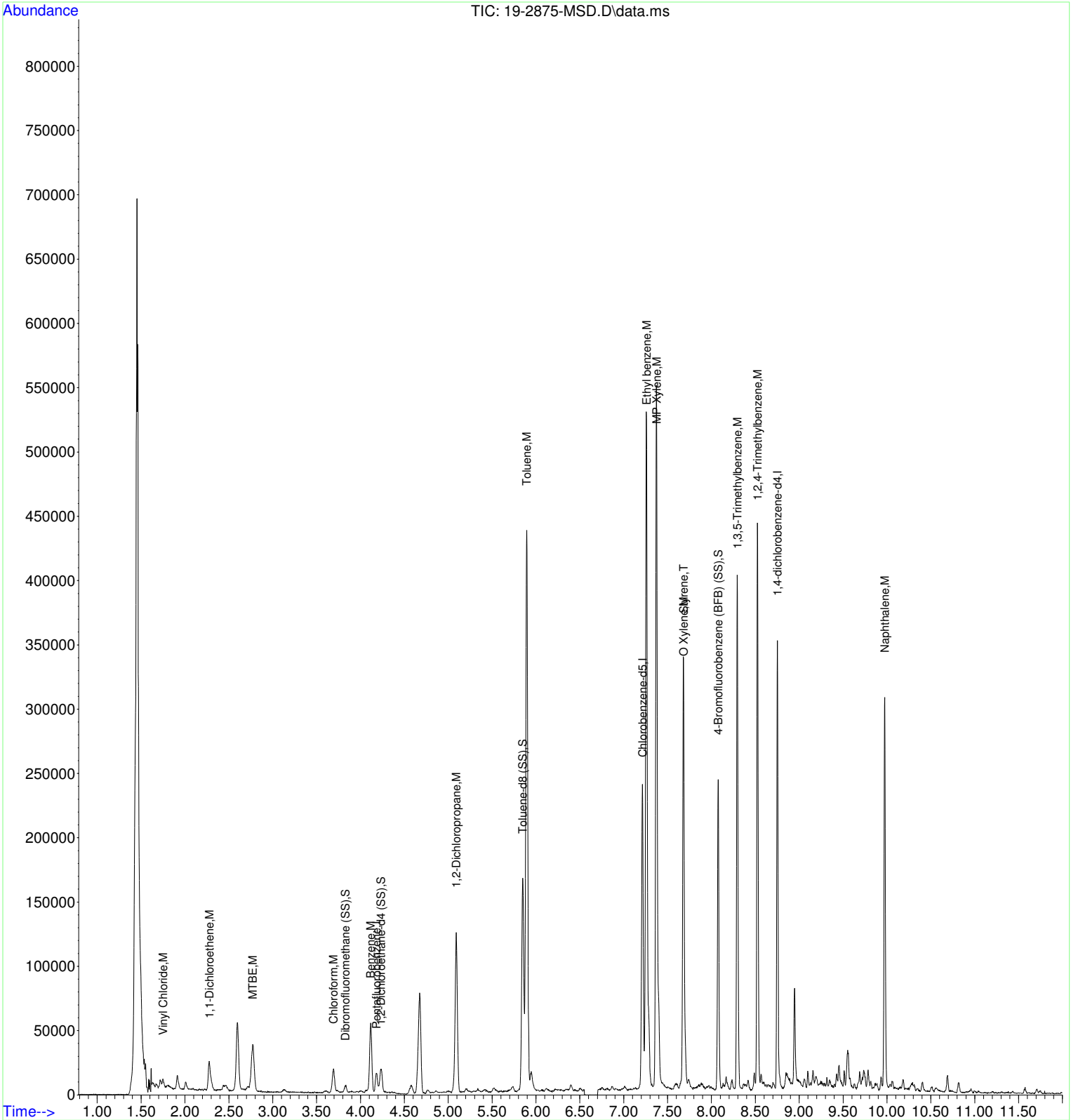
Quant Time: May 30 12:34:29 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	4.183	168	8296m	50.00	ppb		0.40
42) Chlorobenzene-d5	7.216	117	70307m	50.00	ppb		0.11
62) 1,4-dichlorobenzene-d4	8.751	152	38502	50.00	ppb	#	0.02
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.826	111	2962m	36.93	ppb		0.47
Spiked Amount 50.000			Recovery =	73.86%			
32) 1,2-Dichloroethane-d4 ...	4.234	102	895m	41.22	ppb		0.39
Spiked Amount 50.000			Recovery =	82.44%			
44) Toluene-d8 (SS)	5.849	98	78894m	41.86	ppb		0.26
Spiked Amount 50.000	Range 70 - 130		Recovery =	83.72%			
63) 4-Bromofluorobenzene (...	8.079	174	29071	45.85	ppb		0.05
Spiked Amount 50.000	Range 70 - 130		Recovery =	91.70%			
Target Compounds							Qvalue
4) Vinyl Chloride	1.751	62	4450m	37.25	ppb		
9) 1,1-Dichloroethene	2.279	96	3047m	107.62	ppb		
16) MTBE	2.772	73	16168m	97.47	ppb		
24) Chloroform	3.690	83	7531m	46.82	ppb		
30) Benzene	4.116	78	19085m	65.16	ppb		
37) 1,2-Dichloropropane	5.092	63	37482m	222.08	ppb		
43) Toluene	5.894	91	224192m	124.78	ppb		
55) Ethyl benzene	7.261	91	268622m	113.02	ppb		
57) MP Xylene	7.377	91	224024m	120.27	ppb		
58) O Xylene	7.684	91	125426m	60.20	ppb		
59) Styrene	7.681	104	2530	1.21	ppb	#	1
70) 1,3,5-Trimethylbenzene	8.295	105	124287	57.72	ppb		87
75) 1,2,4-Trimethylbenzene	8.526	105	133537	58.61	ppb		94
85) Naphthalene	9.975	128	113364	35.57	ppb		89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2875-MSD.D
Acq On : 30 May 2019 2:11 am
Operator : PS
Sample : 19-2875-MSD
Misc : SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 30 12:34:29 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Untitled
Spike Recovery and RPD Summary Report - SOIL

Method Path : C:\msdchem\1\methods\
Method File : VOC-DA-23MAY2019.M
Title : VOC
Last Update : Mon Jun 03 09:38:56 2019
Response Via : Initial Calibration

Datafile Path: C:\msdchem\1\data\28may2019\

------Sample-------
File : 19-2867.D
Name : 19-2867 Acq Time: 29 May 2019 11:37 pm

------Spike--------
File : 19-2874-MS.D
Name : 19-2874-MS Acq Time: 30 May 2019 1:51 am

--Spike Duplicate--
File : 19-2875-MSD.D
Name : 19-2875-MSD Acq Time: 30 May 2019 2:11 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Vinyl Chloride	0.0	50	35	37	70	75	6	20	23-169
1,1-Dichloroethene	0.0	50	34	108	68	215#	104#	20	31-146
MTBE	0.0	50	100	97	201#	195#	3	20	36-158
Chloroform	0.0	50	45	47	90	94	4	20	70-135
Benzene	0.0	50	36	65	72	130	57#	20	64-143
1,2-Dichloropropane	0.0	50	67	222	134	444#	107#	20	54-135
Toluene	6.4	100	98	125	92	118	25#	20	69-132
Ethyl benzene	2.9	100	119	113	116	110	5	20	71-131
MP Xylene	3.0	100	130	120	127	117	8	20	49-167
O Xylene	1.1	50	67	60	131	118	10	20	76-140
1,3,5-Trimethylbenze	0.7	50	58	58	115	114	1	20	77-145
1,2,4-Trimethylbenze	1.4	50	59	59	116	114	1	20	59-164
Naphthalene	0.9	50	35	36	67	69	3	20	51-137

- Fails Limit Check

VOC-DA-23MAY2019.M Tue Jun 04 14:09:48 2019

- High variability in soil purge, MeOH dilutions analyzed and included

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\30may2019\
Data File : 19-2867x25.D
Acq On : 30 May 2019 6:43 pm
Operator : PS
Sample : 19-2867x25
Misc : SOIL
ALS Vial : 4 Sample Multiplier: 49.65

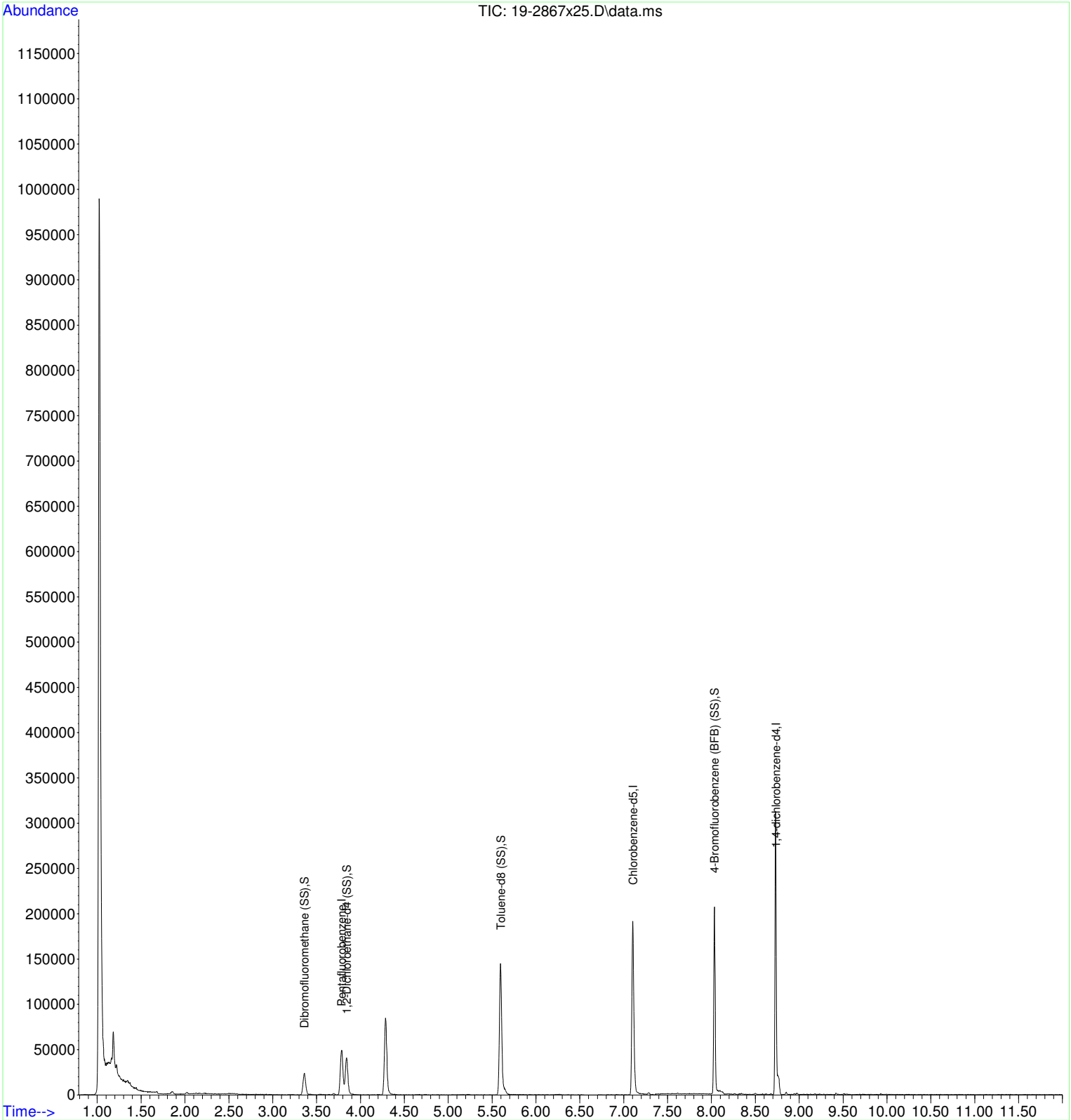
Quant Time: Jun 04 12:37:31 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.787	168	32441	50.00	ppb	0.00
42) Chlorobenzene-d5	7.105	117	77479	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.734	152	42782	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.362	111	16008	51.04	ppb	0.00
Spiked Amount 50.000			Recovery = 102.08%			
32) 1,2-Dichloroethane-d4 ...	3.843	102	4443	52.32	ppb	0.00
Spiked Amount 50.000			Recovery = 104.64%			
44) Toluene-d8 (SS)	5.599	98	88232	42.48	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 84.96%			
63) 4-Bromofluorobenzene (...	8.035	174	30431	43.20	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.40%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\30may2019\
Data File : 19-2867x25.D
Acq On : 30 May 2019 6:43 pm
Operator : PS
Sample : 19-2867x25
Misc : SOIL
ALS Vial : 4 Sample Multiplier: 49.65

Quant Time: Jun 04 12:37:31 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Mon Jun 03 09:38:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\30may2019\
Data File : 19-2874-MSx25.D
Acq On : 30 May 2019 7:02 pm
Operator : PS
Sample : 19-2874-MSx25
Misc : SOIL
ALS Vial : 8 Sample Multiplier: 1

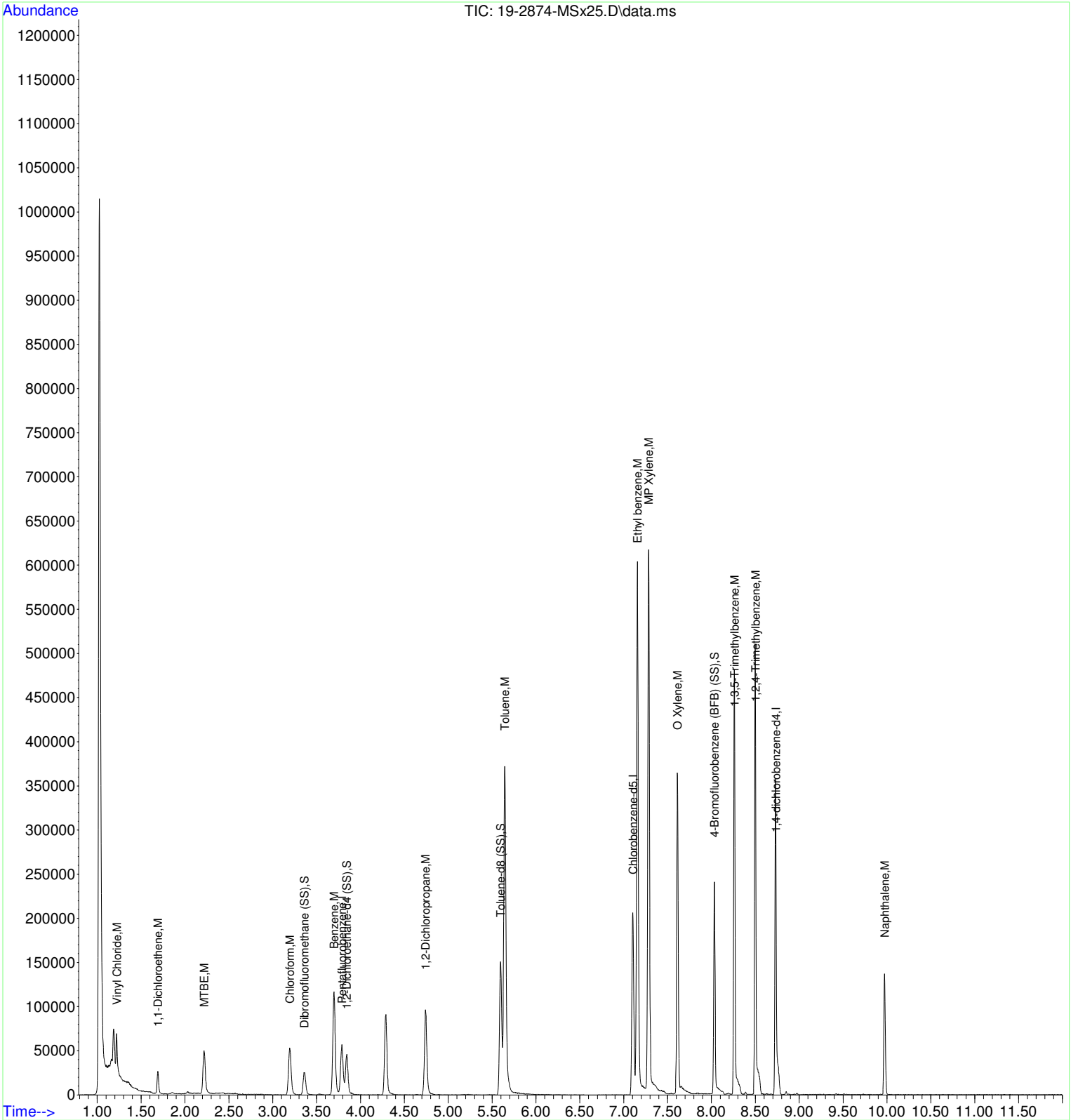
Quant Time: May 31 15:15:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.791	168	35836	50.00	ppb		0.00
42) Chlorobenzene-d5	7.104	117	82077	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.735	152	54430	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.362	111	17318	49.99	ppb		0.00
Spiked Amount 50.000			Recovery = 99.98%				
32) 1,2-Dichloroethane-d4 ...	3.845	102	4700	50.11	ppb		0.00
Spiked Amount 50.000			Recovery = 100.22%				
44) Toluene-d8 (SS)	5.598	98	90823	41.28	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 82.56%				
63) 4-Bromofluorobenzene (...	8.034	174	36342	40.55	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 81.10%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.227	62	28096	55.81	ppb	#	100
9) 1,1-Dichloroethene	1.693	96	4511	36.89	ppb	#	75
16) MTBE	2.219	73	28312	39.51	ppb	#	87
24) Chloroform	3.196	83	35899	51.66	ppb		96
30) Benzene	3.701	78	82933	65.55	ppb		92
37) 1,2-Dichloropropane	4.745	63	35297	48.41	ppb	#	91
43) Toluene	5.649	91	244142	116.40	ppb		95
55) Ethyl benzene	7.159	91	347803	125.35	ppb		94
57) MP Xylene	7.285	91	275416	126.66	ppb		94
58) O Xylene	7.614	91	152972	62.89	ppb		96
70) 1,3,5-Trimethylbenzene	8.264	105	172731	56.66	ppb		87
75) 1,2,4-Trimethylbenzene	8.504	105	180184	55.74	ppb		96
85) Naphthalene	9.974	128	67013	14.87	ppb		95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\30may2019\
Data File : 19-2874-MSx25.D
Acq On : 30 May 2019 7:02 pm
Operator : PS
Sample : 19-2874-MSx25
Misc : SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 31 15:15:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\30may2019\
Data File : 19-2875-MSDx25.D
Acq On : 30 May 2019 7:21 pm
Operator : PS
Sample : 19-2875-MSDx25
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

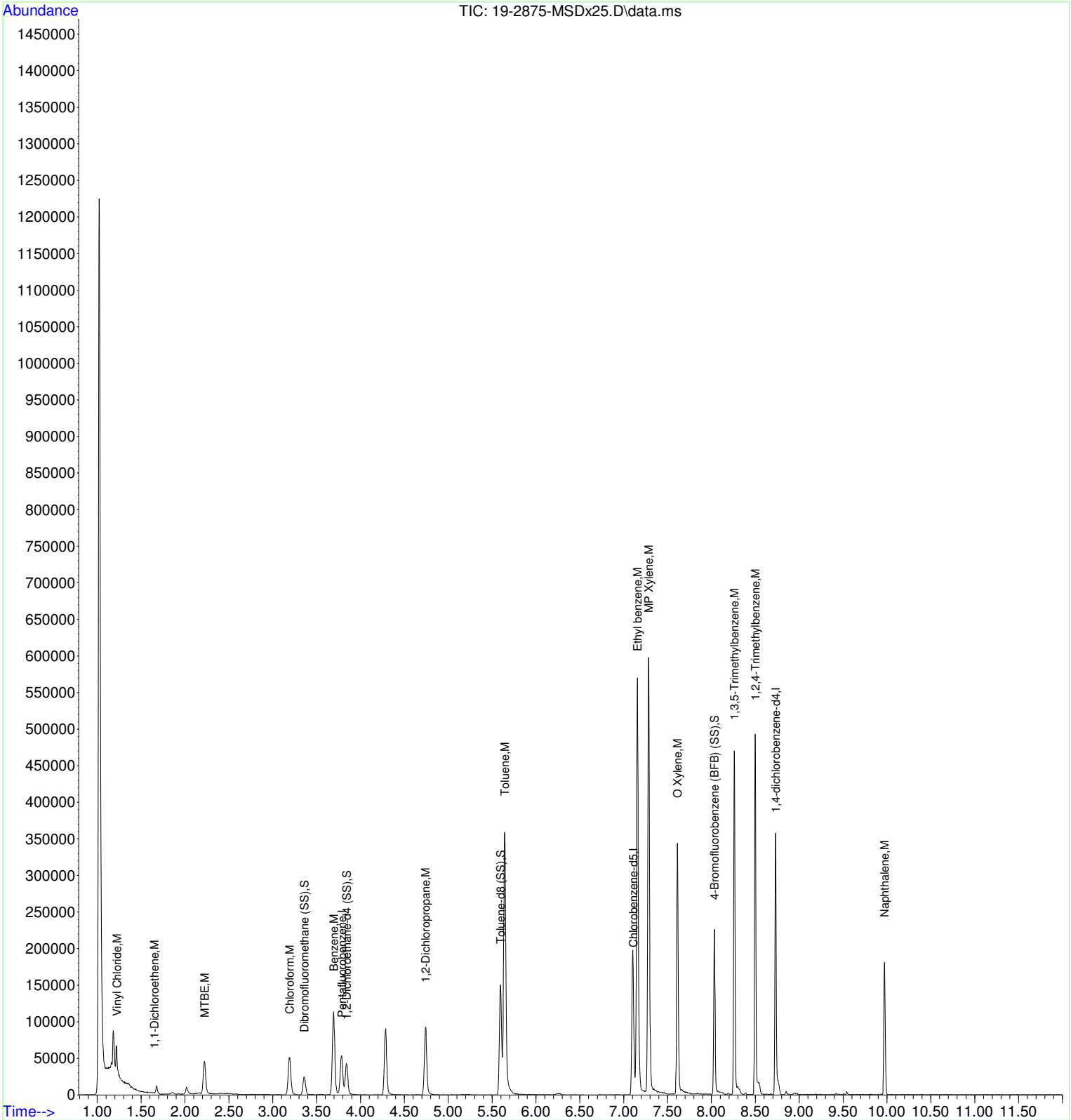
Quant Time: May 31 15:17:01 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.791	168	35809m	50.00	ppb		0.00
42) Chlorobenzene-d5	7.110	117	81575m	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.733	152	50154	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.360	111	16767	48.44	ppb		0.00
Spiked Amount 50.000			Recovery = 96.88%				
32) 1,2-Dichloroethane-d4 ...	3.842	102	4472	47.71	ppb		0.00
Spiked Amount 50.000			Recovery = 95.42%				
44) Toluene-d8 (SS)	5.598	98	91152	41.69	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.38%				
63) 4-Bromofluorobenzene (...	8.035	174	34650	41.96	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.92%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.228	62	30878	61.90	ppb	#	100
9) 1,1-Dichloroethene	1.653	96	879m	7.19	ppb		
16) MTBE	2.224	73	27180m	37.96	ppb		
24) Chloroform	3.193	83	34980	50.38	ppb		97
30) Benzene	3.695	78	81236	64.26	ppb		92
37) 1,2-Dichloropropane	4.744	63	33963	46.62	ppb	#	89
43) Toluene	5.648	91	236403	113.40	ppb		96
55) Ethyl benzene	7.158	91	332173	120.45	ppb		94
57) MP Xylene	7.284	91	264433	122.36	ppb		95
58) O Xylene	7.614	91	147019	60.82	ppb		96
70) 1,3,5-Trimethylbenzene	8.261	105	157981	56.21	ppb		88
75) 1,2,4-Trimethylbenzene	8.502	105	172660	58.14	ppb		93
85) Naphthalene	9.974	128	86537	20.84	ppb		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\30may2019\
Data File : 19-2875-MSDx25.D
Acq On : 30 May 2019 7:21 pm
Operator : PS
Sample : 19-2875-MSDx25
Misc : SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 31 15:17:01 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Untitled
Spike Recovery and RPD Summary Report - SOIL

Method Path : C:\msdchem\1\methods\
Method File : VOC-DA-23MAY2019.M
Title : VOC
Last Update : Mon Jun 03 09:38:56 2019
Response Via : Initial Calibration

Datafile Path: C:\msdchem\1\data\30may2019\

------Sample-------
File : 19-2867x25.D
Name : 19-2867x25 Acq Time: 30 May 2019 6:43 pm

------Spike--------
File : 19-2874-MSx25.D
Name : 19-2874-MSx25 Acq Time: 30 May 2019 7:02 pm

--Spike Duplicate--
File : 19-2875-MSDx25.D
Name : 19-2875-MSDx25 Acq Time: 30 May 2019 7:21 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Vinyl Chloride	0.0	50	56	62	112	124	10	20	23-169
1,1-Dichloroethene	0.0	50	37	7	74	14#	135#	20	31-146
MTBE	0.0	50	40	38	79	76	4	20	36-158
Chloroform	0.0	50	52	50	103	101	3	20	70-135
Benzene	0.0	50	66	64	131	129	2	20	64-143
1,2-Dichloropropane	0.0	50	48	47	97	93	4	20	54-135
Toluene	0.0	100	116	113	116	113	3	20	69-132
Ethyl benzene	0.0	100	125	120	125	120	4	20	71-131
MP Xylene	0.0	100	127	122	127	122	3	20	49-167
O Xylene	0.0	50	63	61	126	122	3	20	76-140
1,3,5-Trimethylbenze	0.0	50	57	56	113	112	1	20	77-145
1,2,4-Trimethylbenze	0.0	50	56	58	111	116	4	20	59-164
Naphthalene	0.0	50	15	21	30#	42#	33#	20	51-137

- Fails Limit Check

VOC-DA-23MAY2019.M Tue Jun 04 12:54:08 2019

- 1,1-Dichloroethene is within acceptable limits on CCV. Sample interference.
- Low Napthalene recovery in CCV check.

TOTAL SOLIDS
5035

Analyst DD

Oven Used: Binder: Redline. Model: 9090-0004 RF53-UL, SN: RL10-06652

Balance Used: Mettler Toledo: AG204. SNR: 1115192488, TDNR: 26215121

Cal. Weights Used: Mettler Toledo: F2AC. SN: 01574117-001, No. 11118457

Date Analyzed 5/29/2019

Drying Oven Temp 105

Last Calibration Date 1/8/2019

Calculation = $\frac{(C - A) \times 100}{(B - A)}$

	Sample #	Aluminium Tray Symbol	Date In / Time In	Date Out / Time Out	Tare Wt. (g) A	Wet Wt. (g) B	Dry Wt. (g) C	Result (%)
	LFB (Std. Weight)							
1	Method Blank		5/29/19 1600	5/30/19 1000	2.2200	10.3786	10.3786	100.00%
2	19-2863	4	5/29/19 1600	5/30/19 1000	2.4030	6.4454	5.5600	78.10%
3	19-2864	5	5/29/19 1600	5/30/19 1000	2.3236	8.1751	6.6434	73.82%
4	19-2865	6	5/29/19 1600	5/30/19 1000	2.3402	7.6610	7.3567	94.28%
5	19-2866	7	5/29/19 1600	5/30/19 1000	2.2982	8.2698	7.1852	81.84%
6	19-2867	8	5/29/19 1600	5/30/19 1000	2.3255	8.3269	7.1145	79.80%
7	19-2868	9	5/29/19 1600	5/30/19 1000	2.2577	8.2637	7.0303	79.46%
8	19-2869	10	5/29/19 1600	5/30/19 1000	2.2544	6.5437	5.7170	80.73%
9	19-2870	11	5/29/19 1600	5/30/19 1000	2.2875	8.4284	7.2854	81.39%
10	19-2871	12	5/29/19 1600	5/30/19 1000	2.3462	8.8594	7.7982	83.71%
11	19-2872	13	5/29/19 1600	5/30/19 1000	2.3655	8.3881	6.5972	70.26%
12	19-2873	14						#DIV/0!
13	19-2874-MS	15	5/29/19 1600	5/30/19 1000	2.3015	7.8094	6.8232	82.09%
14	19-2875-MSD	16	5/29/19 1600	5/30/19 1000	2.2752	8.1182	7.0162	81.14%
15								#DIV/0!
16								#DIV/0!
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53								#DIV/0!

EPA 5035A
VOC SOILS

Soil VOC (=Xs*Vt*D/(Ws*TS%))

SA#	Ini Wt. (g)	Fin Wt. (g)	Weight	Seq. Multiplier	Vt	D	Total Solids (TS%)
19-2863	32.53	37.96	5.43	1.179	5	1	78.10%
19-2864	32.47	38.65	6.18	1.096	5	1	73.82%
19-2865	32.52	38.53	6.01	0.882	5	1	94.28%
19-2866	32.93	39.17	6.24	0.979	5	1	81.84%
19-2867	32.65	38.98	6.33	0.990	5	1	79.80%
19-2868	32.59	38.90	6.31	0.997	5	1	79.46%
19-2869	32.52	38.72	6.20	0.999	5	1	80.73%
19-2870	32.93	39.57	6.64	0.925	5	1	81.39%
19-2871	32.47	39.29	6.82	0.876	5	1	83.71%
19-2872	32.92	38.71	5.79	1.229	5	1	70.26%
19-2874-MS	32.94	39.45	6.51	0.936	5	1	82.09%
19-2875-MSD	32.84	39.14	6.30	0.978	5	1	81.14%
Dilutions							
19-2868x25	29.38	36.45	7.07	44.499	10	25	79.46%
19-2869x25	30.02	36.26	6.24	49.629	10	25	80.73%
19-2870x25	29.40	34.77	5.37	57.202	10	25	81.39%
19-2871x25	29.24	34.95	5.71	52.305	10	25	83.71%
19-2872x25	30.03	35.37	5.34	66.630	10	25	70.26%
19-2874-MSx25	30.02	36.02	6.00	50.754	10	25	82.09%
19-2875-MSDx25	29.26	32.91	3.65	84.414	10	25	81.14%
19-2863x1	32.76	37.17	4.41	1.452	5	1	78.10%
19-2864X25	30.11	35.60	5.49	61.684	10	25	73.82%
19-2865X25	29.28	36.77	7.49	35.403	10	25	94.28%
19-2866X25	30.11	36.42	6.31	48.413	10	25	81.84%
19-2867X25	30.01	36.32	6.31	49.650	10	25	79.80%

Concentration ug/kg = Xs / Ws × Vt / TS% × D

Xs = ng/mL response from instrument, or sequence multiplier x5 as ng
Vt = total volume of extract solvent, if extracted
D = dilution if extracted
Ws = weight of sample extracted or purged
TS% = Total solids %, Can be included in Vt or applied to Ws

LSAI LABORATORIES

QF-5 3.1 Rev 1
Effective: 12/1/14

THERMOMETER TEMPERATURE RECORD

January - June

DEPT. Sample Reception #1 TEMPERATURE RANGE 2.0°C TO 6.0°C

YEAR 2019 Thermometer Variance _____ Next Thermometer Calibration Date _____

MONTH	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL
DAY 1			3.5°C	WL	4.0°C	WL	4.0°C	WL	6.1	PKS	2.6min	WL
2	2.5°C	WL	2.4min	WL	3.2min	WL	3.5°C	WL	5.2	PKS	5.7max	WL
3	4.0°C	WL	5.4max	WL	5.7max	WL	4.0°C	WL	4.8	PKS	4.5°C	WL
4	2.5°C	WL	3.5°C	WL	3.5°C	WL	3.5°C	WL			3.5°C	WL
5	2.8min	WL	4.0°C	WL	3.5°C	WL	4.0°C	WL				
6	5.4max	WL	3.0°C	WL	2.5°C	WL	3.5min	WL				
7	4.0°C	WL	4.5°C	WL	5.0°C	WL	5.5max	WL	2.5°C	WL		
8	3.0°C	WL	4.0°C	WL	3.0°C	WL	4.0°C	WL	4.0°C	WL		
9	4.0°C	WL	2.2min	WL	2.8min	WL	2.5°C	WL	2.0°C	WL		
10	3.5°C	WL	5.6max	WL	5.4max	WL	2.5°C	WL	3.0°C	WL		
11	2.5°C	WL	2.5°C	WL	3.0°C	WL	2.5°C	WL	2.0min	WL		
12	2.4min	WL	3.5°C	WL	3.5°C	WL	4.0°C	WL	4.9max	WL		
13	5.1max	WL	3.5°C	WL	3.5°C	WL	3.2min	WL	3.5°C	WL		
14	3.0°C	WL	2.5°C	WL	4.0°C	WL	5.2max	WL	3.0°C	WL		
15	2.5°C	WL	2.5°C	WL	3.0°C	WL	4.0°C	WL	2.5°C	WL		
16	2.0°C	WL	2.9min	WL	2.8min	WL	3.0°C	WL	3.0°C	WL		
17	3.5°C	WL	5.3max	WL	5.7max	WL	4.0°C	WL	2.5°C	WL		
18	3.0°C	WL	3.0°C	WL			4.0°C	WL	2.3min	WL		
19	2.8min	WL	4.0°C	WL	3.0°C	WL	4.0°C	PKS	5.9max	WL		
20	5.8max	WL	3.5°C	WL	3.5°C	WL	2.8min	WL	4.0°C	WL		
21	3.5°C	WL	3.5°C	WL	4.0°C	WL	5.0max	WL	3.5°C	WL		
22	4.0°C	WL	2.0°C	WL	2.0°C	WL	3.5°C	WL	3.0°C	WL		
23	3.5°C	WL	2.8min	WL	2.4min	WL	3.0°C	WL	3.0°C	WL		
24	4.0°C	WL	5.8max	WL	5.0max	WL	3.0°C	WL	2.5°C	WL		
25	3.0°C	WL	3.5°C	WL	3.0°C	WL	2.0°C	WL	2.8min	WL		
26	2.7min	WL	3.0°C	WL	2.5°C	WL	4.0°C	WL	5.5max	WL		
27	5.4max	WL	4.0°C	WL	4.0°C	WL			↓			
28	3.0°C	WL	3.5°C	WL	3.5°C	WL			4.0°C	WL		
29	4.0°C	WL			3.0°C	WL	5.0	PKS	2.5°C	WL		
30					2.7min	WL	5.7	PKS	5.0°C	WL		
31	3.5°C	WL			5.4max	WL			4.5°C	WL		
SUPERV. REVIEW												

ANALYTICAL BALANCE CALIBRATION LOG

Manufacturer	Mettler Toledo
Model#	AG204
Serial#	1115192488

Adjusting Weight	200g (Internal)
Working Range	0.1mg - 210g
Weight Set Serial#	01574117-001

Date	Time	100mg (99.8-100.2)	1.0000g (0.9990-1.0010)	100.0000g (99.9000-100.1000)	Initials	Comments
05/01/19	13:10	100.0	1.0003	100.0023	R.M	10.0002
05/02/19	12:00	100.1	1.0002	100.0020	R.M	10.0004
05/03/19	13:35	100.1	1.0002	100.0023	R.M	10.0003
05/06/19	12:35	100.1	1.0002	100.0030	R.M	10.0005
05/07/19	13:45	100.0	1.0001	100.0040	R.M	10.0005
05/08/19	11:11	100.0	1.0002	100.0033	R.M	10.0005
05/09/19	11:48	99.9	1.0002	100.0040	R.M	10.005
05/10/19	11:40	100.0	1.0001	100.0038	R.M	10.003
05/13/19	10:10	100.0	1.0002	100.0036	R.M	10.006
05/14/19	12:45	100.1	1.0001	100.0034	M.G.	10.0004
05/15/19	10:20	100.0	1.0000	100.0038	MG	10.0004
05/16/19	12:30	99.9	1.0001	100.0040	R.M	10.0006
05/20/19	13:10	100.0	1.0000	100.0044	MG	10.0004
05/21/19	11:45	100.0	1.0001	100.0036	MG	10.0004
05/22/19	9:40	99.9	1.0001	100.0038	MG	10.0005
05/23/19	9:45	100.0	1.0002	100.0042	R.M	10.0005
05/24/19	9:45	100.0	1.0000	100.0047	MG	10.0007
05/28/19	9:35	100.1	1.0000	100.0051	MG	10.0006
05/29/19	9:05	100.0	1.0001	100.0052	MG	10.0009
05/30/19	9:10	100.0	1.0003	100.0052	MG	10.0007

Rev. 2 - fixed criteria typo - KK

THERMOMETER TEMPERATURE RECORD

January - June

DEPT. Wet Chem. TEMPERATURE RANGE 103 TO 105

YEAR 2019 Thermometer Variance +1.0 Next Thermometer Calibration Date 1/8/2020

MONTH	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL	RECORD	INITIAL
DAY 1					105°C	NR						
2												
3												
4												
5												
6					105°C	NR						
7												
8									ICS	DD		
9												
10									ICS	DD		
11							ICS	DD				
12												
13												
14	105°C	NR			105°C	DD						
15	105°C	NR										
16												
17												
18												
19			105°C	NR								
20									ICS	DD		
21												
22			105°C	NR								
23												
24							ICS	DD				
25					105°C	NR	ICS	DD				
26			105°C	NR								
27			105°C	NR								
28	105°C	NR										
29									ICS	DD		
30												
31												
SUPERV. REVIEW												

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 04, 2019

Mr. Jacob Teuschler
BCA Environmental Consultants, LLC
7202 E. 87th St.
Suite 110
Indianapolis, IN 46256

RE: Project: 216 College / 19-146
Pace Project No.: 50225466

Dear Mr. Teuschler:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Bedel
regina.bedel@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. John Kilmer, BCA Environmental Consultants, LLC
Rod Manny, BCA Environmental Consultants
Mr. Dan Rust, BCA Environmental Consultants, LLC

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: 216 College / 19-146
Pace Project No.: 50225466

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50225466001	**SP-1 (3-5)**	Solid	05/16/19 12:40	05/17/19 18:01
50225466002	**SP-1 (5-7)**	Solid	05/16/19 12:45	05/17/19 18:01
50225466003	**SP-2 (0-2)**	Solid	05/16/19 10:00	05/17/19 18:01
50225466004	**SP-2 (2-4)**	Solid	05/16/19 10:05	05/17/19 18:01
50225466005	**SP-3 (0-2)**	Solid	05/16/19 10:25	05/17/19 18:01
50225466006	**SP-3 (2-4)**	Solid	05/16/19 10:30	05/17/19 18:01
50225466007	**SP-4 (0-2)**	Solid	05/16/19 12:15	05/17/19 18:01
50225466008	**SP-4 (2-4)**	Solid	05/16/19 12:20	05/17/19 18:01
50225466009	**SP-4 (6-8)**	Solid	05/16/19 12:00	05/17/19 18:01
50225466010	**SP-4 (8-9)**	Solid	05/16/19 12:05	05/17/19 18:01
50225466011	**SP-4 (9-10.5)**	Solid	05/16/19 12:10	05/17/19 18:01
50225466012	**SP-5 (0-2)**	Solid	05/16/19 11:40	05/17/19 18:01
50225466013	**SP-5 (0-2) DUP**	Solid	05/16/19 11:40	05/17/19 18:01
50225466014	**SP-5 (2-4)**	Solid	05/16/19 11:45	05/17/19 18:01
50225466015	**SP-5 (9-11)**	Solid	05/16/19 11:30	05/17/19 18:01
50225466016	**SP-5 (11-13)**	Solid	05/16/19 11:35	05/17/19 18:01
50225466017	**SP-5 (11-13) DUP**	Solid	05/16/19 11:35	05/17/19 18:01
50225466018	**SP-5 (6-8)**	Solid	05/16/19 11:37	05/17/19 18:01

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SAMPLE ANALYTE COUNT

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50225466001	**SP-1 (3-5)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466002	**SP-1 (5-7)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466003	**SP-2 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466004	**SP-2 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466005	**SP-3 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466006	**SP-3 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466007	**SP-4 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466008	**SP-4 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466009	**SP-4 (6-8)**	EPA 8270 by SIM	JCM	20	PASI-I

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SAMPLE ANALYTE COUNT

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466010	**SP-4 (8-9)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466011	**SP-4 (9-10.5)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466012	**SP-5 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466013	**SP-5 (0-2) DUP**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466014	**SP-5 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466015	**SP-5 (9-11)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466016	**SP-5 (11-13)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466017	**SP-5 (11-13) DUP**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466018	**SP-5 (6-8)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466001	**SP-1 (3-5)**					
EPA 6010	Arsenic	12.0	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Barium	72.6	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Beryllium	0.91	mg/kg	0.53	05/28/19 16:50	
EPA 6010	Cadmium	0.18J	mg/kg	0.53	05/28/19 16:50	
EPA 6010	Chromium	13.6	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Copper	17.8	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Lead	16.3	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Nickel	17.0	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Selenium	0.64J	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Thallium	1.6	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Zinc	37.0	mg/kg	1.1	05/28/19 16:50	
EPA 7471	Mercury	0.11J	mg/kg	0.22	05/30/19 20:16	
EPA 8270 by SIM	Acenaphthene	301	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Acenaphthylene	86.8	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Anthracene	761	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(a)anthracene	1980	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(a)pyrene	1400	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(b)fluoranthene	1550	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(g,h,i)perylene	810	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(k)fluoranthene	1240	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Chrysene	2270	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Dibenz(a,h)anthracene	428	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Fluoranthene	4460	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Fluorene	270	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	814	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	1-Methylnaphthalene	249	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	2-Methylnaphthalene	282	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Naphthalene	234	ug/kg	29.8	06/02/19 15:59	ED
EPA 8270 by SIM	Phenanthrene	3250	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Pyrene	4200	ug/kg	29.8	06/02/19 15:59	
EPA 8270	Dibenzofuran	494	ug/kg	394	06/02/19 15:20	
SM 2540G	Percent Moisture	16.2	%	0.10	05/28/19 11:52	
50225466002	**SP-1 (5-7)**					
EPA 6010	Arsenic	8.2	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Barium	49.1	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Beryllium	1.4	mg/kg	0.57	05/28/19 16:53	
EPA 6010	Cadmium	0.13J	mg/kg	0.57	05/28/19 16:53	
EPA 6010	Chromium	8.7	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Copper	37.2	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Lead	43.9	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Nickel	19.1	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Selenium	1.2	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Thallium	0.95J	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Zinc	49.9	mg/kg	1.1	05/28/19 16:53	
EPA 7471	Mercury	0.13J	mg/kg	0.24	05/30/19 20:18	
EPA 8270 by SIM	Acenaphthene	149	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Acenaphthylene	33.3	ug/kg	30.9	06/02/19 16:15	

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466002	**SP-1 (5-7)**					
EPA 8270 by SIM	Anthracene	300	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(a)anthracene	268	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(a)pyrene	106	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(b)fluoranthene	108	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(g,h,i)perylene	62.6	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(k)fluoranthene	82.8	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Chrysene	322	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Dibenz(a,h)anthracene	17.9J	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Fluoranthene	486	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Fluorene	207	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	34.1	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	1-Methylnaphthalene	562	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	2-Methylnaphthalene	565	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Naphthalene	315	ug/kg	30.9	06/02/19 16:15	ED
EPA 8270 by SIM	Phenanthrene	1230	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Pyrene	515	ug/kg	30.9	06/02/19 16:15	
EPA 8270	Dibenzofuran	238J	ug/kg	408	06/02/19 15:36	
SM 2540G	Percent Moisture	19.5	%	0.10	05/28/19 11:52	
50225466003	**SP-2 (0-2)**					
EPA 6010	Arsenic	0.97J	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Barium	42.2	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Cadmium	0.37J	mg/kg	0.50	05/28/19 16:55	
EPA 6010	Chromium	7.1	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Copper	2.2	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Lead	2.1	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Nickel	8.6	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Silver	0.68	mg/kg	0.50	05/28/19 16:55	
EPA 6010	Zinc	22.0	mg/kg	1.0	05/28/19 16:55	
EPA 8270 by SIM	Pyrene	2.9J	ug/kg	5.1	06/04/19 13:55	
SM 2540G	Percent Moisture	3.4	%	0.10	05/28/19 11:52	
50225466004	**SP-2 (2-4)**					
EPA 6010	Arsenic	14.2	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Barium	75.2	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Beryllium	0.46J	mg/kg	0.51	05/28/19 16:57	
EPA 6010	Cadmium	0.26J	mg/kg	0.51	05/28/19 16:57	
EPA 6010	Chromium	15.8	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Copper	9.1	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Lead	14.7	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Nickel	11.2	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Thallium	0.86J	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Zinc	33.1	mg/kg	1.0	05/28/19 16:57	
EPA 8270 by SIM	Acenaphthene	61.2	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Acenaphthylene	134	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Anthracene	155	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(a)anthracene	294	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(a)pyrene	349	ug/kg	27.0	06/02/19 16:48	

REPORT OF LABORATORY ANALYSIS

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(317)228-3100

SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466004	**SP-2 (2-4)**					
EPA 8270 by SIM	Benzo(b)fluoranthene	255	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	243	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(k)fluoranthene	215	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Chrysene	334	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Dibenz(a,h)anthracene	106	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Fluoranthene	385	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	221	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	1-Methylnaphthalene	22.6J	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	2-Methylnaphthalene	23.6J	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Naphthalene	36.3	ug/kg	27.0	06/02/19 16:48	ED
EPA 8270 by SIM	Phenanthrene	97.4	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Pyrene	983	ug/kg	27.0	06/02/19 16:48	
SM 2540G	Percent Moisture	8.5	%	0.10	05/28/19 11:52	
50225466005	**SP-3 (0-2)**					
EPA 6010	Arsenic	6.3	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Barium	301	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Beryllium	0.51J	mg/kg	0.53	05/28/19 16:59	
EPA 6010	Cadmium	0.34J	mg/kg	0.53	05/28/19 16:59	
EPA 6010	Chromium	13.3	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Copper	17.6	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Lead	96.5	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Nickel	13.2	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Thallium	0.83J	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Zinc	97.4	mg/kg	1.1	05/28/19 16:59	
EPA 7471	Mercury	0.59	mg/kg	0.22	05/30/19 20:29	
EPA 8270 by SIM	Acenaphthylene	23.9J	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Anthracene	59.3	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(a)anthracene	380	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(a)pyrene	400	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(b)fluoranthene	441	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(g,h,i)perylene	406	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(k)fluoranthene	346	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Chrysene	488	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Dibenz(a,h)anthracene	107	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Fluoranthene	724	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	337	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Phenanthrene	196	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Pyrene	786	ug/kg	59.1	06/02/19 17:04	M6
SM 2540G	Percent Moisture	16.2	%	0.10	05/28/19 11:53	
50225466006	**SP-3 (2-4)**					
EPA 6010	Arsenic	13.6	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Barium	72.8	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Beryllium	0.77	mg/kg	0.59	05/28/19 17:10	
EPA 6010	Cadmium	0.13J	mg/kg	0.59	05/28/19 17:10	
EPA 6010	Chromium	19.2	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Copper	22.1	mg/kg	1.2	05/28/19 17:10	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466006	**SP-3 (2-4)**					
EPA 6010	Lead	20.0	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Nickel	15.8	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Thallium	1.1J	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Zinc	49.8	mg/kg	1.2	05/28/19 17:10	
EPA 8270 by SIM	Naphthalene	4.1J	ug/kg	6.4	06/02/19 17:53	
EPA 8270 by SIM	Phenanthrene	2.7J	ug/kg	6.4	06/02/19 17:53	
SM 2540G	Percent Moisture	22.2	%	0.10	05/28/19 12:39	
50225466007	**SP-4 (0-2)**					
EPA 6010	Arsenic	7.7	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Barium	187	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Beryllium	0.60	mg/kg	0.55	05/28/19 17:17	
EPA 6010	Cadmium	0.63	mg/kg	0.55	05/28/19 17:17	
EPA 6010	Chromium	17.3	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Copper	16.3	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Lead	44.7	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Nickel	12.8	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Selenium	0.50J	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Thallium	0.72J	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Zinc	111	mg/kg	1.1	05/28/19 17:17	
EPA 7471	Mercury	0.15J	mg/kg	0.25	05/30/19 20:37	
SM 2540G	Percent Moisture	18.5	%	0.10	05/28/19 12:39	
50225466008	**SP-4 (2-4)**					
EPA 6010	Arsenic	18.5	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Barium	98.4	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Beryllium	0.91	mg/kg	0.59	05/28/19 17:19	
EPA 6010	Cadmium	0.18J	mg/kg	0.59	05/28/19 17:19	
EPA 6010	Chromium	22.5	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Copper	26.4	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Lead	15.1	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Nickel	15.9	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Thallium	0.84J	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Zinc	57.4	mg/kg	1.2	05/28/19 17:19	
SM 2540G	Percent Moisture	21.9	%	0.10	05/28/19 12:40	
50225466009	**SP-4 (6-8)**					
EPA 8270 by SIM	Acenaphthene	4.4J	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Anthracene	6.6	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Benzo(a)anthracene	8.3	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Chrysene	14.6	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Fluoranthene	11.5	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Fluorene	7.4	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	1-Methylnaphthalene	672	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	2-Methylnaphthalene	1390	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Naphthalene	221	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Phenanthrene	22.2	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Pyrene	14.8	ug/kg	6.2	06/02/19 18:10	
SM 2540G	Percent Moisture	20.7	%	0.10	05/28/19 12:40	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466010	**SP-4 (8-9)**					
EPA 8270 by SIM	Benzo(a)anthracene	2.7J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Chrysene	4.3J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Fluoranthene	4.1J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Fluorene	2.4J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	1-Methylnaphthalene	195	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	2-Methylnaphthalene	398	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Naphthalene	121	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Phenanthrene	7.4	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Pyrene	5.0J	ug/kg	6.2	06/02/19 18:26	
SM 2540G	Percent Moisture	19.3	%	0.10	05/28/19 12:40	
50225466011	**SP-4 (9-10.5)**					
EPA 8270 by SIM	Anthracene	3.4J	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Benzo(a)anthracene	6.5	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Chrysene	11.9	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Fluoranthene	9.6	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Fluorene	5.8J	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	1-Methylnaphthalene	314	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	2-Methylnaphthalene	592	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Naphthalene	200	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Phenanthrene	17.8	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Pyrene	11.9	ug/kg	6.2	06/02/19 18:43	
SM 2540G	Percent Moisture	20.3	%	0.10	05/28/19 12:40	
50225466012	**SP-5 (0-2)**					
EPA 6010	Antimony	0.23J	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Arsenic	6.1	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Barium	147	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Beryllium	0.54	mg/kg	0.48	05/28/19 17:21	
EPA 6010	Cadmium	0.20J	mg/kg	0.48	05/28/19 17:21	
EPA 6010	Chromium	14.9	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Copper	12.1	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Lead	107	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Nickel	9.3	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Thallium	0.59J	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Zinc	57.5	mg/kg	0.95	05/28/19 17:21	
EPA 7471	Mercury	0.85	mg/kg	0.21	05/30/19 20:42	
SM 2540G	Percent Moisture	12.3	%	0.10	05/28/19 12:41	
50225466013	**SP-5 (0-2) DUP**					
EPA 6010	Arsenic	7.5	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Barium	136	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Beryllium	0.66	mg/kg	0.49	05/28/19 17:23	
EPA 6010	Cadmium	0.14J	mg/kg	0.49	05/28/19 17:23	
EPA 6010	Chromium	13.9	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Copper	116	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Lead	95.3	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Nickel	10.5	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Thallium	0.60J	mg/kg	0.98	05/28/19 17:23	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466013	**SP-5 (0-2) DUP**					
EPA 6010	Zinc	74.1	mg/kg	0.98	05/28/19 17:23	
EPA 7471	Mercury	1.0	mg/kg	0.21	05/30/19 20:44	
SM 2540G	Percent Moisture	12.1	%	0.10	05/28/19 12:41	
50225466014	**SP-5 (2-4)**					
EPA 6010	Arsenic	7.7	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Barium	91.6	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Beryllium	0.67	mg/kg	0.57	05/28/19 17:25	
EPA 6010	Cadmium	0.099J	mg/kg	0.57	05/28/19 17:25	
EPA 6010	Chromium	15.1	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Copper	11.8	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Lead	17.8	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Nickel	11.4	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Thallium	0.54J	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Zinc	49.4	mg/kg	1.1	05/28/19 17:25	
EPA 7471	Mercury	0.42	mg/kg	0.24	05/30/19 20:46	
SM 2540G	Percent Moisture	17.8	%	0.10	05/28/19 12:41	
50225466015	**SP-5 (9-11)**					
EPA 8270 by SIM	Acenaphthene	6.3J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Anthracene	5.9J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(a)anthracene	9.6	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(a)pyrene	2.9J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(b)fluoranthene	4.0J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(k)fluoranthene	3.2J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Chrysene	13.9	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Fluoranthene	17.2	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Fluorene	11.2	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	1-Methylnaphthalene	395	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	2-Methylnaphthalene	469	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Phenanthrene	29.1	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Pyrene	20.7	ug/kg	6.6	06/02/19 18:59	
SM 2540G	Percent Moisture	24.8	%	0.10	05/28/19 12:41	
50225466016	**SP-5 (11-13)**					
EPA 8270 by SIM	Acenaphthene	37.6	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Acenaphthylene	11.0	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Anthracene	41.0	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(a)anthracene	22.2	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(a)pyrene	6.3J	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(b)fluoranthene	8.1	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(k)fluoranthene	6.6J	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Chrysene	22.6	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Fluoranthene	134	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Fluorene	89.4	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	1-Methylnaphthalene	27.4	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	2-Methylnaphthalene	38.9	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Naphthalene	144	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Phenanthrene	179	ug/kg	7.3	06/02/19 19:16	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466016	**SP-5 (11-13)**					
EPA 8270 by SIM	Pyrene	110	ug/kg	7.3	06/02/19 19:16	
SM 2540G	Percent Moisture	32.6	%	0.10	05/28/19 12:42	
50225466017	**SP-5 (11-13) DUP**					
EPA 8270 by SIM	1-Methylnaphthalene	19.0	ug/kg	6.5	06/02/19 19:32	
EPA 8270 by SIM	2-Methylnaphthalene	21.3	ug/kg	6.5	06/02/19 19:32	
EPA 8270 by SIM	Naphthalene	14.8	ug/kg	6.5	06/02/19 19:32	
SM 2540G	Percent Moisture	23.7	%	0.10	05/28/19 12:42	
50225466018	**SP-5 (6-8)**					
EPA 6010	Arsenic	6.6	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Barium	118	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Beryllium	1.1	mg/kg	0.56	05/28/19 17:28	
EPA 6010	Cadmium	0.16J	mg/kg	0.56	05/28/19 17:28	
EPA 6010	Chromium	32.3	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Copper	13.5	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Lead	14.0	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Nickel	15.0	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Thallium	0.50J	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Zinc	57.3	mg/kg	1.1	05/28/19 17:28	
SM 2540G	Percent Moisture	19.0	%	0.10	05/28/19 12:42	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (3-5) **Lab ID: 50225466001** Collected: 05/16/19 12:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.124 g Final Volume/Weight: 50 mL								
Antimony	**<0.25**	mg/kg	1.1	0.25	1	05/28/19 07:10	05/28/19 16:50	7440-36-0	
Arsenic	**12.0**	mg/kg	1.1	0.15	1	05/28/19 07:10	05/28/19 16:50	7440-38-2	
Barium	**72.6**	mg/kg	1.1	0.032	1	05/28/19 07:10	05/28/19 16:50	7440-39-3	
Beryllium	**0.91**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:50	7440-41-7	
Cadmium	**0.18J**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:50	7440-43-9	
Chromium	**13.6**	mg/kg	1.1	0.31	1	05/28/19 07:10	05/28/19 16:50	7440-47-3	
Copper	**17.8**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:50	7440-50-8	
Lead	**16.3**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 16:50	7439-92-1	
Nickel	**17.0**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:50	7440-02-0	
Selenium	**0.64J**	mg/kg	1.1	0.39	1	05/28/19 07:10	05/28/19 16:50	7782-49-2	
Silver	**<0.30**	mg/kg	0.53	0.30	1	05/28/19 07:10	05/28/19 16:50	7440-22-4	
Thallium	**1.6**	mg/kg	1.1	0.25	1	05/28/19 07:10	05/28/19 16:50	7440-28-0	
Zinc	**37.0**	mg/kg	1.1	0.37	1	05/28/19 07:10	05/28/19 16:50	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.319 g Final Volume/Weight: 50 mL								
Mercury	**0.11J**	mg/kg	0.22	0.11	1	05/30/19 12:54	05/30/19 20:16	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Acenaphthene	**301**	ug/kg	29.8	7.5	5	05/29/19 09:25	06/02/19 15:59	83-32-9	
Acenaphthylene	**86.8**	ug/kg	29.8	8.9	5	05/29/19 09:25	06/02/19 15:59	208-96-8	
Anthracene	**761**	ug/kg	29.8	8.5	5	05/29/19 09:25	06/02/19 15:59	120-12-7	
Benzo(a)anthracene	**1980**	ug/kg	29.8	8.9	5	05/29/19 09:25	06/02/19 15:59	56-55-3	
Benzo(a)pyrene	**1400**	ug/kg	29.8	10.7	5	05/29/19 09:25	06/02/19 15:59	50-32-8	
Benzo(b)fluoranthene	**1550**	ug/kg	29.8	12.0	5	05/29/19 09:25	06/02/19 15:59	205-99-2	
Benzo(g,h,i)perylene	**810**	ug/kg	29.8	12.8	5	05/29/19 09:25	06/02/19 15:59	191-24-2	
Benzo(k)fluoranthene	**1240**	ug/kg	29.8	11.4	5	05/29/19 09:25	06/02/19 15:59	207-08-9	
Chrysene	**2270**	ug/kg	29.8	10.2	5	05/29/19 09:25	06/02/19 15:59	218-01-9	
Dibenz(a,h)anthracene	**428**	ug/kg	29.8	12.4	5	05/29/19 09:25	06/02/19 15:59	53-70-3	
Fluoranthene	**4460**	ug/kg	29.8	15.5	5	05/29/19 09:25	06/02/19 15:59	206-44-0	
Fluorene	**270**	ug/kg	29.8	7.5	5	05/29/19 09:25	06/02/19 15:59	86-73-7	
Indeno(1,2,3-cd)pyrene	**814**	ug/kg	29.8	11.5	5	05/29/19 09:25	06/02/19 15:59	193-39-5	
1-Methylnaphthalene	**249**	ug/kg	29.8	6.1	5	05/29/19 09:25	06/02/19 15:59	90-12-0	
2-Methylnaphthalene	**282**	ug/kg	29.8	6.3	5	05/29/19 09:25	06/02/19 15:59	91-57-6	
Naphthalene	**234**	ug/kg	29.8	5.9	5	05/29/19 09:25	06/02/19 15:59	91-20-3	ED
Phenanthrene	**3250**	ug/kg	29.8	11.3	5	05/29/19 09:25	06/02/19 15:59	85-01-8	
Pyrene	**4200**	ug/kg	29.8	11.9	5	05/29/19 09:25	06/02/19 15:59	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	36	%.	23-107		5	05/29/19 09:25	06/02/19 15:59	321-60-8	
p-Terphenyl-d14 (S)	49	%.	16-117		5	05/29/19 09:25	06/02/19 15:59	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (3-5) **Lab ID: 50225466001** Collected: 05/16/19 12:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20	100-51-6	
4-Bromophenylphenyl ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	101-55-3	
Butylbenzylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	85-68-7	
4-Chloro-3-methylphenol	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20	59-50-7	
4-Chloroaniline	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20	106-47-8	
bis(2-Chloroethoxy)methane	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	111-91-1	
bis(2-Chloroethyl) ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	111-44-4	
bis(2chloro1methylethyl) ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	108-60-1	
2-Chloronaphthalene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	91-58-7	
2-Chlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	95-57-8	
4-Chlorophenylphenyl ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	7005-72-3	
Dibenzofuran	**494**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	132-64-9	
3,3'-Dichlorobenzidine	**<394**	ug/kg	788	394	1	05/29/19 09:29	06/02/19 15:20	91-94-1	
2,4-Dichlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	120-83-2	
Diethylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	84-66-2	
2,4-Dimethylphenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	105-67-9	
Dimethylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	131-11-3	
Di-n-butylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	84-74-2	
4,6-Dinitro-2-methylphenol	**<394**	ug/kg	788	394	1	05/29/19 09:29	06/02/19 15:20	534-52-1	
2,4-Dinitrophenol	**<955**	ug/kg	1910	955	1	05/29/19 09:29	06/02/19 15:20	51-28-5	
2,4-Dinitrotoluene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	121-14-2	
2,6-Dinitrotoluene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	606-20-2	
Di-n-octylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	117-84-0	
bis(2-Ethylhexyl)phthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	117-81-7	
Hexachloro-1,3-butadiene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	87-68-3	
Hexachlorobenzene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	118-74-1	
Hexachlorocyclopentadiene	**<394**	ug/kg	394	394	1	05/29/19 09:29	06/02/19 15:20	77-47-4	
Hexachloroethane	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	67-72-1	
Isophorone	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	78-59-1	
2-Methylphenol(o-Cresol)	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20		
2-Nitroaniline	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	88-74-4	
3-Nitroaniline	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	99-09-2	
4-Nitroaniline	**<198**	ug/kg	394	198	1	05/29/19 09:29	06/02/19 15:20	100-01-6	
Nitrobenzene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	98-95-3	
2-Nitrophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	88-75-5	
4-Nitrophenol	**<955**	ug/kg	1910	955	1	05/29/19 09:29	06/02/19 15:20	100-02-7	
N-Nitroso-di-n-propylamine	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	621-64-7	
N-Nitrosodiphenylamine	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	86-30-6	
Pentachlorophenol	**<955**	ug/kg	1910	955	1	05/29/19 09:29	06/02/19 15:20	87-86-5	
Phenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	108-95-2	
2,4,5-Trichlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	95-95-4	
2,4,6-Trichlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	88-06-2	

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7726 Moller Road
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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (3-5) **Lab ID: 50225466001** Collected: 05/16/19 12:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	90	%.	18-98		1	05/29/19 09:29	06/02/19 15:20	4165-60-0	
Phenol-d5 (S)	85	%.	18-108		1	05/29/19 09:29	06/02/19 15:20	4165-62-2	
2-Fluorophenol (S)	67	%.	16-104		1	05/29/19 09:29	06/02/19 15:20	367-12-4	
2,4,6-Tribromophenol (S)	57	%.	10-114		1	05/29/19 09:29	06/02/19 15:20	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**16.2**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (5-7) **Lab ID: 50225466002** Collected: 05/16/19 12:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.086 g Final Volume/Weight: 50 mL								
Antimony	**<0.27**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 16:53	7440-36-0	
Arsenic	**8.2**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 16:53	7440-38-2	
Barium	**49.1**	mg/kg	1.1	0.034	1	05/28/19 07:10	05/28/19 16:53	7440-39-3	
Beryllium	**1.4**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 16:53	7440-41-7	
Cadmium	**0.13J**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 16:53	7440-43-9	
Chromium	**8.7**	mg/kg	1.1	0.33	1	05/28/19 07:10	05/28/19 16:53	7440-47-3	
Copper	**37.2**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 16:53	7440-50-8	
Lead	**43.9**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 16:53	7439-92-1	
Nickel	**19.1**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 16:53	7440-02-0	
Selenium	**1.2**	mg/kg	1.1	0.42	1	05/28/19 07:10	05/28/19 16:53	7782-49-2	
Silver	**<0.32**	mg/kg	0.57	0.32	1	05/28/19 07:10	05/28/19 16:53	7440-22-4	
Thallium	**0.95J**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 16:53	7440-28-0	
Zinc	**49.9**	mg/kg	1.1	0.40	1	05/28/19 07:10	05/28/19 16:53	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.312 g Final Volume/Weight: 50 mL								
Mercury	**0.13J**	mg/kg	0.24	0.12	1	05/30/19 12:54	05/30/19 20:18	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.1 g Final Volume/Weight: 1 mL								
Acenaphthene	**149**	ug/kg	30.9	7.8	5	05/29/19 09:25	06/02/19 16:15	83-32-9	
Acenaphthylene	**33.3**	ug/kg	30.9	9.2	5	05/29/19 09:25	06/02/19 16:15	208-96-8	
Anthracene	**300**	ug/kg	30.9	8.8	5	05/29/19 09:25	06/02/19 16:15	120-12-7	
Benzo(a)anthracene	**268**	ug/kg	30.9	9.2	5	05/29/19 09:25	06/02/19 16:15	56-55-3	
Benzo(a)pyrene	**106**	ug/kg	30.9	11.1	5	05/29/19 09:25	06/02/19 16:15	50-32-8	
Benzo(b)fluoranthene	**108**	ug/kg	30.9	12.5	5	05/29/19 09:25	06/02/19 16:15	205-99-2	
Benzo(g,h,i)perylene	**62.6**	ug/kg	30.9	13.3	5	05/29/19 09:25	06/02/19 16:15	191-24-2	
Benzo(k)fluoranthene	**82.8**	ug/kg	30.9	11.8	5	05/29/19 09:25	06/02/19 16:15	207-08-9	
Chrysene	**322**	ug/kg	30.9	10.6	5	05/29/19 09:25	06/02/19 16:15	218-01-9	
Dibenz(a,h)anthracene	**17.9J**	ug/kg	30.9	12.9	5	05/29/19 09:25	06/02/19 16:15	53-70-3	
Fluoranthene	**486**	ug/kg	30.9	16.1	5	05/29/19 09:25	06/02/19 16:15	206-44-0	
Fluorene	**207**	ug/kg	30.9	7.8	5	05/29/19 09:25	06/02/19 16:15	86-73-7	
Indeno(1,2,3-cd)pyrene	**34.1**	ug/kg	30.9	12.0	5	05/29/19 09:25	06/02/19 16:15	193-39-5	
1-Methylnaphthalene	**562**	ug/kg	30.9	6.3	5	05/29/19 09:25	06/02/19 16:15	90-12-0	
2-Methylnaphthalene	**565**	ug/kg	30.9	6.5	5	05/29/19 09:25	06/02/19 16:15	91-57-6	
Naphthalene	**315**	ug/kg	30.9	6.2	5	05/29/19 09:25	06/02/19 16:15	91-20-3	ED
Phenanthrene	**1230**	ug/kg	30.9	11.7	5	05/29/19 09:25	06/02/19 16:15	85-01-8	
Pyrene	**515**	ug/kg	30.9	12.4	5	05/29/19 09:25	06/02/19 16:15	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	48	%.	23-107		5	05/29/19 09:25	06/02/19 16:15	321-60-8	
p-Terphenyl-d14 (S)	60	%.	16-117		5	05/29/19 09:25	06/02/19 16:15	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (5-7) **Lab ID: 50225466002** Collected: 05/16/19 12:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.1 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36	100-51-6	
4-Bromophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	101-55-3	
Butylbenzylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	85-68-7	
4-Chloro-3-methylphenol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36	59-50-7	
4-Chloroaniline	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36	106-47-8	
bis(2-Chloroethoxy)methane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	111-91-1	
bis(2-Chloroethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	111-44-4	
bis(2chloro1methylethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	108-60-1	
2-Chloronaphthalene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	91-58-7	
2-Chlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	95-57-8	
4-Chlorophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	7005-72-3	
Dibenzofuran	**238J**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	132-64-9	
3,3'-Dichlorobenzidine	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 15:36	91-94-1	
2,4-Dichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	120-83-2	
Diethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	84-66-2	
2,4-Dimethylphenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	105-67-9	
Dimethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	131-11-3	
Di-n-butylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	84-74-2	
4,6-Dinitro-2-methylphenol	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 15:36	534-52-1	
2,4-Dinitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 15:36	51-28-5	
2,4-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	121-14-2	
2,6-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	606-20-2	
Di-n-octylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	117-84-0	
bis(2-Ethylhexyl)phthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	117-81-7	
Hexachloro-1,3-butadiene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	87-68-3	
Hexachlorobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	118-74-1	
Hexachlorocyclopentadiene	**<408**	ug/kg	408	408	1	05/29/19 09:29	06/02/19 15:36	77-47-4	
Hexachloroethane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	67-72-1	
Isophorone	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	78-59-1	
2-Methylphenol(o-Cresol)	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36		
2-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	88-74-4	
3-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	99-09-2	
4-Nitroaniline	**<205**	ug/kg	408	205	1	05/29/19 09:29	06/02/19 15:36	100-01-6	
Nitrobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	98-95-3	
2-Nitrophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	88-75-5	
4-Nitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 15:36	100-02-7	
N-Nitroso-di-n-propylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	621-64-7	
N-Nitrosodiphenylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	86-30-6	
Pentachlorophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 15:36	87-86-5	
Phenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	108-95-2	
2,4,5-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	95-95-4	
2,4,6-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (5-7) **Lab ID: 50225466002** Collected: 05/16/19 12:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.1 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	52	%.	18-98		1	05/29/19 09:29	06/02/19 15:36	4165-60-0	
Phenol-d5 (S)	57	%.	18-108		1	05/29/19 09:29	06/02/19 15:36	4165-62-2	
2-Fluorophenol (S)	50	%.	16-104		1	05/29/19 09:29	06/02/19 15:36	367-12-4	
2,4,6-Tribromophenol (S)	38	%.	10-114		1	05/29/19 09:29	06/02/19 15:36	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**19.5**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (0-2) **Lab ID: 50225466003** Collected: 05/16/19 10:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.031 g Final Volume/Weight: 50 mL								
Antimony	**<0.24**	mg/kg	1.0	0.24	1	05/28/19 07:10	05/28/19 16:55	7440-36-0	
Arsenic	**0.97J**	mg/kg	1.0	0.14	1	05/28/19 07:10	05/28/19 16:55	7440-38-2	
Barium	**42.2**	mg/kg	1.0	0.030	1	05/28/19 07:10	05/28/19 16:55	7440-39-3	
Beryllium	**<0.020**	mg/kg	0.50	0.020	1	05/28/19 07:10	05/28/19 16:55	7440-41-7	
Cadmium	**0.37J**	mg/kg	0.50	0.020	1	05/28/19 07:10	05/28/19 16:55	7440-43-9	
Chromium	**7.1**	mg/kg	1.0	0.29	1	05/28/19 07:10	05/28/19 16:55	7440-47-3	
Copper	**2.2**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:55	7440-50-8	
Lead	**2.1**	mg/kg	1.0	0.15	1	05/28/19 07:10	05/28/19 16:55	7439-92-1	
Nickel	**8.6**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:55	7440-02-0	
Selenium	**<0.37**	mg/kg	1.0	0.37	1	05/28/19 07:10	05/28/19 16:55	7782-49-2	
Silver	**0.68**	mg/kg	0.50	0.28	1	05/28/19 07:10	05/28/19 16:55	7440-22-4	
Thallium	**<0.24**	mg/kg	1.0	0.24	1	05/28/19 07:10	05/28/19 16:55	7440-28-0	
Zinc	**22.0**	mg/kg	1.0	0.35	1	05/28/19 07:10	05/28/19 16:55	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.288 g Final Volume/Weight: 50 mL								
Mercury	**<0.10**	mg/kg	0.22	0.10	1	05/30/19 12:54	05/30/19 20:20	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.3**	ug/kg	5.1	1.3	1	05/29/19 09:25	06/04/19 13:55	83-32-9	
Acenaphthylene	**<1.5**	ug/kg	5.1	1.5	1	05/29/19 09:25	06/04/19 13:55	208-96-8	
Anthracene	**<1.5**	ug/kg	5.1	1.5	1	05/29/19 09:25	06/04/19 13:55	120-12-7	
Benzo(a)anthracene	**<1.5**	ug/kg	5.1	1.5	1	05/29/19 09:25	06/04/19 13:55	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/kg	5.1	1.8	1	05/29/19 09:25	06/04/19 13:55	50-32-8	
Benzo(b)fluoranthene	**<2.1**	ug/kg	5.1	2.1	1	05/29/19 09:25	06/04/19 13:55	205-99-2	
Benzo(g,h,i)perylene	**<2.2**	ug/kg	5.1	2.2	1	05/29/19 09:25	06/04/19 13:55	191-24-2	
Benzo(k)fluoranthene	**<2.0**	ug/kg	5.1	2.0	1	05/29/19 09:25	06/04/19 13:55	207-08-9	
Chrysene	**<1.8**	ug/kg	5.1	1.8	1	05/29/19 09:25	06/04/19 13:55	218-01-9	
Dibenz(a,h)anthracene	**<2.1**	ug/kg	5.1	2.1	1	05/29/19 09:25	06/04/19 13:55	53-70-3	
Fluoranthene	**<2.7**	ug/kg	5.1	2.7	1	05/29/19 09:25	06/04/19 13:55	206-44-0	
Fluorene	**<1.3**	ug/kg	5.1	1.3	1	05/29/19 09:25	06/04/19 13:55	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.0**	ug/kg	5.1	2.0	1	05/29/19 09:25	06/04/19 13:55	193-39-5	
1-Methylnaphthalene	**<1.1**	ug/kg	5.1	1.1	1	05/29/19 09:25	06/04/19 13:55	90-12-0	
2-Methylnaphthalene	**<1.1**	ug/kg	5.1	1.1	1	05/29/19 09:25	06/04/19 13:55	91-57-6	
Naphthalene	**<1.0**	ug/kg	5.1	1.0	1	05/29/19 09:25	06/04/19 13:55	91-20-3	
Phenanthrene	**<1.9**	ug/kg	5.1	1.9	1	05/29/19 09:25	06/04/19 13:55	85-01-8	
Pyrene	**2.9J**	ug/kg	5.1	2.1	1	05/29/19 09:25	06/04/19 13:55	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%.	23-107		1	05/29/19 09:25	06/04/19 13:55	321-60-8	
p-Terphenyl-d14 (S)	96	%.	16-117		1	05/29/19 09:25	06/04/19 13:55	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (0-2) **Lab ID: 50225466003** Collected: 05/16/19 10:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52	100-51-6	
4-Bromophenylphenyl ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	101-55-3	
Butylbenzylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	85-68-7	
4-Chloro-3-methylphenol	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52	59-50-7	
4-Chloroaniline	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52	106-47-8	
bis(2-Chloroethoxy)methane	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	111-91-1	
bis(2-Chloroethyl) ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	111-44-4	
bis(2chloro1methylethyl) ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	108-60-1	
2-Chloronaphthalene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	91-58-7	
2-Chlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	95-57-8	
4-Chlorophenylphenyl ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	7005-72-3	
Dibenzofuran	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	132-64-9	
3,3'-Dichlorobenzidine	**<339**	ug/kg	679	339	1	05/29/19 09:29	06/02/19 15:52	91-94-1	
2,4-Dichlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	120-83-2	
Diethylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	84-66-2	
2,4-Dimethylphenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	105-67-9	
Dimethylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	131-11-3	
Di-n-butylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	84-74-2	
4,6-Dinitro-2-methylphenol	**<339**	ug/kg	679	339	1	05/29/19 09:29	06/02/19 15:52	534-52-1	
2,4-Dinitrophenol	**<823**	ug/kg	1650	823	1	05/29/19 09:29	06/02/19 15:52	51-28-5	
2,4-Dinitrotoluene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	121-14-2	
2,6-Dinitrotoluene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	606-20-2	
Di-n-octylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	117-84-0	
bis(2-Ethylhexyl)phthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	117-81-7	
Hexachloro-1,3-butadiene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	87-68-3	
Hexachlorobenzene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	118-74-1	
Hexachlorocyclopentadiene	**<339**	ug/kg	339	339	1	05/29/19 09:29	06/02/19 15:52	77-47-4	
Hexachloroethane	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	67-72-1	
Isophorone	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	78-59-1	
2-Methylphenol(o-Cresol)	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52		
2-Nitroaniline	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	88-74-4	
3-Nitroaniline	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	99-09-2	
4-Nitroaniline	**<171**	ug/kg	339	171	1	05/29/19 09:29	06/02/19 15:52	100-01-6	
Nitrobenzene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	98-95-3	
2-Nitrophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	88-75-5	
4-Nitrophenol	**<823**	ug/kg	1650	823	1	05/29/19 09:29	06/02/19 15:52	100-02-7	
N-Nitroso-di-n-propylamine	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	621-64-7	
N-Nitrosodiphenylamine	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	86-30-6	
Pentachlorophenol	**<823**	ug/kg	1650	823	1	05/29/19 09:29	06/02/19 15:52	87-86-5	
Phenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	108-95-2	
2,4,5-Trichlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	95-95-4	
2,4,6-Trichlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	88-06-2	

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (0-2) **Lab ID: 50225466003** Collected: 05/16/19 10:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	73	%.	18-98		1	05/29/19 09:29	06/02/19 15:52	4165-60-0	
Phenol-d5 (S)	78	%.	18-108		1	05/29/19 09:29	06/02/19 15:52	4165-62-2	
2-Fluorophenol (S)	69	%.	16-104		1	05/29/19 09:29	06/02/19 15:52	367-12-4	
2,4,6-Tribromophenol (S)	69	%.	10-114		1	05/29/19 09:29	06/02/19 15:52	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**3.4**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (2-4) **Lab ID: 50225466004** Collected: 05/16/19 10:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.068 g Final Volume/Weight: 50 mL								
Antimony	**<0.25**	mg/kg	1.0	0.25	1	05/28/19 07:10	05/28/19 16:57	7440-36-0	
Arsenic	**14.2**	mg/kg	1.0	0.14	1	05/28/19 07:10	05/28/19 16:57	7440-38-2	
Barium	**75.2**	mg/kg	1.0	0.031	1	05/28/19 07:10	05/28/19 16:57	7440-39-3	
Beryllium	**0.46J**	mg/kg	0.51	0.020	1	05/28/19 07:10	05/28/19 16:57	7440-41-7	
Cadmium	**0.26J**	mg/kg	0.51	0.020	1	05/28/19 07:10	05/28/19 16:57	7440-43-9	
Chromium	**15.8**	mg/kg	1.0	0.30	1	05/28/19 07:10	05/28/19 16:57	7440-47-3	
Copper	**9.1**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:57	7440-50-8	
Lead	**14.7**	mg/kg	1.0	0.15	1	05/28/19 07:10	05/28/19 16:57	7439-92-1	
Nickel	**11.2**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:57	7440-02-0	
Selenium	**<0.38**	mg/kg	1.0	0.38	1	05/28/19 07:10	05/28/19 16:57	7782-49-2	
Silver	**<0.29**	mg/kg	0.51	0.29	1	05/28/19 07:10	05/28/19 16:57	7440-22-4	
Thallium	**0.86J**	mg/kg	1.0	0.25	1	05/28/19 07:10	05/28/19 16:57	7440-28-0	
Zinc	**33.1**	mg/kg	1.0	0.36	1	05/28/19 07:10	05/28/19 16:57	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.293 g Final Volume/Weight: 50 mL								
Mercury	**<0.11**	mg/kg	0.22	0.11	1	05/30/19 12:54	05/30/19 20:22	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**61.2**	ug/kg	27.0	6.8	5	05/29/19 09:25	06/02/19 16:48	83-32-9	
Acenaphthylene	**134**	ug/kg	27.0	8.0	5	05/29/19 09:25	06/02/19 16:48	208-96-8	
Anthracene	**155**	ug/kg	27.0	7.7	5	05/29/19 09:25	06/02/19 16:48	120-12-7	
Benzo(a)anthracene	**294**	ug/kg	27.0	8.1	5	05/29/19 09:25	06/02/19 16:48	56-55-3	
Benzo(a)pyrene	**349**	ug/kg	27.0	9.7	5	05/29/19 09:25	06/02/19 16:48	50-32-8	
Benzo(b)fluoranthene	**255**	ug/kg	27.0	10.9	5	05/29/19 09:25	06/02/19 16:48	205-99-2	
Benzo(g,h,i)perylene	**243**	ug/kg	27.0	11.6	5	05/29/19 09:25	06/02/19 16:48	191-24-2	
Benzo(k)fluoranthene	**215**	ug/kg	27.0	10.3	5	05/29/19 09:25	06/02/19 16:48	207-08-9	
Chrysene	**334**	ug/kg	27.0	9.3	5	05/29/19 09:25	06/02/19 16:48	218-01-9	
Dibenz(a,h)anthracene	**106**	ug/kg	27.0	11.2	5	05/29/19 09:25	06/02/19 16:48	53-70-3	
Fluoranthene	**385**	ug/kg	27.0	14.1	5	05/29/19 09:25	06/02/19 16:48	206-44-0	
Fluorene	**<6.8**	ug/kg	27.0	6.8	5	05/29/19 09:25	06/02/19 16:48	86-73-7	
Indeno(1,2,3-cd)pyrene	**221**	ug/kg	27.0	10.4	5	05/29/19 09:25	06/02/19 16:48	193-39-5	
1-Methylnaphthalene	**22.6J**	ug/kg	27.0	5.5	5	05/29/19 09:25	06/02/19 16:48	90-12-0	
2-Methylnaphthalene	**23.6J**	ug/kg	27.0	5.7	5	05/29/19 09:25	06/02/19 16:48	91-57-6	
Naphthalene	**36.3**	ug/kg	27.0	5.4	5	05/29/19 09:25	06/02/19 16:48	91-20-3	ED
Phenanthrene	**97.4**	ug/kg	27.0	10.2	5	05/29/19 09:25	06/02/19 16:48	85-01-8	
Pyrene	**983**	ug/kg	27.0	10.8	5	05/29/19 09:25	06/02/19 16:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%.	23-107		5	05/29/19 09:25	06/02/19 16:48	321-60-8	
p-Terphenyl-d14 (S)	77	%.	16-117		5	05/29/19 09:25	06/02/19 16:48	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (2-4) **Lab ID: 50225466004** Collected: 05/16/19 10:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08	100-51-6	
4-Bromophenylphenyl ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	101-55-3	
Butylbenzylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	85-68-7	
4-Chloro-3-methylphenol	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08	59-50-7	
4-Chloroaniline	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08	106-47-8	
bis(2-Chloroethoxy)methane	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	111-91-1	
bis(2-Chloroethyl) ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	111-44-4	
bis(2chloro1methylethyl) ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	108-60-1	
2-Chloronaphthalene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	91-58-7	
2-Chlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	95-57-8	
4-Chlorophenylphenyl ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	7005-72-3	
Dibenzofuran	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	132-64-9	
3,3'-Dichlorobenzidine	**<357**	ug/kg	714	357	1	05/29/19 09:29	06/02/19 16:08	91-94-1	
2,4-Dichlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	120-83-2	
Diethylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	84-66-2	
2,4-Dimethylphenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	105-67-9	
Dimethylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	131-11-3	
Di-n-butylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	84-74-2	
4,6-Dinitro-2-methylphenol	**<357**	ug/kg	714	357	1	05/29/19 09:29	06/02/19 16:08	534-52-1	
2,4-Dinitrophenol	**<865**	ug/kg	1730	865	1	05/29/19 09:29	06/02/19 16:08	51-28-5	
2,4-Dinitrotoluene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	121-14-2	
2,6-Dinitrotoluene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	606-20-2	
Di-n-octylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	117-84-0	
bis(2-Ethylhexyl)phthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	117-81-7	
Hexachloro-1,3-butadiene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	87-68-3	
Hexachlorobenzene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	118-74-1	
Hexachlorocyclopentadiene	**<357**	ug/kg	357	357	1	05/29/19 09:29	06/02/19 16:08	77-47-4	
Hexachloroethane	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	67-72-1	
Isophorone	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	78-59-1	
2-Methylphenol(o-Cresol)	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08		
2-Nitroaniline	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	88-74-4	
3-Nitroaniline	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	99-09-2	
4-Nitroaniline	**<180**	ug/kg	357	180	1	05/29/19 09:29	06/02/19 16:08	100-01-6	
Nitrobenzene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	98-95-3	
2-Nitrophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	88-75-5	
4-Nitrophenol	**<865**	ug/kg	1730	865	1	05/29/19 09:29	06/02/19 16:08	100-02-7	
N-Nitroso-di-n-propylamine	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	621-64-7	
N-Nitrosodiphenylamine	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	86-30-6	
Pentachlorophenol	**<865**	ug/kg	1730	865	1	05/29/19 09:29	06/02/19 16:08	87-86-5	
Phenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	108-95-2	
2,4,5-Trichlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	95-95-4	
2,4,6-Trichlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	88-06-2	

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (2-4) **Lab ID: 50225466004** Collected: 05/16/19 10:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	71	%.	18-98		1	05/29/19 09:29	06/02/19 16:08	4165-60-0	
Phenol-d5 (S)	73	%.	18-108		1	05/29/19 09:29	06/02/19 16:08	4165-62-2	
2-Fluorophenol (S)	49	%.	16-104		1	05/29/19 09:29	06/02/19 16:08	367-12-4	
2,4,6-Tribromophenol (S)	25	%.	10-114		1	05/29/19 09:29	06/02/19 16:08	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**8.5**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (0-2) **Lab ID: 50225466005** Collected: 05/16/19 10:25 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.115 g Final Volume/Weight: 50 mL								
Antimony	**<0.26**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 16:59	7440-36-0	
Arsenic	**6.3**	mg/kg	1.1	0.15	1	05/28/19 07:10	05/28/19 16:59	7440-38-2	
Barium	**301**	mg/kg	1.1	0.032	1	05/28/19 07:10	05/28/19 16:59	7440-39-3	
Beryllium	**0.51J**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:59	7440-41-7	
Cadmium	**0.34J**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:59	7440-43-9	
Chromium	**13.3**	mg/kg	1.1	0.31	1	05/28/19 07:10	05/28/19 16:59	7440-47-3	
Copper	**17.6**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:59	7440-50-8	
Lead	**96.5**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 16:59	7439-92-1	
Nickel	**13.2**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:59	7440-02-0	
Selenium	**<0.40**	mg/kg	1.1	0.40	1	05/28/19 07:10	05/28/19 16:59	7782-49-2	
Silver	**<0.30**	mg/kg	0.53	0.30	1	05/28/19 07:10	05/28/19 16:59	7440-22-4	
Thallium	**0.83J**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 16:59	7440-28-0	
Zinc	**97.4**	mg/kg	1.1	0.37	1	05/28/19 07:10	05/28/19 16:59	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.323 g Final Volume/Weight: 50 mL								
Mercury	**0.59**	mg/kg	0.22	0.11	1	05/30/19 12:54	05/30/19 20:29	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**<14.8**	ug/kg	59.1	14.8	10	05/29/19 09:25	06/02/19 17:04	83-32-9	
Acenaphthylene	**23.9J**	ug/kg	59.1	17.5	10	05/29/19 09:25	06/02/19 17:04	208-96-8	
Anthracene	**59.3**	ug/kg	59.1	16.9	10	05/29/19 09:25	06/02/19 17:04	120-12-7	
Benzo(a)anthracene	**380**	ug/kg	59.1	17.6	10	05/29/19 09:25	06/02/19 17:04	56-55-3	
Benzo(a)pyrene	**400**	ug/kg	59.1	21.1	10	05/29/19 09:25	06/02/19 17:04	50-32-8	
Benzo(b)fluoranthene	**441**	ug/kg	59.1	23.8	10	05/29/19 09:25	06/02/19 17:04	205-99-2	
Benzo(g,h,i)perylene	**406**	ug/kg	59.1	25.3	10	05/29/19 09:25	06/02/19 17:04	191-24-2	
Benzo(k)fluoranthene	**346**	ug/kg	59.1	22.5	10	05/29/19 09:25	06/02/19 17:04	207-08-9	
Chrysene	**488**	ug/kg	59.1	20.2	10	05/29/19 09:25	06/02/19 17:04	218-01-9	
Dibenz(a,h)anthracene	**107**	ug/kg	59.1	24.5	10	05/29/19 09:25	06/02/19 17:04	53-70-3	
Fluoranthene	**724**	ug/kg	59.1	30.7	10	05/29/19 09:25	06/02/19 17:04	206-44-0	
Fluorene	**<14.8**	ug/kg	59.1	14.8	10	05/29/19 09:25	06/02/19 17:04	86-73-7	
Indeno(1,2,3-cd)pyrene	**337**	ug/kg	59.1	22.8	10	05/29/19 09:25	06/02/19 17:04	193-39-5	
1-Methylnaphthalene	**<12.1**	ug/kg	59.1	12.1	10	05/29/19 09:25	06/02/19 17:04	90-12-0	
2-Methylnaphthalene	**<12.4**	ug/kg	59.1	12.4	10	05/29/19 09:25	06/02/19 17:04	91-57-6	
Naphthalene	**<11.8**	ug/kg	59.1	11.8	10	05/29/19 09:25	06/02/19 17:04	91-20-3	ED
Phenanthrene	**196**	ug/kg	59.1	22.3	10	05/29/19 09:25	06/02/19 17:04	85-01-8	
Pyrene	**786**	ug/kg	59.1	23.6	10	05/29/19 09:25	06/02/19 17:04	129-00-0	M6
Surrogates									
2-Fluorobiphenyl (S)	62	%.	23-107		10	05/29/19 09:25	06/02/19 17:04	321-60-8	
p-Terphenyl-d14 (S)	80	%.	16-117		10	05/29/19 09:25	06/02/19 17:04	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (0-2) **Lab ID: 50225466005** Collected: 05/16/19 10:25 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24	100-51-6	
4-Bromophenylphenyl ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	101-55-3	
Butylbenzylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	85-68-7	
4-Chloro-3-methylphenol	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24	59-50-7	
4-Chloroaniline	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24	106-47-8	
bis(2-Chloroethoxy)methane	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	111-91-1	
bis(2-Chloroethyl) ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	111-44-4	
bis(2chloro1methylethyl) ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	108-60-1	
2-Chloronaphthalene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	91-58-7	
2-Chlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	95-57-8	
4-Chlorophenylphenyl ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	7005-72-3	
Dibenzofuran	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	132-64-9	
3,3'-Dichlorobenzidine	**<390**	ug/kg	780	390	1	05/29/19 09:29	06/02/19 16:24	91-94-1	
2,4-Dichlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	120-83-2	
Diethylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	84-66-2	
2,4-Dimethylphenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	105-67-9	
Dimethylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	131-11-3	
Di-n-butylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	84-74-2	
4,6-Dinitro-2-methylphenol	**<390**	ug/kg	780	390	1	05/29/19 09:29	06/02/19 16:24	534-52-1	
2,4-Dinitrophenol	**<945**	ug/kg	1890	945	1	05/29/19 09:29	06/02/19 16:24	51-28-5	
2,4-Dinitrotoluene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	121-14-2	
2,6-Dinitrotoluene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	606-20-2	
Di-n-octylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	117-84-0	
bis(2-Ethylhexyl)phthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	117-81-7	
Hexachloro-1,3-butadiene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	87-68-3	
Hexachlorobenzene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	118-74-1	
Hexachlorocyclopentadiene	**<390**	ug/kg	390	390	1	05/29/19 09:29	06/02/19 16:24	77-47-4	
Hexachloroethane	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	67-72-1	
Isophorone	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	78-59-1	
2-Methylphenol(o-Cresol)	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24		
2-Nitroaniline	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	88-74-4	
3-Nitroaniline	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	99-09-2	
4-Nitroaniline	**<196**	ug/kg	390	196	1	05/29/19 09:29	06/02/19 16:24	100-01-6	
Nitrobenzene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	98-95-3	
2-Nitrophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	88-75-5	
4-Nitrophenol	**<945**	ug/kg	1890	945	1	05/29/19 09:29	06/02/19 16:24	100-02-7	
N-Nitroso-di-n-propylamine	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	621-64-7	
N-Nitrosodiphenylamine	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	86-30-6	
Pentachlorophenol	**<945**	ug/kg	1890	945	1	05/29/19 09:29	06/02/19 16:24	87-86-5	
Phenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	108-95-2	
2,4,5-Trichlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	95-95-4	
2,4,6-Trichlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (0-2) **Lab ID: 50225466005** Collected: 05/16/19 10:25 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	72	%.	18-98		1	05/29/19 09:29	06/02/19 16:24	4165-60-0	
Phenol-d5 (S)	78	%.	18-108		1	05/29/19 09:29	06/02/19 16:24	4165-62-2	
2-Fluorophenol (S)	64	%.	16-104		1	05/29/19 09:29	06/02/19 16:24	367-12-4	
2,4,6-Tribromophenol (S)	63	%.	10-114		1	05/29/19 09:29	06/02/19 16:24	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**16.2**	%	0.10	0.10	1		05/28/19 11:53		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (2-4) **Lab ID: 50225466006** Collected: 05/16/19 10:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.091 g Final Volume/Weight: 50 mL								
Antimony	**<0.28**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:10	7440-36-0	
Arsenic	**13.6**	mg/kg	1.2	0.17	1	05/28/19 07:10	05/28/19 17:10	7440-38-2	
Barium	**72.8**	mg/kg	1.2	0.035	1	05/28/19 07:10	05/28/19 17:10	7440-39-3	
Beryllium	**0.77**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:10	7440-41-7	
Cadmium	**0.13J**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:10	7440-43-9	
Chromium	**19.2**	mg/kg	1.2	0.34	1	05/28/19 07:10	05/28/19 17:10	7440-47-3	
Copper	**22.1**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:10	7440-50-8	
Lead	**20.0**	mg/kg	1.2	0.18	1	05/28/19 07:10	05/28/19 17:10	7439-92-1	
Nickel	**15.8**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:10	7440-02-0	
Selenium	**<0.44**	mg/kg	1.2	0.44	1	05/28/19 07:10	05/28/19 17:10	7782-49-2	
Silver	**<0.33**	mg/kg	0.59	0.33	1	05/28/19 07:10	05/28/19 17:10	7440-22-4	
Thallium	**1.1J**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:10	7440-28-0	
Zinc	**49.8**	mg/kg	1.2	0.41	1	05/28/19 07:10	05/28/19 17:10	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.324 g Final Volume/Weight: 50 mL								
Mercury	**<0.12**	mg/kg	0.24	0.12	1	05/30/19 12:54	05/30/19 20:35	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.4	1.6	1	05/29/19 09:25	06/02/19 17:53	83-32-9	
Acenaphthylene	**<1.9**	ug/kg	6.4	1.9	1	05/29/19 09:25	06/02/19 17:53	208-96-8	
Anthracene	**<1.8**	ug/kg	6.4	1.8	1	05/29/19 09:25	06/02/19 17:53	120-12-7	
Benzo(a)anthracene	**<1.9**	ug/kg	6.4	1.9	1	05/29/19 09:25	06/02/19 17:53	56-55-3	
Benzo(a)pyrene	**<2.3**	ug/kg	6.4	2.3	1	05/29/19 09:25	06/02/19 17:53	50-32-8	
Benzo(b)fluoranthene	**<2.6**	ug/kg	6.4	2.6	1	05/29/19 09:25	06/02/19 17:53	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.4	2.7	1	05/29/19 09:25	06/02/19 17:53	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.4	2.4	1	05/29/19 09:25	06/02/19 17:53	207-08-9	
Chrysene	**<2.2**	ug/kg	6.4	2.2	1	05/29/19 09:25	06/02/19 17:53	218-01-9	
Dibenz(a,h)anthracene	**<2.7**	ug/kg	6.4	2.7	1	05/29/19 09:25	06/02/19 17:53	53-70-3	
Fluoranthene	**<3.3**	ug/kg	6.4	3.3	1	05/29/19 09:25	06/02/19 17:53	206-44-0	
Fluorene	**<1.6**	ug/kg	6.4	1.6	1	05/29/19 09:25	06/02/19 17:53	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.5**	ug/kg	6.4	2.5	1	05/29/19 09:25	06/02/19 17:53	193-39-5	
1-Methylnaphthalene	**<1.3**	ug/kg	6.4	1.3	1	05/29/19 09:25	06/02/19 17:53	90-12-0	
2-Methylnaphthalene	**<1.3**	ug/kg	6.4	1.3	1	05/29/19 09:25	06/02/19 17:53	91-57-6	
Naphthalene	**4.1J**	ug/kg	6.4	1.3	1	05/29/19 09:25	06/02/19 17:53	91-20-3	
Phenanthrene	**2.7J**	ug/kg	6.4	2.4	1	05/29/19 09:25	06/02/19 17:53	85-01-8	
Pyrene	**<2.6**	ug/kg	6.4	2.6	1	05/29/19 09:25	06/02/19 17:53	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%.	23-107		1	05/29/19 09:25	06/02/19 17:53	321-60-8	
p-Terphenyl-d14 (S)	82	%.	16-117		1	05/29/19 09:25	06/02/19 17:53	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (2-4) **Lab ID: 50225466006** Collected: 05/16/19 10:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12	100-51-6	
4-Bromophenylphenyl ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	101-55-3	
Butylbenzylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	85-68-7	
4-Chloro-3-methylphenol	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12	59-50-7	
4-Chloroaniline	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12	106-47-8	
bis(2-Chloroethoxy)methane	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	111-91-1	
bis(2-Chloroethyl) ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	111-44-4	
bis(2chloro1methylethyl) ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	108-60-1	
2-Chloronaphthalene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	91-58-7	
2-Chlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	95-57-8	
4-Chlorophenylphenyl ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	7005-72-3	
Dibenzofuran	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	132-64-9	
3,3'-Dichlorobenzidine	**<422**	ug/kg	843	422	1	05/29/19 09:29	06/02/19 17:12	91-94-1	
2,4-Dichlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	120-83-2	
Diethylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	84-66-2	
2,4-Dimethylphenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	105-67-9	
Dimethylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	131-11-3	
Di-n-butylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	84-74-2	
4,6-Dinitro-2-methylphenol	**<422**	ug/kg	843	422	1	05/29/19 09:29	06/02/19 17:12	534-52-1	
2,4-Dinitrophenol	**<1020**	ug/kg	2040	1020	1	05/29/19 09:29	06/02/19 17:12	51-28-5	
2,4-Dinitrotoluene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	121-14-2	
2,6-Dinitrotoluene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	606-20-2	
Di-n-octylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	117-84-0	
bis(2-Ethylhexyl)phthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	117-81-7	
Hexachloro-1,3-butadiene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	87-68-3	
Hexachlorobenzene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	118-74-1	
Hexachlorocyclopentadiene	**<422**	ug/kg	422	422	1	05/29/19 09:29	06/02/19 17:12	77-47-4	
Hexachloroethane	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	67-72-1	
Isophorone	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	78-59-1	
2-Methylphenol(o-Cresol)	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12		
2-Nitroaniline	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	88-74-4	
3-Nitroaniline	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	99-09-2	
4-Nitroaniline	**<212**	ug/kg	422	212	1	05/29/19 09:29	06/02/19 17:12	100-01-6	
Nitrobenzene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	98-95-3	
2-Nitrophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	88-75-5	
4-Nitrophenol	**<1020**	ug/kg	2040	1020	1	05/29/19 09:29	06/02/19 17:12	100-02-7	
N-Nitroso-di-n-propylamine	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	621-64-7	
N-Nitrosodiphenylamine	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	86-30-6	
Pentachlorophenol	**<1020**	ug/kg	2040	1020	1	05/29/19 09:29	06/02/19 17:12	87-86-5	
Phenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	108-95-2	
2,4,5-Trichlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	95-95-4	
2,4,6-Trichlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (2-4) **Lab ID: 50225466006** Collected: 05/16/19 10:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	78	%.	18-98		1	05/29/19 09:29	06/02/19 17:12	4165-60-0	
Phenol-d5 (S)	76	%.	18-108		1	05/29/19 09:29	06/02/19 17:12	4165-62-2	
2-Fluorophenol (S)	67	%.	16-104		1	05/29/19 09:29	06/02/19 17:12	367-12-4	
2,4,6-Tribromophenol (S)	63	%.	10-114		1	05/29/19 09:29	06/02/19 17:12	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**22.2**	%	0.10	0.10	1		05/28/19 12:39		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (0-2) **Lab ID: 50225466007** Collected: 05/16/19 12:15 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.113 g Final Volume/Weight: 50 mL								
Antimony	**<0.26**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 17:17	7440-36-0	
Arsenic	**7.7**	mg/kg	1.1	0.15	1	05/28/19 07:10	05/28/19 17:17	7440-38-2	
Barium	**187**	mg/kg	1.1	0.033	1	05/28/19 07:10	05/28/19 17:17	7440-39-3	
Beryllium	**0.60**	mg/kg	0.55	0.022	1	05/28/19 07:10	05/28/19 17:17	7440-41-7	
Cadmium	**0.63**	mg/kg	0.55	0.022	1	05/28/19 07:10	05/28/19 17:17	7440-43-9	
Chromium	**17.3**	mg/kg	1.1	0.32	1	05/28/19 07:10	05/28/19 17:17	7440-47-3	
Copper	**16.3**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:17	7440-50-8	
Lead	**44.7**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 17:17	7439-92-1	
Nickel	**12.8**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:17	7440-02-0	
Selenium	**0.50J**	mg/kg	1.1	0.41	1	05/28/19 07:10	05/28/19 17:17	7782-49-2	
Silver	**<0.31**	mg/kg	0.55	0.31	1	05/28/19 07:10	05/28/19 17:17	7440-22-4	
Thallium	**0.72J**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 17:17	7440-28-0	
Zinc	**111**	mg/kg	1.1	0.39	1	05/28/19 07:10	05/28/19 17:17	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.297 g Final Volume/Weight: 50 mL								
Mercury	**0.15J**	mg/kg	0.25	0.12	1	05/30/19 12:54	05/30/19 20:37	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**18.5**	%	0.10	0.10	1		05/28/19 12:39		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (2-4) **Lab ID: 50225466008** Collected: 05/16/19 12:20 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.086 g Final Volume/Weight: 50 mL								
Antimony	**<0.28**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:19	7440-36-0	
Arsenic	**18.5**	mg/kg	1.2	0.17	1	05/28/19 07:10	05/28/19 17:19	7440-38-2	
Barium	**98.4**	mg/kg	1.2	0.035	1	05/28/19 07:10	05/28/19 17:19	7440-39-3	
Beryllium	**0.91**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:19	7440-41-7	
Cadmium	**0.18J**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:19	7440-43-9	
Chromium	**22.5**	mg/kg	1.2	0.34	1	05/28/19 07:10	05/28/19 17:19	7440-47-3	
Copper	**26.4**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:19	7440-50-8	
Lead	**15.1**	mg/kg	1.2	0.18	1	05/28/19 07:10	05/28/19 17:19	7439-92-1	
Nickel	**15.9**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:19	7440-02-0	
Selenium	**<0.44**	mg/kg	1.2	0.44	1	05/28/19 07:10	05/28/19 17:19	7782-49-2	
Silver	**<0.33**	mg/kg	0.59	0.33	1	05/28/19 07:10	05/28/19 17:19	7440-22-4	
Thallium	**0.84J**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:19	7440-28-0	
Zinc	**57.4**	mg/kg	1.2	0.41	1	05/28/19 07:10	05/28/19 17:19	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.303 g Final Volume/Weight: 50 mL								
Mercury	**<0.12**	mg/kg	0.25	0.12	1	05/30/19 12:54	05/30/19 20:39	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**21.9**	%	0.10	0.10	1		05/28/19 12:40		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (6-8) **Lab ID: 50225466009** Collected: 05/16/19 12:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**4.4J**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:10	83-32-9	
Acenaphthylene	**<1.9**	ug/kg	6.2	1.9	1	05/29/19 09:25	06/02/19 18:10	208-96-8	
Anthracene	**6.6**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:10	120-12-7	
Benzo(a)anthracene	**8.3**	ug/kg	6.2	1.9	1	05/29/19 09:25	06/02/19 18:10	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.2	2.2	1	05/29/19 09:25	06/02/19 18:10	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:10	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.2	2.7	1	05/29/19 09:25	06/02/19 18:10	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:10	207-08-9	
Chrysene	**14.6**	ug/kg	6.2	2.1	1	05/29/19 09:25	06/02/19 18:10	218-01-9	
Dibenz(a,h)anthracene	**<2.6**	ug/kg	6.2	2.6	1	05/29/19 09:25	06/02/19 18:10	53-70-3	
Fluoranthene	**11.5**	ug/kg	6.2	3.2	1	05/29/19 09:25	06/02/19 18:10	206-44-0	
Fluorene	**7.4**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:10	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:10	193-39-5	
1-Methylnaphthalene	**672**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:10	90-12-0	
2-Methylnaphthalene	**1390**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:10	91-57-6	
Naphthalene	**221**	ug/kg	6.2	1.2	1	05/29/19 09:25	06/02/19 18:10	91-20-3	
Phenanthrene	**22.2**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:10	85-01-8	
Pyrene	**14.8**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:10	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%.	23-107		1	05/29/19 09:25	06/02/19 18:10	321-60-8	
p-Terphenyl-d14 (S)	89	%.	16-117		1	05/29/19 09:25	06/02/19 18:10	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28	100-51-6	
4-Bromophenylphenyl ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	101-55-3	
Butylbenzylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	85-68-7	
4-Chloro-3-methylphenol	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28	59-50-7	
4-Chloroaniline	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28	106-47-8	
bis(2-Chloroethoxy)methane	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	111-91-1	
bis(2-Chloroethyl) ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	111-44-4	
bis(2chloro1methylethyl) ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	108-60-1	
2-Chloronaphthalene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	91-58-7	
2-Chlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	95-57-8	
4-Chlorophenylphenyl ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	7005-72-3	
Dibenzofuran	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	132-64-9	
3,3'-Dichlorobenzidine	**<412**	ug/kg	824	412	1	05/29/19 09:29	06/02/19 17:28	91-94-1	
2,4-Dichlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	120-83-2	
Diethylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	84-66-2	
2,4-Dimethylphenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	105-67-9	
Dimethylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	131-11-3	
Di-n-butylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	84-74-2	
4,6-Dinitro-2-methylphenol	**<412**	ug/kg	824	412	1	05/29/19 09:29	06/02/19 17:28	534-52-1	
2,4-Dinitrophenol	**<998**	ug/kg	2000	998	1	05/29/19 09:29	06/02/19 17:28	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (6-8) **Lab ID: 50225466009** Collected: 05/16/19 12:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	121-14-2	
2,6-Dinitrotoluene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	606-20-2	
Di-n-octylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	117-84-0	
bis(2-Ethylhexyl)phthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	117-81-7	
Hexachloro-1,3-butadiene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	87-68-3	
Hexachlorobenzene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	118-74-1	
Hexachlorocyclopentadiene	**<412**	ug/kg	412	412	1	05/29/19 09:29	06/02/19 17:28	77-47-4	
Hexachloroethane	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	67-72-1	
Isophorone	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	78-59-1	
2-Methylphenol(o-Cresol)	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28		
2-Nitroaniline	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	88-74-4	
3-Nitroaniline	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	99-09-2	
4-Nitroaniline	**<207**	ug/kg	412	207	1	05/29/19 09:29	06/02/19 17:28	100-01-6	
Nitrobenzene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	98-95-3	
2-Nitrophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	88-75-5	
4-Nitrophenol	**<998**	ug/kg	2000	998	1	05/29/19 09:29	06/02/19 17:28	100-02-7	
N-Nitroso-di-n-propylamine	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	621-64-7	
N-Nitrosodiphenylamine	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	86-30-6	
Pentachlorophenol	**<998**	ug/kg	2000	998	1	05/29/19 09:29	06/02/19 17:28	87-86-5	
Phenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	108-95-2	
2,4,5-Trichlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	95-95-4	
2,4,6-Trichlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	76	%.	18-98		1	05/29/19 09:29	06/02/19 17:28	4165-60-0	
Phenol-d5 (S)	70	%.	18-108		1	05/29/19 09:29	06/02/19 17:28	4165-62-2	
2-Fluorophenol (S)	64	%.	16-104		1	05/29/19 09:29	06/02/19 17:28	367-12-4	
2,4,6-Tribromophenol (S)	69	%.	10-114		1	05/29/19 09:29	06/02/19 17:28	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**20.7**	%	0.10	0.10	1		05/28/19 12:40		

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (8-9) **Lab ID: 50225466010** Collected: 05/16/19 12:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:26	83-32-9	
Acenaphthylene	**<1.8**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:26	208-96-8	
Anthracene	**<1.8**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:26	120-12-7	
Benzo(a)anthracene	**2.7J**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:26	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.2	2.2	1	05/29/19 09:25	06/02/19 18:26	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:26	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.2	2.7	1	05/29/19 09:25	06/02/19 18:26	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:26	207-08-9	
Chrysene	**4.3J**	ug/kg	6.2	2.1	1	05/29/19 09:25	06/02/19 18:26	218-01-9	
Dibenz(a,h)anthracene	**<2.6**	ug/kg	6.2	2.6	1	05/29/19 09:25	06/02/19 18:26	53-70-3	
Fluoranthene	**4.1J**	ug/kg	6.2	3.2	1	05/29/19 09:25	06/02/19 18:26	206-44-0	
Fluorene	**2.4J**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:26	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:26	193-39-5	
1-Methylnaphthalene	**195**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:26	90-12-0	
2-Methylnaphthalene	**398**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:26	91-57-6	
Naphthalene	**121**	ug/kg	6.2	1.2	1	05/29/19 09:25	06/02/19 18:26	91-20-3	
Phenanthrene	**7.4**	ug/kg	6.2	2.3	1	05/29/19 09:25	06/02/19 18:26	85-01-8	
Pyrene	**5.0J**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	65	%.	23-107		1	05/29/19 09:25	06/02/19 18:26	321-60-8	
p-Terphenyl-d14 (S)	90	%.	16-117		1	05/29/19 09:25	06/02/19 18:26	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44	100-51-6	
4-Bromophenylphenyl ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	101-55-3	
Butylbenzylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	85-68-7	
4-Chloro-3-methylphenol	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44	59-50-7	
4-Chloroaniline	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44	106-47-8	
bis(2-Chloroethoxy)methane	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	111-91-1	
bis(2-Chloroethyl) ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	111-44-4	
bis(2chloro1methylethyl) ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	108-60-1	
2-Chloronaphthalene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	91-58-7	
2-Chlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	95-57-8	
4-Chlorophenylphenyl ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	7005-72-3	
Dibenzofuran	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	132-64-9	
3,3'-Dichlorobenzidine	**<409**	ug/kg	818	409	1	05/29/19 09:29	06/02/19 17:44	91-94-1	
2,4-Dichlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	120-83-2	
Diethylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	84-66-2	
2,4-Dimethylphenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	105-67-9	
Dimethylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	131-11-3	
Di-n-butylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	84-74-2	
4,6-Dinitro-2-methylphenol	**<409**	ug/kg	818	409	1	05/29/19 09:29	06/02/19 17:44	534-52-1	
2,4-Dinitrophenol	**<991**	ug/kg	1980	991	1	05/29/19 09:29	06/02/19 17:44	51-28-5	

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (8-9) **Lab ID: 50225466010** Collected: 05/16/19 12:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	121-14-2	
2,6-Dinitrotoluene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	606-20-2	
Di-n-octylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	117-84-0	
bis(2-Ethylhexyl)phthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	117-81-7	
Hexachloro-1,3-butadiene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	87-68-3	
Hexachlorobenzene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	118-74-1	
Hexachlorocyclopentadiene	**<409**	ug/kg	409	409	1	05/29/19 09:29	06/02/19 17:44	77-47-4	
Hexachloroethane	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	67-72-1	
Isophorone	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	78-59-1	
2-Methylphenol(o-Cresol)	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44		
2-Nitroaniline	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	88-74-4	
3-Nitroaniline	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	99-09-2	
4-Nitroaniline	**<206**	ug/kg	409	206	1	05/29/19 09:29	06/02/19 17:44	100-01-6	
Nitrobenzene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	98-95-3	
2-Nitrophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	88-75-5	
4-Nitrophenol	**<991**	ug/kg	1980	991	1	05/29/19 09:29	06/02/19 17:44	100-02-7	
N-Nitroso-di-n-propylamine	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	621-64-7	
N-Nitrosodiphenylamine	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	86-30-6	
Pentachlorophenol	**<991**	ug/kg	1980	991	1	05/29/19 09:29	06/02/19 17:44	87-86-5	
Phenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	108-95-2	
2,4,5-Trichlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	95-95-4	
2,4,6-Trichlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	70	%.	18-98		1	05/29/19 09:29	06/02/19 17:44	4165-60-0	
Phenol-d5 (S)	76	%.	18-108		1	05/29/19 09:29	06/02/19 17:44	4165-62-2	
2-Fluorophenol (S)	70	%.	16-104		1	05/29/19 09:29	06/02/19 17:44	367-12-4	
2,4,6-Tribromophenol (S)	67	%.	10-114		1	05/29/19 09:29	06/02/19 17:44	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**19.3**	%	0.10	0.10	1		05/28/19 12:40		

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Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (9-10.5) **Lab ID: 50225466011** Collected: 05/16/19 12:10 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.4 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:43	83-32-9	
Acenaphthylene	**<1.8**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:43	208-96-8	
Anthracene	**3.4J**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:43	120-12-7	
Benzo(a)anthracene	**6.5**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:43	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.2	2.2	1	05/29/19 09:25	06/02/19 18:43	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:43	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.2	2.7	1	05/29/19 09:25	06/02/19 18:43	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:43	207-08-9	
Chrysene	**11.9**	ug/kg	6.2	2.1	1	05/29/19 09:25	06/02/19 18:43	218-01-9	
Dibenz(a,h)anthracene	**<2.6**	ug/kg	6.2	2.6	1	05/29/19 09:25	06/02/19 18:43	53-70-3	
Fluoranthene	**9.6**	ug/kg	6.2	3.2	1	05/29/19 09:25	06/02/19 18:43	206-44-0	
Fluorene	**5.8J**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:43	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:43	193-39-5	
1-Methylnaphthalene	**314**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:43	90-12-0	
2-Methylnaphthalene	**592**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:43	91-57-6	
Naphthalene	**200**	ug/kg	6.2	1.2	1	05/29/19 09:25	06/02/19 18:43	91-20-3	
Phenanthrene	**17.8**	ug/kg	6.2	2.3	1	05/29/19 09:25	06/02/19 18:43	85-01-8	
Pyrene	**11.9**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%.	23-107		1	05/29/19 09:25	06/02/19 18:43	321-60-8	
p-Terphenyl-d14 (S)	89	%.	16-117		1	05/29/19 09:25	06/02/19 18:43	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.4 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00	100-51-6	
4-Bromophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	101-55-3	
Butylbenzylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	85-68-7	
4-Chloro-3-methylphenol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00	59-50-7	
4-Chloroaniline	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00	106-47-8	
bis(2-Chloroethoxy)methane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	111-91-1	
bis(2-Chloroethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	111-44-4	
bis(2chloro1methylethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	108-60-1	
2-Chloronaphthalene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	91-58-7	
2-Chlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	95-57-8	
4-Chlorophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	7005-72-3	
Dibenzofuran	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	132-64-9	
3,3'-Dichlorobenzidine	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 18:00	91-94-1	
2,4-Dichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	120-83-2	
Diethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	84-66-2	
2,4-Dimethylphenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	105-67-9	
Dimethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	131-11-3	
Di-n-butylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	84-74-2	
4,6-Dinitro-2-methylphenol	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 18:00	534-52-1	
2,4-Dinitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 18:00	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (9-10.5) **Lab ID: 50225466011** Collected: 05/16/19 12:10 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.4 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	121-14-2	
2,6-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	606-20-2	
Di-n-octylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	117-84-0	
bis(2-Ethylhexyl)phthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	117-81-7	
Hexachloro-1,3-butadiene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	87-68-3	
Hexachlorobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	118-74-1	
Hexachlorocyclopentadiene	**<408**	ug/kg	408	408	1	05/29/19 09:29	06/02/19 18:00	77-47-4	
Hexachloroethane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	67-72-1	
Isophorone	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	78-59-1	
2-Methylphenol(o-Cresol)	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00		
2-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	88-74-4	
3-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	99-09-2	
4-Nitroaniline	**<205**	ug/kg	408	205	1	05/29/19 09:29	06/02/19 18:00	100-01-6	
Nitrobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	98-95-3	
2-Nitrophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	88-75-5	
4-Nitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 18:00	100-02-7	
N-Nitroso-di-n-propylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	621-64-7	
N-Nitrosodiphenylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	86-30-6	
Pentachlorophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 18:00	87-86-5	
Phenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	108-95-2	
2,4,5-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	95-95-4	
2,4,6-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	76	%.	18-98		1	05/29/19 09:29	06/02/19 18:00	4165-60-0	
Phenol-d5 (S)	75	%.	18-108		1	05/29/19 09:29	06/02/19 18:00	4165-62-2	
2-Fluorophenol (S)	68	%.	16-104		1	05/29/19 09:29	06/02/19 18:00	367-12-4	
2,4,6-Tribromophenol (S)	63	%.	10-114		1	05/29/19 09:29	06/02/19 18:00	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**20.3**	%	0.10	0.10	1		05/28/19 12:40		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (0-2) **Lab ID: 50225466012** Collected: 05/16/19 11:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.195 g Final Volume/Weight: 50 mL								
Antimony	**0.23J**	mg/kg	0.95	0.23	1	05/28/19 07:10	05/28/19 17:21	7440-36-0	
Arsenic	**6.1**	mg/kg	0.95	0.13	1	05/28/19 07:10	05/28/19 17:21	7440-38-2	
Barium	**147**	mg/kg	0.95	0.029	1	05/28/19 07:10	05/28/19 17:21	7440-39-3	
Beryllium	**0.54**	mg/kg	0.48	0.019	1	05/28/19 07:10	05/28/19 17:21	7440-41-7	
Cadmium	**0.20J**	mg/kg	0.48	0.019	1	05/28/19 07:10	05/28/19 17:21	7440-43-9	
Chromium	**14.9**	mg/kg	0.95	0.28	1	05/28/19 07:10	05/28/19 17:21	7440-47-3	
Copper	**12.1**	mg/kg	0.95	0.10	1	05/28/19 07:10	05/28/19 17:21	7440-50-8	
Lead	**107**	mg/kg	0.95	0.14	1	05/28/19 07:10	05/28/19 17:21	7439-92-1	
Nickel	**9.3**	mg/kg	0.95	0.10	1	05/28/19 07:10	05/28/19 17:21	7440-02-0	
Selenium	**<0.35**	mg/kg	0.95	0.35	1	05/28/19 07:10	05/28/19 17:21	7782-49-2	
Silver	**<0.27**	mg/kg	0.48	0.27	1	05/28/19 07:10	05/28/19 17:21	7440-22-4	
Thallium	**0.59J**	mg/kg	0.95	0.23	1	05/28/19 07:10	05/28/19 17:21	7440-28-0	
Zinc	**57.5**	mg/kg	0.95	0.33	1	05/28/19 07:10	05/28/19 17:21	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.322 g Final Volume/Weight: 50 mL								
Mercury	**0.85**	mg/kg	0.21	0.10	1	05/30/19 12:54	05/30/19 20:42	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**12.3**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (0-2) DUP **Lab ID: 50225466013** Collected: 05/16/19 11:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.166 g Final Volume/Weight: 50 mL								
Antimony	**<0.23**	mg/kg	0.98	0.23	1	05/28/19 07:10	05/28/19 17:23	7440-36-0	
Arsenic	**7.5**	mg/kg	0.98	0.14	1	05/28/19 07:10	05/28/19 17:23	7440-38-2	
Barium	**136**	mg/kg	0.98	0.029	1	05/28/19 07:10	05/28/19 17:23	7440-39-3	
Beryllium	**0.66**	mg/kg	0.49	0.020	1	05/28/19 07:10	05/28/19 17:23	7440-41-7	
Cadmium	**0.14J**	mg/kg	0.49	0.020	1	05/28/19 07:10	05/28/19 17:23	7440-43-9	
Chromium	**13.9**	mg/kg	0.98	0.28	1	05/28/19 07:10	05/28/19 17:23	7440-47-3	
Copper	**116**	mg/kg	0.98	0.11	1	05/28/19 07:10	05/28/19 17:23	7440-50-8	
Lead	**95.3**	mg/kg	0.98	0.15	1	05/28/19 07:10	05/28/19 17:23	7439-92-1	
Nickel	**10.5**	mg/kg	0.98	0.11	1	05/28/19 07:10	05/28/19 17:23	7440-02-0	
Selenium	**<0.36**	mg/kg	0.98	0.36	1	05/28/19 07:10	05/28/19 17:23	7782-49-2	
Silver	**<0.27**	mg/kg	0.49	0.27	1	05/28/19 07:10	05/28/19 17:23	7440-22-4	
Thallium	**0.60J**	mg/kg	0.98	0.23	1	05/28/19 07:10	05/28/19 17:23	7440-28-0	
Zinc	**74.1**	mg/kg	0.98	0.34	1	05/28/19 07:10	05/28/19 17:23	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.328 g Final Volume/Weight: 50 mL								
Mercury	**1.0**	mg/kg	0.21	0.10	1	05/30/19 12:54	05/30/19 20:44	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**12.1**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (2-4) **Lab ID: 50225466014** Collected: 05/16/19 11:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.065 g Final Volume/Weight: 50 mL								
Antimony	**<0.27**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:25	7440-36-0	
Arsenic	**7.7**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 17:25	7440-38-2	
Barium	**91.6**	mg/kg	1.1	0.034	1	05/28/19 07:10	05/28/19 17:25	7440-39-3	
Beryllium	**0.67**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 17:25	7440-41-7	
Cadmium	**0.099J**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 17:25	7440-43-9	
Chromium	**15.1**	mg/kg	1.1	0.33	1	05/28/19 07:10	05/28/19 17:25	7440-47-3	
Copper	**11.8**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 17:25	7440-50-8	
Lead	**17.8**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 17:25	7439-92-1	
Nickel	**11.4**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 17:25	7440-02-0	
Selenium	**<0.42**	mg/kg	1.1	0.42	1	05/28/19 07:10	05/28/19 17:25	7782-49-2	
Silver	**<0.32**	mg/kg	0.57	0.32	1	05/28/19 07:10	05/28/19 17:25	7440-22-4	
Thallium	**0.54J**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:25	7440-28-0	
Zinc	**49.4**	mg/kg	1.1	0.40	1	05/28/19 07:10	05/28/19 17:25	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.307 g Final Volume/Weight: 50 mL								
Mercury	**0.42**	mg/kg	0.24	0.12	1	05/30/19 12:54	05/30/19 20:46	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**17.8**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (9-11) **Lab ID: 50225466015** Collected: 05/16/19 11:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**6.3J**	ug/kg	6.6	1.7	1	05/29/19 09:25	06/02/19 18:59	83-32-9	
Acenaphthylene	**<2.0**	ug/kg	6.6	2.0	1	05/29/19 09:25	06/02/19 18:59	208-96-8	
Anthracene	**5.9J**	ug/kg	6.6	1.9	1	05/29/19 09:25	06/02/19 18:59	120-12-7	
Benzo(a)anthracene	**9.6**	ug/kg	6.6	2.0	1	05/29/19 09:25	06/02/19 18:59	56-55-3	
Benzo(a)pyrene	**2.9J**	ug/kg	6.6	2.4	1	05/29/19 09:25	06/02/19 18:59	50-32-8	
Benzo(b)fluoranthene	**4.0J**	ug/kg	6.6	2.7	1	05/29/19 09:25	06/02/19 18:59	205-99-2	
Benzo(g,h,i)perylene	**<2.8**	ug/kg	6.6	2.8	1	05/29/19 09:25	06/02/19 18:59	191-24-2	
Benzo(k)fluoranthene	**3.2J**	ug/kg	6.6	2.5	1	05/29/19 09:25	06/02/19 18:59	207-08-9	
Chrysene	**13.9**	ug/kg	6.6	2.3	1	05/29/19 09:25	06/02/19 18:59	218-01-9	
Dibenz(a,h)anthracene	**<2.7**	ug/kg	6.6	2.7	1	05/29/19 09:25	06/02/19 18:59	53-70-3	
Fluoranthene	**17.2**	ug/kg	6.6	3.4	1	05/29/19 09:25	06/02/19 18:59	206-44-0	
Fluorene	**11.2**	ug/kg	6.6	1.7	1	05/29/19 09:25	06/02/19 18:59	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.6**	ug/kg	6.6	2.6	1	05/29/19 09:25	06/02/19 18:59	193-39-5	
1-Methylnaphthalene	**395**	ug/kg	6.6	1.4	1	05/29/19 09:25	06/02/19 18:59	90-12-0	
2-Methylnaphthalene	**469**	ug/kg	6.6	1.4	1	05/29/19 09:25	06/02/19 18:59	91-57-6	
Naphthalene	**<1.3**	ug/kg	6.6	1.3	1	05/29/19 09:25	06/02/19 18:59	91-20-3	
Phenanthrene	**29.1**	ug/kg	6.6	2.5	1	05/29/19 09:25	06/02/19 18:59	85-01-8	
Pyrene	**20.7**	ug/kg	6.6	2.6	1	05/29/19 09:25	06/02/19 18:59	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%.	23-107		1	05/29/19 09:25	06/02/19 18:59	321-60-8	
p-Terphenyl-d14 (S)	93	%.	16-117		1	05/29/19 09:25	06/02/19 18:59	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16	100-51-6	
4-Bromophenylphenyl ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	101-55-3	
Butylbenzylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	85-68-7	
4-Chloro-3-methylphenol	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16	59-50-7	
4-Chloroaniline	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16	106-47-8	
bis(2-Chloroethoxy)methane	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	111-91-1	
bis(2-Chloroethyl) ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	111-44-4	
bis(2chloro1methylethyl) ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	108-60-1	
2-Chloronaphthalene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	91-58-7	
2-Chlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	95-57-8	
4-Chlorophenylphenyl ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	7005-72-3	
Dibenzofuran	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	132-64-9	
3,3'-Dichlorobenzidine	**<436**	ug/kg	871	436	1	05/29/19 09:29	06/02/19 18:16	91-94-1	
2,4-Dichlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	120-83-2	
Diethylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	84-66-2	
2,4-Dimethylphenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	105-67-9	
Dimethylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	131-11-3	
Di-n-butylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	84-74-2	
4,6-Dinitro-2-methylphenol	**<436**	ug/kg	871	436	1	05/29/19 09:29	06/02/19 18:16	534-52-1	
2,4-Dinitrophenol	**<1060**	ug/kg	2110	1060	1	05/29/19 09:29	06/02/19 18:16	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (9-11) **Lab ID: 50225466015** Collected: 05/16/19 11:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	121-14-2	
2,6-Dinitrotoluene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	606-20-2	
Di-n-octylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	117-84-0	
bis(2-Ethylhexyl)phthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	117-81-7	
Hexachloro-1,3-butadiene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	87-68-3	
Hexachlorobenzene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	118-74-1	
Hexachlorocyclopentadiene	**<436**	ug/kg	436	436	1	05/29/19 09:29	06/02/19 18:16	77-47-4	
Hexachloroethane	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	67-72-1	
Isophorone	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	78-59-1	
2-Methylphenol(o-Cresol)	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16		
2-Nitroaniline	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	88-74-4	
3-Nitroaniline	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	99-09-2	
4-Nitroaniline	**<219**	ug/kg	436	219	1	05/29/19 09:29	06/02/19 18:16	100-01-6	
Nitrobenzene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	98-95-3	
2-Nitrophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	88-75-5	
4-Nitrophenol	**<1060**	ug/kg	2110	1060	1	05/29/19 09:29	06/02/19 18:16	100-02-7	
N-Nitroso-di-n-propylamine	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	621-64-7	
N-Nitrosodiphenylamine	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	86-30-6	
Pentachlorophenol	**<1060**	ug/kg	2110	1060	1	05/29/19 09:29	06/02/19 18:16	87-86-5	
Phenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	108-95-2	
2,4,5-Trichlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	95-95-4	
2,4,6-Trichlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	70	%.	18-98		1	05/29/19 09:29	06/02/19 18:16	4165-60-0	
Phenol-d5 (S)	76	%.	18-108		1	05/29/19 09:29	06/02/19 18:16	4165-62-2	
2-Fluorophenol (S)	69	%.	16-104		1	05/29/19 09:29	06/02/19 18:16	367-12-4	
2,4,6-Tribromophenol (S)	68	%.	10-114		1	05/29/19 09:29	06/02/19 18:16	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**24.8**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) **Lab ID: 50225466016** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**37.6**	ug/kg	7.3	1.8	1	05/29/19 09:25	06/02/19 19:16	83-32-9	
Acenaphthylene	**11.0**	ug/kg	7.3	2.2	1	05/29/19 09:25	06/02/19 19:16	208-96-8	
Anthracene	**41.0**	ug/kg	7.3	2.1	1	05/29/19 09:25	06/02/19 19:16	120-12-7	
Benzo(a)anthracene	**22.2**	ug/kg	7.3	2.2	1	05/29/19 09:25	06/02/19 19:16	56-55-3	
Benzo(a)pyrene	**6.3J**	ug/kg	7.3	2.6	1	05/29/19 09:25	06/02/19 19:16	50-32-8	
Benzo(b)fluoranthene	**8.1**	ug/kg	7.3	3.0	1	05/29/19 09:25	06/02/19 19:16	205-99-2	
Benzo(g,h,i)perylene	**<3.1**	ug/kg	7.3	3.1	1	05/29/19 09:25	06/02/19 19:16	191-24-2	
Benzo(k)fluoranthene	**6.6J**	ug/kg	7.3	2.8	1	05/29/19 09:25	06/02/19 19:16	207-08-9	
Chrysene	**22.6**	ug/kg	7.3	2.5	1	05/29/19 09:25	06/02/19 19:16	218-01-9	
Dibenz(a,h)anthracene	**<3.1**	ug/kg	7.3	3.1	1	05/29/19 09:25	06/02/19 19:16	53-70-3	
Fluoranthene	**134**	ug/kg	7.3	3.8	1	05/29/19 09:25	06/02/19 19:16	206-44-0	
Fluorene	**89.4**	ug/kg	7.3	1.8	1	05/29/19 09:25	06/02/19 19:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.8**	ug/kg	7.3	2.8	1	05/29/19 09:25	06/02/19 19:16	193-39-5	
1-Methylnaphthalene	**27.4**	ug/kg	7.3	1.5	1	05/29/19 09:25	06/02/19 19:16	90-12-0	
2-Methylnaphthalene	**38.9**	ug/kg	7.3	1.5	1	05/29/19 09:25	06/02/19 19:16	91-57-6	
Naphthalene	**144**	ug/kg	7.3	1.5	1	05/29/19 09:25	06/02/19 19:16	91-20-3	
Phenanthrene	**179**	ug/kg	7.3	2.8	1	05/29/19 09:25	06/02/19 19:16	85-01-8	
Pyrene	**110**	ug/kg	7.3	2.9	1	05/29/19 09:25	06/02/19 19:16	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%.	23-107		1	05/29/19 09:25	06/02/19 19:16	321-60-8	
p-Terphenyl-d14 (S)	87	%.	16-117		1	05/29/19 09:25	06/02/19 19:16	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31	100-51-6	
4-Bromophenylphenyl ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	101-55-3	
Butylbenzylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	85-68-7	
4-Chloro-3-methylphenol	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31	59-50-7	
4-Chloroaniline	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31	106-47-8	
bis(2-Chloroethoxy)methane	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	111-91-1	
bis(2-Chloroethyl) ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	111-44-4	
bis(2chloro1methylethyl) ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	108-60-1	
2-Chloronaphthalene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	91-58-7	
2-Chlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	95-57-8	
4-Chlorophenylphenyl ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	7005-72-3	
Dibenzofuran	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	132-64-9	
3,3'-Dichlorobenzidine	**<484**	ug/kg	969	484	1	05/29/19 09:29	06/02/19 18:31	91-94-1	
2,4-Dichlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	120-83-2	
Diethylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	84-66-2	
2,4-Dimethylphenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	105-67-9	
Dimethylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	131-11-3	
Di-n-butylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	84-74-2	
4,6-Dinitro-2-methylphenol	**<484**	ug/kg	969	484	1	05/29/19 09:29	06/02/19 18:31	534-52-1	
2,4-Dinitrophenol	**<1170**	ug/kg	2350	1170	1	05/29/19 09:29	06/02/19 18:31	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) **Lab ID: 50225466016** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	121-14-2	
2,6-Dinitrotoluene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	606-20-2	
Di-n-octylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	117-84-0	
bis(2-Ethylhexyl)phthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	117-81-7	
Hexachloro-1,3-butadiene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	87-68-3	
Hexachlorobenzene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	118-74-1	
Hexachlorocyclopentadiene	**<484**	ug/kg	484	484	1	05/29/19 09:29	06/02/19 18:31	77-47-4	
Hexachloroethane	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	67-72-1	
Isophorone	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	78-59-1	
2-Methylphenol(o-Cresol)	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31		
2-Nitroaniline	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	88-74-4	
3-Nitroaniline	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	99-09-2	
4-Nitroaniline	**<244**	ug/kg	484	244	1	05/29/19 09:29	06/02/19 18:31	100-01-6	
Nitrobenzene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	98-95-3	
2-Nitrophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	88-75-5	
4-Nitrophenol	**<1170**	ug/kg	2350	1170	1	05/29/19 09:29	06/02/19 18:31	100-02-7	
N-Nitroso-di-n-propylamine	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	621-64-7	
N-Nitrosodiphenylamine	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	86-30-6	
Pentachlorophenol	**<1170**	ug/kg	2350	1170	1	05/29/19 09:29	06/02/19 18:31	87-86-5	
Phenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	108-95-2	
2,4,5-Trichlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	95-95-4	
2,4,6-Trichlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%.	18-98		1	05/29/19 09:29	06/02/19 18:31	4165-60-0	
Phenol-d5 (S)	77	%.	18-108		1	05/29/19 09:29	06/02/19 18:31	4165-62-2	
2-Fluorophenol (S)	67	%.	16-104		1	05/29/19 09:29	06/02/19 18:31	367-12-4	
2,4,6-Tribromophenol (S)	68	%.	10-114		1	05/29/19 09:29	06/02/19 18:31	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**32.6**	%	0.10	0.10	1		05/28/19 12:42		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) DUP **Lab ID: 50225466017** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.5	1.6	1	05/29/19 09:25	06/02/19 19:32	83-32-9	
Acenaphthylene	**<1.9**	ug/kg	6.5	1.9	1	05/29/19 09:25	06/02/19 19:32	208-96-8	
Anthracene	**<1.9**	ug/kg	6.5	1.9	1	05/29/19 09:25	06/02/19 19:32	120-12-7	
Benzo(a)anthracene	**<1.9**	ug/kg	6.5	1.9	1	05/29/19 09:25	06/02/19 19:32	56-55-3	
Benzo(a)pyrene	**<2.3**	ug/kg	6.5	2.3	1	05/29/19 09:25	06/02/19 19:32	50-32-8	
Benzo(b)fluoranthene	**<2.6**	ug/kg	6.5	2.6	1	05/29/19 09:25	06/02/19 19:32	205-99-2	
Benzo(g,h,i)perylene	**<2.8**	ug/kg	6.5	2.8	1	05/29/19 09:25	06/02/19 19:32	191-24-2	
Benzo(k)fluoranthene	**<2.5**	ug/kg	6.5	2.5	1	05/29/19 09:25	06/02/19 19:32	207-08-9	
Chrysene	**<2.2**	ug/kg	6.5	2.2	1	05/29/19 09:25	06/02/19 19:32	218-01-9	
Dibenz(a,h)anthracene	**<2.7**	ug/kg	6.5	2.7	1	05/29/19 09:25	06/02/19 19:32	53-70-3	
Fluoranthene	**<3.4**	ug/kg	6.5	3.4	1	05/29/19 09:25	06/02/19 19:32	206-44-0	
Fluorene	**<1.6**	ug/kg	6.5	1.6	1	05/29/19 09:25	06/02/19 19:32	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.5**	ug/kg	6.5	2.5	1	05/29/19 09:25	06/02/19 19:32	193-39-5	
1-Methylnaphthalene	**19.0**	ug/kg	6.5	1.3	1	05/29/19 09:25	06/02/19 19:32	90-12-0	
2-Methylnaphthalene	**21.3**	ug/kg	6.5	1.4	1	05/29/19 09:25	06/02/19 19:32	91-57-6	
Naphthalene	**14.8**	ug/kg	6.5	1.3	1	05/29/19 09:25	06/02/19 19:32	91-20-3	
Phenanthrene	**<2.4**	ug/kg	6.5	2.4	1	05/29/19 09:25	06/02/19 19:32	85-01-8	
Pyrene	**<2.6**	ug/kg	6.5	2.6	1	05/29/19 09:25	06/02/19 19:32	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%.	23-107		1	05/29/19 09:25	06/02/19 19:32	321-60-8	
p-Terphenyl-d14 (S)	85	%.	16-117		1	05/29/19 09:25	06/02/19 19:32	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47	100-51-6	
4-Bromophenylphenyl ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	101-55-3	
Butylbenzylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	85-68-7	
4-Chloro-3-methylphenol	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47	59-50-7	
4-Chloroaniline	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47	106-47-8	
bis(2-Chloroethoxy)methane	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	111-91-1	
bis(2-Chloroethyl) ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	111-44-4	
bis(2chloro1methylethyl) ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	108-60-1	
2-Chloronaphthalene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	91-58-7	
2-Chlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	95-57-8	
4-Chlorophenylphenyl ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	7005-72-3	
Dibenzofuran	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	132-64-9	
3,3'-Dichlorobenzidine	**<428**	ug/kg	856	428	1	05/29/19 09:29	06/02/19 18:47	91-94-1	
2,4-Dichlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	120-83-2	
Diethylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	84-66-2	
2,4-Dimethylphenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	105-67-9	
Dimethylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	131-11-3	
Di-n-butylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	84-74-2	
4,6-Dinitro-2-methylphenol	**<428**	ug/kg	856	428	1	05/29/19 09:29	06/02/19 18:47	534-52-1	
2,4-Dinitrophenol	**<1040**	ug/kg	2070	1040	1	05/29/19 09:29	06/02/19 18:47	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) DUP **Lab ID: 50225466017** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	121-14-2	
2,6-Dinitrotoluene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	606-20-2	
Di-n-octylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	117-84-0	
bis(2-Ethylhexyl)phthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	117-81-7	
Hexachloro-1,3-butadiene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	87-68-3	
Hexachlorobenzene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	118-74-1	
Hexachlorocyclopentadiene	**<428**	ug/kg	428	428	1	05/29/19 09:29	06/02/19 18:47	77-47-4	
Hexachloroethane	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	67-72-1	
Isophorone	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	78-59-1	
2-Methylphenol(o-Cresol)	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47		
2-Nitroaniline	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	88-74-4	
3-Nitroaniline	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	99-09-2	
4-Nitroaniline	**<215**	ug/kg	428	215	1	05/29/19 09:29	06/02/19 18:47	100-01-6	
Nitrobenzene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	98-95-3	
2-Nitrophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	88-75-5	
4-Nitrophenol	**<1040**	ug/kg	2070	1040	1	05/29/19 09:29	06/02/19 18:47	100-02-7	
N-Nitroso-di-n-propylamine	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	621-64-7	
N-Nitrosodiphenylamine	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	86-30-6	
Pentachlorophenol	**<1040**	ug/kg	2070	1040	1	05/29/19 09:29	06/02/19 18:47	87-86-5	
Phenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	108-95-2	
2,4,5-Trichlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	95-95-4	
2,4,6-Trichlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%.	18-98		1	05/29/19 09:29	06/02/19 18:47	4165-60-0	
Phenol-d5 (S)	80	%.	18-108		1	05/29/19 09:29	06/02/19 18:47	4165-62-2	
2-Fluorophenol (S)	71	%.	16-104		1	05/29/19 09:29	06/02/19 18:47	367-12-4	
2,4,6-Tribromophenol (S)	66	%.	10-114		1	05/29/19 09:29	06/02/19 18:47	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**23.7**	%	0.10	0.10	1		05/28/19 12:42		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (6-8) **Lab ID: 50225466018** Collected: 05/16/19 11:37 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.11 g Final Volume/Weight: 50 mL								
Antimony	**<0.27**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:28	7440-36-0	
Arsenic	**6.6**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 17:28	7440-38-2	
Barium	**118**	mg/kg	1.1	0.033	1	05/28/19 07:10	05/28/19 17:28	7440-39-3	
Beryllium	**1.1**	mg/kg	0.56	0.022	1	05/28/19 07:10	05/28/19 17:28	7440-41-7	
Cadmium	**0.16J**	mg/kg	0.56	0.022	1	05/28/19 07:10	05/28/19 17:28	7440-43-9	
Chromium	**32.3**	mg/kg	1.1	0.32	1	05/28/19 07:10	05/28/19 17:28	7440-47-3	
Copper	**13.5**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:28	7440-50-8	
Lead	**14.0**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 17:28	7439-92-1	
Nickel	**15.0**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:28	7440-02-0	
Selenium	**<0.41**	mg/kg	1.1	0.41	1	05/28/19 07:10	05/28/19 17:28	7782-49-2	
Silver	**<0.31**	mg/kg	0.56	0.31	1	05/28/19 07:10	05/28/19 17:28	7440-22-4	
Thallium	**0.50J**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:28	7440-28-0	
Zinc	**57.3**	mg/kg	1.1	0.39	1	05/28/19 07:10	05/28/19 17:28	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.324 g Final Volume/Weight: 50 mL								
Mercury	**<0.11**	mg/kg	0.23	0.11	1	05/30/19 12:54	05/30/19 20:48	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.5**	ug/kg	6.1	1.5	1	05/29/19 09:25	06/03/19 13:19	83-32-9	
Acenaphthylene	**<1.8**	ug/kg	6.1	1.8	1	05/29/19 09:25	06/03/19 13:19	208-96-8	
Anthracene	**<1.8**	ug/kg	6.1	1.8	1	05/29/19 09:25	06/03/19 13:19	120-12-7	
Benzo(a)anthracene	**<1.8**	ug/kg	6.1	1.8	1	05/29/19 09:25	06/03/19 13:19	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.1	2.2	1	05/29/19 09:25	06/03/19 13:19	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.1	2.5	1	05/29/19 09:25	06/03/19 13:19	205-99-2	
Benzo(g,h,i)perylene	**<2.6**	ug/kg	6.1	2.6	1	05/29/19 09:25	06/03/19 13:19	191-24-2	
Benzo(k)fluoranthene	**<2.3**	ug/kg	6.1	2.3	1	05/29/19 09:25	06/03/19 13:19	207-08-9	
Chrysene	**<2.1**	ug/kg	6.1	2.1	1	05/29/19 09:25	06/03/19 13:19	218-01-9	
Dibenz(a,h)anthracene	**<2.5**	ug/kg	6.1	2.5	1	05/29/19 09:25	06/03/19 13:19	53-70-3	
Fluoranthene	**<3.2**	ug/kg	6.1	3.2	1	05/29/19 09:25	06/03/19 13:19	206-44-0	
Fluorene	**<1.5**	ug/kg	6.1	1.5	1	05/29/19 09:25	06/03/19 13:19	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.1	2.4	1	05/29/19 09:25	06/03/19 13:19	193-39-5	
1-Methylnaphthalene	**<1.3**	ug/kg	6.1	1.3	1	05/29/19 09:25	06/03/19 13:19	90-12-0	
2-Methylnaphthalene	**<1.3**	ug/kg	6.1	1.3	1	05/29/19 09:25	06/03/19 13:19	91-57-6	
Naphthalene	**<1.2**	ug/kg	6.1	1.2	1	05/29/19 09:25	06/03/19 13:19	91-20-3	
Phenanthrene	**<2.3**	ug/kg	6.1	2.3	1	05/29/19 09:25	06/03/19 13:19	85-01-8	
Pyrene	**<2.5**	ug/kg	6.1	2.5	1	05/29/19 09:25	06/03/19 13:19	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%.	23-107		1	05/29/19 09:25	06/03/19 13:19	321-60-8	
p-Terphenyl-d14 (S)	86	%.	16-117		1	05/29/19 09:25	06/03/19 13:19	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (6-8) **Lab ID: 50225466018** Collected: 05/16/19 11:37 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03	100-51-6	
4-Bromophenylphenyl ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	101-55-3	
Butylbenzylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	85-68-7	
4-Chloro-3-methylphenol	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03	59-50-7	
4-Chloroaniline	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03	106-47-8	
bis(2-Chloroethoxy)methane	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	111-91-1	
bis(2-Chloroethyl) ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	111-44-4	
bis(2chloro1methylethyl) ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	108-60-1	
2-Chloronaphthalene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	91-58-7	
2-Chlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	95-57-8	
4-Chlorophenylphenyl ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	7005-72-3	
Dibenzofuran	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	132-64-9	
3,3'-Dichlorobenzidine	**<405**	ug/kg	809	405	1	05/29/19 09:29	06/02/19 19:03	91-94-1	
2,4-Dichlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	120-83-2	
Diethylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	84-66-2	
2,4-Dimethylphenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	105-67-9	
Dimethylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	131-11-3	
Di-n-butylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	84-74-2	
4,6-Dinitro-2-methylphenol	**<405**	ug/kg	809	405	1	05/29/19 09:29	06/02/19 19:03	534-52-1	
2,4-Dinitrophenol	**<981**	ug/kg	1960	981	1	05/29/19 09:29	06/02/19 19:03	51-28-5	
2,4-Dinitrotoluene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	121-14-2	
2,6-Dinitrotoluene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	606-20-2	
Di-n-octylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	117-84-0	
bis(2-Ethylhexyl)phthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	117-81-7	
Hexachloro-1,3-butadiene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	87-68-3	
Hexachlorobenzene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	118-74-1	
Hexachlorocyclopentadiene	**<405**	ug/kg	405	405	1	05/29/19 09:29	06/02/19 19:03	77-47-4	
Hexachloroethane	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	67-72-1	
Isophorone	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	78-59-1	
2-Methylphenol(o-Cresol)	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03		
2-Nitroaniline	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	88-74-4	
3-Nitroaniline	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	99-09-2	
4-Nitroaniline	**<203**	ug/kg	405	203	1	05/29/19 09:29	06/02/19 19:03	100-01-6	
Nitrobenzene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	98-95-3	
2-Nitrophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	88-75-5	
4-Nitrophenol	**<981**	ug/kg	1960	981	1	05/29/19 09:29	06/02/19 19:03	100-02-7	
N-Nitroso-di-n-propylamine	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	621-64-7	
N-Nitrosodiphenylamine	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	86-30-6	
Pentachlorophenol	**<981**	ug/kg	1960	981	1	05/29/19 09:29	06/02/19 19:03	87-86-5	
Phenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	108-95-2	
2,4,5-Trichlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	95-95-4	
2,4,6-Trichlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (6-8) **Lab ID: 50225466018** Collected: 05/16/19 11:37 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	72	%.	18-98		1	05/29/19 09:29	06/02/19 19:03	4165-60-0	
Phenol-d5 (S)	86	%.	18-108		1	05/29/19 09:29	06/02/19 19:03	4165-62-2	
2-Fluorophenol (S)	72	%.	16-104		1	05/29/19 09:29	06/02/19 19:03	367-12-4	
2,4,6-Tribromophenol (S)	71	%.	10-114		1	05/29/19 09:29	06/02/19 19:03	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**19.0**	%	0.10	0.10	1		05/28/19 12:42		

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 503160 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

METHOD BLANK: 2321759 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.091	0.19	0.091	05/30/19 20:12	

LABORATORY CONTROL SAMPLE: 2321760

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.49	0.52	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2321761 2321762

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.59	0.54	0.55	1.6	0.96	184	67	75-125	49	20	1d,M0

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502188 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

METHOD BLANK: 2317323 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/kg	<0.24	1.0	0.24	05/28/19 16:42	
Arsenic	mg/kg	<0.14	1.0	0.14	05/28/19 16:42	
Barium	mg/kg	<0.030	1.0	0.030	05/28/19 16:42	
Beryllium	mg/kg	<0.020	0.50	0.020	05/28/19 16:42	
Cadmium	mg/kg	<0.020	0.50	0.020	05/28/19 16:42	
Chromium	mg/kg	<0.29	1.0	0.29	05/28/19 16:42	
Copper	mg/kg	0.18J	1.0	0.11	05/28/19 16:42	
Lead	mg/kg	<0.15	1.0	0.15	05/28/19 16:42	
Nickel	mg/kg	<0.11	1.0	0.11	05/28/19 16:42	
Selenium	mg/kg	<0.37	1.0	0.37	05/28/19 16:42	
Silver	mg/kg	<0.28	0.50	0.28	05/28/19 16:42	
Thallium	mg/kg	<0.24	1.0	0.24	05/28/19 16:42	
Zinc	mg/kg	<0.35	1.0	0.35	05/28/19 16:42	

LABORATORY CONTROL SAMPLE: 2317324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	50	49.9	100	80-120	
Arsenic	mg/kg	50	48.2	96	80-120	
Barium	mg/kg	50	51.2	102	80-120	
Beryllium	mg/kg	50	49.6	99	80-120	
Cadmium	mg/kg	50	48.7	97	80-120	
Chromium	mg/kg	50	49.1	98	80-120	
Copper	mg/kg	50	49.3	99	80-120	
Lead	mg/kg	50	46.9	94	80-120	
Nickel	mg/kg	50	48.5	97	80-120	
Selenium	mg/kg	50	49.1	98	80-120	
Silver	mg/kg	25	24.9	100	80-120	
Thallium	mg/kg	50	47.5	95	80-120	
Zinc	mg/kg	50	47.9	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2317325 2317326

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/kg	<0.26	51.9	58.9	17.1	22.6	33	38	75-125	28	20	2d,M3
Arsenic	mg/kg	6.3	51.9	58.9	50.6	59.2	85	90	75-125	16	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2317325 2317326

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	301	51.9	58.9	408	345	206	74	75-125	17	20	P6
Beryllium	mg/kg	0.51J	51.9	58.9	44.9	52.1	86	88	75-125	15	20	
Cadmium	mg/kg	0.34J	51.9	58.9	45.9	54.2	88	92	75-125	17	20	
Chromium	mg/kg	13.3	51.9	58.9	59.9	65.7	90	89	75-125	9	20	
Copper	mg/kg	17.6	51.9	58.9	67.1	74.1	95	96	75-125	10	20	
Lead	mg/kg	96.5	51.9	58.9	150	162	102	111	75-125	8	20	
Nickel	mg/kg	13.2	51.9	58.9	54.3	60.9	79	81	75-125	12	20	
Selenium	mg/kg	<0.40	51.9	58.9	44.4	52.9	85	89	75-125	18	20	
Silver	mg/kg	<0.30	25.9	29.5	24.2	28.9	93	97	75-125	17	20	
Thallium	mg/kg	0.83J	51.9	58.9	37.7	42.6	71	71	75-125	12	20	M3
Zinc	mg/kg	97.4	51.9	58.9	142	159	87	104	75-125	11	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502966 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270 MSSV PAH by SIM
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

METHOD BLANK: 2320950 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<1.0	5.0	1.0	05/30/19 15:26	
2-Methylnaphthalene	ug/kg	<1.0	5.0	1.0	05/30/19 15:26	
Acenaphthene	ug/kg	<1.2	5.0	1.2	05/30/19 15:26	
Acenaphthylene	ug/kg	<1.5	5.0	1.5	05/30/19 15:26	
Anthracene	ug/kg	<1.4	5.0	1.4	05/30/19 15:26	
Benzo(a)anthracene	ug/kg	<1.5	5.0	1.5	05/30/19 15:26	
Benzo(a)pyrene	ug/kg	<1.8	5.0	1.8	05/30/19 15:26	
Benzo(b)fluoranthene	ug/kg	<2.0	5.0	2.0	05/30/19 15:26	
Benzo(g,h,i)perylene	ug/kg	<2.1	5.0	2.1	05/30/19 15:26	
Benzo(k)fluoranthene	ug/kg	<1.9	5.0	1.9	05/30/19 15:26	
Chrysene	ug/kg	<1.7	5.0	1.7	05/30/19 15:26	
Dibenz(a,h)anthracene	ug/kg	<2.1	5.0	2.1	05/30/19 15:26	
Fluoranthene	ug/kg	<2.6	5.0	2.6	05/30/19 15:26	
Fluorene	ug/kg	<1.2	5.0	1.2	05/30/19 15:26	
Indeno(1,2,3-cd)pyrene	ug/kg	<1.9	5.0	1.9	05/30/19 15:26	
Naphthalene	ug/kg	<0.99	5.0	0.99	05/30/19 15:26	
Phenanthrene	ug/kg	<1.9	5.0	1.9	05/30/19 15:26	
Pyrene	ug/kg	<2.0	5.0	2.0	05/30/19 15:26	
2-Fluorobiphenyl (S)	%.	62	23-107		05/30/19 15:26	
p-Terphenyl-d14 (S)	%.	89	16-117		05/30/19 15:26	

LABORATORY CONTROL SAMPLE: 2320951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	215	64	44-111	
2-Methylnaphthalene	ug/kg	333	218	66	45-111	
Acenaphthene	ug/kg	333	211	63	48-109	
Acenaphthylene	ug/kg	333	211	63	49-108	
Anthracene	ug/kg	333	244	73	44-104	
Benzo(a)anthracene	ug/kg	333	242	73	46-122	
Benzo(a)pyrene	ug/kg	333	193	58	31-156	
Benzo(b)fluoranthene	ug/kg	333	218	65	29-158	
Benzo(g,h,i)perylene	ug/kg	333	203	61	35-145	
Benzo(k)fluoranthene	ug/kg	333	191	57	33-150	
Chrysene	ug/kg	333	277	83	47-120	
Dibenz(a,h)anthracene	ug/kg	333	197	59	28-160	
Fluoranthene	ug/kg	333	236	71	49-121	
Fluorene	ug/kg	333	211	63	47-116	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

LABORATORY CONTROL SAMPLE: 2320951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/kg	333	200	60	31-155	
Naphthalene	ug/kg	333	210	63	47-103	
Phenanthrene	ug/kg	333	243	73	50-114	
Pyrene	ug/kg	333	277	83	49-114	
2-Fluorobiphenyl (S)	%.			57	23-107	
p-Terphenyl-d14 (S)	%.			82	16-117	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2320952 2320953

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<12.1	396	397	277	291	70	73	10-145	5	20	
2-Methylnaphthalene	ug/kg	<12.4	396	397	280	291	71	73	10-135	4	20	
Acenaphthene	ug/kg	<14.8	396	397	272	291	69	73	10-138	7	20	
Acenaphthylene	ug/kg	23.9J	396	397	282	300	65	70	11-133	6	20	
Anthracene	ug/kg	59.3	396	397	349	363	73	76	10-131	4	20	
Benzo(a)anthracene	ug/kg	380	396	397	810	835	108	114	10-158	3	20	
Benzo(a)pyrene	ug/kg	400	396	397	786	907	98	128	10-174	14	20	
Benzo(b)fluoranthene	ug/kg	441	396	397	865	947	107	127	10-184	9	20	
Benzo(g,h,i)perylene	ug/kg	406	396	397	729	784	81	95	10-170	7	20	
Benzo(k)fluoranthene	ug/kg	346	396	397	708	757	91	103	10-183	7	20	
Chrysene	ug/kg	488	396	397	979	1010	124	131	10-147	3	20	
Dibenz(a,h)anthracene	ug/kg	107	396	397	351	369	62	66	10-166	5	20	
Fluoranthene	ug/kg	724	396	397	1270	1200	138	121	10-158	5	20	
Fluorene	ug/kg	<14.8	396	397	268	284	68	71	10-142	6	20	
Indeno(1,2,3-cd)pyrene	ug/kg	337	396	397	667	723	83	97	11-167	8	20	
Naphthalene	ug/kg	<11.8	396	397	284	294	72	74	13-128	3	20	ED
Phenanthrene	ug/kg	196	396	397	549	509	89	79	10-164	8	20	
Pyrene	ug/kg	786	396	397	1410	1320	157	133	10-152	7	20	M6
2-Fluorobiphenyl (S)	%.						61	64	23-107			
p-Terphenyl-d14 (S)	%.						78	80	16-117			

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502967 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 MSSV Microwave Scan Spike
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

METHOD BLANK: 2320954 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-Trichlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4,6-Trichlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4-Dichlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4-Dimethylphenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4-Dinitrophenol	ug/kg	<795	1590	795	05/30/19 20:22	
2,4-Dinitrotoluene	ug/kg	<164	328	164	05/30/19 20:22	
2,6-Dinitrotoluene	ug/kg	<164	328	164	05/30/19 20:22	
2-Chloronaphthalene	ug/kg	<164	328	164	05/30/19 20:22	
2-Chlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2-Methylphenol(o-Cresol)	ug/kg	<164	328	164	05/30/19 20:22	
2-Nitroaniline	ug/kg	<164	328	164	05/30/19 20:22	
2-Nitrophenol	ug/kg	<164	328	164	05/30/19 20:22	
3&4-Methylphenol(m&p Cresol)	ug/kg	<164	656	164	05/30/19 20:22	
3,3'-Dichlorobenzidine	ug/kg	<328	656	328	05/30/19 20:22	
3-Nitroaniline	ug/kg	<164	328	164	05/30/19 20:22	
4,6-Dinitro-2-methylphenol	ug/kg	<328	656	328	05/30/19 20:22	
4-Bromophenylphenyl ether	ug/kg	<164	328	164	05/30/19 20:22	
4-Chloro-3-methylphenol	ug/kg	<164	656	164	05/30/19 20:22	
4-Chloroaniline	ug/kg	<164	656	164	05/30/19 20:22	
4-Chlorophenylphenyl ether	ug/kg	<164	328	164	05/30/19 20:22	
4-Nitroaniline	ug/kg	<165	328	165	05/30/19 20:22	
4-Nitrophenol	ug/kg	<795	1590	795	05/30/19 20:22	
Benzyl alcohol	ug/kg	<164	656	164	05/30/19 20:22	
bis(2-Chloroethoxy)methane	ug/kg	<164	328	164	05/30/19 20:22	
bis(2-Chloroethyl) ether	ug/kg	<164	328	164	05/30/19 20:22	
bis(2-Ethylhexyl)phthalate	ug/kg	<164	328	164	05/30/19 20:22	
bis(2chloro1methylethyl) ether	ug/kg	<164	328	164	05/30/19 20:22	
Butylbenzylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Di-n-butylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Di-n-octylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Dibenzofuran	ug/kg	<164	328	164	05/30/19 20:22	
Diethylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Dimethylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Hexachloro-1,3-butadiene	ug/kg	<164	328	164	05/30/19 20:22	
Hexachlorobenzene	ug/kg	<164	328	164	05/30/19 20:22	
Hexachlorocyclopentadiene	ug/kg	<328	328	328	05/30/19 20:22	
Hexachloroethane	ug/kg	<164	328	164	05/30/19 20:22	
Isophorone	ug/kg	<164	328	164	05/30/19 20:22	
N-Nitroso-di-n-propylamine	ug/kg	<164	328	164	05/30/19 20:22	
N-Nitrosodiphenylamine	ug/kg	<164	328	164	05/30/19 20:22	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

METHOD BLANK: 2320954 Matrix: Solid

Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrobenzene	ug/kg	<164	328	164	05/30/19 20:22	
Pentachlorophenol	ug/kg	<795	1590	795	05/30/19 20:22	
Phenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4,6-Tribromophenol (S)	%.	69	10-114		05/30/19 20:22	
2-Fluorophenol (S)	%.	85	16-104		05/30/19 20:22	
Nitrobenzene-d5 (S)	%.	61	18-98		05/30/19 20:22	
Phenol-d5 (S)	%.	64	18-108		05/30/19 20:22	

LABORATORY CONTROL SAMPLE: 2320955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/kg	3330	2190	66	32-115	
2-Chlorophenol	ug/kg	3330	2130	64	47-102	
4-Chloro-3-methylphenol	ug/kg	3330	2000	60	46-112	
4-Nitrophenol	ug/kg	3330	2170	65	28-123	
N-Nitroso-di-n-propylamine	ug/kg	3330	2000	60	40-103	
Pentachlorophenol	ug/kg	3330	2170	65	27-124	
Phenol	ug/kg	3330	2220	67	40-104	
2,4,6-Tribromophenol (S)	%.			65	10-114	
2-Fluorophenol (S)	%.			65	16-104	
Nitrobenzene-d5 (S)	%.			58	18-98	
Phenol-d5 (S)	%.			64	18-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2320956 2320957

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4-Dinitrotoluene	ug/kg	<195	3960	3970	2840	2960	72	75	10-125	4	20	
2-Chlorophenol	ug/kg	<195	3960	3970	2660	2720	67	68	14-115	2	20	
4-Chloro-3-methylphenol	ug/kg	<195	3960	3970	3090	3300	78	83	14-127	7	20	
4-Nitrophenol	ug/kg	<945	3960	3970	3000	3080	76	77	10-137	2	20	
N-Nitroso-di-n-propylamine	ug/kg	<195	3960	3970	3200	3260	81	82	24-108	2	20	
Pentachlorophenol	ug/kg	<945	3960	3970	2370	2550	60	64	10-139	7	20	
Phenol	ug/kg	<195	3960	3970	2930	2900	74	73	10-117	1	20	
2,4,6-Tribromophenol (S)	%.						61	62	10-114			
2-Fluorophenol (S)	%.						63	64	16-104			
Nitrobenzene-d5 (S)	%.						68	71	18-98			
Phenol-d5 (S)	%.						73	74	18-108			

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502826 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005

SAMPLE DUPLICATE: 2320587

Parameter	Units	50225398001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.0	9.5	5	5	

SAMPLE DUPLICATE: 2320588

Parameter	Units	50225466005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.2	16.5	2	5	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502836 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 50225466006, 50225466007, 50225466008, 50225466009, 50225466010, 50225466011, 50225466012, 50225466013, 50225466014, 50225466015, 50225466016, 50225466017, 50225466018

SAMPLE DUPLICATE: 2320625

Parameter	Units	50225404004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.6	18.2	3	5	

SAMPLE DUPLICATE: 2320626

Parameter	Units	50225466016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	32.6	32.0	2	5	

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QUALIFIERS

Project: 216 College / 19-146
Pace Project No.: 50225466

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

1d	RPD is outside control limits due to sample non-homogeneity
2d	RPD is outside control limits due to sample non-homogeneity KJE 5/28/19
ED	Due to the extract's physical characteristics, the analysis was performed at dilution.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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METHOD CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225466

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Solid	SW-846 6010B	SW-846 3050B
7471 Mercury	Solid	SW-846 7471A	SW-846 7471A
8270 PAH Combo Soil	Solid	SW-846 8270C	SW-846 3546
8270 SVOC Combo Soil	Solid	SW-846 8270C	SW-846 3546

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50225466001	**SP-1 (3-5)**	EPA 3050	502188	EPA 6010	502901
50225466002	**SP-1 (5-7)**	EPA 3050	502188	EPA 6010	502901
50225466003	**SP-2 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466004	**SP-2 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466005	**SP-3 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466006	**SP-3 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466007	**SP-4 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466008	**SP-4 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466012	**SP-5 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466013	**SP-5 (0-2) DUP**	EPA 3050	502188	EPA 6010	502901
50225466014	**SP-5 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466018	**SP-5 (6-8)**	EPA 3050	502188	EPA 6010	502901
50225466001	**SP-1 (3-5)**	EPA 7471	503160	EPA 7471	503520
50225466002	**SP-1 (5-7)**	EPA 7471	503160	EPA 7471	503520
50225466003	**SP-2 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466004	**SP-2 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466005	**SP-3 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466006	**SP-3 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466007	**SP-4 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466008	**SP-4 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466012	**SP-5 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466013	**SP-5 (0-2) DUP**	EPA 7471	503160	EPA 7471	503520
50225466014	**SP-5 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466018	**SP-5 (6-8)**	EPA 7471	503160	EPA 7471	503520
50225466001	**SP-1 (3-5)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466002	**SP-1 (5-7)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466003	**SP-2 (0-2)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466004	**SP-2 (2-4)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466005	**SP-3 (0-2)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466006	**SP-3 (2-4)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466009	**SP-4 (6-8)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466010	**SP-4 (8-9)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466011	**SP-4 (9-10.5)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466015	**SP-5 (9-11)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466016	**SP-5 (11-13)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466017	**SP-5 (11-13) DUP**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466018	**SP-5 (6-8)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466001	**SP-1 (3-5)**	EPA 3546	502967	EPA 8270	503444
50225466002	**SP-1 (5-7)**	EPA 3546	502967	EPA 8270	503444
50225466003	**SP-2 (0-2)**	EPA 3546	502967	EPA 8270	503444
50225466004	**SP-2 (2-4)**	EPA 3546	502967	EPA 8270	503444
50225466005	**SP-3 (0-2)**	EPA 3546	502967	EPA 8270	503444
50225466006	**SP-3 (2-4)**	EPA 3546	502967	EPA 8270	503444
50225466009	**SP-4 (6-8)**	EPA 3546	502967	EPA 8270	503444
50225466010	**SP-4 (8-9)**	EPA 3546	502967	EPA 8270	503444
50225466011	**SP-4 (9-10.5)**	EPA 3546	502967	EPA 8270	503444
50225466015	**SP-5 (9-11)**	EPA 3546	502967	EPA 8270	503444

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50225466016	**SP-5 (11-13)**	EPA 3546	502967	EPA 8270	503444
50225466017	**SP-5 (11-13) DUP**	EPA 3546	502967	EPA 8270	503444
50225466018	**SP-5 (6-8)**	EPA 3546	502967	EPA 8270	503444
50225466001	**SP-1 (3-5)**	SM 2540G	502826		
50225466002	**SP-1 (5-7)**	SM 2540G	502826		
50225466003	**SP-2 (0-2)**	SM 2540G	502826		
50225466004	**SP-2 (2-4)**	SM 2540G	502826		
50225466005	**SP-3 (0-2)**	SM 2540G	502826		
50225466006	**SP-3 (2-4)**	SM 2540G	502836		
50225466007	**SP-4 (0-2)**	SM 2540G	502836		
50225466008	**SP-4 (2-4)**	SM 2540G	502836		
50225466009	**SP-4 (6-8)**	SM 2540G	502836		
50225466010	**SP-4 (8-9)**	SM 2540G	502836		
50225466011	**SP-4 (9-10.5)**	SM 2540G	502836		
50225466012	**SP-5 (0-2)**	SM 2540G	502836		
50225466013	**SP-5 (0-2) DUP**	SM 2540G	502836		
50225466014	**SP-5 (2-4)**	SM 2540G	502836		
50225466015	**SP-5 (9-11)**	SM 2540G	502836		
50225466016	**SP-5 (11-13)**	SM 2540G	502836		
50225466017	**SP-5 (11-13) DUP**	SM 2540G	502836		
50225466018	**SP-5 (6-8)**	SM 2540G	502836		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2276474

Section A — **Required** Client Information:

Company:	BCA
Address:	
Email To:	JTEUSCHLER
Phone: / Fax:	
Requested Due Date/TAT:	STD

Section B — **Required** Project Information:

Report To:	JTEUSCHLER
Copy To:	LMinnicks
Purchase Order No.:	
Project Name:	216 College
Project Number:	19-146

Section C — Invoice Information:

Attention:	SAME
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: IN

Section D — **Required** Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: SVOCs + SIM	14 Metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP-1 (3-5)					5-16-19	1240		1	1									/	/		001
2	SP-1 (5-7)						1245		1	1									/	/		002
3	SP-2 (0-2)						1000		1	1									/	/		003
4	SP-2 (2-4)						1005		1	1									/	/		004
5	SP-3 (0-2)						1025		3	3									/	/		MS/MSD 005
6	SP-3 (2-4)						1030		1	1									/	/		006
7	SP-4 (0-2)						1215		1	1									/	/		007
8	SP-4 (2-4)						1220		1	1									/	/		008
9	SP-4 (6-8)						1200		1	1									/			009
10	SP-4 (8-9)						1205		1	1									/			016
11	SP-4 (9-10.5)						1210		1	1									/			011
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Rod Manny/BCA	5.17.19	1801		5/17/19	1801	1.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rod Manny

SIGNATURE of SAMPLER: Rod Manny

DATE Signed (MM/DD/YY): 05/17/19

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-C-010-rev.00, 09Nov2017

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2276473

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: BCA	Report To: SAME	Attention: SAME
Address:	Copy To:	Company Name:
		Address:
Email To: JTEUSCHER	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: 216 College	Pace Project Manager:
Requested Due Date/TAT: STD	Project Number: 19-146	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	Sample ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: SVOCs + SIM	14 metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP-5(0-2)					5/16/19	1140		1	1									1		50225466 012
2	SP-5(0-2) DUP						1146		1	1									1		013
3	SP-5(2-4)						1145		1	1									1		014
4	SP-5(9-11)						1130		1	1								1			015
5	SP-5(11-13)						1135		1	1								1			016
6	SP-5(11-13) DUP						1135		1	1								1			017
7	SP-5(6-8)						1137		1	1								1			018
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Rod Mumy/BCA	5.17.19	1801		5/17/19	1801	1.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rod Mumy

SIGNATURE of SAMPLER: Rod Mumy

DATE Signed (MM/DD/YY): 05/17/19

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

SAMPLE CONDITION UPON RECEIPT FORM

Pace Analytical

Project #: 50225466

Date/Time and Initials of person examining contents: LWG 5/17/19 1820

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals Intact:** ☐ Yes ☒ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer: 1 2 3 4 5 6 A B C D E F Ice Type: ☒ Wet ☐ Blue ☐ None | Samples collected today and on ice: ☒ Yes ☐ No ☐ N/A

Cooler Temperature: 1.5 / 1.5 Ice Visible in Sample Containers?: ☐ Yes ☒ No ☐ N/A

(Initial/Corrected) Temp should be above freezing to 6°C If temp. is Over 6°C or under 0°C, was the PM Notified?: ☐ Yes ☐ No ☒ N/A

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been checked?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.			
USDA Regulated Soils? (ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Chain of Custody Present:	✓		Circle: HNO3 H2SO4 NaOH NaOH/ZnAc			✓
Chain of Custody Filled Out:	✓		Dissolved Metals field filtered?:			✓
Short Hold Time Analysis (<72hr)?: Analysis:		✓	Headspace Wisconsin Sulfide			✓
Time 5035A TC placed in Freezer or Short Holds To Lab:				Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
			Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested:		✓	Headspace in VOA Vials (>6mm):			✓
Containers Intact?:	✓		Trip Blank Present?:		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Custody Seals?:		✓	

Comments:

Sample Container Count

CLIENT: BCA

COC PAGE 1 of 2

COC ID# 2276474

Project # 50225466

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	SBS DI Bulk Kit R			Matrix SI/Wt/NAL (Soil/Water/Non-Aqueous Liquid)	pH <2	pH >9	pH>12
1																				SL			
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

3 5/20/19 MM3

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpreserved amber glass
DG9H	40mL HCL amber voa vial	AG1H	1 liter HCL amber glass
DG9M	40mL MeOH clear vial	AG1S	1 liter H2SO4 amber glass
DG9P	40mL TSP amber vial	AG1T	1 liter Na Thiosulfate amber glass
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpreserved amber glass
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass
DG9U	40mL unpreserved **amber** vial	AG2S	500mL H2SO4 amber glass
VG9H	40mL HCL clear vial	AG2U	500mL unpreserved amber glass
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 glass amber
VG9U	40mL unpreserved **clear** vial	AG3U	250mL unpreserved amber glass
VGFX	40mL w/hexane wipe vial	BG1H	1 liter HCL clear glass
VSG	Headspace septa vial & HCL	BG1S	1 liter H2SO4 clear glass
WGKU	8oz unpreserved clear jar	BG1T	1 liter Na Thiosulfate clear glass
WGFU	4oz clear soil jar	BG1U	1 liter unpreserved glass
JGFU	4oz unpreserved amber wide	BG3H	250mL HCl Clear Glass
		BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic	BP3U	250mL unpreserved plastic
BP1N	1 liter HNO3 plastic	BP3Z	250mL NaOH, Zn Ac plastic
BP1S	1 liter H2SO4 plastic		
BP1U	1 liter unpreserved plastic	AF	Air Filter
BP1Z	1 liter NaOH, Zn, Ac	C	Air Cassettes
BP2A	500mL NaOH, Asc Acid plastic	R	Terra core kit
BP2N	500mL HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
BP2O	500mL NaOH plastic	U	Summa Can
BP2S	500mL H2SO4 plastic	ZPLC	Ziploc Bag
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3S	250mL H2SO4 plastic		

Sample Container Count

WO# : 50225466

CLIENT: BCA

COC PAGE 1 of 1

COC ID# 22764 73

Project # 50225466

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	Bulk Kit R	Matrix SI/W (Soil/Water) Aqueous Li	pH <2	pH >9	pH>12
1							1											52			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial
DG9H	40mL HCL amber voa vial
DG9M	40mL MeOH clear vial
DG9P	40mL TSP amber vial
DG9S	40mL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved amber vial
VG9H	40mL HCL clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved clear vial
VGFX	40mL w/hexane wipe vial
VSG	Headspace septa vial & HCL
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide

AG0U	100mL unpreserved amber glass
AG1H	1 liter HCL amber glass
AG1S	1 liter H2SO4 amber glass
AG1T	1 liter Na Thiosulfate amber glass
AG1U	1liter unpreserved amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpreserved amber glass
AG3S	250mL H2SO4 glass amber
AG3U	250mL unpreserved amber glass
BG1H	1 liter HCL clear glass
BG1S	1 liter H2SO4 clear glass
BG1T	1 liter Na Thiosulfate clear glass
BG1U	1 liter unpreserved glass
BG3H	250mL HCl Clear Glass
BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic
BP1N	1 liter HNO3 plastic
BP1S	1 liter H2SO4 plastic
BP1U	1 liter unpreserved plastic
BP1Z	1 liter NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3S	250mL H2SO4 plastic
BP3U	250mL unpreserved plastic
BP3Z	250mL NaOH, Zn Ac plastic

AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 11, 2019

Mr. Jacob Teuschler
BCA Environmental Consultants, LLC
7202 E. 87th St.
Suite 110
Indianapolis, IN 46256

RE: Project: 216 S. College / 19-146
Pace Project No.: 50227372

Dear Mr. Teuschler:
Enclosed are the analytical results for sample(s) received by the laboratory on June 07, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Bedel
regina.bedel@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. John Kilmer, BCA Environmental Consultants, LLC
Rod Manny, BCA Environmental Consultants
Mr. Dan Rust, BCA Environmental Consultants, LLC

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Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50227372001	**SP-3 (4-6)**	Solid	05/16/19 10:33	06/07/19 16:45
50227372002	**SP-3 (6-8)**	Solid	05/16/19 10:35	06/07/19 16:45
50227372003	**SP-3 (8-10.5)**	Solid	05/16/19 10:40	06/07/19 16:45
50227372004	**SP-4 (4-6)**	Solid	05/16/19 12:25	06/07/19 16:45
50227372005	**SP-4 (6-8)**	Solid	05/16/19 12:00	06/07/19 16:45
50227372006	**SP-4 (8-10.5)**	Solid	05/16/19 12:07	06/07/19 16:45

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(317)228-3100

SAMPLE ANALYTE COUNT

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50227372001	**SP-3 (4-6)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372002	**SP-3 (6-8)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372003	**SP-3 (8-10.5)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372004	**SP-4 (4-6)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372005	**SP-4 (6-8)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372006	**SP-4 (8-10.5)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I

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SUMMARY OF DETECTION

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50227372001	**SP-3 (4-6)**					
EPA 6010	Arsenic	8.4	mg/kg	1.2	06/10/19 09:17	
SM 2540G	Percent Moisture	20.1	%	0.10	06/10/19 09:05	H3
50227372002	**SP-3 (6-8)**					
EPA 6010	Arsenic	4.2	mg/kg	1.2	06/10/19 09:19	
SM 2540G	Percent Moisture	18.5	%	0.10	06/10/19 09:05	H3
50227372003	**SP-3 (8-10.5)**					
EPA 6010	Arsenic	5.2	mg/kg	1.1	06/10/19 09:21	
SM 2540G	Percent Moisture	17.7	%	0.10	06/10/19 09:06	H3
50227372004	**SP-4 (4-6)**					
EPA 6010	Arsenic	15.1	mg/kg	1.3	06/10/19 09:23	
SM 2540G	Percent Moisture	24.6	%	0.10	06/10/19 09:06	H3
50227372005	**SP-4 (6-8)**					
EPA 6010	Arsenic	8.6	mg/kg	1.2	06/10/19 09:26	
SM 2540G	Percent Moisture	21.4	%	0.10	06/10/19 09:06	H3
50227372006	**SP-4 (8-10.5)**					
EPA 6010	Arsenic	4.2	mg/kg	1.2	06/10/19 09:28	
SM 2540G	Percent Moisture	22.0	%	0.10	06/10/19 09:06	H3

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-3 (4-6) **Lab ID: 50227372001** Collected: 05/16/19 10:33 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.08 g Final Volume/Weight: 50 mL								
Arsenic	**8.4**	mg/kg	1.2	0.23	1	06/08/19 09:50	06/10/19 09:17	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**20.1**	%	0.10	0.10	1		06/10/19 09:05		H3

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-3 (6-8) **Lab ID: 50227372002** Collected: 05/16/19 10:35 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.063 g Final Volume/Weight: 50 mL								
Arsenic	**4.2**	mg/kg	1.2	0.23	1	06/08/19 09:50	06/10/19 09:19	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**18.5**	%	0.10	0.10	1		06/10/19 09:05		H3

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-3 (8-10.5) **Lab ID: 50227372003** Collected: 05/16/19 10:40 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.068 g Final Volume/Weight: 50 mL								
Arsenic	**5.2**	mg/kg	1.1	0.23	1	06/08/19 09:50	06/10/19 09:21	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**17.7**	%	0.10	0.10	1		06/10/19 09:06		H3

REPORT OF LABORATORY ANALYSIS

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Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-4 (4-6) **Lab ID: 50227372004** Collected: 05/16/19 12:25 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.053 g Final Volume/Weight: 50 mL								
Arsenic	**15.1**	mg/kg	1.3	0.25	1	06/08/19 09:50	06/10/19 09:23	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**24.6**	%	0.10	0.10	1		06/10/19 09:06		H3

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-4 (6-8) **Lab ID: 50227372005** Collected: 05/16/19 12:00 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.075 g Final Volume/Weight: 50 mL								
Arsenic	**8.6**	mg/kg	1.2	0.24	1	06/08/19 09:50	06/10/19 09:26	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**21.4**	%	0.10	0.10	1		06/10/19 09:06		H3

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-4 (8-10.5) **Lab ID: 50227372006** Collected: 05/16/19 12:07 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.105 g Final Volume/Weight: 50 mL								
Arsenic	**4.2**	mg/kg	1.2	0.23	1	06/08/19 09:50	06/10/19 09:28	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**22.0**	%	0.10	0.10	1		06/10/19 09:06		H3

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QUALITY CONTROL DATA

Project: 216 S. College / 19-146
Pace Project No.: 50227372

QC Batch: 505182 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 50227372001, 50227372002, 50227372003, 50227372004, 50227372005, 50227372006

METHOD BLANK: 2331140 Matrix: Solid
Associated Lab Samples: 50227372001, 50227372002, 50227372003, 50227372004, 50227372005, 50227372006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<0.20	1.0	0.20	06/10/19 08:48	

LABORATORY CONTROL SAMPLE: 2331141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2331142 2331143

Parameter	Units	50226732001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.1	23.4	23.1	31.4	24.6	126	97	75-125	25	20	M0,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 216 S. College / 19-146
Pace Project No.: 50227372

QC Batch: 505358 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 50227372001, 50227372002, 50227372003, 50227372004, 50227372005, 50227372006

SAMPLE DUPLICATE: 2332191

Parameter	Units	50227372001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.1	20.2	0	5	

SAMPLE DUPLICATE: 2332192

Parameter	Units	50227356001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.8	18.1	2	5	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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(317)228-3100

QUALIFIERS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
R1	RPD value was outside control limits.

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(317)228-3100

METHOD CROSS REFERENCE TABLE

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Solid	SW-846 6010B	SW-846 3050B

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50227372001	**SP-3 (4-6)**	EPA 3050	505182	EPA 6010	505342
50227372002	**SP-3 (6-8)**	EPA 3050	505182	EPA 6010	505342
50227372003	**SP-3 (8-10.5)**	EPA 3050	505182	EPA 6010	505342
50227372004	**SP-4 (4-6)**	EPA 3050	505182	EPA 6010	505342
50227372005	**SP-4 (6-8)**	EPA 3050	505182	EPA 6010	505342
50227372006	**SP-4 (8-10.5)**	EPA 3050	505182	EPA 6010	505342
50227372001	**SP-3 (4-6)**	SM 2540G	505358		
50227372002	**SP-3 (6-8)**	SM 2540G	505358		
50227372003	**SP-3 (8-10.5)**	SM 2540G	505358		
50227372004	**SP-4 (4-6)**	SM 2540G	505358		
50227372005	**SP-4 (6-8)**	SM 2540G	505358		
50227372006	**SP-4 (8-10.5)**	SM 2540G	505358		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1935853

Section A Required Client Information:

Company:	BCA
Address:	
Email To:	JTEUSCHLER@BCA
Phone:	317-578-4233
Fax:	Consultants .com
Requested Due Date/TAT:	24-DAY JT

Section B Required Project Information:

Report To:	J. TEUSCHLER
Copy To:	
Purchase Order No.:	
Project Name:	216 S. College
Project Number:	19-146

Section C Invoice Information:

Attention:	SAME
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: IN

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Arsenic	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 50227372
1	SP-3 (4-6)	SL	G			5-16-19	1033		1	1								1		001
2	SP-3 (6-8)	SL	G			5-16-19	1035		1	1								1		002
3	SP-3 (8-10.5)	SL	G			5-16-19	1040		1	1								1		003
4																				
5	SP-4 (4-6)	SL	G			5-16-19	1225		1	1								1		004
6	SP-4 (6-8)	SL	G			5-16-19	1200		1	1								1		005
7	SP-4 (8-10.5)	SL	G			5-16-19	1207		1	1								1		006
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		6-7-19	15:40		6-7-19	15:40				
		6-7-19	16:45		6/7/19	1645	1.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JACOB TEUSCHLER

SIGNATURE of SAMPLER: _____ DATE Signed (MM/DD/YY): 6-7-19

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical

SAMPLE CONDITION UPON RECEIPT FORM

Project #: 50227372

Date/Time and Initials of person examining contents: LWG 1720 6/7/19

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☑ None ☐ Other _____ LWG

Thermometer: 1 2 3 4 5 6 A B C D E F **Ice Type:** ☑ Wet ☐ Blue ☐ None | **Samples collected today and on ice:** ☐ Yes ☐ No ☑ N/A

Cooler Temperature: 1.3/1.5 **Ice Visible in Sample Containers?:** ☐ Yes ☑ No ☐ N/A

(Initial/Corrected) Temp should be above freezing to 6°C **If temp. is Over 6°C or under 0°C, was the PM Notified?:** ☐ Yes ☐ No ☑ N/A

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been checked?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.			
USDA Regulated Soils? (ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Chain of Custody Present:	✓		Circle: HNO3 H2SO4 NaOH NaOH/ZnAc			✓
Chain of Custody Filled Out:	✓		Dissolved Metals field filtered?:			✓
Short Hold Time Analysis (<72hr)?: Analysis:		✓	Headspace Wisconsin Sulfide			✓
Time 5035A TC placed in Freezer or Short Holds To Lab:				Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
			Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested: 2day	✓		Headspace in VOA Vials (>6mm):			✓
Containers Intact?:	✓		Trip Blank Present?:		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Custody Seals?:		✓	

Comments:

Sample Container Count

WO# : 50227372

50227372

CLIENT: BCA

COC PAGE 1 of 1

COC ID# 1935853

Project # 50227372

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	Bu Kit R	Matrix Sl (Soil/Wat Aqueous	pH <2	pH >9	pH>12
1							1											5L			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial
DG9H	40mL HCL amber voa vial
DG9M	40mL MeOH clear vial
DG9P	40mL TSP amber vial
DG9S	40rnL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved amber vial
VG9H	40mL HCL clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved clear vial
VGFX	40mL w/hexane wipe vial
VSG	Headspace septa vial & HCL
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide

AG0U	100mL unpreserved amber glass
AG1H	1 liter HCL amber glass
AG1S	1 liter H2SO4 amber glass
AG1T	1 liter Na Thiosulfate amber glass
AG1U	1liter unpreserved amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpreserved amber glass
AG3S	250mL H2SO4 glass amber
AG3U	250mL unpreserved amber glass
BG1H	1 liter HCL clear glass
BG1S	1 liter H2SO4 clear glass
BG1T	1 liter Na Thiosulfate clear glass
BG1U	1 liter unpreserved glass
BG3H	250mL HCl Clear Glass
BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic
BP1N	1 liter HNO3 plastic
BP1S	1 liter H2SO4 plastic
BP1U	1 liter unpreserved plastic
BP1Z	1 liter NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3S	250mL H2SO4 plastic
BP3U	250mL unpreserved plastic
BP3Z	250mL NaOH, Zn Ac plastic

AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

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Lab Solutions for AnalyticalTesting & Issues

Bruce Carter and Associates
7202 E. 87th St., Ste. 110
Indianapolis, IN 46256

May 29, 2019

Client Project Name: 19-146 / Bloomington, IN

Dear Client,

We are pleased to provide the attached analytical report(s) for the samples received May 20, 2019. All testing was performed as requested on the enclosed chain of custody. All methods cited were executed in full compliance with local, state, and EPA regulations. All control data met QA/QC criteria as outlined in EPA methodology. Please review the flag sections for any and all deviations from the Quality Control Data and Procedures.

LSAI Labs utilized the following EPA methodologies to perform the volatile organics (VOCs) assay in ground water. Preservation technique referenced in table 4-1 of SW-846; sample preparation via 5030B; and sample analysis using GC/MS via 8260B.

Please contact me with any questions, concerns, or comments regarding the attached analytical report.

Thank you for your business. We are committed to providing Lab Solutions and Services for your upcoming Analytical Testing needs and Issues.

Sincerely,

Pramod K. Sethia

Laboratory Manager
LSAI Labs, LLC

UDOH Lab Code: IN018112018-8

LSAI Labs, LLC
8444 Castlewood Drive, Suite 800
Indianapolis IN 46250
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FLAGS & DEFINITIONS

FLAGS & QUALIFIERS

B	Analyte detected in the blank
C	Result confirmed by reanalysis
DF	Dilution Factor: represents factor applied to sample aliquot due to a dilution 1 - reported result is a 2X dilution; 2 - reported result is a 5X dilution; 3 – reported result is a 10X dilution; 4 – reported result is a 20X dilution; 5 – reported result is a 25X dilution; 6 – reported result is a 50X dilution; 7 – reported result is a 100X dilution; 8 – reported result is a 250X dilution; 9 – reported result is a 500X dilution; 10 – reported result is a 1000X dilution; 11 – reported result is a 2500X dilution .
E	Concentration exceeds calibration range
J	Estimated value J1. ≥ Method Detection Limit (MDL) & < Limit of Quantitation (LOQ) or Reporting Limit (RL) J2. Estimated due to presence of interference
U	Analyzed for but not detected
N	Indicates presumptive evidence of a compound
P	Post-analysis pH measurement indicates insufficient VOA sample preservation.
R	Recovery outside control limits
R1	RPD value outside control limits
Rd	Duplicate analysis outside control limits

DEFINITIONS

RL: Reporting Limit
BMQL: Below Minimum Quantitation Level
LCS: Laboratory Control Sample
LCS (D): Laboratory Control Sample Duplicate
MS: Matrix Spike
MSD: Matrix Spike Duplicate
DUP: Sample Duplicate
RPD: Relative Percent Difference
ND: none detected
MPN: Most Probable Number
ppm: parts per million
ppb: parts per billion
TNI: The NELAC Institute
S: Surrogate

Note: A critical step involved in environmental analysis is the sample collection. It is required by the client that the submitted sample is truly representative of the replicate(s) and/or bulk material.

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QF-5.10.3 Rev1
Effective 2/1/16

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Indianapolis, IN 46250
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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	SP-1	Sample Collection Date/Time:	5/17/2019	11:45
LSAI Sample ID:	19-2876	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	12:43
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	< 5.0	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 1.0	1.0	
sec-Butylbenzene	< 1.0	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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Lab Solutions for AnalyticalTesting & Issues

LSAI SAMPLE ID continued 19-2876

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	< 5.0	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	< 1.0	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	< 1.0	1.0	
2-Methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
n-Propylbenzene	< 1.0	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	< 5.0	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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LSAI SAMPLE ID continued 19-2876

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	< 1.0	1.0	
1,3,5-Trimethylbenzene	< 1.0	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	< 5.0	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	< 10	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	96.5%	
1,2-Dichloroethane-d4	91.7%	
Toluene-d8	90.8%	
4-bromofluorobenzene	85.1%	

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	SP-3	Sample Collection Date/Time:	5/17/2019	13:10
LSAI Sample ID:	19-2877	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	13:03
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	< 5.0	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 1.0	1.0	
sec-Butylbenzene	< 1.0	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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LSAI SAMPLE ID continued 19-2877

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	< 5.0	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	< 1.0	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	< 1.0	1.0	
2-Methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
n-Propylbenzene	< 1.0	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	11.4	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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LSAI SAMPLE ID continued 19-2877

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	< 1.0	1.0	
1,3,5-Trimethylbenzene	< 1.0	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	< 5.0	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	< 10	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	96.3%	
1,2-Dichloroethane-d4	94.2%	
Toluene-d8	91.0%	
4-bromofluorobenzene	84.0%	

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	SP-4	Sample Collection Date/Time:	5/17/2019	13:45
LSAI Sample ID:	19-2878	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	13:22
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	183	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	5.8	1.0	
sec-Butylbenzene	4.4	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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LSAI SAMPLE ID continued 19-2878

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	244	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	164	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	35.4	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	12.4	1.0	
2-Methylnaphthalene	35.2	1.0	
Naphthalene	9.4	1.0	
n-Propylbenzene	43.3	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	< 5.0	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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LSAI SAMPLE ID continued 19-2878

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	41.2	1.0	
1,3,5-Trimethylbenzene	16.7	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	72.6	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	72.6	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	97.3%	
1,2-Dichloroethane-d4	88.7%	
Toluene-d8	94.9%	
4-bromofluorobenzene	86.6%	

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	SP-5	Sample Collection Date/Time:	5/17/2019	10:23
LSAI Sample ID:	19-2879	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	13:41
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	34.0	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 1.0	1.0	
sec-Butylbenzene	1.5	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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LSAI SAMPLE ID continued 19-2879

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	< 5.0	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	6.4	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	< 1.0	1.0	
2-Methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
n-Propylbenzene	4.0	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	< 5.0	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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LSAI SAMPLE ID continued 19-2879

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	< 1.0	1.0	
1,3,5-Trimethylbenzene	< 1.0	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	< 5.0	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	< 10	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	100.0%	
1,2-Dichloroethane-d4	96.7%	
Toluene-d8	93.6%	
4-bromofluorobenzene	85.9%	

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CERTIFICATE OF ANALYSIS

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	SP-5 (Dup)	Sample Collection Date/Time:	5/17/2019	10:23
LSAI Sample ID:	19-2880	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	14:00
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	36.1	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 1.0	1.0	
sec-Butylbenzene	1.4	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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LSAI SAMPLE ID continued 19-2880

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	< 5.0	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	6.3	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	< 1.0	1.0	
2-Methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
n-Propylbenzene	3.7	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	< 5.0	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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LSAI SAMPLE ID continued 19-2880

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	< 1.0	1.0	
1,3,5-Trimethylbenzene	< 1.0	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	< 5.0	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	< 10	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	99.7%	
1,2-Dichloroethane-d4	96.5%	
Toluene-d8	91.8%	
4-bromofluorobenzene	85.4%	

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	EB-1	Sample Collection Date/Time:	5/17/2019	14:50
LSAI Sample ID:	19-2881	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	14:19
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	< 5.0	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 1.0	1.0	
sec-Butylbenzene	< 1.0	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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LSAI SAMPLE ID continued 19-2881

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	< 5.0	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	< 1.0	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	< 1.0	1.0	
2-Methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
n-Propylbenzene	< 1.0	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	< 5.0	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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LSAI SAMPLE ID continued 19-2881

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	< 1.0	1.0	
1,3,5-Trimethylbenzene	< 1.0	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	< 5.0	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	< 10	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	101%	
1,2-Dichloroethane-d4	97.1%	
Toluene-d8	90.5%	
4-bromofluorobenzene	84.2%	

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CERTIFICATE OF ANALYSIS

Lab Solutions for AnalyticalTesting & Issues

Sample Submission Description

Customer Name:	BCA	Project ID:	19-146	
Customer Address:	7202 E 87th St. STE 110	Site Name:	216 College	
	Indianapolis	Site Location:	Bloomington	
	IN 46256	Sample Collected By:	Brad Manny	
Sample Field ID:	TB-1	Sample Collection Date/Time:		
LSAI Sample ID:	19-2882	Sample Receipt Date/Time:	5/20/2019	12:41

Sample Analysis Description

Analytical Method:	EPA 8260B	Analytical Batch:	28MAY2019	
Preparation Method:	EPA 5030B	Analysis Date/Time:	5/28/2019	14:38
Sample Matrix:	Ground Water	Analyst:	PS	

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Acetone	< 120	120	
Acrolein	< 1.0	1.0	
Acrylonitrile	< 1.0	1.0	
Benzene	< 5.0	5.0	
Bromobenzene	< 1.0	1.0	
Bromochloromethane	< 1.0	1.0	
Bromodichloromethane	< 1.0	1.0	
Bromoform	< 5.0	5.0	
Bromomethane	< 5.0	5.0	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 1.0	1.0	
sec-Butylbenzene	< 1.0	1.0	
tert-Butylbenzene	< 1.0	1.0	
Carbon Disulfide	< 5.0	5.0	
Carbon Tetrachloride	< 1.0	1.0	
Chlorobenzene	< 1.0	1.0	
Chloroethane (Ethyl Chloride)	< 5.0	5.0	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 1.0	1.0	
Chloromethane	< 1.0	1.0	
2-Chlorotoluene	< 1.0	1.0	
4-Chlorotoluene	< 1.0	1.0	
1,2-Dibromo-3-chloropropane	< 5.0	5.0	
Dibromochloromethane	< 1.0	1.0	
1,2-Dibromoethane (EDB)	< 1.0	1.0	
Dibromomethane	< 1.0	1.0	
1,2-Dichlorobenzene	< 1.0	1.0	

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LSAI SAMPLE ID continued 19-2882

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
1,3-Dichlorobenzene	< 1.0	1.0	
1,4-Dichlorobenzene	< 1.0	1.0	
trans-1,4-Dichloro-2-butene	< 5.0	5.0	
Dichlorodifluoromethane	< 1.0	1.0	
1,1-Dichloroethane	< 1.0	1.0	
1,2-Dichloroethane	< 1.0	1.0	
1,1-Dichloroethene	< 1.0	1.0	
cis-1,2-Dichloroethene	< 1.0	1.0	
trans-1,2-Dichloroethene	< 5.0	5.0	
1,2-Dichloropropane	< 5.0	5.0	
1,3-Dichloropropane	< 1.0	1.0	
2,2-Dichloropropane	< 1.0	1.0	
1,1-Dichloropropene	< 5.0	5.0	
1,3-Dichloropropene	< 5.0	5.0	
Ethylbenzene	< 5.0	5.0	
Ethylmethacrylate	< 1.0	1.0	
Hexachloro-1,3-butadiene	< 5.0	5.0	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 5.0	5.0	
Isopropylbenzene (Cumene)	< 1.0	1.0	
p-Isopropyltoluene	< 1.0	1.0	
Methylene chloride	< 20	20	
4-Methyl-2-pentanone (MIBK)	< 1.0	1.0	
Methyl tert-butyl ether (MTBE)	< 5.0	5.0	
1-Methylnaphthalene	< 1.0	1.0	
2-Methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
n-Propylbenzene	< 1.0	1.0	
Styrene	< 1.0	1.0	
1,1,1,2-Tetrachloroethane	< 1.0	1.0	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	
Tetrachloroethene	< 1.0	1.0	
Toluene	< 5.0	5.0	
1,2,3-Trichlorobenzene	< 1.0	1.0	
1,2,4-Trichlorobenzene	< 1.0	1.0	
1,1,1-Trichloroethane	< 5.0	5.0	
1,1,2-Trichloroethane	< 1.0	1.0	
Trichloroethene	< 5.0	5.0	

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Lab Solutions for AnalyticalTesting & Issues

LSAI SAMPLE ID continued 19-2882

Analyte	Results (µg/L)	Reporting Limit (µg/L)	Flags
Trichlorofluoromethane	< 5.0	5.0	
1,2,3-Trichloropropane	< 5.0	5.0	
1,2,4-Trimethylbenzene	< 1.0	1.0	
1,3,5-Trimethylbenzene	< 1.0	1.0	
Vinyl acetate	< 10	10	
Vinyl chloride	< 1.0	1.0	
Xylene M&P	< 5.0	5.0	
Xylene Ortho	< 5.0	5.0	
Total Xylenes	< 10	10	

QA/QC

Surrogates	% Recovery	Flags
Dibromofluoromethane	101%	
1,2-Dichloroethane-d4	101%	
Toluene-d8	89.5%	
4-bromofluorobenzene	84.6%	

LSAI LABS, LLC Chain of Custody Record

8444 Castlewood Drive, Suite 800, Indianapolis, IN 46250/ T:(317) 284 1033/ F: (317) 284 1129/ admin@lsailabs.com

Client Information:	
Company Name	BCA
Contact Name	J. TEUSCHLER
Address	7202 E 87th
City	Indianapolis
State & Zip	INDIANA
Phone Number	317-578-4233
Email	JTEUSCHLER@BCAconsultants.com
Project ID	19-146
Site Name	216 College
Site Location	Bloomington

Billing Information: ELTF / Non-ELTF
Other Comments:

TAT: (Standard) / 7 business days)
Rush: 1 day / 2 days / 3 days
Rush TAT will incur a surcharge

Sampler's Name: Rod Mumy
Sampler's Signature: Rod Mumy
Required QC Level: Level II / III / IV
Shipping Method: (Drop-off) / Picked / UPS / FedEx / Airborne / Other:

LSAI Quote#
LSAI PO#

Sample Integrity Notes
- Samples Received on Ice: Yes/No
- Cooler Temp: 2.9 °C
- Samples Intact? Yes / No
- Vials free of head-space: Yes/No/N/A
- Other comments:

Matrix Code

DW =	Drinking Water
WW =	Waste Wateer
GW =	Ground Water
SO =	Soil
EF =	Effluent
SOL =	Solid
Other =	

Which Regulations Apply:
NPDES / RECAP / RISC / RCG / POTW / STATE / USDA / FDA / Other

Sample ID / Description		Collection Information				Container		Preservative	Requested Tests								
Client ID	LSAI ID	Date	Time	Grab / Composite	Matrix	Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO_3, H_2SO_4, NaOH, $NaHSO_4$	VOC's								
SP-1	19-2876	5-17-19	1145	G	GW	9	V	HCl	X	MS/MSD							
SP-3	19-2877	5-17-19	1310	G	GW	2	V	HCl	X								
SP-4	19-2878	5-17-19	1345	G	GW	3	V	HCl	X								
SP-5	19-2879	5-17-19	1023	G	GW	3	V	HCl	X								
SP-5 (DUP	19-2880	5-17-19	1023	G	GW	3	V	HCl	X								
EB-1	19-2881	5-17-19	1450	G	GW	3	V	HCl	X								
TB-1	19-2882					3	V		X								
MS	19-2883																
MSD	19-2884																

Comments:

	Relinquished by	Date	Time		Received By	Date	Time	Comments:
1	Rod Mumy / BCA	5/20/19	1241		PKS	5/20/19	12:41	
2								
3								

LSAI LABORATORIES
Lab Solutions for AnalyticalTesting & Issues

SAMPLE CONDITION UPON RECEPTION

Customer: BCA COC Date 5/20/19 Project # 19-1416

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Customer ☐ LSAI ☐ Other _____
Tracking #: _____

Custody Seal on Cooler: ☐ Yes ☒ No Seal Intact: ☐ Yes ☐ No

Temperature 2.9°C Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process begun

Logged in by: (Date and Initial) WL 5/20/19		**Comments**
Chain of Custody Present	☒ Yes ☐ No ☐ N/A	
Chain of Custody Properly Filled Out	☒ Yes ☐ No ☐ N/A	
Chain of Custody Relinquished	☒ Yes ☐ No ☐ N/A	
Sampler Name and Signatory on COC	☒ Yes ☐ No ☐ N/A	
Adherence to Holding Times	☒ Yes ☐ No ☐ N/A	
Rush Turn Around Time Requested	☐ Yes ☒ No ☐ N/A	
Containers Intact	☒ Yes ☐ No ☐ N/A	
Sample Labels Match COC	☒ Yes ☐ No ☐ N/A	
Sample Labels Legible	☒ Yes ☐ No ☐ N/A	
Samples Preserved Properly	☒ Yes ☐ No ☐ N/A	
Headspace in VOA vials (> pea size)	☐ Yes ☒ No ☐ N/A	
Trip Blank Present	☒ Yes ☐ No ☐ N/A	
Sufficient Volume for Requested Tests	☒ Yes ☐ No ☐ N/A	
Correct Containers Used	☒ Yes ☐ No ☐ N/A	

Deviations from above needing customer notification? ☐ Yes ☒ No

Description _____

_____

Person Contacted _____ Date/Time _____

QF-4.9.1 Enacted ☐ Yes ☐ No

LSAI LABORATORIES
Lab Solutions for Analytical Testing & Issues

Level III QA/QC Checklist

Analytical Method	8260B
Extraction Method (If applicable)	5030B
LSAI Batch I.D.	28MAY2019
Sequence Log	✓
Reporting Limits	✓
Initial Calibration Data:	
Calibration Curve	VOC-DA-23MAY2019
Initial Calibration Raw Data	✓
Initial Calibration RF Summary	✓
Initial Calibration Second Source Check	✓
Tune Data	✓
Continuing Calibration Verification (CCV) Data:	
CCV Raw Data	✓
CCV Summary	✓
Tune Data	✓
Quality Control Data:	
Method Blank (MBLANK)	✓
Laboratory Control Standard (LCS)	✓
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	✓

The contents of this report packet have been reviewed for completeness and accuracy regarding LSAI & methodology requirements.

Signature of Approval: [signature]

2019 May 28 1102 Sequence Log .LOG

Starting sequence Tue May 28 11:02:34 2019

Instrument Name: VOA MSD
Sequence File: C:\msdchem\1\sequence\2019_MAY_28_1801.S
Comment:
Operator: PS
Data Path: C:\MSDCHEM\1\DATA\28MAY2019\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Sample	1	CCV-1	8260B	CCV-1
2)	Sample	1	CCV-1A	8260B	CCV-1A
3)	Sample	2	SP-1	8260B	SP-1
4)	Sample	3	MB-1	8260B	MB-1
5)	Sample	4	19-2876	8260B	19-2876
6)	Sample	5	19-2877	8260B	19-2877
7)	Sample	6	19-2878	8260B	19-2878
8)	Sample	7	19-2879	8260B	19-2879
9)	Sample	8	19-2880	8260B	19-2880
10)	Sample	9	19-2881	8260B	19-2881
11)	Sample	10	19-2882	8260B	19-2882
12)	Sample	11	19-2883	8260B	19-2883
13)	Sample	12	19-2884	8260B	19-2884
14)	Sample	13	19-2790	8260B	19-2790
15)	Sample	13	19-2790-MS		
	Datafile		19-2790-MS		
	Method		8260B		
16)	Sample	13	19-2790-MSD		
	Datafile		19-2790-MSD		
	Method		8260B		
17)	Sample	14	19-2791	8260B	19-2791
18)	Sample	15	19-2792	8260B	19-2792
19)	Sample	15	19-2792X50		
	Datafile		19-2792X50		
	Method		8260B		
20)	Sample	16	19-2793	8260B	19-2793
21)	Sample	17	19-2794	8260B	19-2794
22)	Sample	17	19-2794X10		
	Datafile		19-2794X10		
	Method		8260B		
23)	Sample	18	19-2795	8260B	19-2795
24)	Sample	19	LCS-2	8260B	LCS-2
25)	Sample	19	LCS-2A	8260B	LCS-2A
26)	Sample	88	SB-2	8260B	SB-2
27)	Sample	20	MB-2	8260B	MB-2
28)	Sample	21	19-2796	8260B	19-2796
29)	Sample	22	19-2797	8260B	19-2797
30)	Sample	22	19-2797X10		
	Datafile		19-2797X10		
	Method		8260B		
31)	Sample	23	19-2798	8260B	19-2798
32)	Sample	24	19-2799	8260B	19-2799
33)	Sample	24	19-2799X10		
	Datafile		19-2799X10		
	Method		8260B		
34)	Sample	25	19-2800	8260B	19-2800
35)	Sample	25	19-2800X100		
	Datafile		19-2800X100		
	Method		8260B		
36)	Sample	26	19-2801	8260B	19-2801
37)	Sample	27	19-2802	8260B	19-2802
38)	Sample	28	19-2803	8260B	19-2803
39)	Sample	29	19-2804	8260B	19-2804
40)	Sample	30	19-2805	8260B	19-2805
41)	Sample	31	19-2806	8260B	19-2806
42)	Sample	32	19-2807	8260B	19-2807
43)	Sample	33	19-2808	8260B	19-2808
44)	Sample	33	19-2808X10		
	Datafile		19-2808X10		
	Method		8260B		
45)	Sample	34	19-2809	8260B	19-2809
46)	Sample	35	19-2819	8260B	19-2819
47)	Sample	35	19-2819X10		
	Datafile		19-2819X10		
	Method		8260B		
48)	Sample	36	CCV-3	8260B	CCV-3
49)	Sample	36	CCV-3A	8260B	CCV-3A
50)	Sample	2	SP-3	8260B	SP-3

```
 51) Sample        37  MB-3      8260B     MB-3
 52) Sample        38  19-2820   8260B     19-2820
 53) Sample        38  19-2820-MS
     Datafile          19-2820-MS
     Method            8260B
 54) Sample        38  19-2820-MSD
     Datafile          19-2820-MSD
     Method            8260B
 55) Sample        39  19-2821   8260B     19-2821
 56) Sample        40  19-2822   8260B     19-2822
 57) Sample        41  19-2823   8260B     19-2823
 58) Sample        42  19-2824   8260B     19-2824
 59) Sample        43  19-2825   8260B     19-2825
 60) Sample        44  19-2826   8260B     19-2826
 61) Sample        45  19-2827   8260B     19-2827
 62) Sample        46  19-2828   8260B     19-2828
 63) Sample        47  19-2829   8260B     19-2829
Sequence Table edit performed Wed May 29 07:56:09 2019
 64) Sample        48  19-2830   8260B     19-2830
 65) Sample        49  19-2831   8260B     19-2831
 66) Sample        50  19-2832   8260B     19-2832
 67) Sample        51  19-2833   8260B     19-2833
 68) Sample        52  19-2834   8260B     19-2834
 69) Sample        53  19-2835   8260B     19-2835
Sequence Table edit performed Wed May 29 10:05:33 2019
 70) Sample        54  19-2836   8260B     19-2836
 71) Sample        55  19-2837   8260B     19-2837
 72) Sample        56  CCV-4     8260B     CCV-4
 73) Sample        56  CCV-4A    8260B     CCV-4A
 74) Sample         2  SP-4      8260B     SP-4
 75) Sample        57  MB-4      8260B     MB-4
 76) Sample        58  19-2838   8260B     19-2838
 77) Sample        59  19-2839   8260B     19-2839
 78) Sample        60  19-2840   8260B     19-2840
 79) Sample        61  19-2841   8260B     19-2841
 80) Sample        63  19-2842   8260B     19-2842
 81) Sample        63  19-2842x10
     Datafile          19-2842x10
     Method            8260B
 82) Sample        11  19-2883-ms
     Datafile          19-2883-ms
     Method            8260B
 83) Sample        12  19-2884-msd
     Datafile          19-2884-msd
     Method            8260B
 84) Sample        64  19-2843   8260B     19-2843
 85) Sample        65  19-2844   8260B     19-2844
 86) Sample        66  19-2845   8260B     19-2845
 87) Sample        67  19-2846   8260B     19-2846
 88) Sample         1  19-2884-msd-1
     Datafile          19-2884-msd-1
     Method            8260B
 89) Sample        69  19-2848   8260B     19-2848
 90) Sample        70  19-2849   8260B     19-2849
 91) Sample        71  19-2850   8260B     19-2850
 92) Sample        72  19-2851   8260B     19-2851
 93) Sample        73  19-2852   8260B     19-2852

Sequence paused Wed May 29 17:56:46 2019

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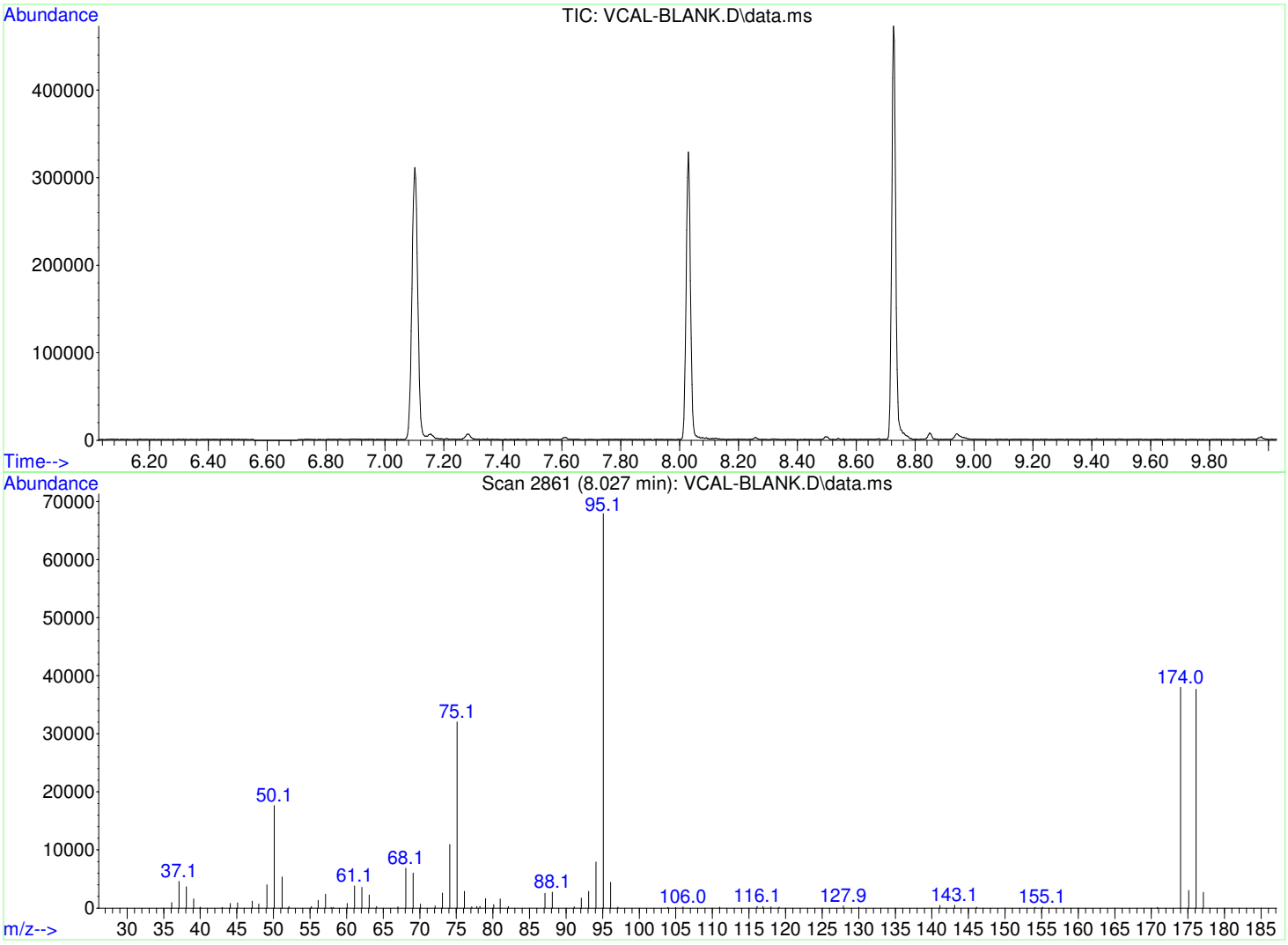
Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : VCAL-BLANK.D
Acq On : 23 May 2019 3:55 pm
Operator : DJD
Sample : VCAL-BLANK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Title : VOC
Last Update : Fri May 24 11:00:55 2019



Spectrum Information: Scan 2861

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.0	17648	PASS
75	95	30	60	47.1	32032	PASS
95	95	100	100	100.0	67944	PASS
96	95	5	9	6.5	4436	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	56.0	38016	PASS
175	174	5	9	7.9	3013	PASS
176	174	95	101	99.1	37664	PASS
177	176	5	9	7.2	2719	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : VCAL-BLANK.D
Acq On : 23 May 2019 3:55 pm
Operator : DJD
Sample : VCAL-BLANK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 24 11:02:39 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 11:00:55 2019
Response via : Initial Calibration

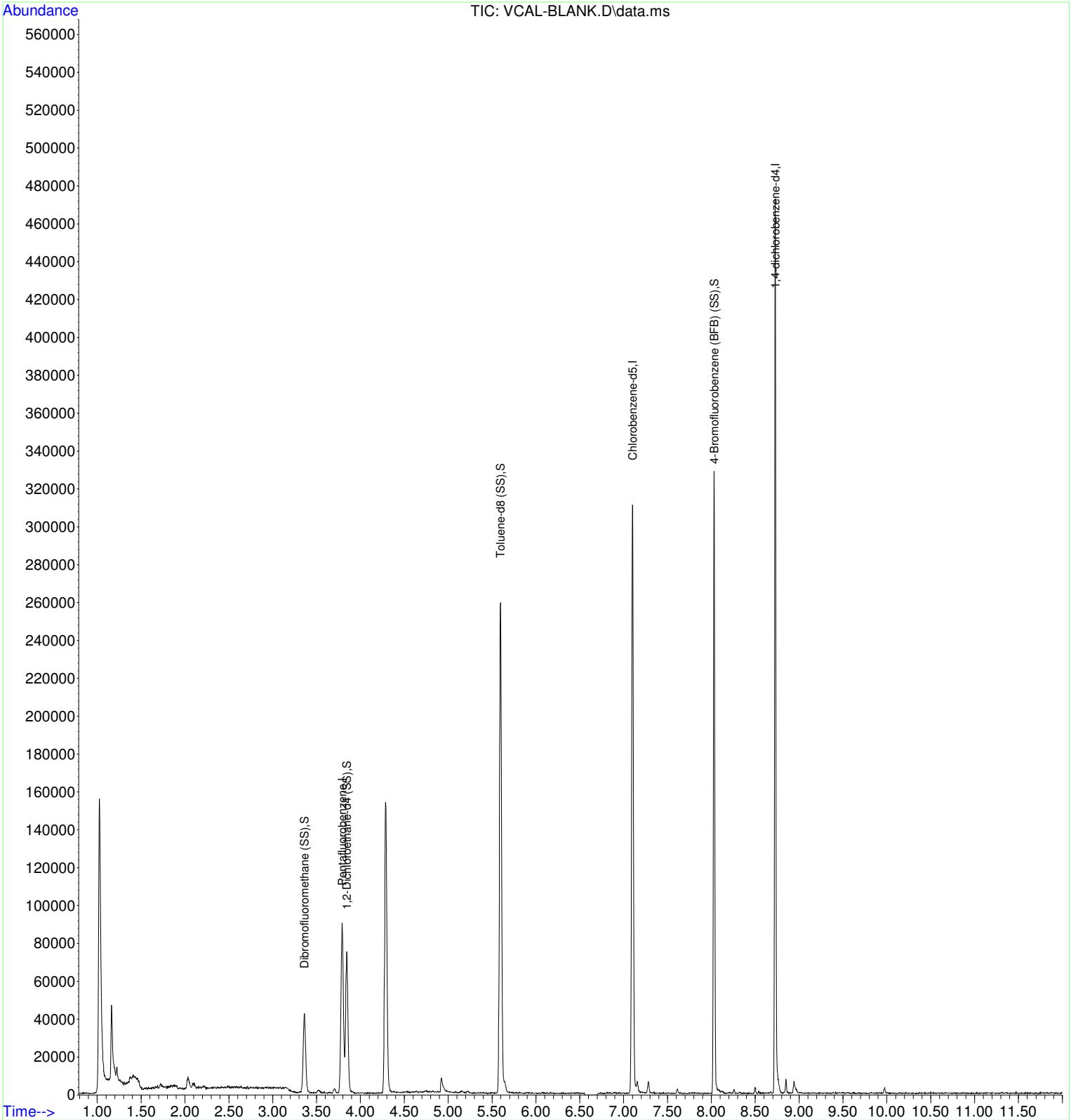
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.793	168	51244	50.00	ppb	0.00
42) Chlorobenzene-d5	7.102	117	119355	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.729	152	63427	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.362	111	25142	50.75	ppb	0.00
Spiked Amount 50.000			Recovery = 101.50%			
32) 1,2-Dichloroethane-d4 ...	3.845	102	7329	54.64	ppb	0.00
Spiked Amount 50.000			Recovery = 109.28%			
44) Toluene-d8 (SS)	5.597	98	147258	46.03	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.06%			
63) 4-Bromofluorobenzene (...	8.031	174	43853	41.99	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.98%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : VCAL-BLANK.D
Acq On : 23 May 2019 3:55 pm
Operator : DJD
Sample : VCAL-BLANK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 24 11:02:39 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 11:00:55 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V001.D
Acq On : 23 May 2019 10:03 pm
Operator : DJD
Sample : V001
Misc :
ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 24 10:09:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.794	168	53143	50.00	ppb		0.01
42) Chlorobenzene-d5	7.102	117	110655	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	62834m	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.363	111	24829	49.80	ppb		0.00
Spiked Amount 50.000			Recovery = 99.60%				
32) 1,2-Dichloroethane-d4 ...	3.847	102	6775	55.37	ppb		0.00
Spiked Amount 50.000			Recovery = 110.74%				
44) Toluene-d8 (SS)	5.598	98	133612	51.44	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.88%				
63) 4-Bromofluorobenzene (...	8.033	174	43649m	53.93	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 107.86%				
Target Compounds							Qvalue
3) Chloromethane	1.204	50	5328	1.69	ppb	#	49
4) Vinyl Chloride	1.227	62	6397	4.08	ppb	#	100
5) Bromomethane	1.374	94	917m	2.11	ppb		
6) Chloroethane	1.411	64	441m	1.28	ppb		
7) Trichlorofluoromethane	1.462	101	165m	1.18	ppb		
8) Carbon disulfide	1.746	76	252m	1.46	ppb		
9) 1,1-Dichloroethene	1.726	96	420m	5.18	ppb		
12) Methylene Chloride	2.043	84	591m	2.66	ppb		
13) Acetone	2.096	58	419m	5.34	ppb		
14) trans-1,2-Dichloroethene	2.128	61	465m	1.37	ppb		
17) Chloroprene (2-Chloro-...	2.513	53	939m	1.46	ppb		
18) 1,1-Dichloroethane	2.533	63	613m	1.03	ppb		
19) Acrylonitrile	2.513	53	939m	1.46	ppb		
22) 2,2-Dichloropropane	3.044	77	394m	1.75	ppb		
24) Chloroform	3.200	83	993m	1.48	ppb		
25) Carbon tetrachloride	3.293	117	468m	1.18	ppb		
26) 1,1,1-Trichloroethane	3.366	97	751m	1.30	ppb		
28) 1,1-Dichloropropene	3.472	75	531m	1.39	ppb		
29) 2-Butanone	3.522	43	3455	2.84	ppb	#	62
30) Benzene	3.705	78	3227	2.06	ppb	#	50
31) Methacrylonitrile*	3.791	41	1323m	1.06	ppb		
33) 1,2-Dichloroethane	3.909	62	1342	1.42	ppb	#	1
34) Trichloroethene	4.244	130	547m	1.34	ppb		
37) 1,2-Dichloropropane	4.747	63	988m	1.50	ppb		
39) Methyl methacrylate	5.008	41	1776	0.97	ppb	#	26
43) Toluene	5.647	91	4304	2.14	ppb	#	87
45) Tetrachloroethene	6.010	164	496m	1.37	ppb		
49) Ethyl methacrylate	6.283	69	1209	0.98	ppb	#	37
51) 1,3-Dichloropropane	6.500	76	1147m	1.00	ppb		
53) 2-Hexanone	6.912	43	2153	1.06	ppb	#	36
54) Chlorobenzene	7.115	112	1557m	1.06	ppb		
55) Ethyl benzene	7.155	91	4808	2.24	ppb	#	82
57) MP Xylene	7.284	91	7243m	4.26	ppb		
58) O Xylene	7.611	91	3374m	1.65	ppb		
59) Styrene	7.656	104	1767	1.06	ppb	#	32
61) Isopropylbenzene (Cumene)	7.845	105	3331m	1.70	ppb		
64) Bromobenzene	8.091	156	632m	1.20	ppb		
65) cis-1,4-Dichloro-2-butene	8.096	53	431m	1.01	ppb		
66) n-Propylbenzene	8.127	91	3136m	2.08	ppb		
68) 2-Chlorotoluene	8.218	91	2315	1.95	ppb	#	53
69) 1,2,3-Trichloropropane	8.263	75	1113	1.19	ppb	#	29
70) 1,3,5-Trimethylbenzene	8.260	105	3214	2.09	ppb	#	75

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V001.D
Acq On : 23 May 2019 10:03 pm
Operator : DJD
Sample : V001
Misc :
ALS Vial : 37 Sample Multiplier: 1

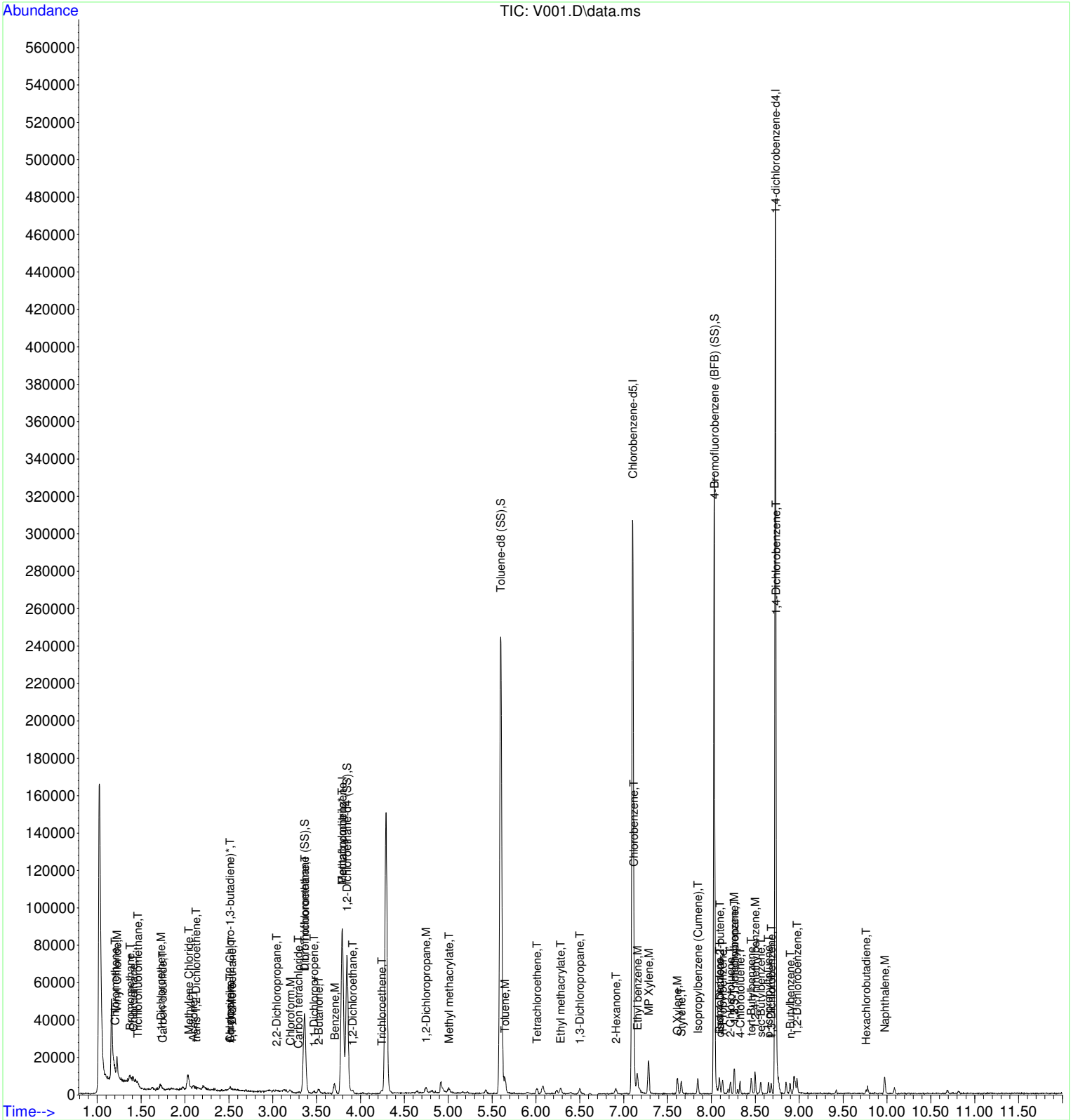
Quant Time: May 24 10:09:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
72) 4-Chlorotoluene	8.328	91	2170m	1.73	ppb		
73) tert-Butylbenzene	8.454	119	2207	1.73	ppb	#	79
75) 1,2,4-Trimethylbenzene	8.498	105	3518	2.04	ppb	#	71
76) sec-Butylbenzene	8.561	105	2794	2.02	ppb	#	59
77) p-Isopropyltoluene	8.651	119	2130	1.68	ppb	#	51
78) 1,3-Dichlorobenzene	8.682	146	1023m	1.07	ppb		
79) 1,4-Dichlorobenzene	8.735	146	1143m	1.15	ppb		
80) n-Butylbenzene	8.896	91	1948m	1.83	ppb		
81) 1,2-Dichlorobenzene	8.977	146	1329	1.11	ppb	#	28
83) Hexachlorobutadiene	9.762	225	333m	1.20	ppb		
85) Naphthalene	9.975	128	4490m	1.32	ppb		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V001.D
Acq On : 23 May 2019 10:03 pm
Operator : DJD
Sample : V001
Misc :
ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 24 10:09:40 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V010.D
Acq On : 23 May 2019 10:22 pm
Operator : DJD
Sample : V010
Misc :
ALS Vial : 38 Sample Multiplier: 1

Quant Time: May 24 09:20:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.792	168	47545	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	103064	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	58263	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.361	111	21966	55.03	ppb		0.00
Spiked Amount 50.000			Recovery = 110.06%				
32) 1,2-Dichloroethane-d4 ...	3.845	102	5853	52.68	ppb		0.00
Spiked Amount 50.000			Recovery = 105.36%				
44) Toluene-d8 (SS)	5.597	98	124363	46.93	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.86%				
63) 4-Bromofluorobenzene (...	8.032	174	41116	43.68	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 87.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.101	85	13534	19.39	ppb	#	94
3) Chloromethane	1.208	50	31716	16.35	ppb		95
4) Vinyl Chloride	1.227	62	24861	25.34	ppb	#	100
5) Bromomethane	1.369	94	5033	19.68	ppb	#	92
6) Chloroethane	1.412	64	3602	13.79	ppb	#	100
7) Trichlorofluoromethane	1.460	101	2477	15.83	ppb	#	73
8) Carbon disulfide	1.745	76	2757	4.30	ppb	#	92
9) 1,1-Dichloroethene	1.721	96	1763	6.63	ppb	#	38
10) Iodomethane	1.808	142	1357	6.81	ppb	#	37
12) Methylene Chloride	2.040	84	3035	7.30	ppb	#	21
13) Acetone	2.097	58	1378	11.13	ppb	#	67
14) trans-1,2-Dichloroethene	2.127	61	5421	6.03	ppb		81
15) n-Hexane	2.155	57	2568	6.70	ppb	#	79
17) Chloroprene (2-Chloro-...	2.510	53	11120	7.28	ppb	#	81
18) 1,1-Dichloroethane	2.533	63	7726	6.96	ppb	#	91
19) Acrylonitrile	2.510	53	11120	7.28	ppb	#	45
21) cis-1,2-Dichloroethene	2.955	61	7068	7.28	ppb	#	75
22) 2,2-Dichloropropane	3.042	77	4586	7.01	ppb	#	56
23) Bromochloromethane	3.132	130	1945	5.79	ppb	#	1
24) Chloroform	3.196	83	9077	8.59	ppb		93
25) Carbon tetrachloride	3.294	117	5534	8.34	ppb		92
26) 1,1,1-Trichloroethane	3.364	97	7700	8.42	ppb		94
28) 1,1-Dichloropropene	3.472	75	6370	7.60	ppb	#	80
29) 2-Butanone	3.522	43	13098	13.14	ppb	#	62
30) Benzene	3.703	78	22901	11.35	ppb		88
31) Methacrylonitrile*	3.790	41	12270	10.19	ppb		92
33) 1,2-Dichloroethane	3.908	62	11599	10.84	ppb	#	89
34) Trichloroethene	4.242	130	5747	8.97	ppb		89
35) Dibromomethane	4.647	93	3961	8.83	ppb	#	83
36) n-Butanol	4.686	56	740m	110.27	ppb		
37) 1,2-Dichloropropane	4.745	63	9553	9.53	ppb	#	88
38) Bromodichloromethane	4.815	83	8016	8.58	ppb		90
39) Methyl methacrylate	5.004	41	17661	9.85	ppb	#	78
41) cis-1,3-Dichloropropene	5.427	75	10099	8.58	ppb	#	74
43) Toluene	5.646	91	30641	10.27	ppb		96
45) Tetrachloroethene	6.009	164	5938	7.76	ppb	#	76
46) 4-Methyl-2-pentanone (...	6.072	43	25152	8.22	ppb		94
47) trans-1,3-Dichloropropene	6.083	75	10071	7.27	ppb	#	72
48) 1,1,2-Trichloroethane	6.237	97	7136	7.93	ppb	#	87
49) Ethyl methacrylate	6.280	69	13869	8.04	ppb	#	55
50) Dibromochloromethane	6.398	129	5481	6.10	ppb	#	82
51) 1,3-Dichloropropane	6.499	76	13023	7.94	ppb	#	58

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V010.D
Acq On : 23 May 2019 10:22 pm
Operator : DJD
Sample : V010
Misc :
ALS Vial : 38 Sample Multiplier: 1

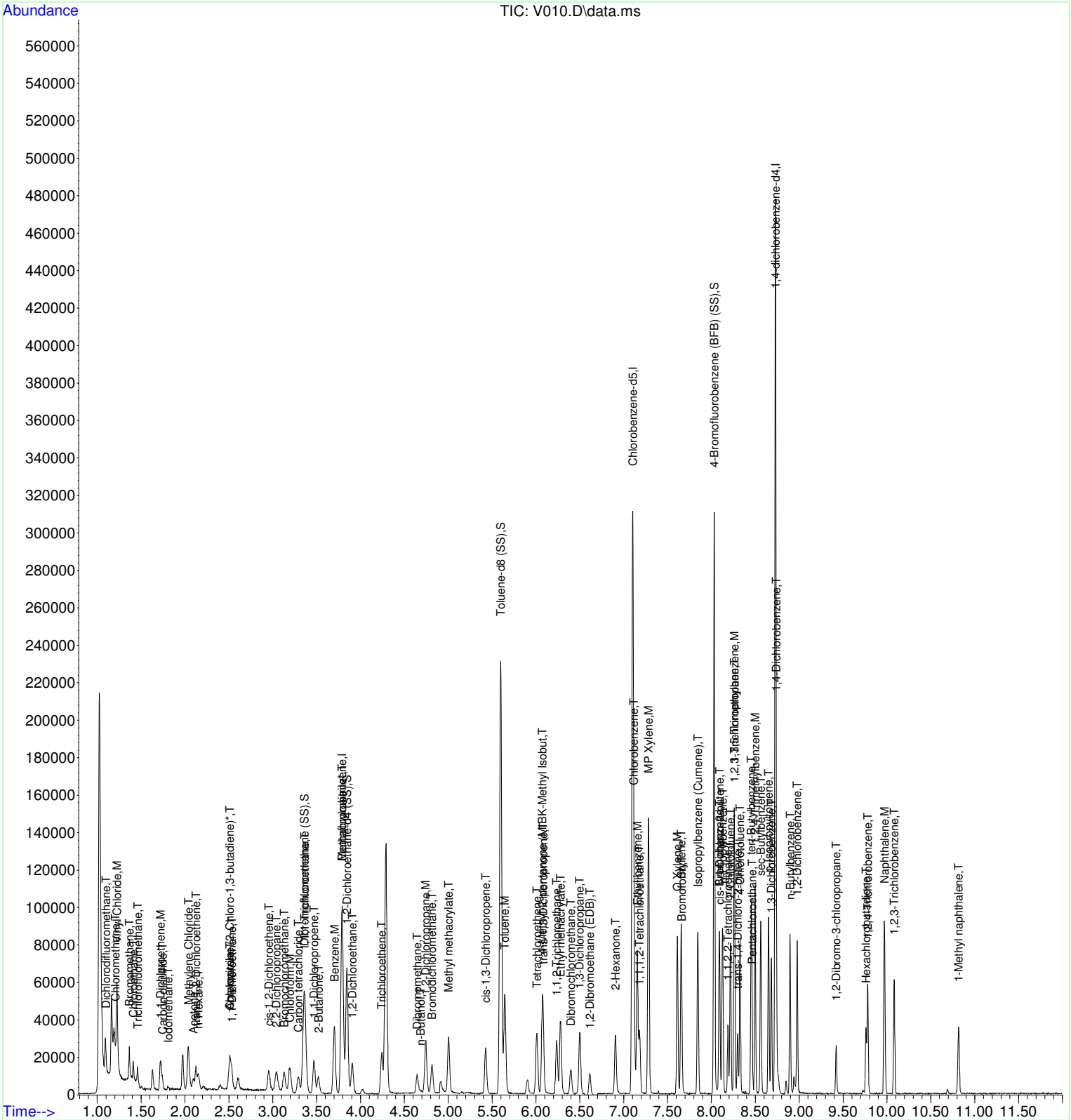
Quant Time: May 24 09:20:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.614	107	7814	11.02	ppb	#	98
53) 2-Hexanone	6.907	43	19367	7.72	ppb		91
54) Chlorobenzene	7.115	112	19052	7.41	ppb		84
55) Ethyl benzene	7.155	91	37757	9.67	ppb		95
56) 1,1,1,2-Tetrachloroethane	7.181	131	6011	6.99	ppb		90
57) MP Xylene	7.282	91	59472	18.09	ppb		95
58) O Xylene	7.612	91	32145	9.23	ppb		97
59) Styrene	7.656	104	22064	6.58	ppb		91
60) Bromoform	7.662	173	4050	6.97	ppb		93
61) Isopropylbenzene (Cumene)	7.844	105	35331	8.72	ppb		98
64) Bromobenzene	8.091	156	7623	6.57	ppb	#	69
65) cis-1,4-Dichloro-2-butene	8.093	53	5343	8.16	ppb	#	77
66) n-Propylbenzene	8.126	91	40066	7.01	ppb		97
67) 1,1,2,2-Tetrachloroethane	8.188	83	10552	5.94	ppb		98
68) 2-Chlorotoluene	8.217	91	27353	8.07	ppb		95
69) 1,2,3-Trichloropropane	8.262	75	12920	7.78	ppb		95
70) 1,3,5-Trimethylbenzene	8.259	105	31566	9.65	ppb		96
71) trans-1,4-Dichloro-2-b...	8.298	53	5018	7.34	ppb	#	78
72) 4-Chlorotoluene	8.325	91	27096m	7.25	ppb		
73) tert-Butylbenzene	8.454	119	26534	6.67	ppb		89
74) Pentachloroethane	8.463	167	1998	4.56	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.498	105	32942	9.17	ppb		97
76) sec-Butylbenzene	8.562	105	36682	6.71	ppb		96
77) p-Isopropyltoluene	8.652	119	29631	6.37	ppb		96
78) 1,3-Dichlorobenzene	8.683	146	14563	5.98	ppb		95
79) 1,4-Dichlorobenzene	8.738	146	14738m	5.71	ppb		
80) n-Butylbenzene	8.895	91	26696	5.51	ppb		96
81) 1,2-Dichlorobenzene	8.978	146	15669	5.86	ppb		96
82) 1,2-Dibromo-3-chloropr...	9.422	157	3146	6.84	ppb	#	70
83) Hexachlorobutadiene	9.760	225	4591	4.49	ppb		98
84) 1,2,4-Trichlorobenzene	9.780	180	10186	4.84	ppb		99
85) Naphthalene	9.972	128	43799	8.08	ppb		95
86) 1,2,3-Trichlorobenzene	10.082	180	11505	5.62	ppb		98
88) 1-Methyl naphthalene	10.816	142	12273	4.23	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V010.D
Acq On : 23 May 2019 10:22 pm
Operator : DJD
Sample : V010
Misc :
ALS Vial : 38 Sample Multiplier: 1

Quant Time: May 24 09:20:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V050.D
Acq On : 23 May 2019 10:42 pm
Operator : DJD
Sample : V050
Misc :
ALS Vial : 39 Sample Multiplier: 1

Quant Time: May 24 09:20:48 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.791	168	48865	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	104840	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	63694	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.360	111	22548	54.96	ppb		0.00
Spiked Amount 50.000			Recovery = 109.92%				
32) 1,2-Dichloroethane-d4 ...	3.845	102	6213	54.41	ppb		0.00
Spiked Amount 50.000			Recovery = 108.82%				
44) Toluene-d8 (SS)	5.597	98	126770	47.03	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.06%				
63) 4-Bromofluorobenzene (...	8.032	174	44480	43.22	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.44%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.101	85	68019	99.71	ppb	#	98
3) Chloromethane	1.207	50	152967	82.12	ppb		97
4) Vinyl Chloride	1.227	62	106717	105.83	ppb	#	100
5) Bromomethane	1.368	94	20334	77.36	ppb	#	99
6) Chloroethane	1.411	64	17557	66.57	ppb	#	100
7) Trichlorofluoromethane	1.458	101	12937	80.47	ppb		97
8) Carbon disulfide	1.737	76	14919	22.67	ppb	#	99
9) 1,1-Dichloroethene	1.713	96	7496	27.41	ppb	#	50
10) Iodomethane	1.809	142	9850m	42.63	ppb		
12) Methylene Chloride	2.038	84	12228	28.64	ppb	#	24
13) Acetone	2.099	58	5377	42.27	ppb	#	66
14) trans-1,2-Dichloroethene	2.124	61	27622	29.88	ppb		84
15) n-Hexane	2.149	57	14540	36.90	ppb	#	97
17) Chloroprene (2-Chloro-...	2.507	53	58865	37.51	ppb	#	92
18) 1,1-Dichloroethane	2.531	63	38779	33.97	ppb	#	98
19) Acrylonitrile	2.507	53	58865	37.51	ppb	#	52
21) cis-1,2-Dichloroethene	2.954	61	32120	32.20	ppb		86
22) 2,2-Dichloropropane	3.042	77	20185	30.03	ppb	#	83
23) Bromochloromethane	3.131	130	7474	21.65	ppb	#	1
24) Chloroform	3.196	83	37394	34.43	ppb		94
25) Carbon tetrachloride	3.292	117	32864	48.20	ppb		98
26) 1,1,1-Trichloroethane	3.362	97	43774	46.58	ppb		97
28) 1,1-Dichloropropene	3.470	75	33808	39.23	ppb		87
29) 2-Butanone	3.522	43	55377	54.06	ppb	#	66
30) Benzene	3.702	78	116583	56.21	ppb		90
31) Methacrylonitrile*	3.790	41	61435	50.09	ppb		93
33) 1,2-Dichloroethane	3.907	62	61746	56.15	ppb	#	92
34) Trichloroethene	4.242	130	30571	46.45	ppb		91
35) Dibromomethane	4.647	93	21261	46.12	ppb	#	87
36) n-Butanol	4.691	56	3709	537.75	ppb	#	81
37) 1,2-Dichloropropane	4.744	63	49219	47.77	ppb	#	93
38) Bromodichloromethane	4.815	83	45098	46.96	ppb		91
39) Methyl methacrylate	5.004	41	91987	50.16	ppb	#	80
41) cis-1,3-Dichloropropene	5.427	75	59055	48.82	ppb	#	80
43) Toluene	5.646	91	155126	51.13	ppb		95
45) Tetrachloroethene	6.009	164	33751	43.37	ppb	#	72
46) 4-Methyl-2-pentanone (...	6.072	43	133435	42.89	ppb		92
47) trans-1,3-Dichloropropene	6.083	75	58181	41.27	ppb	#	77
48) 1,1,2-Trichloroethane	6.237	97	38927	42.53	ppb	#	90
49) Ethyl methacrylate	6.281	69	74257	42.34	ppb	#	57
50) Dibromochloromethane	6.399	129	34538	37.80	ppb		95
51) 1,3-Dichloropropane	6.499	76	71063	42.60	ppb	#	63

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V050.D
Acq On : 23 May 2019 10:42 pm
Operator : DJD
Sample : V050
Misc :
ALS Vial : 39 Sample Multiplier: 1

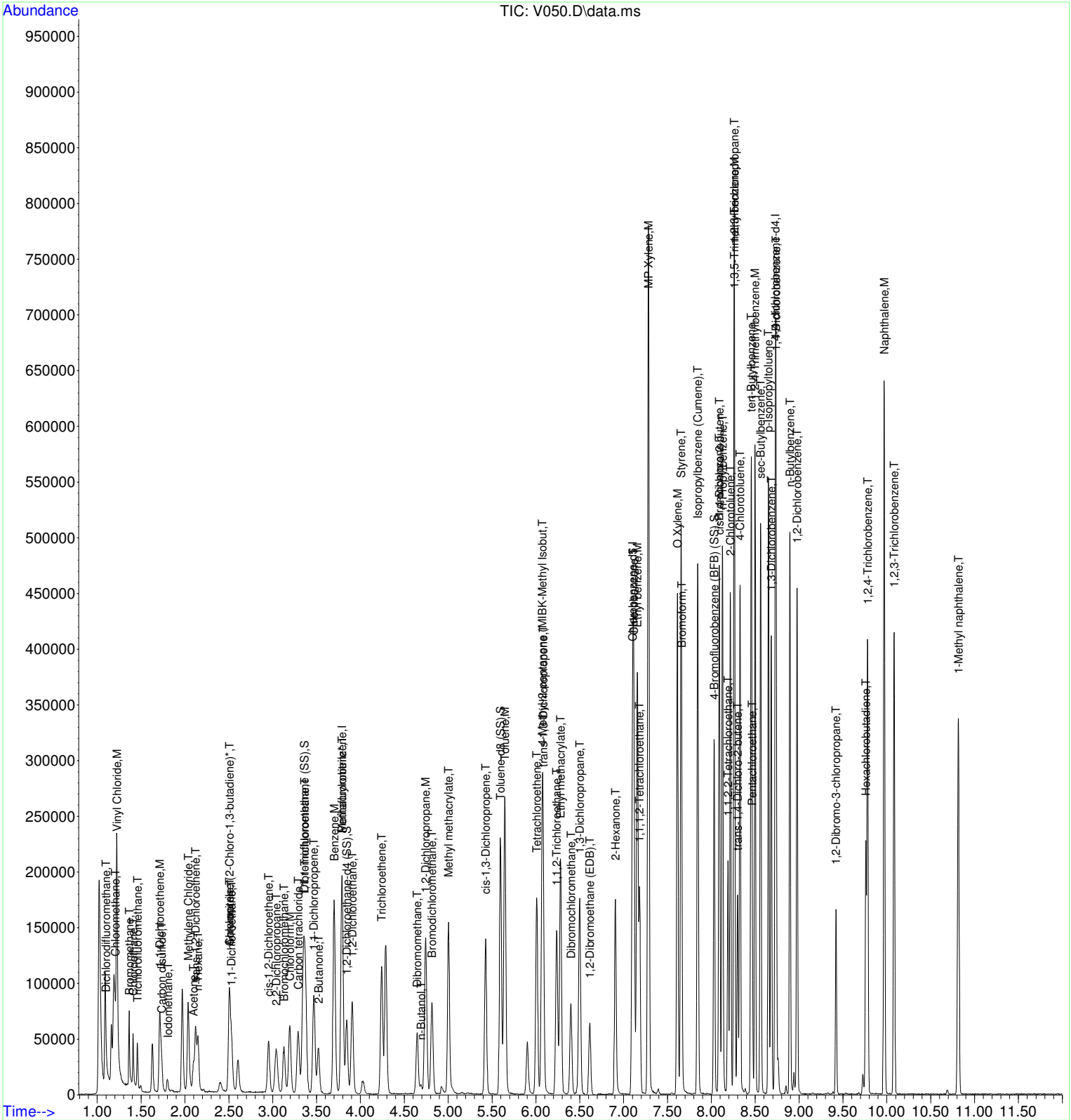
Quant Time: May 24 09:20:48 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.614	107	42775	59.30	ppb	#	98
53) 2-Hexanone	6.906	43	104293	40.89	ppb		91
54) Chlorobenzene	7.116	112	105059	40.18	ppb		91
55) Ethyl benzene	7.155	91	200497	50.48	ppb		94
56) 1,1,1,2-Tetrachloroethane	7.182	131	34305	39.23	ppb		95
57) MP Xylene	7.282	91	313831	93.82	ppb		96
58) O Xylene	7.612	91	171870	48.53	ppb		97
59) Styrene	7.656	104	126460	37.05	ppb		93
60) Bromoform	7.663	173	26336	41.03	ppb		98
61) Isopropylbenzene (Cumene)	7.845	105	193517	46.93	ppb		98
64) Bromobenzene	8.091	156	44370	34.98	ppb	#	78
65) cis-1,4-Dichloro-2-butene	8.093	53	27542	38.47	ppb		85
66) n-Propylbenzene	8.127	91	232738	37.24	ppb		98
67) 1,1,2,2-Tetrachloroethane	8.188	83	59853	30.80	ppb		99
68) 2-Chlorotoluene	8.217	91	145857	39.38	ppb		97
69) 1,2,3-Trichloropropane	8.264	75	66649m	36.71	ppb		
70) 1,3,5-Trimethylbenzene	8.260	105	170005	47.69	ppb		97
71) trans-1,4-Dichloro-2-b...	8.298	53	28605	38.28	ppb	#	81
72) 4-Chlorotoluene	8.326	91	151252	37.04	ppb		98
73) tert-Butylbenzene	8.454	119	147586	33.92	ppb		91
74) Pentachloroethane	8.464	167	12577	25.16	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.498	105	181920	46.40	ppb		96
76) sec-Butylbenzene	8.562	105	206159	34.51	ppb		96
77) p-Isopropyltoluene	8.652	119	169805	33.39	ppb		97
78) 1,3-Dichlorobenzene	8.683	146	87112	32.71	ppb		97
79) 1,4-Dichlorobenzene	8.738	146	86462	30.65	ppb		94
80) n-Butylbenzene	8.895	91	159764	30.15	ppb		96
81) 1,2-Dichlorobenzene	8.978	146	93874	32.10	ppb		97
82) 1,2-Dibromo-3-chloropr...	9.422	157	21394	42.58	ppb	#	82
83) Hexachlorobutadiene	9.760	225	28534	25.53	ppb		99
84) 1,2,4-Trichlorobenzene	9.780	180	72184	31.36	ppb		98
85) Naphthalene	9.971	128	279930	47.21	ppb		96
86) 1,2,3-Trichlorobenzene	10.082	180	79629	35.56	ppb		98
88) 1-Methyl naphthalene	10.814	142	118320	37.32	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V050.D
Acq On : 23 May 2019 10:42 pm
Operator : DJD
Sample : V050
Misc :
ALS Vial : 39 Sample Multiplier: 1

Quant Time: May 24 09:20:48 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V100.D
Acq On : 23 May 2019 11:01 pm
Operator : DJD
Sample : V100
Misc :
ALS Vial : 40 Sample Multiplier: 1

Quant Time: May 24 10:16:42 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.789	168	60291	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	115996	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	74534	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.358	111	26153	46.24	ppb		0.00
Spiked Amount 50.000			Recovery = 92.48%				
32) 1,2-Dichloroethane-d4 ...	3.843	102	7182	51.74	ppb		0.00
Spiked Amount 50.000			Recovery = 103.48%				
44) Toluene-d8 (SS)	5.596	98	140650	51.66	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.32%				
63) 4-Bromofluorobenzene (...	8.032	174	53700	55.93	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 111.86%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.100	85	120642	291.17	ppb	#	97
3) Chloromethane	1.205	50	281534	88.78	ppb		96
4) Vinyl Chloride	1.225	62	186342	128.19	ppb	#	100
5) Bromomethane	1.366	94	37981	86.37	ppb	#	99
6) Chloroethane	1.409	64	31780	90.59	ppb	#	100
7) Trichlorofluoromethane	1.455	101	23194	198.81	ppb		96
8) Carbon disulfide	1.728	76	31674	162.17	ppb	#	87
9) 1,1-Dichloroethene	1.706	96	15760	171.46	ppb	#	64
10) Iodomethane	1.798	142	20563	119.17	ppb	#	94
12) Methylene Chloride	2.035	84	25727	105.78	ppb	#	52
13) Acetone	2.101	58	8616	96.78	ppb	#	43
14) trans-1,2-Dichloroethene	2.119	61	52217	135.49	ppb		86
15) n-Hexane	2.143	57	26748m	Below Cal			
17) Chloroprene (2-Chloro-...	2.503	53	97899	133.78	ppb	#	92
18) 1,1-Dichloroethane	2.529	63	70260	104.27	ppb	#	99
19) Acrylonitrile	2.503	53	97899	133.78	ppb	#	52
21) cis-1,2-Dichloroethene	2.951	61	75295	119.08	ppb		92
22) 2,2-Dichloropropane	3.038	77	49313	193.54	ppb		87
23) Bromochloromethane	3.128	130	19133	91.29	ppb	#	1
24) Chloroform	3.193	83	90828	119.57	ppb		97
25) Carbon tetrachloride	3.288	117	67525	150.32	ppb		98
26) 1,1,1-Trichloroethane	3.359	97	89205	136.24	ppb		99
28) 1,1-Dichloropropene	3.467	75	72616	167.59	ppb		94
29) 2-Butanone	3.521	43	105817	84.66	ppb	#	66
30) Benzene	3.699	78	235604	132.72	ppb		93
31) Methacrylonitrile*	3.789	41	116161	90.59	ppb		94
33) 1,2-Dichloroethane	3.905	62	119267	111.26	ppb	#	92
34) Trichloroethene	4.240	130	65298	140.74	ppb		95
35) Dibromomethane	4.645	93	43885	105.83	ppb		93
36) n-Butanol	4.695	56	7637	84.76	ppb	#	90
37) 1,2-Dichloropropane	4.743	63	97473	130.10	ppb	#	95
38) Bromodichloromethane	4.814	83	92629	106.37	ppb		93
39) Methyl methacrylate	5.004	41	173587	92.28	ppb	#	81
41) cis-1,3-Dichloropropene	5.426	75	119201	121.31	ppb	#	84
43) Toluene	5.645	91	308853	146.18	ppb		96
45) Tetrachloroethene	6.008	164	70882	174.97	ppb	#	79
46) 4-Methyl-2-pentanone (...	6.073	43	249476	87.57	ppb		93
47) trans-1,3-Dichloropropene	6.083	75	117666	118.44	ppb	#	83
48) 1,1,2-Trichloroethane	6.237	97	77475	108.83	ppb		92
49) Ethyl methacrylate	6.281	69	143913	111.23	ppb	#	62
50) Dibromochloromethane	6.399	129	75029	95.00	ppb		96
51) 1,3-Dichloropropane	6.499	76	139169	115.60	ppb	#	69

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V100.D
Acq On : 23 May 2019 11:01 pm
Operator : DJD
Sample : V100
Misc :
ALS Vial : 40 Sample Multiplier: 1

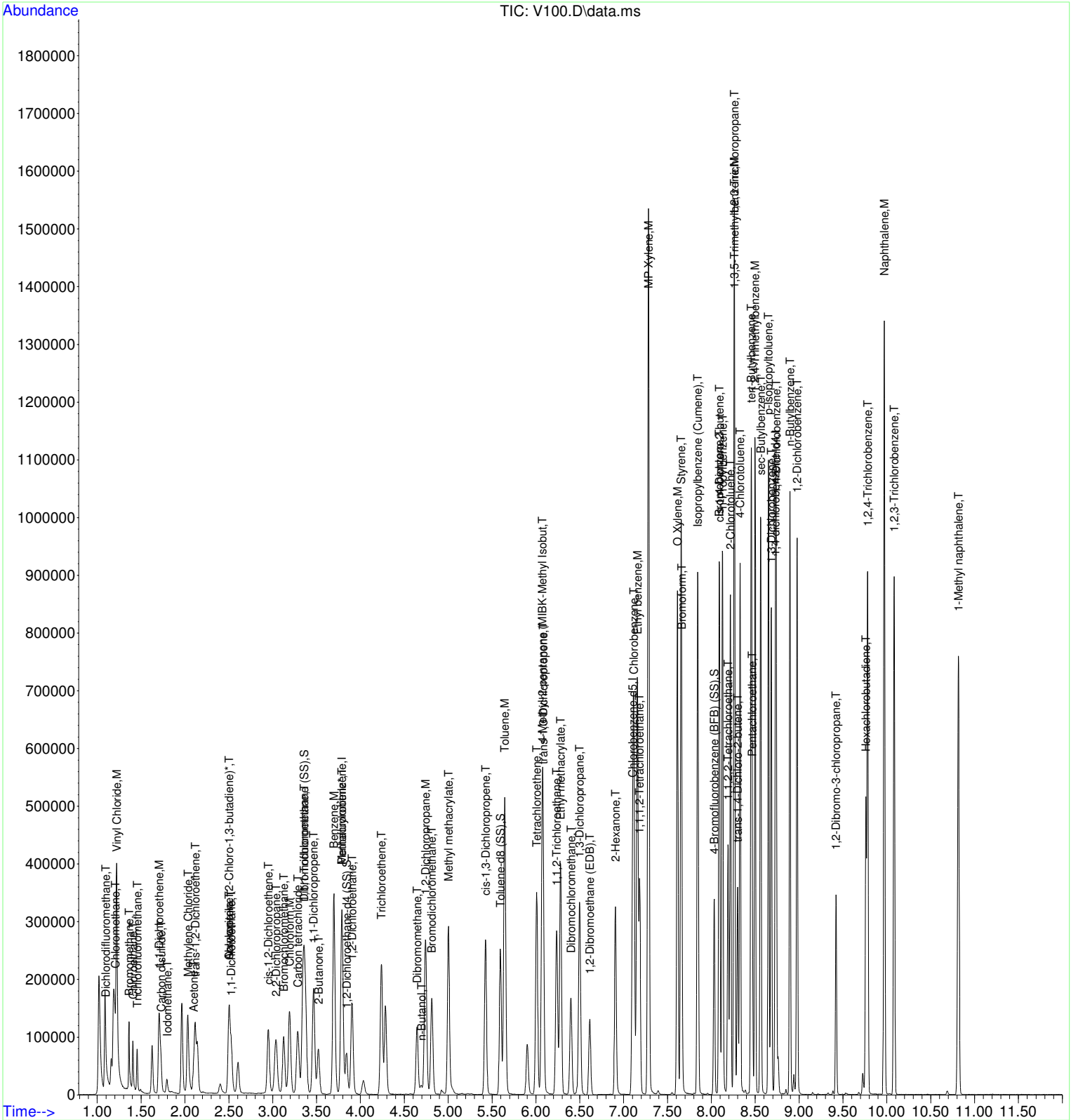
Quant Time: May 24 10:16:42 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.614	107	86925	104.67	ppb	#	98
53) 2-Hexanone	6.907	43	198674	93.07	ppb		91
54) Chlorobenzene	7.116	112	214914	139.39	ppb		94
55) Ethyl benzene	7.156	91	387940	172.13	ppb		96
56) 1,1,1,2-Tetrachloroethane	7.182	131	73657	108.28	ppb		97
57) MP Xylene	7.283	91	611613	342.76	ppb		96
58) O Xylene	7.612	91	329161	153.91	ppb		98
59) Styrene	7.656	104	249089	142.13	ppb		94
60) Bromoform	7.663	173	62669	100.98	ppb		98
61) Isopropylbenzene (Cumene)	7.845	105	381053	185.04	ppb		98
64) Bromobenzene	8.091	156	94823	151.79	ppb	#	89
65) cis-1,4-Dichloro-2-butene	8.093	53	55031	121.90	ppb	#	85
66) n-Propylbenzene	8.127	91	453361	253.55	ppb		99
67) 1,1,2,2-Tetrachloroethane	8.189	83	127627	105.81	ppb		99
68) 2-Chlorotoluene	8.217	91	283005	201.03	ppb		99
69) 1,2,3-Trichloropropane	8.263	75	127897	115.40	ppb		97
70) 1,3,5-Trimethylbenzene	8.261	105	331545	213.26	ppb		97
71) trans-1,4-Dichloro-2-b...	8.298	53	55168	108.42	ppb	#	86
72) 4-Chlorotoluene	8.327	91	294617	198.09	ppb		99
73) tert-Butylbenzene	8.455	119	301317	199.63	ppb		94
74) Pentachloroethane	8.465	167	33809	115.80	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.499	105	355751	194.85	ppb		97
76) sec-Butylbenzene	8.562	105	407991	248.05	ppb		96
77) p-Isopropyltoluene	8.652	119	344241	229.34	ppb		97
78) 1,3-Dichlorobenzene	8.683	146	191467	169.37	ppb		98
79) 1,4-Dichlorobenzene	8.738	146	196193	165.76	ppb		99
80) n-Butylbenzene	8.895	91	313862	248.53	ppb		97
81) 1,2-Dichlorobenzene	8.978	146	208185	145.97	ppb		99
82) 1,2-Dibromo-3-chloropr...	9.422	157	49077	107.77	ppb		94
83) Hexachlorobutadiene	9.761	225	68484	207.31	ppb		99
84) 1,2,4-Trichlorobenzene	9.780	180	168359	182.83	ppb		99
85) Naphthalene	9.972	128	597906	148.19	ppb		97
86) 1,2,3-Trichlorobenzene	10.082	180	181624	180.05	ppb		98
88) 1-Methyl naphthalene	10.815	142	273301	153.34	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V100.D
Acq On : 23 May 2019 11:01 pm
Operator : DJD
Sample : V100
Misc :
ALS Vial : 40 Sample Multiplier: 1

Quant Time: May 24 10:16:42 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:04:03 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V150PPB.D
Acq On : 23 May 2019 5:31 pm
Operator : DJD
Sample : V150PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 23 17:49:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Thu May 23 17:49:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.785	168	58648	50.00	ppb		0.00
42) Chlorobenzene-d5	7.101	117	107306	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	67039	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.355	111	27230	51.01	ppb		0.00
Spiked Amount 50.000			Recovery = 102.02%				
32) 1,2-Dichloroethane-d4 ...	3.840	102	7187	53.09	ppb		0.00
Spiked Amount 50.000			Recovery = 106.18%				
44) Toluene-d8 (SS)	5.594	98	134462	51.75	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 103.50%				
63) 4-Bromofluorobenzene (...	8.031	174	45944	49.55	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.10%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.100	85	50666	40.78	ppb	#	98
3) Chloromethane	1.204	50	121150	40.69	ppb		96
4) Vinyl Chloride	1.225	62	75825	59.33	ppb	#	100
5) Bromomethane	1.365	94	17039	52.83	ppb	#	99
6) Chloroethane	1.408	64	12911	39.84	ppb	#	100
7) Trichlorofluoromethane	1.453	101	8057	41.15	ppb		94
8) Carbon disulfide	1.719	76	14294	19.11	ppb	#	88
9) 1,1-Dichloroethene	1.696	96	6777	21.68	ppb	#	79
10) Iodomethane	1.795	142	7699	39.30	ppb	#	96
12) Methylene Chloride	2.030	84	11116	22.68	ppb	#	67
13) Acetone	2.107	58	3540	24.26	ppb	#	81
14) trans-1,2-Dichloroethene	2.113	61	19406	18.42	ppb		87
15) n-Hexane	2.135	57	10259	23.21	ppb	#	87
17) Chloroprene (2-Chloro-...	2.498	53	42581	23.52	ppb	#	94
18) 1,1-Dichloroethane	2.524	63	31726	24.15	ppb	#	97
19) Acrylonitrile	2.498	53	42581	23.52	ppb	#	51
21) cis-1,2-Dichloroethene	2.947	61	32443	28.15	ppb		96
22) 2,2-Dichloropropane	3.033	77	23563	29.68	ppb		89
23) Bromochloromethane	3.126	130	10374	26.01	ppb	#	1
24) Chloroform	3.189	83	43230	33.81	ppb		100
25) Carbon tetrachloride	3.283	117	30830	37.34	ppb		99
26) 1,1,1-Trichloroethane	3.355	97	39264	35.02	ppb		99
28) 1,1-Dichloropropene	3.462	75	32243	31.89	ppb		97
29) 2-Butanone	3.522	43	47178	38.83	ppb	#	66
30) Benzene	3.695	78	106510	43.08	ppb		95
31) Methacrylonitrile*	3.787	41	48102	36.82	ppb		95
33) 1,2-Dichloroethane	3.902	62	51311	39.46	ppb	#	94
34) Trichloroethene	4.236	130	29643	37.74	ppb		97
35) Dibromomethane	4.643	93	19378	35.45	ppb		93
36) n-Butanol	4.705	56	3481	410.36	ppb	#	1
37) 1,2-Dichloropropane	4.740	63	40972	33.85	ppb	#	90
38) Bromodichloromethane	4.811	83	40007	35.03	ppb		94
39) Methyl methacrylate	5.003	41	70255	35.97	ppb		84
41) cis-1,3-Dichloropropene	5.423	75	50815	35.23	ppb	#	85
43) Toluene	5.643	91	136424	44.39	ppb		96
45) Tetrachloroethene	6.006	164	30067	38.24	ppb		79
46) 4-Methyl-2-pentanone (...	6.072	43	100019	32.14	ppb		94
47) trans-1,3-Dichloropropene	6.081	75	50218	35.04	ppb	#	84
48) 1,1,2-Trichloroethane	6.236	97	33078	35.84	ppb		93
49) Ethyl methacrylate	6.279	69	60780	34.38	ppb	#	64
50) Dibromochloromethane	6.397	129	30961	33.20	ppb		95
51) 1,3-Dichloropropane	6.497	76	57994	34.65	ppb	#	72

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V150PPB.D
Acq On : 23 May 2019 5:31 pm
Operator : DJD
Sample : V150PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

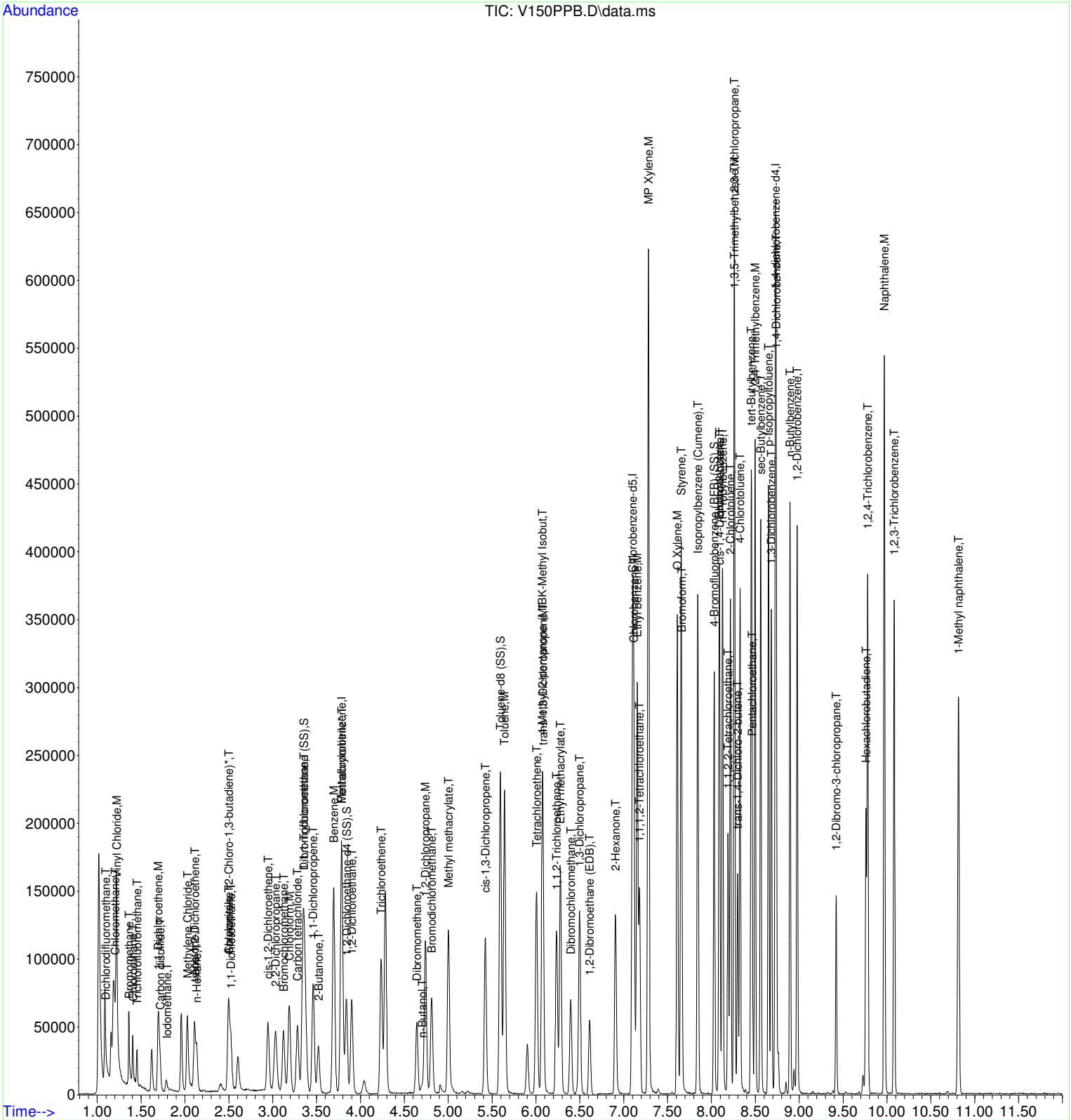
Quant Time: May 23 17:49:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Thu May 23 17:49:46 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.612	107	36780	49.16	ppb	#	99
53) 2-Hexanone	6.907	43	82220	32.08	ppb		92
54) Chlorobenzene	7.115	112	89140	33.79	ppb		95
55) Ethyl benzene	7.154	91	159986	39.68	ppb		96
56) 1,1,1,2-Tetrachloroethane	7.181	131	29446	32.99	ppb		96
57) MP Xylene	7.282	91	255859	75.38	ppb		97
58) O Xylene	7.611	91	137076	38.08	ppb		98
59) Styrene	7.656	104	105488	30.69	ppb		94
60) Bromoform	7.662	173	23792	37.22	ppb		97
61) Isopropylbenzene (Cumene)	7.844	105	156156	37.10	ppb		98
64) Bromobenzene	8.091	156	37767	29.36	ppb	#	82
65) cis-1,4-Dichloro-2-butene	8.093	53	23763	32.18	ppb		87
66) n-Propylbenzene	8.126	91	188116	29.91	ppb		99
67) 1,1,2,2-Tetrachloroethane	8.189	83	55223	28.00	ppb		98
68) 2-Chlorotoluene	8.217	91	119634	32.02	ppb		99
69) 1,2,3-Trichloropropane	8.263	75	55274	30.14	ppb		96
70) 1,3,5-Trimethylbenzene	8.259	105	138550	44.70	ppb		97
71) trans-1,4-Dichloro-2-b...	8.298	53	24704	32.09	ppb	#	85
72) 4-Chlorotoluene	8.326	91	124664	30.31	ppb		99
73) tert-Butylbenzene	8.454	119	125229	28.35	ppb		94
74) Pentachloroethane	8.464	167	13391	33.21	ppb	#	1
75) 1,2,4-Trimethylbenzene	8.498	105	150036	43.80	ppb		97
76) sec-Butylbenzene	8.561	105	169539	28.11	ppb		96
77) p-Isopropyltoluene	8.651	119	142784	27.71	ppb		97
78) 1,3-Dichlorobenzene	8.683	146	76731	28.30	ppb		98
79) 1,4-Dichlorobenzene	8.738	146	79853	27.86	ppb		95
80) n-Butylbenzene	8.895	91	133857	25.19	ppb		97
81) 1,2-Dichlorobenzene	8.978	146	87118	29.26	ppb		98
82) 1,2-Dibromo-3-chloropr...	9.422	157	18960	36.14	ppb	#	84
83) Hexachlorobutadiene	9.761	225	27306	24.16	ppb		99
84) 1,2,4-Trichlorobenzene	9.780	180	66406	28.21	ppb		98
85) Naphthalene	9.971	128	243633	39.33	ppb		96
86) 1,2,3-Trichlorobenzene	10.082	180	70711	30.86	ppb		100
88) 1-Methyl naphthalene	10.814	142	102381	31.21	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V150PPB.D
Acq On : 23 May 2019 5:31 pm
Operator : DJD
Sample : V150PPB
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 23 17:49:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Thu May 23 17:49:46 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V200.D
Acq On : 23 May 2019 11:21 pm
Operator : DJD
Sample : V200
Misc :
ALS Vial : 41 Sample Multiplier: 1

Quant Time: May 24 09:21:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.786	168	69235	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	124222	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	93701	50.00	ppb		0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.357	111	28253	48.60	ppb		0.00
Spiked Amount 50.000			Recovery =	97.20%			
32) 1,2-Dichloroethane-d4 ...	3.842	102	7978	49.31	ppb		0.00
Spiked Amount 50.000			Recovery =	98.62%			
44) Toluene-d8 (SS)	5.595	98	145216	45.47	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	90.94%			
63) 4-Bromofluorobenzene (...	8.032	174	64896	42.86	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery =	85.72%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.100	85	204052	230.33	ppb	#	97
3) Chloromethane	1.205	50	505361	226.14	ppb		99
4) Vinyl Chloride	1.225	62	314378	220.04	ppb	#	100
5) Bromomethane	1.366	94	67355	180.86	ppb	#	99
6) Chloroethane	1.407	64	56568	156.13	ppb	#	100
7) Trichlorofluoromethane	1.453	101	38527	169.13	ppb		96
8) Carbon disulfide	1.717	76	62605	67.13	ppb	#	80
9) 1,1-Dichloroethene	1.693	96	30531	78.80	ppb	#	78
10) Iodomethane	1.794	142	48235	118.64	ppb	#	99
12) Methylene Chloride	2.029	84	53159	87.86	ppb	#	72
13) Acetone	2.111	58	20474	113.59	ppb	#	1
14) trans-1,2-Dichloroethene	2.111	61	105010	80.17	ppb		89
15) n-Hexane	2.132	57	53160	95.23	ppb	#	20
17) Chloroprene (2-Chloro-...	2.496	53	209516	94.22	ppb	#	95
18) 1,1-Dichloroethane	2.524	63	150207	92.86	ppb	#	99
19) Acrylonitrile	2.496	53	209516	94.22	ppb	#	51
21) cis-1,2-Dichloroethene	2.947	61	138104	97.73	ppb		96
22) 2,2-Dichloropropane	3.034	77	91509	96.08	ppb		91
23) Bromochloromethane	3.125	130	40480	82.76	ppb	#	1
24) Chloroform	3.192	83	174180	113.19	ppb		99
25) Carbon tetrachloride	3.283	117	138277	143.15	ppb		97
26) 1,1,1-Trichloroethane	3.355	97	174356	130.96	ppb		97
28) 1,1-Dichloropropene	3.463	75	142317	116.56	ppb		95
29) 2-Butanone	3.525	43	192948	132.93	ppb	#	68
30) Benzene	3.696	78	459352	156.32	ppb		96
31) Methacrylonitrile*	3.791	41	207178	121.23	ppb		96
33) 1,2-Dichloroethane	3.904	62	218865	140.47	ppb	#	94
34) Trichloroethene	4.237	130	132219	141.78	ppb		96
35) Dibromomethane	4.644	93	87735	134.31	ppb		97
36) n-Butanol	4.708	56	16288	1666.73	ppb	#	1
37) 1,2-Dichloropropane	4.742	63	179377	122.88	ppb	#	94
38) Bromodichloromethane	4.813	83	182625	134.22	ppb		95
39) Methyl methacrylate	5.004	41	314349	122.00	ppb		83
41) cis-1,3-Dichloropropene	5.425	75	224908	131.23	ppb		88
43) Toluene	5.644	91	592885	164.92	ppb		97
45) Tetrachloroethene	6.008	164	142531	154.56	ppb		90
46) 4-Methyl-2-pentanone (...	6.075	43	463792	125.83	ppb		93
47) trans-1,3-Dichloropropene	6.083	75	227229	136.02	ppb		87
48) 1,1,2-Trichloroethane	6.238	97	152315	140.44	ppb		96
49) Ethyl methacrylate	6.282	69	274717	132.20	ppb	#	68
50) Dibromochloromethane	6.400	129	159260	147.10	ppb		98
51) 1,3-Dichloropropane	6.499	76	261678	132.40	ppb	#	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V200.D
Acq On : 23 May 2019 11:21 pm
Operator : DJD
Sample : V200
Misc :
ALS Vial : 41 Sample Multiplier: 1

Quant Time: May 24 09:21:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration

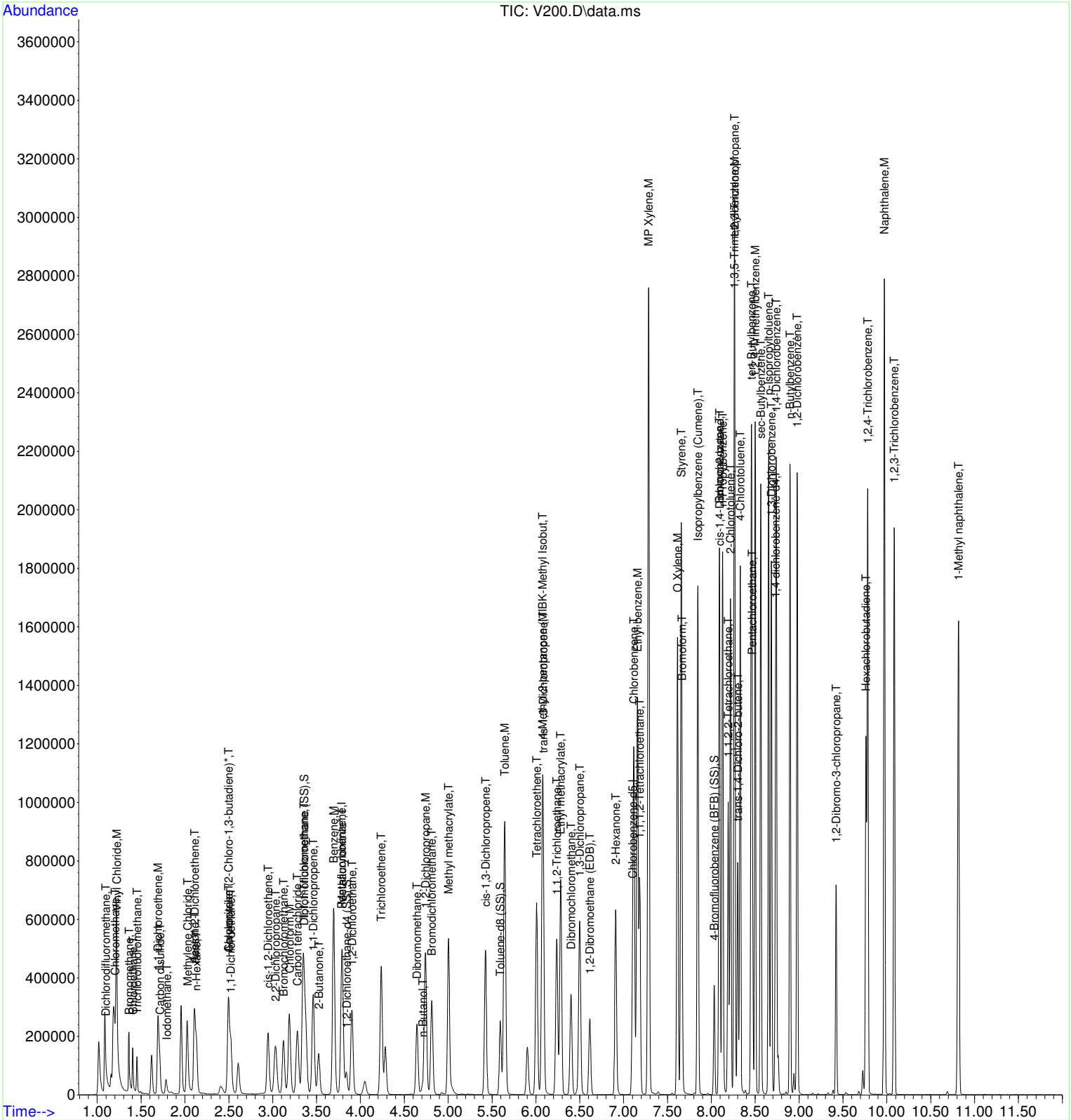
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
52) 1,2-Dibromoethane (EDB)	6.615	107	173734	203.29	ppb	#	99
53) 2-Hexanone	6.910	43	395320	130.81	ppb		91
54) Chlorobenzene	7.116	112	420102	135.59	ppb		95
55) Ethyl benzene	7.156	91	733197	155.79	ppb		97
56) 1,1,1,2-Tetrachloroethane	7.183	131	151934	146.62	ppb		98
57) MP Xylene	7.284	91	1151035	290.42	ppb		97
58) O Xylene	7.613	91	628007	149.67	ppb		98
59) Styrene	7.657	104	493274	121.98	ppb		95
60) Bromoform	7.665	173	150727	156.12	ppb		99
61) Isopropylbenzene (Cumene)	7.845	105	744876	152.45	ppb		97
64) Bromobenzene	8.092	156	207150	111.00	ppb		95
65) cis-1,4-Dichloro-2-butene	8.094	53	112995	107.28	ppb		90
66) n-Propylbenzene	8.128	91	890039	96.80	ppb		99
67) 1,1,2,2-Tetrachloroethane	8.191	83	296382	103.69	ppb		99
68) 2-Chlorotoluene	8.219	91	561365	103.02	ppb		98
69) 1,2,3-Trichloropropane	8.265	75	268667	100.58	ppb		94
70) 1,3,5-Trimethylbenzene	8.262	105	661573	126.82	ppb		97
71) trans-1,4-Dichloro-2-b...	8.300	53	119311	108.55	ppb		90
72) 4-Chlorotoluene	8.328	91	602632	100.31	ppb		97
73) tert-Butylbenzene	8.456	119	647529	101.17	ppb		97
74) Pentachloroethane	8.466	167	99509	114.31	ppb	#	49
75) 1,2,4-Trimethylbenzene	8.500	105	735158	127.93	ppb		98
76) sec-Butylbenzene	8.563	105	845470	96.21	ppb		96
77) p-Isopropyltoluene	8.653	119	735535	98.31	ppb		97
78) 1,3-Dichlorobenzene	8.684	146	441080	112.59	ppb		96
79) 1,4-Dichlorobenzene	8.739	146	457540	110.26	ppb		96
80) n-Butylbenzene	8.896	91	674898	86.58	ppb		97
81) 1,2-Dichlorobenzene	8.979	146	496192	115.32	ppb		97
82) 1,2-Dibromo-3-chloropr...	9.423	157	111229	150.47	ppb		98
83) Hexachlorobutadiene	9.761	225	174693	106.26	ppb		99
84) 1,2,4-Trichlorobenzene	9.781	180	394434	116.50	ppb		98
85) Naphthalene	9.972	128	1283646	147.16	ppb		98
86) 1,2,3-Trichlorobenzene	10.083	180	408603	124.04	ppb		98
88) 1-Methyl naphthalene	10.815	142	602082	129.10	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : V200.D
Acq On : 23 May 2019 11:21 pm
Operator : DJD
Sample : V200
Misc :
ALS Vial : 41 Sample Multiplier: 1

Quant Time: May 24 09:21:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:19:18 2019
Response via : Initial Calibration



Untitled
Response Factor Report VOA MSD

Method Path : C:\msdchem\1\methods\
Method File : VOC-DA-23MAY2019.M
Title : VOC
Last Update : Fri May 24 11:00:55 2019
Response Via : Initial Calibration

Calibration Files
1 =BCAL-001PPB.D 10 =BCAL-010PPB.D 50 =BCAL-050PPB.D 100 =BCAL-100PPB.D 200 =BCAL-150PPB.D

		Compound	1	10	50	100	200	Avg	%RSD	R^2
1)	I	Pentafluorobenzene	----------	ISTD	----------					
2)	T	Dichlorodifluo...	0.496	1.477	1.466	1.249	1.156	1.169	34.29	0.999
3)	T	Chloromethane		3.462	3.296	2.915	2.864	3.134	9.30	0.999
4)	M	Vinyl Chloride	2.099	0.967	0.791	0.625	0.569	1.010	62.18	0.997
5)	T	Bromomethane	0.964	0.549	0.438	0.393	0.382	0.545	44.59	0.999
6)	T	Chloroethane	0.463	0.393	0.378	0.329	0.321	0.377	15.26	0.999
7)	T	Trichlorofluor...	0.173	0.270	0.279	0.240	0.218	0.236	18.04	0.999
8)	T	Carbon disulfide	0.265	0.301	0.321	0.328	0.355	0.314	10.68	0.998
9)	M	1,1-Dichloroet...	0.441	0.192	0.162	0.163	0.173	0.226	53.41	0.999
10)	T	Iodomethane	0.053	0.148	0.212	0.213	0.273	0.180	46.60	0.999
11)	T	Acrolein (2-Pr...	0.106	0.098	0.072	0.056	0.051	0.077#	32.06	0.996
12)	T	Methylene Chlo...	0.621	0.331	0.263	0.266	0.301	0.357	42.16	1.000
13)	T	Acetone	0.440	0.150	0.116	0.089	0.116	0.182	79.97	0.993
14)	T	trans-1,2-Dich...	0.489	0.592	0.595	0.541	0.595	0.562	8.40	0.998
15)	T	n-Hexane	0.289	0.280	0.313	0.277	0.301	0.292	5.17	0.998
16)	M	MTBE	1.688	1.227	1.144	0.996	0.991	1.209	23.64	0.999
17)	T	Chloroprene (2...	0.987	1.214	1.268	1.014	1.187	1.134	11.11	0.993
18)	T	1,1-Dichloroet...	0.644	0.843	0.836	0.727	0.851	0.780	11.71	0.994
19)	T	Acrylonitrile	0.987	1.214	1.268	1.014	1.187	1.134	11.11	0.993
20)	T	Vinyl Acetate ...	0.668	1.055	1.385	1.229	1.148	1.097	24.49	0.999
21)	T	cis-1,2-Dichlo...	0.540	0.772	0.692	0.780	0.783	0.713	14.54	0.999
22)	T	2,2-Dichloropr...	0.414	0.501	0.435	0.511	0.519	0.476	10.04	0.998
23)	T	Bromochloromet...	0.057	0.212	0.161	0.198	0.229	0.172	40.18	0.991
24)	M	Chloroform	1.044	0.991	0.806	0.940	0.987	0.954	9.47	0.997
25)	T	Carbon tetrach...	0.492	0.604	0.708	0.699	0.784	0.657	17.09	0.997
26)	T	1,1,1-Trichlor...	0.789	0.841	0.943	0.924	0.988	0.897	8.98	0.999
27)	S	Dibromofluorom...	0.486	0.478	0.468	0.486	0.499	0.483	2.39	
28)	T	1,1-Dichloropr...	0.558	0.695	0.728	0.752	0.806	0.708	13.15	0.999
29)	T	2-Butanone	3.631	1.430	1.193	1.096	1.093	1.689	64.81	1.000
30)	M	Benzene	2.857	2.267	2.047	1.913	1.709	2.159	20.39	0.996
31)	T	Methacrylonitr...	1.390	1.339	1.324	1.203	1.174	1.286	7.24	1.000
32)	S	1,2-Dichloroet...	0.129	0.134	0.132	0.126	0.134	0.131	2.72	
33)	T	1,2-Dichloroet...	1.410	1.186	1.117	1.027	0.918	1.132	16.38	0.995
34)	T	Trichloroethene	0.575	0.627	0.659	0.676	0.749	0.657	9.77	0.997
35)	T	Dibromomethane	0.286	0.432	0.458	0.454	0.497	0.426	19.15	0.998
36)	T	n-Butanol		0.081	0.080	0.079	0.092	0.083#	7.50	1.000
37)	M	1,2-Dichloropr...	1.038	1.043	1.061	1.009	1.016	1.033	2.01	1.000
38)	T	Bromodichlorom...	0.725	0.875	0.972	0.959	1.035	0.913	13.09	1.000
39)	T	Methyl methacr...	1.866	1.928	1.982	1.797	1.781	1.871	4.56	0.999
40)	T	2-Chloroethyl ...	1.142	0.515	0.550	0.531	0.487	0.645	43.21	1.000
41)	T	cis-1,3-Dichlo...	0.913	1.102	1.273	1.234	1.274	1.159	13.32	1.000
42)	I	Chlorobenzene-d5	----------	ISTD	----------					
43)	M	Toluene	1.832	1.429	1.369	1.325	1.260	1.443	15.67	0.999
44)	S	Toluene-d8 (SS)	1.311	1.335	1.338	1.337	1.379	1.340	1.84	
45)	T	Tetrachloroethene	0.247	0.310	0.361	0.379	0.442	0.348	21.09	1.000
46)	T	4-Methyl-2-pen...	1.250	1.312	1.426	1.335	1.437	1.352	5.86	0.999
47)	T	trans-1,3-Dich...	0.404	0.525	0.622	0.630	0.704	0.577	20.03	1.000
48)	T	1,1,2-Trichlor...	0.287	0.372	0.416	0.415	0.472	0.392	17.55	0.996
49)	T	Ethyl methacry...	0.603	0.724	0.794	0.770	0.851	0.748	12.49	0.998
50)	T	Dibromochlorom...	0.201	0.286	0.369	0.402	0.493	0.350	31.90	0.990
51)	T	1,3-Dichloropr...	0.572	0.679	0.760	0.745	0.811	0.713	12.89	0.998
52)	T	1,2-Dibromoeth...	0.335	0.373	0.372	0.368	0.352	0.360	4.53	0.999
53)	T	2-Hexanone	1.073	1.010	1.115	1.063	1.225	1.097	7.32	0.995
54)	T	Chlorobenzene	0.776	0.994	1.123	1.150	1.302	1.069	18.42	0.996
55)	M	Ethyl benzene	1.788	1.736	1.756	1.751	1.671	1.740	2.48	0.999
56)	T	1,1,1,2-Tetrac...	0.207	0.314	0.367	0.394	0.471	0.350	28.04	0.992
57)	M	MP Xylene	1.312	1.375	1.378	1.378	1.308	1.350	2.72	0.999
58)	M	O Xylene	1.306	1.547	1.545	1.517	1.469	1.477	6.81	1.000
59)	T	Styrene	0.881	1.151	1.352	1.333	1.528	1.249	19.64	0.996
60)	T	Bromoform	0.129	0.211	0.282	0.335	0.467	0.285	44.89	1.000
61)	T	Isopropylbenze...	1.166	1.648	1.697	1.708	1.656	1.575	14.59	1.000
62)	I	1,4-dichlorobenzen...	----------	ISTD	----------					
63)	S	4-Bromofluorob...	0.823	0.836	0.827	0.802	0.829	0.823	1.58	

			Untitled						
64)	T	Bromobenzene	0.610	0.756	0.889	0.884	0.982	0.824	17.49	0.997
65)	T	cis-1,4-Dichlo...	0.416	0.530	0.552	0.513	0.536	0.509	10.60	0.999
66)	T	n-Propylbenzene	3.026	3.976	4.661	4.226	4.218	4.022	15.14	0.999
67)	T	1,1,2,2-Tetrac...	0.784	1.047	1.199	1.190	1.405	1.125	20.40	0.994
68)	T	2-Chlorotoluene	2.234	2.714	2.921	2.638	2.661	2.634	9.49	0.999
69)	T	1,2,3-Trichlor...	1.074	1.282	1.335	1.192	1.273	1.231	8.26	0.998
70)	M	1,3,5-Trimethy...	2.320	2.789	2.812	2.647	2.264	2.566	10.10	1.000
71)	T	trans-1,4-Dich...	0.422	0.498	0.573	0.514	0.565	0.514	11.86	0.999
72)	T	4-Chlorotoluene	2.094	2.689	3.029	2.746	2.856	2.683	13.19	0.999
73)	T	tert-Butylbenzene	2.130	2.633	2.956	2.809	3.069	2.719	13.53	0.998
74)	T	Pentachloroethane	0.074	0.198	0.252	0.315	0.472	0.262	55.96	1.000
75)	M	1,2,4-Trimethy...	2.543	2.949	3.019	2.801	2.444	2.751	9.10	1.000
76)	T	sec-Butylbenzene	2.696	3.640	4.129	3.803	4.007	3.655	15.54	0.999
77)	T	p-Isopropyltol...	2.055	2.940	3.401	3.209	3.486	3.018	19.14	0.998
78)	T	1,3-Dichlorobe...	0.987	1.445	1.745	1.785	2.091	1.610	25.88	0.994
79)	T	1,4-Dichlorobe...	1.103	1.463	1.732	1.829	2.169	1.659	24.14	0.993
80)	T	n-Butylbenzene	1.880	2.649	3.200	2.926	3.199	2.771	19.77	0.998
81)	T	1,2-Dichlorobe...	1.282	1.555	1.880	1.941	2.352	1.802	22.52	0.992
82)	T	1,2-Dibromo-3-...	0.224	0.312	0.428	0.458	0.527	0.390	31.02	0.995
83)	T	Hexachlorobuta...	0.321	0.456	0.571	0.638	0.828	0.563	33.93	1.000
84)	T	1,2,4-Trichlor...	0.654	1.011	1.446	1.569	1.869	1.310	36.58	0.993
85)	M	Naphthalene	2.637	3.593	4.470	4.344	4.069	3.823	19.44	0.998
86)	T	1,2,3-Trichlor...	0.723	1.142	1.595	1.693	1.937	1.418	34.11	0.996
87)	T	2-Methyl napht...	0.446	0.735	1.642	1.943	1.974	1.348	52.73	0.998
88)	T	1-Methyl napht...	0.518	1.218	2.370	2.548	2.854	1.901	52.09	0.997

(#) = Out of Range

VOC-DA-23MAY2019.M Fri May 24 11:03:09 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : ICV-3.D
Acq On : 24 May 2019 12:00 am
Operator : DJD
Sample : ICV-3
Misc :
ALS Vial : 9 Sample Multiplier: 1

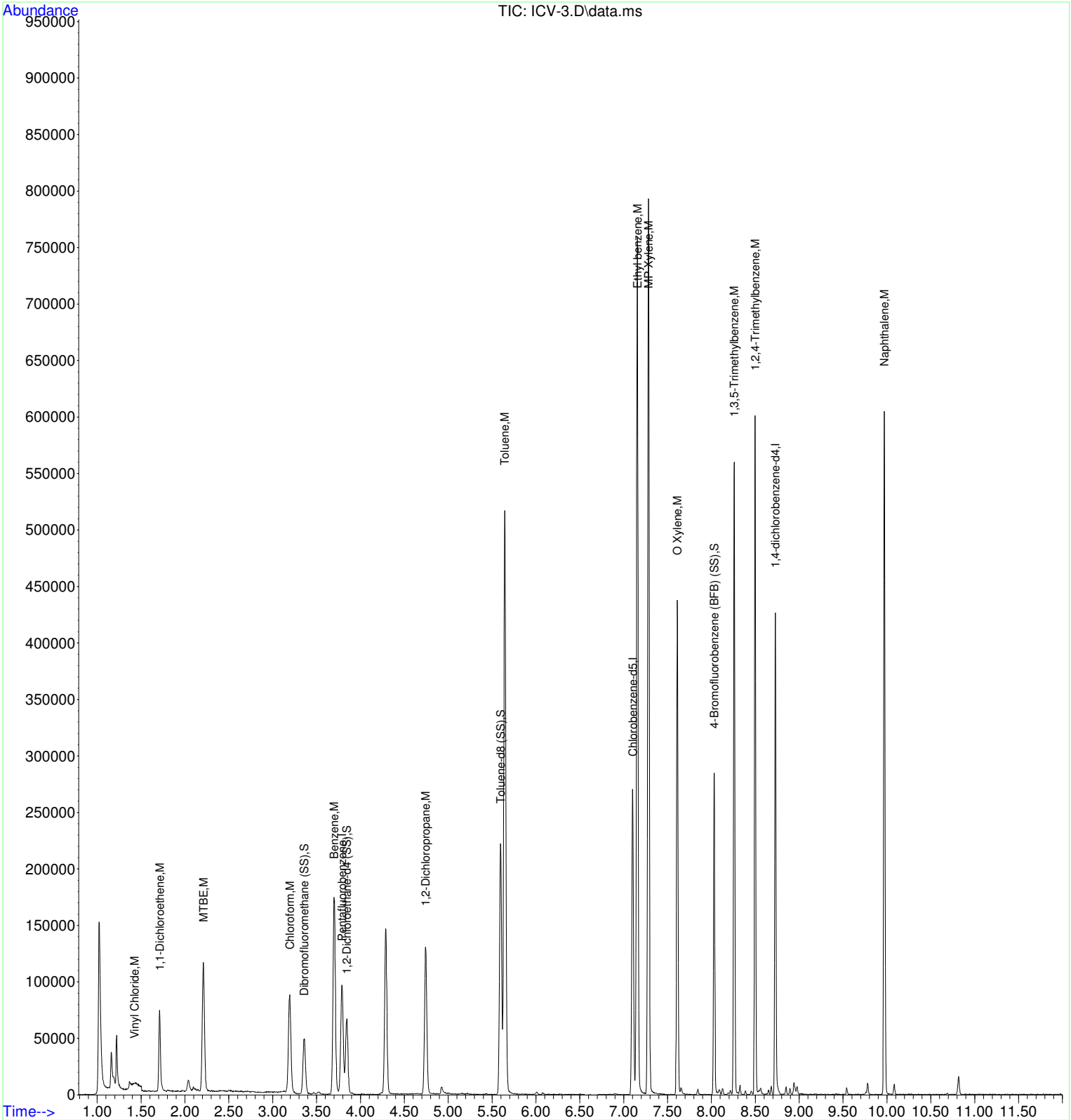
Quant Time: May 24 10:47:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:47:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.791	168	63655	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	104641	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	58400	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.360	111	30937	50.27	ppb		0.00
Spiked Amount 50.000			Recovery = 100.54%				
32) 1,2-Dichloroethane-d4 ...	3.844	102	7353	44.13	ppb		0.00
Spiked Amount 50.000			Recovery = 88.26%				
44) Toluene-d8 (SS)	5.597	98	130505	46.53	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 93.06%				
63) 4-Bromofluorobenzene (...	8.032	174	44052	45.81	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.62%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.426	62	35818m	39.18	ppb		
9) 1,1-Dichloroethene	1.713	96	13482	62.06	ppb	#	76
16) MTBE	2.210	73	74790	58.76	ppb	#	89
24) Chloroform	3.194	83	59186	47.95	ppb		99
30) Benzene	3.701	78	127167	56.59	ppb		96
37) 1,2-Dichloropropane	4.744	63	49135	37.94	ppb	#	97
43) Toluene	5.646	91	324535	121.36	ppb		97
55) Ethyl benzene	7.155	91	403128	113.96	ppb		97
57) MP Xylene	7.282	91	319965	115.42	ppb		97
58) O Xylene	7.612	91	169949	54.81	ppb		98
70) 1,3,5-Trimethylbenzene	8.259	105	184276	56.31	ppb		89
75) 1,2,4-Trimethylbenzene	8.498	105	193491	55.80	ppb		97
85) Naphthalene	9.971	128	276364	57.16	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : ICV-3.D
Acq On : 24 May 2019 12:00 am
Operator : DJD
Sample : ICV-3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 10:47:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:47:43 2019
Response via : Initial Calibration



Untitled
Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\23MAY2019-CAL\
Data File : ICV-3.D
Acq On : 24 May 2019 12:00 am
Operator : DJD
Sample : ICV-3
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 10:47:54 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Fri May 24 10:47:43 2019
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	137	0.00
4	M	Vinyl Chloride	50.000	39.178	21.6	98	0.20
9	M	1,1-Dichloroethene	50.000	62.062	-24.1	180	0.03
16	M	MTBE	50.000	58.764	-17.5	141	0.00
24	M	Chloroform	50.000	47.950	4.1	158	0.00
27	S	Dibromofluoromethane (SS)	50.000	50.275	-0.5	143	0.00
30	M	Benzene	50.000	56.588	-13.2	134	0.00
32	S	1,2-Dichloroethane-d4 (SS)	50.000	44.131	11.7	120	0.00
37	M	1,2-Dichloropropane	50.000	37.941	24.1	100	0.00
42	I	Chlorobenzene-d5	50.000	50.000	0.0	112	0.00
43	M	Toluene	100.000	121.360	-21.4	131	0.00
44	S	Toluene-d8 (SS)	50.000	46.526	6.9	104	0.00
55	M	Ethyl benzene	100.000	113.958	-14.0	123	0.00
57	M	MP Xylene	100.000	115.419	-15.4	124	0.00
58	M	O Xylene	50.000	54.805	-9.6	118	0.00
62	I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	117	0.00
63	S	4-Bromofluorobenzene (BFB)	50.000	45.808	8.4	107	0.00
70	M	1,3,5-Trimethylbenzene	50.000	56.313	-12.6	131	0.00
75	M	1,2,4-Trimethylbenzene	50.000	55.796	-11.6	128	0.00
85	M	Naphthalene	50.000	57.162	-14.3	124	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

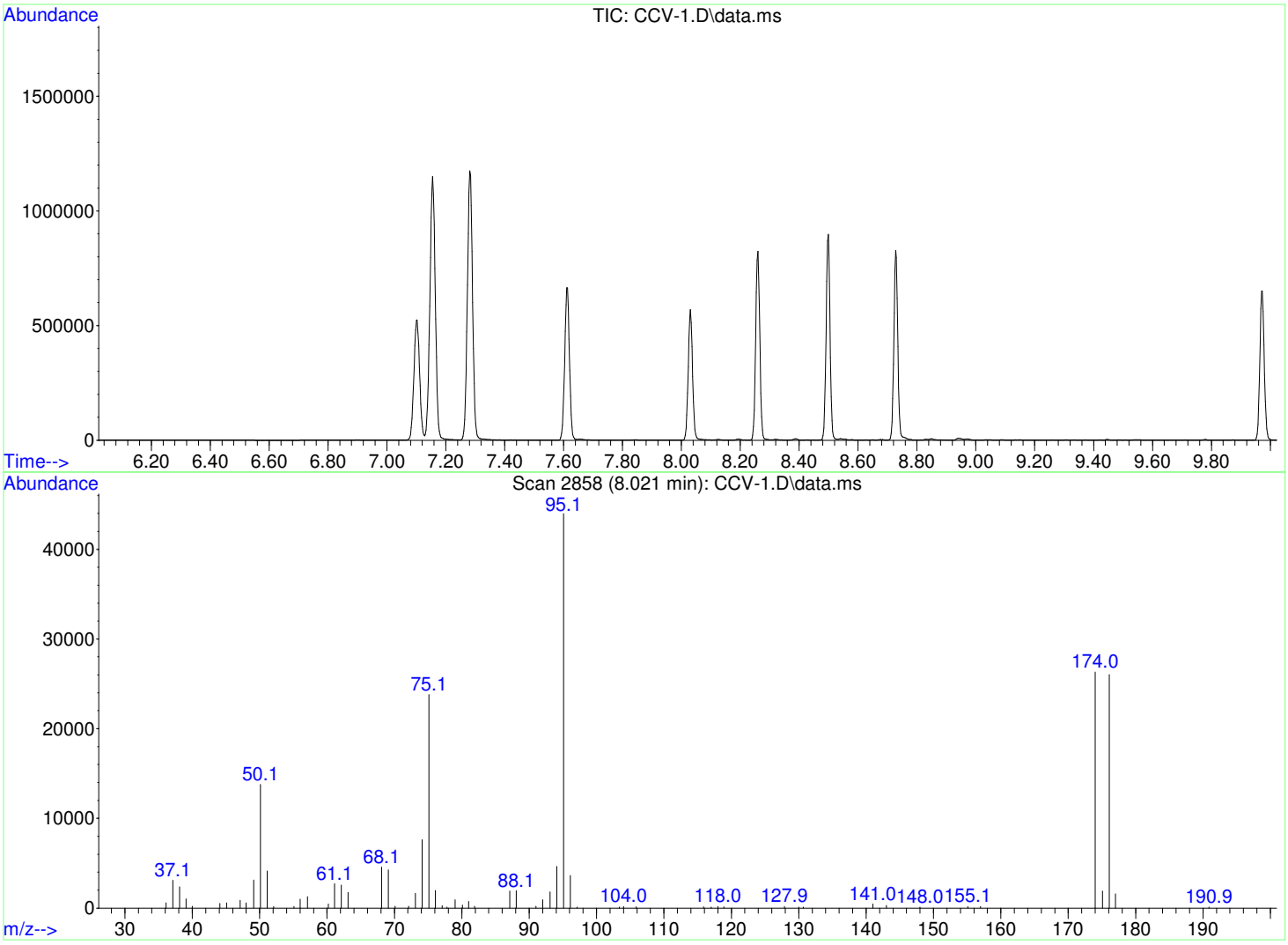
VOC-DA-23MAY2019.M Fri May 24 10:54:59 2019

CLPBFB

Data Path : C:\msdchem\1\data\28may2019\
Data File : CCV-1.D
Acq On : 28 May 2019 11:27 am
Operator : PS
Sample : CCV-1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Title : VOC
Last Update : Tue May 28 11:14:41 2019



Spectrum Information: Scan 2858

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.4	13794	PASS
75	95	30	60	54.1	23792	PASS
95	95	100	100	100.0	43992	PASS
96	95	5	9	8.3	3644	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	59.8	26320	PASS
175	174	5	9	7.2	1889	PASS
176	174	95	101	98.9	26040	PASS
177	176	5	9	6.1	1577	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : CCV-1A.D
Acq On : 28 May 2019 11:46 am
Operator : PS
Sample : CCV-1A
Misc :
ALS Vial : 1 Sample Multiplier: 1

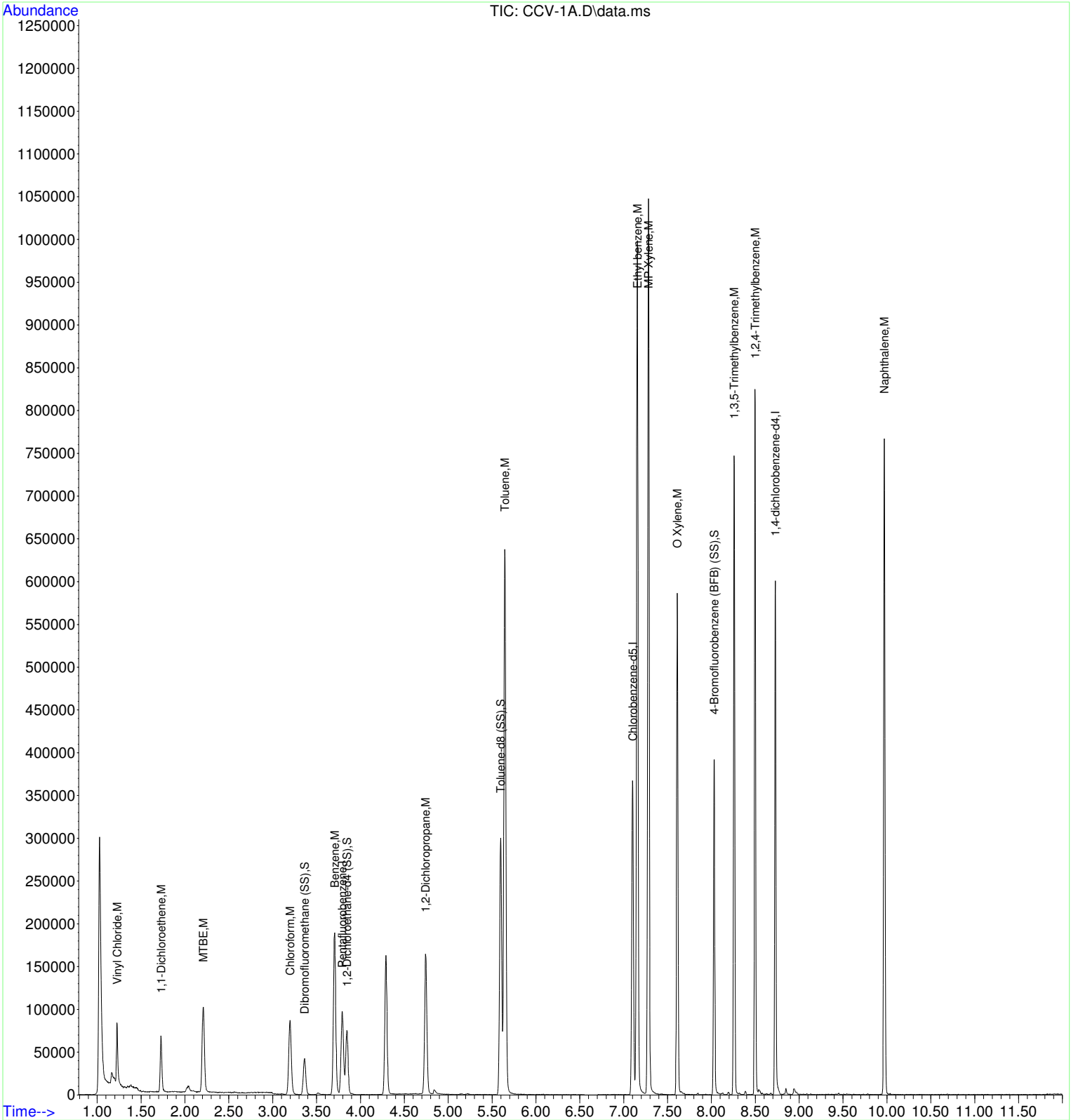
Quant Time: May 29 15:06:26 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.794	168	58902	50.00	ppb		0.01
42) Chlorobenzene-d5	7.101	117	136431	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	80758	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.363	111	25522	44.82	ppb		0.00
Spiked Amount 50.000			Recovery = 89.64%				
32) 1,2-Dichloroethane-d4 ...	3.846	102	6832	44.31	ppb		0.00
Spiked Amount 50.000			Recovery = 88.62%				
44) Toluene-d8 (SS)	5.598	98	167013	45.67	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.34%				
63) 4-Bromofluorobenzene (...	8.031	174	56259	42.31	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 84.62%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.231	62	50282	61.22	ppb	#	100
9) 1,1-Dichloroethene	1.729	96	10001	49.75	ppb	#	36
16) MTBE	2.209	73	55162	46.84	ppb	#	82
24) Chloroform	3.198	83	55229	48.36	ppb		95
30) Benzene	3.705	78	122341	58.83	ppb		88
37) 1,2-Dichloropropane	4.745	63	59393	49.56	ppb	#	96
43) Toluene	5.647	91	378317	108.51	ppb		95
55) Ethyl benzene	7.155	91	529590	114.82	ppb		95
57) MP Xylene	7.282	91	416013	115.10	ppb		96
58) O Xylene	7.612	91	223752	55.34	ppb		97
70) 1,3,5-Trimethylbenzene	8.259	105	242470	53.37	ppb		88
75) 1,2,4-Trimethylbenzene	8.498	105	255794	53.17	ppb		96
85) Naphthalene	9.971	128	356682	53.35	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : CCV-1A.D
Acq On : 28 May 2019 11:46 am
Operator : PS
Sample : CCV-1A
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 15:06:26 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\28may2019\
Data File : CCV-1A.D
Acq On : 28 May 2019 11:46 am
Operator : PS
Sample : CCV-1A
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 15:06:26 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	127	0.01
4	M	Vinyl Chloride	50.000	61.218	-22.4	137	0.00
9	M	1,1-Dichloroethene	50.000	49.753	0.5	133	0.05
16	M	MTBE	50.000	46.839	6.3	104	0.00
24	M	Chloroform	50.000	48.355	3.3	148	0.00
27	S	Dibromofluoromethane (SS)	50.000	44.822	10.4	118	0.00
30	M	Benzene	50.000	58.834	-17.7	129	0.01
32	S	1,2-Dichloroethane-d4 (SS)	50.000	44.312	11.4	112	0.00
37	M	1,2-Dichloropropane	50.000	49.563	0.9	121	0.00
42	I	Chlorobenzene-d5	50.000	50.000	0.0	146	0.00
43	M	Toluene	100.000	108.508	-8.5	153	0.00
44	S	Toluene-d8 (SS)	50.000	45.668	8.7	133	0.00
55	M	Ethyl benzene	100.000	114.824	-14.8	162	0.00
57	M	MP Xylene	100.000	115.099	-15.1	161	0.00
58	M	O Xylene	50.000	55.343	-10.7	155	0.00
62	I	1,4-dichlorobenzene-d4	50.000	50.000	0.0	162	0.00
63	S	4-Bromofluorobenzene (BFB)	50.000	42.305	15.4	136	0.00
70	M	1,3,5-Trimethylbenzene	50.000	53.373	-6.7	173	0.00
75	M	1,2,4-Trimethylbenzene	50.000	53.169	-6.3	170	0.00
85	M	Naphthalene	50.000	53.350	-6.7	160	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

VOC-DA-23MAY2019.M Wed May 29 15:09:06 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : MB-1.D
Acq On : 28 May 2019 12:24 pm
Operator : PS
Sample : MB-1
Misc :
ALS Vial : 3 Sample Multiplier: 1

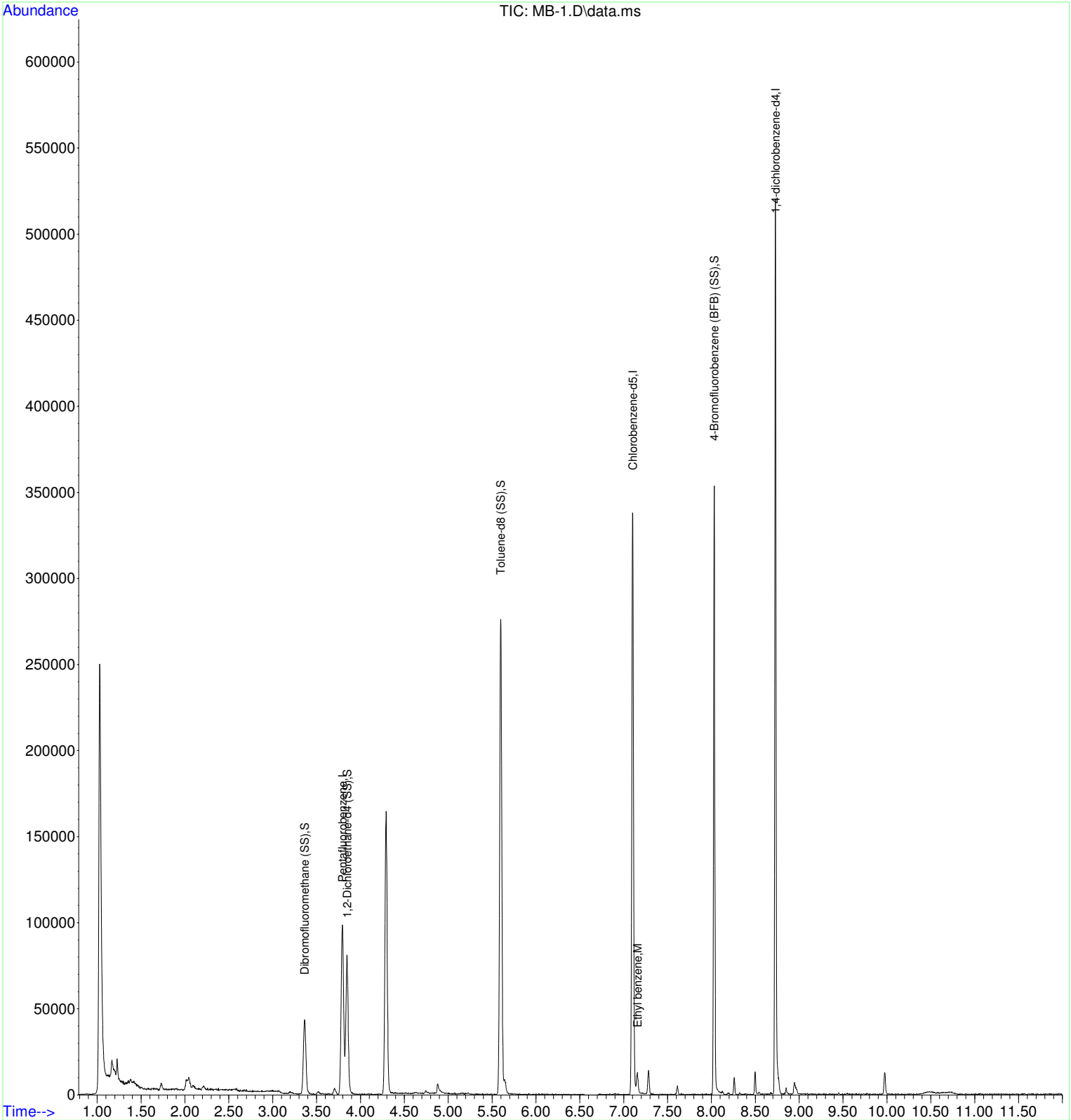
Quant Time: May 29 14:25:30 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.795	168	60994	50.00	ppb	0.01
42) Chlorobenzene-d5	7.103	117	124276	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.730	152	71365	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.364	111	27466	46.58	ppb	0.00
Spiked Amount 50.000			Recovery = 93.16%			
32) 1,2-Dichloroethane-d4 ...	3.848	102	7504	47.00	ppb	0.00
Spiked Amount 50.000			Recovery = 94.00%			
44) Toluene-d8 (SS)	5.598	98	152294	45.72	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.44%			
63) 4-Bromofluorobenzene (...	8.032	174	49339	41.98	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.96%			
Target Compounds						Qvalue
55) Ethyl benzene	7.156	91	5896	1.40	ppb	# 89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : MB-1.D
Acq On : 28 May 2019 12:24 pm
Operator : PS
Sample : MB-1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 29 14:25:30 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-2.D
Acq On : 28 May 2019 6:53 pm
Operator : PS
Sample : LCS-2
Misc :
ALS Vial : 19 Sample Multiplier: 1

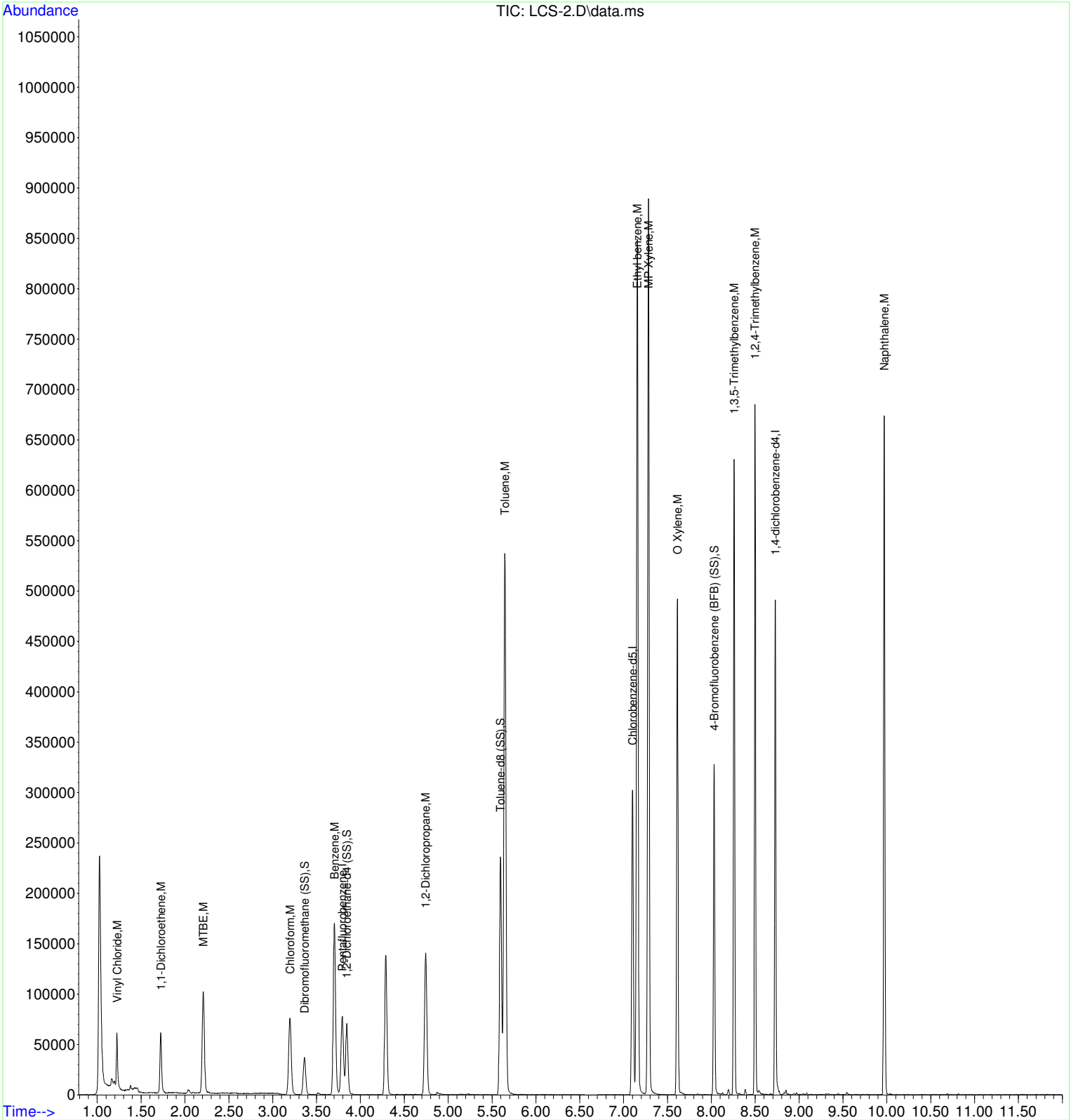
Quant Time: May 29 17:14:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:26:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.793	168	44503	50.00	ppb		0.00
42) Chlorobenzene-d5	7.102	117	112320	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.729	152	67642	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.362	111	22612	60.52	ppb		0.00
Spiked Amount 50.000			Recovery = 121.04%				
32) 1,2-Dichloroethane-d4 ...	3.845	102	6178	59.40	ppb		0.00
Spiked Amount 50.000			Recovery = 118.80%				
44) Toluene-d8 (SS)	5.598	98	131442	45.52	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.04%				
63) 4-Bromofluorobenzene (...	8.031	174	47480	43.44	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.88%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.229	62	36677	39.94	ppb	#	100
9) 1,1-Dichloroethene	1.725	96	9635	38.69	ppb	#	39
16) MTBE	2.209	73	58627	60.57	ppb	#	91
24) Chloroform	3.197	83	50915	51.47	ppb		96
30) Benzene	3.705	78	110922	58.72	ppb		88
37) 1,2-Dichloropropane	4.745	63	52879	56.35	ppb	#	97
43) Toluene	5.647	91	329299	101.31	ppb		96
55) Ethyl benzene	7.155	91	450150	105.78	ppb		95
57) MP Xylene	7.282	91	358175	99.95	ppb		96
58) O Xylene	7.612	91	189714	50.00	ppb		97
70) 1,3,5-Trimethylbenzene	8.260	105	206417	54.54	ppb		88
75) 1,2,4-Trimethylbenzene	8.498	105	217853	52.33	ppb		97
85) Naphthalene	9.971	128	307390	48.81	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : LCS-2.D
Acq On : 28 May 2019 6:53 pm
Operator : PS
Sample : LCS-2
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 29 17:14:41 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-26APR2019.M
Quant Title : VOC
QLast Update : Fri May 24 09:26:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2883.D
Acq On : 28 May 2019 2:57 pm
Operator : PS
Sample : 19-2883
Misc :
ALS Vial : 11 Sample Multiplier: 1

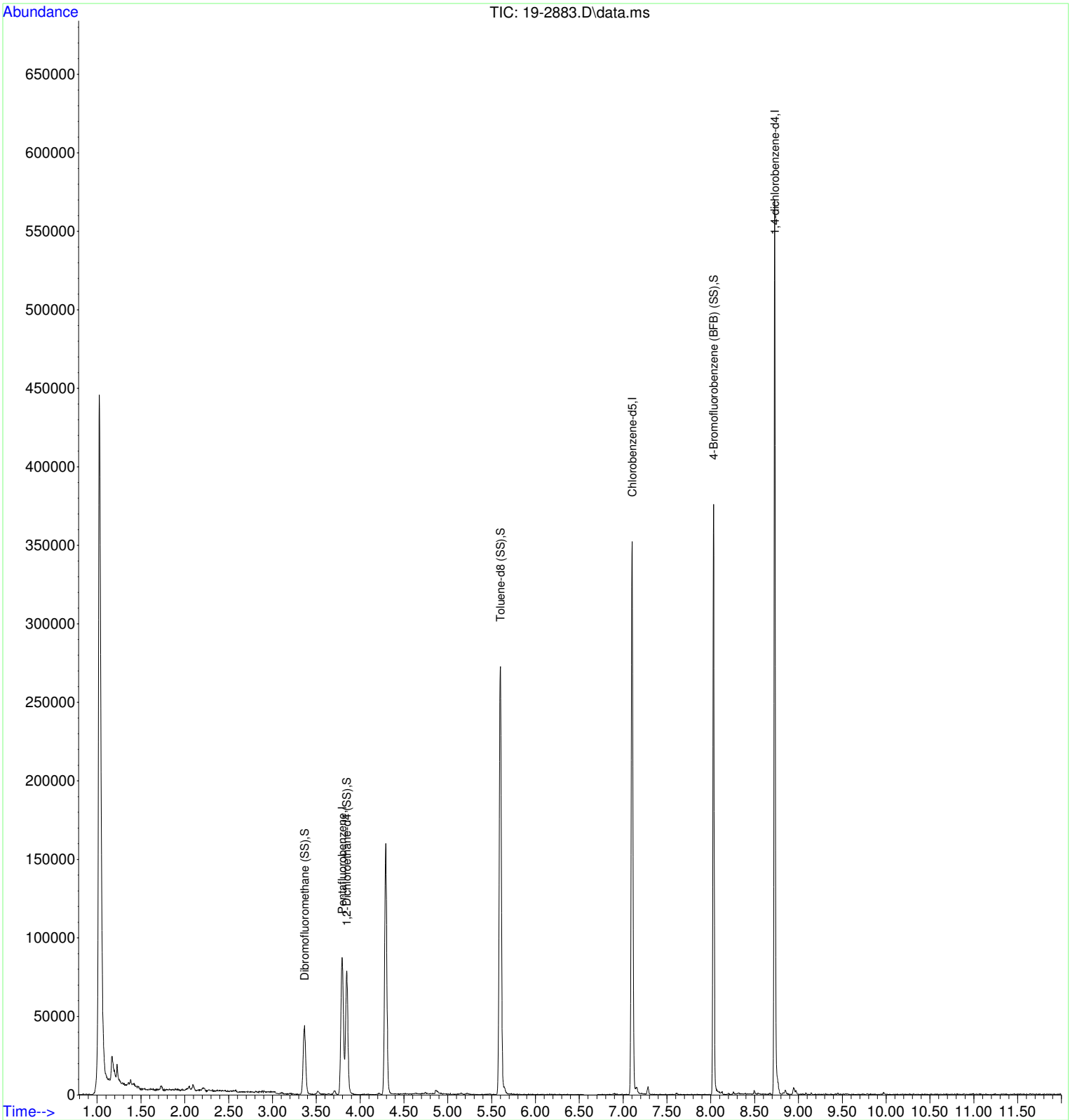
Quant Time: May 29 14:47:32 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	3.796	168	54592	50.00	ppb	0.01
42) Chlorobenzene-d5	7.102	117	128987	50.00	ppb	0.00
62) 1,4-dichlorobenzene-d4	8.730	152	76926	50.00	ppb	# 0.00
System Monitoring Compounds						
27) Dibromofluoromethane (SS)	3.365	111	26228	49.70	ppb	0.00
Spiked Amount 50.000			Recovery = 99.40%			
32) 1,2-Dichloroethane-d4 ...	3.847	102	7158	50.09	ppb	0.00
Spiked Amount 50.000			Recovery = 100.18%			
44) Toluene-d8 (SS)	5.598	98	153197	44.31	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 88.62%			
63) 4-Bromofluorobenzene (...	8.031	174	52650	41.56	ppb	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.12%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2883.D
Acq On : 28 May 2019 2:57 pm
Operator : PS
Sample : 19-2883
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 29 14:47:32 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2883-ms.D
Acq On : 29 May 2019 2:00 pm
Operator : PS
Sample : 19-2883-ms
Misc :
ALS Vial : 11 Sample Multiplier: 1

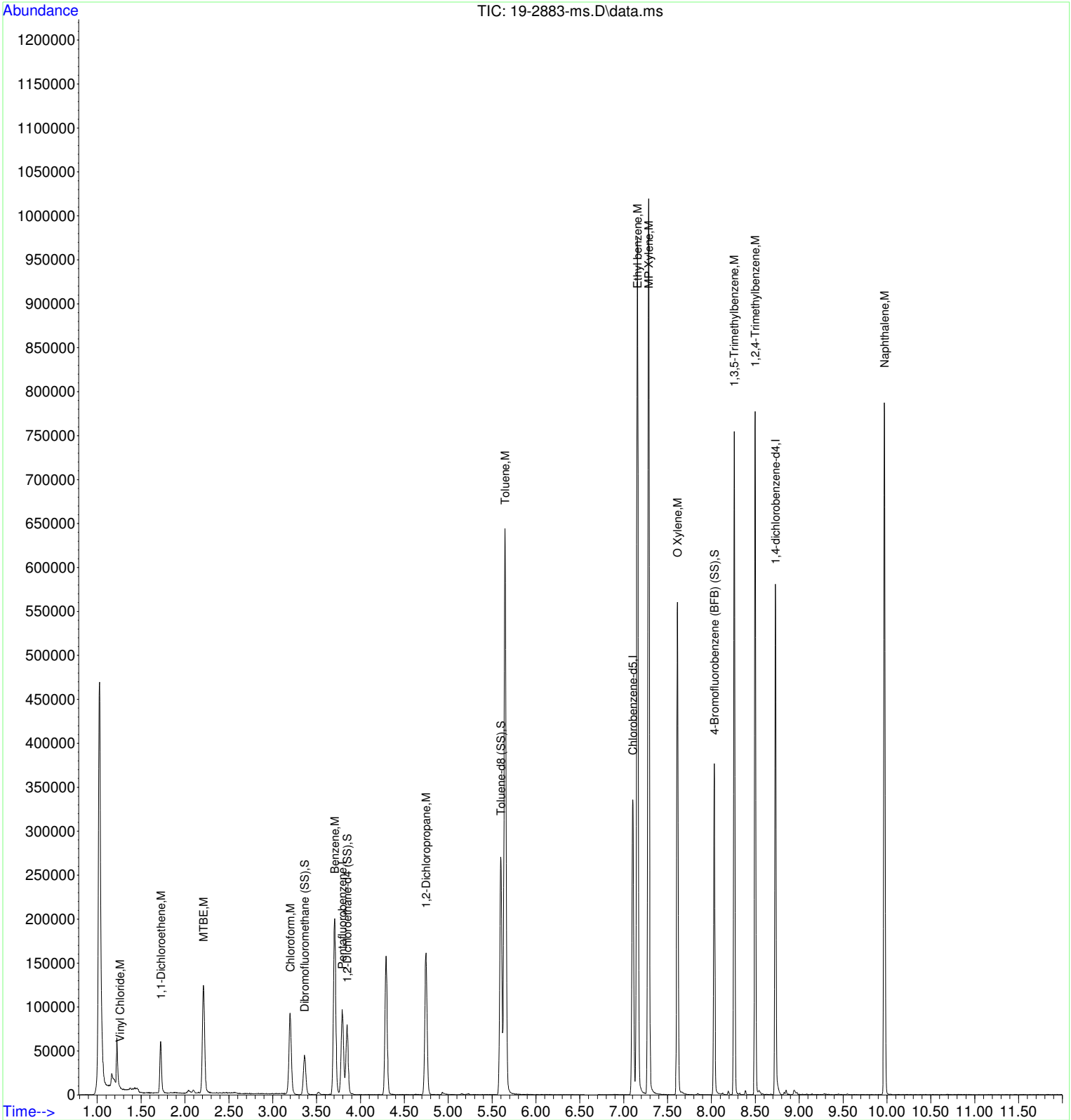
Quant Time: May 29 14:48:04 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.795	168	58393	50.00	ppb		0.01
42) Chlorobenzene-d5	7.104	117	125653	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	77574	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.364	111	27486	48.69	ppb		0.00
Spiked Amount 50.000			Recovery = 97.38%				
32) 1,2-Dichloroethane-d4 ...	3.849	102	6927	45.32	ppb		0.00
Spiked Amount 50.000			Recovery = 90.64%				
44) Toluene-d8 (SS)	5.599	98	150773	44.76	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 89.52%				
63) 4-Bromofluorobenzene (...	8.032	174	53347	41.76	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 83.52%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.260	62	40742m	49.23	ppb		
9) 1,1-Dichloroethene	1.724	96	9946	49.91	ppb	#	45
16) MTBE	2.212	73	68974	59.08	ppb	#	87
24) Chloroform	3.200	83	54971m	48.55	ppb		
30) Benzene	3.705	78	133695m	64.85	ppb		
37) 1,2-Dichloropropane	4.747	63	60614	51.02	ppb	#	96
43) Toluene	5.649	91	381970	118.95	ppb		96
55) Ethyl benzene	7.156	91	520576	122.55	ppb		95
57) MP Xylene	7.283	91	408910	122.84	ppb		96
58) O Xylene	7.613	91	217470	58.40	ppb		98
70) 1,3,5-Trimethylbenzene	8.260	105	230154	52.69	ppb		90
75) 1,2,4-Trimethylbenzene	8.498	105	244153	52.81	ppb		97
85) Naphthalene	9.972	128	361786	56.33	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2883-ms.D
Acq On : 29 May 2019 2:00 pm
Operator : PS
Sample : 19-2883-ms
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 29 14:48:04 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2884-msd-1.D
Acq On : 29 May 2019 4:05 pm
Operator : PS
Sample : 19-2884-msd-1
Misc :
ALS Vial : 1 Sample Multiplier: 1

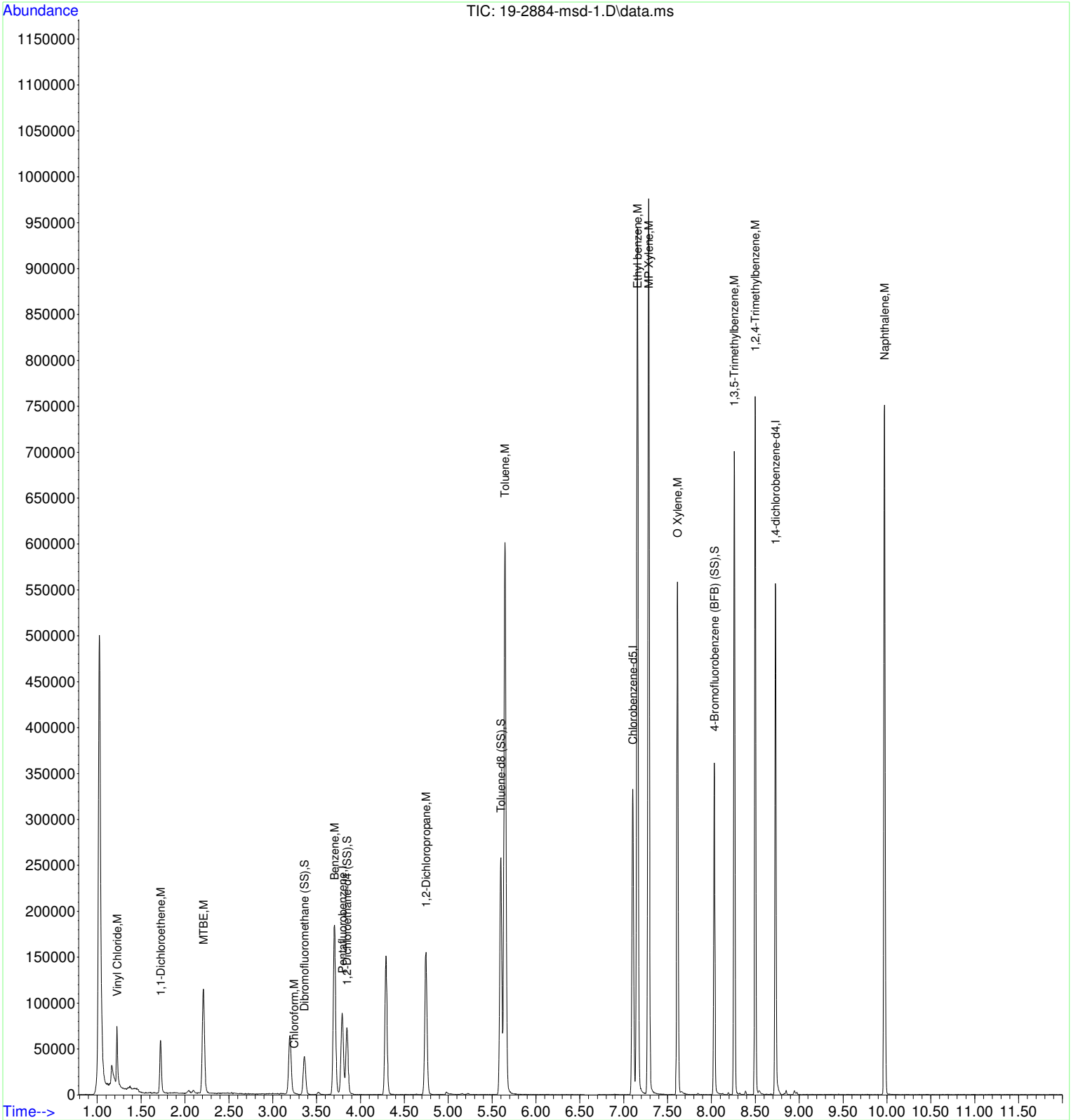
Quant Time: May 29 16:38:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	3.796	168	56345m	50.00	ppb		0.01
42) Chlorobenzene-d5	7.104	117	120483	50.00	ppb		0.00
62) 1,4-dichlorobenzene-d4	8.730	152	72278	50.00	ppb	#	0.00
System Monitoring Compounds							
27) Dibromofluoromethane (SS)	3.362	111	25465	46.75	ppb		0.00
Spiked Amount 50.000			Recovery = 93.50%				
32) 1,2-Dichloroethane-d4 ...	3.846	102	6629	44.95	ppb		0.00
Spiked Amount 50.000			Recovery = 89.90%				
44) Toluene-d8 (SS)	5.599	98	140285	43.44	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 86.88%				
63) 4-Bromofluorobenzene (...	8.033	174	50653	42.56	ppb		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 85.12%				
Target Compounds							Qvalue
4) Vinyl Chloride	1.230	62	44391	56.11	ppb	#	100
9) 1,1-Dichloroethene	1.723	96	9335	48.55	ppb	#	41
16) MTBE	2.210	73	61468	54.56	ppb	#	83
24) Chloroform	3.243	83	39511m	36.16	ppb		
30) Benzene	3.704	78	123924	62.30	ppb		91
37) 1,2-Dichloropropane	4.746	63	57789	50.41	ppb	#	96
43) Toluene	5.648	91	362823	117.84	ppb		95
55) Ethyl benzene	7.157	91	496611	121.93	ppb		95
57) MP Xylene	7.284	91	389212	121.94	ppb		96
58) O Xylene	7.613	91	210297	58.90	ppb		97
70) 1,3,5-Trimethylbenzene	8.261	105	220579	54.32	ppb		90
75) 1,2,4-Trimethylbenzene	8.500	105	234731	54.61	ppb		97
85) Naphthalene	9.973	128	342663	57.27	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\28may2019\
Data File : 19-2884-msd-1.D
Acq On : 29 May 2019 4:05 pm
Operator : PS
Sample : 19-2884-msd-1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 16:38:09 2019
Quant Method : C:\msdchem\1\methods\VOC-DA-23MAY2019.M
Quant Title : VOC
QLast Update : Tue May 28 11:14:41 2019
Response via : Initial Calibration



Untitled
Spike Recovery and RPD Summary Report - WATER

Method Path : C:\msdchem\1\methods\
Method File : VOC-DA-23MAY2019.M
Title : VOC
Last Update : Tue May 28 11:14:41 2019
Response Via : Initial Calibration

Datafile Path: C:\msdchem\1\data\28may2019\

------Sample-------
File : 19-2883.D
Name : 19-2883 Acq Time: 28 May 2019 2:57 pm

------Spike--------
File : 19-2883-ms.D
Name : 19-2883-ms Acq Time: 29 May 2019 2:00 pm

--Spike Duplicate--
File : 19-2884-msd-1.D
Name : 19-2884-msd-1 Acq Time: 29 May 2019 4:05 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Vinyl Chloride	0.0	50	49	56	98	112	13	20	50-144
1,1-Dichloroethene	0.0	50	50	49	100	97	3	20	55-130
MTBE	0.0	50	59	55	118	109	8	20	58-130
Chloroform	0.0	50	49	36	97	72	29#	20	70-130
Benzene	0.8	50	65	62	128	123	4	20	70-130
1,2-Dichloropropane	0.0	50	51	50	102	101	1	20	70-130
Toluene	0.0	100	119	118	119	118	1	20	70-130
Ethyl benzene	0.4	100	123	122	122	122	1	20	70-130
MP Xylene	0.5	100	123	122	122	121	1	20	70-130
O Xylene	0.0	50	58	59	117	118	1	20	70-130
1,3,5-Trimethylbenze	0.0	50	53	54	105	109	3	20	70-130
1,2,4-Trimethylbenze	0.0	50	53	55	106	109	3	20	70-130
Naphthalene	0.0	50	56	57	113	115	2	20	56-130

- Fails Limit Check

VOC-DA-23MAY2019.M Wed May 29 16:46:59 2019

- Recoveries are within acceptable limits, matrix interference from sample.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 04, 2019

Mr. Jacob Teuschler
BCA Environmental Consultants, LLC
7202 E. 87th St.
Suite 110
Indianapolis, IN 46256

RE: Project: 216 College / 19-146
Pace Project No.: 50225468

Dear Mr. Teuschler:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Bedel
regina.bedel@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. John Kilmer, BCA Environmental Consultants, LLC
Rod Manny, BCA Environmental Consultants
Mr. Dan Rust, BCA Environmental Consultants, LLC

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 216 College / 19-146
Pace Project No.: 50225468

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50225468001	**SP-1**	Water	05/17/19 11:45	05/17/19 18:01
50225468002	**SP-3**	Water	05/17/19 13:10	05/17/19 18:01
50225468003	**SP-4**	Water	05/17/19 13:45	05/17/19 18:01
50225468004	**SP-5**	Water	05/17/19 10:23	05/17/19 18:01
50225468005	**SP-5 DUP**	Water	05/17/19 10:23	05/17/19 18:01
50225468006	**EQ Blank**	Water	05/17/19 14:50	05/17/19 18:01
50225468007	**SP-1 FIELD FILTERED**	Water	05/17/19 11:45	05/17/19 18:01
50225468008	**SP-4 FIELD FILTERED**	Water	05/17/19 13:45	05/17/19 18:01
50225468009	**SP-5 FIELD FILTERED**	Water	05/17/19 10:23	05/17/19 18:01

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SAMPLE ANALYTE COUNT

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50225468001	**SP-1**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468002	**SP-3**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468003	**SP-4**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468004	**SP-5**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468005	**SP-5 DUP**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468006	**EQ Blank**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	FRW	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225468001	**SP-1**					
EPA 6010	Arsenic	8.2J	ug/L	10.0	05/21/19 23:33	
EPA 6010	Barium	276	ug/L	10.0	05/21/19 23:33	
EPA 6010	Nickel	3.7J	ug/L	10.0	05/21/19 23:33	
EPA 6010	Zinc	3.5J	ug/L	20.0	05/21/19 23:33	
50225468002	**SP-3**					
EPA 6010	Antimony	3.9J	ug/L	6.0	05/21/19 23:45	
EPA 6010	Arsenic	10J	ug/L	10.0	05/21/19 23:45	
EPA 6010	Barium	203	ug/L	10.0	05/21/19 23:45	
EPA 6010	Beryllium	1.6J	ug/L	4.0	05/21/19 23:45	
EPA 6010	Cadmium	1.3J	ug/L	2.0	05/21/19 23:45	
EPA 6010	Chromium	44.6	ug/L	10.0	05/21/19 23:45	
EPA 6010	Copper	18.1	ug/L	10.0	05/21/19 23:45	
EPA 6010	Lead	33.2	ug/L	10.0	05/21/19 23:45	
EPA 6010	Nickel	29.4	ug/L	10.0	05/21/19 23:45	
EPA 6010	Zinc	69.2	ug/L	20.0	05/21/19 23:45	
EPA 6020	Thallium	0.18J	ug/L	1.0	06/01/19 14:17	
EPA 8270 by SIM	1-Methylnaphthalene	0.065J	ug/L	1.0	05/28/19 17:16	
EPA 8270 by SIM	2-Methylnaphthalene	0.071J	ug/L	1.0	05/28/19 17:16	
50225468003	**SP-4**					
EPA 6010	Arsenic	14.9	ug/L	10.0	05/21/19 23:47	
EPA 6010	Barium	607	ug/L	10.0	05/21/19 23:47	
EPA 6010	Beryllium	1.2J	ug/L	4.0	05/21/19 23:47	
EPA 6010	Cadmium	0.73J	ug/L	2.0	05/21/19 23:47	
EPA 6010	Chromium	22.7	ug/L	10.0	05/21/19 23:47	
EPA 6010	Copper	24.3	ug/L	10.0	05/21/19 23:47	
EPA 6010	Lead	26.4	ug/L	10.0	05/21/19 23:47	
EPA 6010	Nickel	18.0	ug/L	10.0	05/21/19 23:47	
EPA 6010	Zinc	68.1	ug/L	20.0	05/21/19 23:47	
EPA 6020	Thallium	0.22J	ug/L	1.0	06/01/19 14:22	
EPA 8270 by SIM	Fluorene	0.080J	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	1-Methylnaphthalene	10.6	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	2-Methylnaphthalene	18.1	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	Naphthalene	8.0	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	Phenanthrene	0.11J	ug/L	1.0	05/28/19 17:27	
50225468004	**SP-5**					
EPA 6010	Arsenic	12.4	ug/L	10.0	05/21/19 23:50	
EPA 6010	Barium	459	ug/L	10.0	05/21/19 23:50	
EPA 6010	Cadmium	0.58J	ug/L	2.0	05/21/19 23:50	
EPA 6010	Chromium	2.8J	ug/L	10.0	05/21/19 23:50	
EPA 6010	Nickel	5.8J	ug/L	10.0	05/21/19 23:50	
EPA 6010	Zinc	12.7J	ug/L	20.0	05/21/19 23:50	
EPA 8270 by SIM	Acenaphthene	0.066J	ug/L	1.0	05/28/19 17:39	
EPA 8270 by SIM	1-Methylnaphthalene	0.38J	ug/L	1.0	05/28/19 17:39	
EPA 8270 by SIM	2-Methylnaphthalene	0.31J	ug/L	1.0	05/28/19 17:39	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225468005	**SP-5 DUP**					
EPA 6010	Arsenic	12.1	ug/L	10.0	05/21/19 23:52	
EPA 6010	Barium	460	ug/L	10.0	05/21/19 23:52	
EPA 6010	Cadmium	0.59J	ug/L	2.0	05/21/19 23:52	
EPA 6010	Chromium	3.4J	ug/L	10.0	05/21/19 23:52	
EPA 6010	Nickel	6.8J	ug/L	10.0	05/21/19 23:52	
EPA 6010	Zinc	15.7J	ug/L	20.0	05/21/19 23:52	
EPA 8270 by SIM	1-Methylnaphthalene	0.47J	ug/L	1.0	05/28/19 17:50	
EPA 8270 by SIM	2-Methylnaphthalene	0.39J	ug/L	1.0	05/28/19 17:50	
EPA 8270 by SIM	Phenanthrene	0.053J	ug/L	1.0	05/28/19 17:50	
50225468006	**EQ Blank**					
EPA 6010	Zinc	1.6J	ug/L	20.0	05/24/19 22:58	
EPA 8270 by SIM	Naphthalene	0.096J	ug/L	1.0	05/28/19 18:01	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-1 **Lab ID: 50225468001** Collected: 05/17/19 11:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:33	7440-36-0	
Arsenic	**8.2J**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:33	7440-38-2	
Barium	**276**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:33	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:33	7440-41-7	
Cadmium	**<0.44**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:33	7440-43-9	
Chromium	**<1.1**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:33	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:33	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:33	7439-92-1	
Nickel	**3.7J**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:33	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:33	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:33	7440-22-4	
Zinc	**3.5J**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:33	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 12:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 19:45	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 16:41	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 16:41	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 16:41	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 16:41	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 16:41	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 16:41	205-99-2	R1
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 16:41	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 16:41	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 16:41	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 16:41	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 16:41	206-44-0	R1
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 16:41	86-73-7	R1
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 16:41	193-39-5	
1-Methylnaphthalene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 16:41	90-12-0	
2-Methylnaphthalene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 16:41	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 16:41	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 16:41	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 16:41	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	50	%.	10-83		1	05/22/19 09:23	05/28/19 16:41	321-60-8	
p-Terphenyl-d14 (S)	89	%.	28-125		1	05/22/19 09:23	05/28/19 16:41	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-1 **Lab ID: 50225468001** Collected: 05/17/19 11:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 20:11	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 20:11	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 20:11	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 20:11	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 20:11	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 20:11	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 20:11	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 20:11	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 20:11	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 20:11	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 20:11	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 20:11	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 20:11	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 20:11	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 20:11	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 20:11	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 20:11	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 20:11	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 20:11	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 20:11	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 20:11	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 20:11	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 20:11	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 20:11	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 20:11	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 20:11	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 20:11	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 20:11	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 20:11	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 20:11	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 20:11	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 20:11	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 20:11	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 20:11	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 20:11	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	85	%.	15-115		1	05/22/19 09:23	05/24/19 20:11	4165-60-0	

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-1 **Lab ID: 50225468001** Collected: 05/17/19 11:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	40	%.	10-65		1	05/22/19 09:23	05/24/19 20:11	4165-62-2	
2-Fluorophenol (S)	58	%.	10-82		1	05/22/19 09:23	05/24/19 20:11	367-12-4	
2,4,6-Tribromophenol (S)	93	%.	29-134		1	05/22/19 09:23	05/24/19 20:11	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-3 **Lab ID: 50225468002** Collected: 05/17/19 13:10 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**3.9J**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:45	7440-36-0	
Arsenic	**10J**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:45	7440-38-2	
Barium	**203**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:45	7440-39-3	
Beryllium	**1.6J**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:45	7440-41-7	
Cadmium	**1.3J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:45	7440-43-9	
Chromium	**44.6**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:45	7440-47-3	
Copper	**18.1**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:45	7440-50-8	
Lead	**33.2**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:45	7439-92-1	
Nickel	**29.4**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:45	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:45	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:45	7440-22-4	
Zinc	**69.2**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:45	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**0.18J**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 19:58	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:16	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:16	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:16	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:16	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:16	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:16	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:16	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:16	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:16	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:16	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:16	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:16	193-39-5	
1-Methylnaphthalene	**0.065J**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:16	90-12-0	
2-Methylnaphthalene	**0.071J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:16	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:16	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:16	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:16	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	43	%.	10-83		1	05/22/19 09:23	05/28/19 17:16	321-60-8	
p-Terphenyl-d14 (S)	66	%.	28-125		1	05/22/19 09:23	05/28/19 17:16	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-3 **Lab ID: 50225468002** Collected: 05/17/19 13:10 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:00	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:00	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:00	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:00	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:00	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:00	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:00	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:00	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:00	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:00	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:00	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:00	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:00	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:00	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:00	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:00	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:00	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:00	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:00	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:00	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:00	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:00	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:00	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:00	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:00	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:00	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:00	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:00	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:00	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:00	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:00	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:00	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:00	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:00	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	81	%.	15-115		1	05/22/19 09:23	05/24/19 21:00	4165-60-0	

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-3 **Lab ID: 50225468002** Collected: 05/17/19 13:10 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	45	%.	10-65		1	05/22/19 09:23	05/24/19 21:00	4165-62-2	
2-Fluorophenol (S)	59	%.	10-82		1	05/22/19 09:23	05/24/19 21:00	367-12-4	
2,4,6-Tribromophenol (S)	88	%.	29-134		1	05/22/19 09:23	05/24/19 21:00	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 **Lab ID: 50225468003** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:47	7440-36-0	
Arsenic	**14.9**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:47	7440-38-2	
Barium	**607**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:47	7440-39-3	
Beryllium	**1.2J**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:47	7440-41-7	
Cadmium	**0.73J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:47	7440-43-9	
Chromium	**22.7**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:47	7440-47-3	
Copper	**24.3**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:47	7440-50-8	
Lead	**26.4**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:47	7439-92-1	
Nickel	**18.0**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:47	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:47	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:47	7440-22-4	
Zinc	**68.1**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:47	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**0.22J**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 20:00	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:27	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:27	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:27	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:27	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:27	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:27	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:27	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:27	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:27	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:27	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:27	206-44-0	
Fluorene	**0.080J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:27	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:27	193-39-5	
1-Methylnaphthalene	**10.6**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:27	90-12-0	
2-Methylnaphthalene	**18.1**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:27	91-57-6	
Naphthalene	**8.0**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:27	91-20-3	
Phenanthrene	**0.11J**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:27	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	44	%.	10-83		1	05/22/19 09:23	05/28/19 17:27	321-60-8	
p-Terphenyl-d14 (S)	76	%.	28-125		1	05/22/19 09:23	05/28/19 17:27	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 **Lab ID: 50225468003** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:17	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:17	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:17	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:17	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:17	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:17	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:17	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:17	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:17	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:17	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:17	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:17	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:17	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:17	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:17	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:17	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:17	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:17	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:17	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:17	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:17	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:17	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:17	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:17	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:17	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:17	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:17	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:17	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:17	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:17	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:17	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:17	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:17	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:17	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	101	%.	15-115		1	05/22/19 09:23	05/24/19 21:17	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 **Lab ID: 50225468003** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	51	%.	10-65		1	05/22/19 09:23	05/24/19 21:17	4165-62-2	
2-Fluorophenol (S)	71	%.	10-82		1	05/22/19 09:23	05/24/19 21:17	367-12-4	
2,4,6-Tribromophenol (S)	119	%.	29-134		1	05/22/19 09:23	05/24/19 21:17	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 **Lab ID: 50225468004** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:50	7440-36-0	
Arsenic	**12.4**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:50	7440-38-2	
Barium	**459**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:50	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:50	7440-41-7	
Cadmium	**0.58J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:50	7440-43-9	
Chromium	**2.8J**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:50	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:50	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:50	7439-92-1	
Nickel	**5.8J**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:50	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:50	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:50	7440-22-4	
Zinc	**12.7J**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:50	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 20:02	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**0.066J**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:39	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:39	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:39	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:39	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:39	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:39	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:39	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:39	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:39	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:39	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:39	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:39	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:39	193-39-5	
1-Methylnaphthalene	**0.38J**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:39	90-12-0	
2-Methylnaphthalene	**0.31J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:39	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:39	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:39	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:39	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	46	%.	10-83		1	05/22/19 09:23	05/28/19 17:39	321-60-8	
p-Terphenyl-d14 (S)	87	%.	28-125		1	05/22/19 09:23	05/28/19 17:39	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 **Lab ID: 50225468004** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:33	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:33	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:33	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:33	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:33	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:33	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:33	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:33	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:33	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:33	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:33	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:33	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:33	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:33	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:33	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:33	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:33	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:33	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:33	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:33	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:33	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:33	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:33	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:33	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:33	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:33	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:33	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:33	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:33	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:33	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:33	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:33	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:33	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:33	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:33	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	88	%.	15-115		1	05/22/19 09:23	05/24/19 21:33	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 **Lab ID: 50225468004** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	48	%.	10-65		1	05/22/19 09:23	05/24/19 21:33	4165-62-2	
2-Fluorophenol (S)	64	%.	10-82		1	05/22/19 09:23	05/24/19 21:33	367-12-4	
2,4,6-Tribromophenol (S)	102	%.	29-134		1	05/22/19 09:23	05/24/19 21:33	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 DUP **Lab ID: 50225468005** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:52	7440-36-0	
Arsenic	**12.1**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:52	7440-38-2	
Barium	**460**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:52	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:52	7440-41-7	
Cadmium	**0.59J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:52	7440-43-9	
Chromium	**3.4J**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:52	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:52	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:52	7439-92-1	
Nickel	**6.8J**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:52	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:52	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:52	7440-22-4	
Zinc	**15.7J**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:52	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 20:04	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:50	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:50	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:50	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:50	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:50	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:50	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:50	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:50	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:50	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:50	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:50	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:50	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:50	193-39-5	
1-Methylnaphthalene	**0.47J**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:50	90-12-0	
2-Methylnaphthalene	**0.39J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:50	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:50	91-20-3	
Phenanthrene	**0.053J**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:50	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:50	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	39	%.	10-83		1	05/22/19 09:23	05/28/19 17:50	321-60-8	
p-Terphenyl-d14 (S)	72	%.	28-125		1	05/22/19 09:23	05/28/19 17:50	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 DUP **Lab ID: 50225468005** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:50	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:50	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:50	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:50	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:50	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:50	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:50	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:50	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:50	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:50	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:50	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:50	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:50	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:50	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:50	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:50	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:50	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:50	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:50	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:50	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:50	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:50	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:50	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:50	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:50	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:50	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:50	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:50	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:50	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:50	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:50	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:50	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:50	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:50	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:50	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	92	%.	15-115		1	05/22/19 09:23	05/24/19 21:50	4165-60-0	

REPORT OF LABORATORY ANALYSIS

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 DUP **Lab ID: 50225468005** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	47	%.	10-65		1	05/22/19 09:23	05/24/19 21:50	4165-62-2	
2-Fluorophenol (S)	62	%.	10-82		1	05/22/19 09:23	05/24/19 21:50	367-12-4	
2,4,6-Tribromophenol (S)	100	%.	29-134		1	05/22/19 09:23	05/24/19 21:50	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: EQ Blank **Lab ID: 50225468006** Collected: 05/17/19 14:50 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/24/19 13:15	05/24/19 22:58	7440-36-0	
Arsenic	**<4.3**	ug/L	10.0	4.3	1	05/24/19 13:15	05/24/19 22:58	7440-38-2	
Barium	**<0.66**	ug/L	10.0	0.66	1	05/24/19 13:15	05/24/19 22:58	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/24/19 13:15	05/24/19 22:58	7440-41-7	
Cadmium	**<0.44**	ug/L	2.0	0.44	1	05/24/19 13:15	05/24/19 22:58	7440-43-9	
Chromium	**<1.1**	ug/L	10.0	1.1	1	05/24/19 13:15	05/24/19 22:58	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/24/19 13:15	05/24/19 22:58	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/24/19 13:15	05/24/19 22:58	7439-92-1	
Nickel	**<1.0**	ug/L	10.0	1.0	1	05/24/19 13:15	05/24/19 22:58	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/24/19 13:15	05/24/19 22:58	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/24/19 13:15	05/24/19 22:58	7440-22-4	
Zinc	**1.6J**	ug/L	20.0	1.1	1	05/24/19 13:15	05/24/19 22:58	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/23/19 22:50	05/24/19 09:28	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 18:01	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 18:01	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 18:01	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 18:01	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 18:01	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 18:01	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 18:01	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 18:01	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 18:01	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 18:01	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 18:01	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 18:01	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 18:01	193-39-5	
1-Methylnaphthalene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 18:01	90-12-0	
2-Methylnaphthalene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 18:01	91-57-6	
Naphthalene	**0.096J**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 18:01	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 18:01	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 18:01	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	42	%.	10-83		1	05/22/19 09:23	05/28/19 18:01	321-60-8	
p-Terphenyl-d14 (S)	60	%.	28-125		1	05/22/19 09:23	05/28/19 18:01	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: EQ Blank **Lab ID: 50225468006** Collected: 05/17/19 14:50 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 22:06	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 22:06	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 22:06	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 22:06	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 22:06	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 22:06	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 22:06	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 22:06	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 22:06	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 22:06	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 22:06	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 22:06	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 22:06	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 22:06	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 22:06	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 22:06	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 22:06	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 22:06	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 22:06	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 22:06	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 22:06	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 22:06	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 22:06	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 22:06	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 22:06	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 22:06	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 22:06	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 22:06	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 22:06	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 22:06	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 22:06	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 22:06	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 22:06	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 22:06	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 22:06	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	59	%.	15-115		1	05/22/19 09:23	05/24/19 22:06	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: EQ Blank **Lab ID: 50225468006** Collected: 05/17/19 14:50 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	29	%.	10-65		1	05/22/19 09:23	05/24/19 22:06	4165-62-2	
2-Fluorophenol (S)	39	%.	10-82		1	05/22/19 09:23	05/24/19 22:06	367-12-4	
2,4,6-Tribromophenol (S)	70	%.	29-134		1	05/22/19 09:23	05/24/19 22:06	118-79-6	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 501889 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

METHOD BLANK: 2315928 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.069	2.0	0.069	05/28/19 19:05	

LABORATORY CONTROL SAMPLE: 2315929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2315930 2315931

Parameter	Units	50225442011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.7	4.3	93	86	75-125	8	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2315932 2315933

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.069	5	5	5.3	5.0	105	100	75-125	5	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502148 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 50225468006

METHOD BLANK: 2317087 Matrix: Water
Associated Lab Samples: 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.069	2.0	0.069	05/24/19 09:22	

LABORATORY CONTROL SAMPLE: 2317088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2317089 2317090

Parameter	Units	50225773003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.0	4.9	97	95	75-125	2	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 501305 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

METHOD BLANK: 2313609 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<3.3	6.0	3.3	05/21/19 22:45	
Arsenic	ug/L	<4.3	10.0	4.3	05/21/19 22:45	
Barium	ug/L	<0.66	10.0	0.66	05/21/19 22:45	
Beryllium	ug/L	<0.24	4.0	0.24	05/21/19 22:45	
Cadmium	ug/L	<0.44	2.0	0.44	05/21/19 22:45	
Chromium	ug/L	<1.1	10.0	1.1	05/21/19 22:45	
Copper	ug/L	<2.7	10.0	2.7	05/21/19 22:45	
Lead	ug/L	<3.5	10.0	3.5	05/21/19 22:45	
Nickel	ug/L	<1.0	10.0	1.0	05/21/19 22:45	
Selenium	ug/L	<5.2	10.0	5.2	05/21/19 22:45	
Silver	ug/L	<1.2	10.0	1.2	05/21/19 22:45	
Zinc	ug/L	1.5J	20.0	1.1	05/21/19 22:45	

LABORATORY CONTROL SAMPLE: 2313610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	1000	996	100	80-120	
Arsenic	ug/L	1000	971	97	80-120	
Barium	ug/L	1000	969	97	80-120	
Beryllium	ug/L	1000	986	99	80-120	
Cadmium	ug/L	1000	978	98	80-120	
Chromium	ug/L	1000	977	98	80-120	
Copper	ug/L	1000	958	96	80-120	
Lead	ug/L	1000	925	93	80-120	
Nickel	ug/L	1000	985	99	80-120	
Selenium	ug/L	1000	979	98	80-120	
Silver	ug/L	500	473	95	80-120	
Zinc	ug/L	1000	976	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313611 2313612

Parameter	Units	50225400001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	1000	1000	972	972	97	97	75-125	0	20	
Arsenic	ug/L	15.4	1000	1000	1010	1010	99	99	75-125	0	20	
Barium	ug/L	202	1000	1000	1160	1160	95	96	75-125	0	20	
Beryllium	ug/L	ND	1000	1000	955	960	95	96	75-125	0	20	
Cadmium	ug/L	2.1	1000	1000	981	987	98	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313611 2313612

Parameter	Units	50225400001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	57.8	1000	1000	967	976	91	92	75-125	1	20	
Copper	ug/L	95.5	1000	1000	1040	1040	94	95	75-125	0	20	
Lead	ug/L	137	1000	1000	956	961	82	82	75-125	1	20	
Nickel	ug/L	109	1000	1000	982	989	87	88	75-125	1	20	
Selenium	ug/L	ND	1000	1000	986	986	99	99	75-125	0	20	
Silver	ug/L	ND	500	500	486	488	97	98	75-125	1	20	
Zinc	ug/L	401	1000	1000	1280	1290	88	89	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313613 2313614

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<3.3	1000	1000	1010	1010	101	101	75-125	0	20	
Arsenic	ug/L	8.2J	1000	1000	1020	1010	101	100	75-125	1	20	
Barium	ug/L	276	1000	1000	1250	1250	97	97	75-125	0	20	
Beryllium	ug/L	<0.24	1000	1000	981	988	98	99	75-125	1	20	
Cadmium	ug/L	<0.44	1000	1000	990	994	99	99	75-125	0	20	
Chromium	ug/L	<1.1	1000	1000	941	946	94	95	75-125	0	20	
Copper	ug/L	<2.7	1000	1000	956	952	95	95	75-125	0	20	
Lead	ug/L	<3.5	1000	1000	846	845	85	84	75-125	0	20	
Nickel	ug/L	3.7J	1000	1000	909	914	91	91	75-125	1	20	
Selenium	ug/L	<5.2	1000	1000	1000	1000	100	100	75-125	0	20	
Silver	ug/L	<1.2	500	500	488	488	98	98	75-125	0	20	
Zinc	ug/L	3.5J	1000	1000	942	944	94	94	75-125	0	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502070 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 50225468006

METHOD BLANK: 2316804 Matrix: Water
Associated Lab Samples: 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<3.3	6.0	3.3	05/24/19 22:35	
Arsenic	ug/L	<4.3	10.0	4.3	05/24/19 22:35	
Barium	ug/L	<0.66	10.0	0.66	05/24/19 22:35	
Beryllium	ug/L	<0.24	4.0	0.24	05/24/19 22:35	
Cadmium	ug/L	<0.44	2.0	0.44	05/24/19 22:35	
Chromium	ug/L	<1.1	10.0	1.1	05/24/19 22:35	
Copper	ug/L	<2.7	10.0	2.7	05/24/19 22:35	
Lead	ug/L	<3.5	10.0	3.5	05/24/19 22:35	
Nickel	ug/L	<1.0	10.0	1.0	05/24/19 22:35	
Selenium	ug/L	<5.2	10.0	5.2	05/24/19 22:35	
Silver	ug/L	<1.2	10.0	1.2	05/24/19 22:35	
Zinc	ug/L	2.2J	20.0	1.1	05/24/19 22:35	

LABORATORY CONTROL SAMPLE: 2316805

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	1000	996	100	80-120	
Arsenic	ug/L	1000	953	95	80-120	
Barium	ug/L	1000	977	98	80-120	
Beryllium	ug/L	1000	1010	101	80-120	
Cadmium	ug/L	1000	986	99	80-120	
Chromium	ug/L	1000	957	96	80-120	
Copper	ug/L	1000	957	96	80-120	
Lead	ug/L	1000	933	93	80-120	
Nickel	ug/L	1000	976	98	80-120	
Selenium	ug/L	1000	968	97	80-120	
Silver	ug/L	500	475	95	80-120	
Zinc	ug/L	1000	988	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2316806 2316807

Parameter	Units	50225740008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	30.5	5000	5000	3290	3250	65	64	75-125	1	20	M3
Arsenic	ug/L	789	5000	5000	5330	5250	91	89	75-125	2	20	
Barium	ug/L	1940	5000	5000	6540	6500	92	91	75-125	1	20	
Beryllium	ug/L	21.5	5000	5000	4680	4670	93	93	75-125	0	20	
Cadmium	ug/L	13.8	5000	5000	4720	4670	94	93	75-125	1	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2316806 2316807

Parameter	Units	50225740008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	752	5000	5000	5080	5020	87	85	75-125	1	20	
Copper	ug/L	1450	5000	5000	6080	5960	93	90	75-125	2	20	
Lead	ug/L	637	5000	5000	4490	4450	77	76	75-125	1	20	
Nickel	ug/L	766	5000	5000	4820	4780	81	80	75-125	1	20	
Selenium	ug/L	ND	5000	5000	4490	4500	90	90	75-125	0	20	
Silver	ug/L	ND	2500	2500	2370	2350	95	94	75-125	1	20	
Zinc	ug/L	2860	5000	5000	6990	6760	83	78	75-125	3	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 503006 Analysis Method: EPA 6020
QC Batch Method: EPA 200.2 Analysis Description: 6020 MET
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

METHOD BLANK: 2321049 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Thallium	ug/L	<0.040	1.0	0.040	06/01/19 11:52	

LABORATORY CONTROL SAMPLE: 2321050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	40	40.2	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2321051 2321052

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Thallium	ug/L	<0.040	40	40	40.5	41.5	101	104	75-125	2	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502357 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH Low Volume
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

METHOD BLANK: 2318323 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.045	1.0	0.045	05/24/19 18:56	
2-Methylnaphthalene	ug/L	<0.044	1.0	0.044	05/24/19 18:56	
Acenaphthene	ug/L	<0.032	1.0	0.032	05/24/19 18:56	
Acenaphthylene	ug/L	<0.045	1.0	0.045	05/24/19 18:56	
Anthracene	ug/L	<0.040	0.10	0.040	05/24/19 18:56	
Benzo(a)anthracene	ug/L	<0.042	0.10	0.042	05/24/19 18:56	
Benzo(a)pyrene	ug/L	<0.043	0.10	0.043	05/24/19 18:56	
Benzo(b)fluoranthene	ug/L	<0.038	0.10	0.038	05/24/19 18:56	
Benzo(g,h,i)perylene	ug/L	<0.029	0.10	0.029	05/24/19 18:56	
Benzo(k)fluoranthene	ug/L	<0.042	0.10	0.042	05/24/19 18:56	
Chrysene	ug/L	<0.056	0.50	0.056	05/24/19 18:56	
Dibenz(a,h)anthracene	ug/L	<0.032	0.10	0.032	05/24/19 18:56	
Fluoranthene	ug/L	<0.029	1.0	0.029	05/24/19 18:56	
Fluorene	ug/L	<0.044	1.0	0.044	05/24/19 18:56	
Indeno(1,2,3-cd)pyrene	ug/L	<0.031	0.10	0.031	05/24/19 18:56	
Naphthalene	ug/L	<0.053	1.0	0.053	05/24/19 18:56	
Phenanthrene	ug/L	<0.052	1.0	0.052	05/24/19 18:56	
Pyrene	ug/L	<0.034	1.0	0.034	05/24/19 18:56	
2-Fluorobiphenyl (S)	%.	54	10-83		05/24/19 18:56	
p-Terphenyl-d14 (S)	%.	72	28-125		05/24/19 18:56	

LABORATORY CONTROL SAMPLE: 2318324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	10	5.4	54	20-92	
2-Methylnaphthalene	ug/L	10	5.3	53	18-98	
Acenaphthene	ug/L	10	5.8	58	21-102	
Acenaphthylene	ug/L	10	6.3	63	23-118	
Anthracene	ug/L	10	6.1	61	29-119	
Benzo(a)anthracene	ug/L	10	6.4	64	36-131	
Benzo(a)pyrene	ug/L	10	5.2	52	31-121	
Benzo(b)fluoranthene	ug/L	10	6.8	68	32-130	
Benzo(g,h,i)perylene	ug/L	10	4.5	45	23-118	
Benzo(k)fluoranthene	ug/L	10	5.4	54	33-127	
Chrysene	ug/L	10	6.0	60	41-118	
Dibenz(a,h)anthracene	ug/L	10	4.9	49	25-121	
Fluoranthene	ug/L	10	6.8	68	36-128	
Fluorene	ug/L	10	6.4	64	26-114	
Indeno(1,2,3-cd)pyrene	ug/L	10	5.1	51	26-119	
Naphthalene	ug/L	10	5.3	53	19-97	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

LABORATORY CONTROL SAMPLE: 2318324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/L	10	6.4	64	32-115	
Pyrene	ug/L	10	6.7	67	36-123	
2-Fluorobiphenyl (S)	%.			56	10-83	
p-Terphenyl-d14 (S)	%.			63	28-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2318325 2318326

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/L	<0.045	10	10	6.3	6.1	63	61	15-88	2	20	
2-Methylnaphthalene	ug/L	<0.044	10	10	6.1	6.0	61	60	19-92	3	20	
Acenaphthene	ug/L	<0.032	10	10	6.4	6.2	64	62	13-91	3	20	
Acenaphthylene	ug/L	<0.045	10	10	6.1	7.2	61	72	10-110	16	20	
Anthracene	ug/L	<0.040	10	10	6.9	7.1	69	71	18-111	3	20	
Benzo(a)anthracene	ug/L	<0.042	10	10	7.4	7.2	74	72	36-113	3	20	
Benzo(a)pyrene	ug/L	<0.043	10	10	6.1	6.7	61	67	22-92	9	20	
Benzo(b)fluoranthene	ug/L	<0.038	10	10	6.8	8.6	68	86	28-104	23	20	R1
Benzo(g,h,i)perylene	ug/L	<0.029	10	10	5.0	5.7	50	57	10-83	13	20	
Benzo(k)fluoranthene	ug/L	<0.042	10	10	6.3	5.7	63	57	19-98	9	20	
Chrysene	ug/L	<0.056	10	10	7.1	7.5	71	75	36-100	6	20	
Dibenz(a,h)anthracene	ug/L	<0.032	10	10	5.5	6.3	55	63	12-88	14	20	
Fluoranthene	ug/L	<0.029	10	10	5.2	11.2	52	112	41-114	74	20	R1
Fluorene	ug/L	<0.044	10	10	6.8	4.8	68	48	21-104	36	20	R1
Indeno(1,2,3-cd)pyrene	ug/L	<0.031	10	10	5.5	6.2	55	62	13-88	11	20	
Naphthalene	ug/L	<0.053	10	10	6.2	6.2	62	62	14-92	0	20	
Phenanthrene	ug/L	<0.052	10	10	6.6	6.5	66	65	29-105	1	20	
Pyrene	ug/L	<0.034	10	10	7.9	8.3	79	83	29-112	4	20	
2-Fluorobiphenyl (S)	%.						37	41	10-83			
p-Terphenyl-d14 (S)	%.						65	79	28-125			

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502356 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water Scan LV
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

METHOD BLANK: 2318319 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-Trichlorophenol	ug/L	<2.9	10.0	2.9	05/24/19 17:43	
2,4,6-Trichlorophenol	ug/L	<3.2	10.0	3.2	05/24/19 17:43	
2,4-Dichlorophenol	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
2,4-Dimethylphenol	ug/L	<3.9	10.0	3.9	05/24/19 17:43	
2,4-Dinitrophenol	ug/L	<3.8	50.0	3.8	05/24/19 17:43	
2,4-Dinitrotoluene	ug/L	<2.6	10.0	2.6	05/24/19 17:43	
2,6-Dinitrotoluene	ug/L	<3.4	10.0	3.4	05/24/19 17:43	
2-Chloronaphthalene	ug/L	<4.1	10.0	4.1	05/24/19 17:43	
2-Chlorophenol	ug/L	<2.7	10.0	2.7	05/24/19 17:43	
2-Methylphenol(o-Cresol)	ug/L	<2.7	10.0	2.7	05/24/19 17:43	
2-Nitroaniline	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
2-Nitrophenol	ug/L	<2.8	10.0	2.8	05/24/19 17:43	
3&4-Methylphenol(m&p Cresol)	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
3,3'-Dichlorobenzidine	ug/L	<3.5	20.0	3.5	05/24/19 17:43	
3-Nitroaniline	ug/L	<3.0	10.0	3.0	05/24/19 17:43	
4,6-Dinitro-2-methylphenol	ug/L	<4.9	20.0	4.9	05/24/19 17:43	
4-Bromophenylphenyl ether	ug/L	<3.0	10.0	3.0	05/24/19 17:43	
4-Chloro-3-methylphenol	ug/L	<2.9	10.0	2.9	05/24/19 17:43	
4-Chloroaniline	ug/L	<2.2	10.0	2.2	05/24/19 17:43	
4-Chlorophenylphenyl ether	ug/L	<3.8	10.0	3.8	05/24/19 17:43	
4-Nitroaniline	ug/L	<2.8	10.0	2.8	05/24/19 17:43	
4-Nitrophenol	ug/L	<2.5	50.0	2.5	05/24/19 17:43	
Benzyl alcohol	ug/L	<2.4	10.0	2.4	05/24/19 17:43	
bis(2-Chloroethoxy)methane	ug/L	<2.6	10.0	2.6	05/24/19 17:43	
bis(2-Chloroethyl) ether	ug/L	<2.2	10.0	2.2	05/24/19 17:43	
bis(2-Ethylhexyl)phthalate	ug/L	<4.4	10.0	4.4	05/24/19 17:43	
bis(2chloro1methylethyl) ether	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Butylbenzylphthalate	ug/L	<4.2	10.0	4.2	05/24/19 17:43	
Di-n-butylphthalate	ug/L	<3.1	10.0	3.1	05/24/19 17:43	
Di-n-octylphthalate	ug/L	<6.2	10.0	6.2	05/24/19 17:43	
Dibenzofuran	ug/L	<3.6	10.0	3.6	05/24/19 17:43	
Diethylphthalate	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Dimethylphthalate	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Hexachloro-1,3-butadiene	ug/L	<3.0	10.0	3.0	05/24/19 17:43	
Hexachlorobenzene	ug/L	<2.7	10.0	2.7	05/24/19 17:43	
Hexachlorocyclopentadiene	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Hexachloroethane	ug/L	<2.6	10.0	2.6	05/24/19 17:43	
Isophorone	ug/L	<2.2	10.0	2.2	05/24/19 17:43	
N-Nitroso-di-n-propylamine	ug/L	<2.6	50.0	2.6	05/24/19 17:43	
N-Nitrosodiphenylamine	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Nitrobenzene	ug/L	<2.4	10.0	2.4	05/24/19 17:43	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

METHOD BLANK: 2318319 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Pentachlorophenol	ug/L	<1.9	50.0	1.9	05/24/19 17:43	
Phenol	ug/L	<1.7	10.0	1.7	05/24/19 17:43	
2,4,6-Tribromophenol (S)	%.	98	29-134		05/24/19 17:43	
2-Fluorophenol (S)	%.	47	10-82		05/24/19 17:43	
Nitrobenzene-d5 (S)	%.	94	15-115		05/24/19 17:43	
Phenol-d5 (S)	%.	37	10-65		05/24/19 17:43	

LABORATORY CONTROL SAMPLE: 2318320

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	100	88.4	88	10-142	
2-Chlorophenol	ug/L	100	60.1	60	18-105	
4-Chloro-3-methylphenol	ug/L	100	77.7	78	18-127	
4-Nitrophenol	ug/L	100	43.8J	44	10-87	
N-Nitroso-di-n-propylamine	ug/L	100	90.4	90	20-120	
Pentachlorophenol	ug/L	100	97.8	98	21-141	
Phenol	ug/L	100	32.3	32	10-62	
2,4,6-Tribromophenol (S)	%.			87	29-134	
2-Fluorophenol (S)	%.			46	10-82	
Nitrobenzene-d5 (S)	%.			90	15-115	
Phenol-d5 (S)	%.			36	10-65	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2318321 2318322

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4-Dinitrotoluene	ug/L	<2.6	100	100	96.1	93.5	96	93	10-134	3	20	
2-Chlorophenol	ug/L	<2.7	100	100	85.1	84.1	85	84	13-95	1	20	
4-Chloro-3-methylphenol	ug/L	<2.9	100	100	110	108	110	108	15-119	2	20	
4-Nitrophenol	ug/L	<2.5	100	100	58.8	57.3	59	57	10-76	3	20	
N-Nitroso-di-n-propylamine	ug/L	<2.6	100	100	95.3	92.3	95	92	12-111	3	20	
Pentachlorophenol	ug/L	<1.9	100	100	119	114	119	114	21-132	4	20	
Phenol	ug/L	<1.7	100	100	41.1	41.0	41	41	10-52	0	20	
2,4,6-Tribromophenol (S)	%.						92	95	29-134			
2-Fluorophenol (S)	%.						59	58	10-82			
Nitrobenzene-d5 (S)	%.						88	91	15-115			
Phenol-d5 (S)	%.						41	41	10-65			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: 216 College / 19-146
Pace Project No.: 50225468

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1	RPD value was outside control limits.

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METHOD CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225468

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Water	SW-846 6010B	SW-846 3010A
6020 MET ICPMS	Water	SW-846 6020	SW-846 3010A
7470 Mercury	Water	SW-846 7470A	SW-846 7470A
8270 100mL Combo RV	Water	SW-846 8270C	SW-846 3510C
8270 SVOC Combo Water	Water	SW-846 8270C	SW-846 3510C

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50225468001	**SP-1**	EPA 3010	501305	EPA 6010	501704
50225468002	**SP-3**	EPA 3010	501305	EPA 6010	501704
50225468003	**SP-4**	EPA 3010	501305	EPA 6010	501704
50225468004	**SP-5**	EPA 3010	501305	EPA 6010	501704
50225468005	**SP-5 DUP**	EPA 3010	501305	EPA 6010	501704
50225468006	**EQ Blank**	EPA 3010	502070	EPA 6010	502565
50225468001	**SP-1**	EPA 200.2	503006	EPA 6020	503481
50225468002	**SP-3**	EPA 200.2	503006	EPA 6020	503481
50225468003	**SP-4**	EPA 200.2	503006	EPA 6020	503481
50225468004	**SP-5**	EPA 200.2	503006	EPA 6020	503481
50225468005	**SP-5 DUP**	EPA 200.2	503006	EPA 6020	503481
50225468006	**EQ Blank**	EPA 200.2	503006	EPA 6020	503481
50225468001	**SP-1**	EPA 7470	501889	EPA 7470	502925
50225468002	**SP-3**	EPA 7470	501889	EPA 7470	502925
50225468003	**SP-4**	EPA 7470	501889	EPA 7470	502925
50225468004	**SP-5**	EPA 7470	501889	EPA 7470	502925
50225468005	**SP-5 DUP**	EPA 7470	501889	EPA 7470	502925
50225468006	**EQ Blank**	EPA 7470	502148	EPA 7470	502319
50225468001	**SP-1**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468002	**SP-3**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468003	**SP-4**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468004	**SP-5**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468005	**SP-5 DUP**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468006	**EQ Blank**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468001	**SP-1**	EPA 3510	502356	EPA 8270	502531
50225468002	**SP-3**	EPA 3510	502356	EPA 8270	502531
50225468003	**SP-4**	EPA 3510	502356	EPA 8270	502531
50225468004	**SP-5**	EPA 3510	502356	EPA 8270	502531
50225468005	**SP-5 DUP**	EPA 3510	502356	EPA 8270	502531
50225468006	**EQ Blank**	EPA 3510	502356	EPA 8270	502531

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CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

50225468

ALL SHADED AREAS are for LAB USE ONLY

Company: BLA Environmental	Billing Information:
Address: 12026 87th St.	
Report To: JTenschler	Email To: JTenschler
Copy To: RManny@BLAConsultants.com	Site Collection Info/Address: 216 S College
Customer Project Name/Number: 19-146	State: IN County/City: Monroe Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [✓] No
Collected By (print): Rod Manny	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature): Rod Manny	Turnaround Date Required: STD Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: [X] Hold: Filtered metals	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [✓] Yes [ ] No Analysis: 14 Metals

Container Preservative Type **: U | | 1 | | 1 | | B

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	SVOCs + PAHs 8270 + SIM	14 Metals	14 Metals (Field Filtered *)	CrVI 7199	Lab Sample # / Comments
** SP-1	GW	G	5.17.19	1145				14	X	X	X	X	001 007
SP-3	"	"	"	1310				5	X	X		X	002
SP-4	"	"	"	1345				5	X	X	X	X	003 008
SP-5	"	"	"	1023				5	X	X	X	X	004 009
SP-5 DUP	"	"	"	1023				4	X	X		X	005
Equipment Blank 5/21/19 RMB									X	X		X	006

Lab Profile/Line:

Lab Sample Receipt Checklist: See Scan

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
* Hold Filtered until Analysis Pending
** MS/MSD

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2397500

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: E
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: 0.0 oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Rod Manny/BLA	Date/Time: 5/17/19 1801	Received by/Company: (Signature)	Date/Time: 5/17/19 1801	MTJL LAB USE ONLY
Relinquished by/Company: (Signature) Lucas Dawson LWC	Date/Time: 5/17/19	Received by/Company: (Signature)	Date/Time:	Table #: Acctnum: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Pace Analytical

SAMPLE CONDITION UPON RECEIPT FORM

Project #: 50225468

Date/Time and Initials of person examining contents: LWG 1830 5/17/19

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer: 1 2 3 4 5 6 A B C D (E) F Ice Type: ☑ Wet ☐ Blue ☐ None | Samples collected today and on ice: ☑ Yes ☐ No ☐ N/A

Cooler Temperature: 1.5/1.5 Ice Visible in Sample Containers?: ☐ Yes ☑ No ☐ N/A

(Initial/Corrected) Temp should be above freezing to 6°C If temp. is Over 6°C or under 0°C, was the PM Notified?: ☐ Yes ☐ No ☑ N/A

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been checked?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.			+ CWG
USDA Regulated Soils? (ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Chain of Custody Present:	✓		Circle: (HNO3) H2SO4 NaOH NaOH/ZnAc	✓		
Chain of Custody Filled Out:	✓		Dissolved Metals field filtered?:	✓		+ LWG
Short Hold Time Analysis (<72hr)?: **Analysis:**		✓	Headspace Wisconsin Sulfide			✓
Time 5035A TC placed in Freezer or Short Holds To Lab:				Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
			Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested:		✓	Headspace in VOA Vials (>6mm):			✓
Containers Intact?:	✓		Trip Blank Present?:		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		✓	Trip Blank Custody Seals?:		✓	

Comments: Missing SP-3 Cr VI Sample. - LWG 5/17/19 EQ blank not on COC - LWG 5/17/19
This ↑ is correct - ~~not~~ no SP-3 CrVI 5/20/19 KMB
Analyze CrVI groundwater, per Rob Manny 5/21/19 KMB
Analyze equipment blank for all parameters 5/21/19 KMB

Sample Container Count

WO# : 50225468

CLIENT: BCA

COC PAGE 1 of 1
COC ID# 2397500

Project # 50225468

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	R	Bulk Kit SRS	GNX	Date	Time	Matrix SI/ (Soil/Wate Aqueous	pH <2	pH >9	pH>12
1		6												4					3			WT	✓		
2		2												1					0						
3		2												2					1						
4		|												2					1						
5		|												1					1						
6		|												1					1	5/17	1450	|	|		
7																									
8																									
9																									
10																									
11																									
12																									

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpreserved amber glass
DG9H	40mL HCL amber voa vial	AG1H	1 liter HCL amber glass
DG9M	40mL MeOH clear vial	AG1S	1 liter H2SO4 amber glass
DG9P	40mL TSP amber vial	AG1T	1 liter Na Thiosulfate amber glass
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpreserved amber glass
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass
DG9U	40mL unpreserved amber vial	AG2S	500mL H2SO4 amber glass
VG9H	40mL HCL clear vial	AG2U	500mL unpreserved amber glass
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 glass amber
VG9U	40mL unpreserved clear vial	AG3U	250mL unpreserved amber glass
VGFX	40mL w/hexane wipe vial	BG1H	1 liter HCL clear glass
VSG	Headspace septa vial & HCL	BG1S	1 liter H2SO4 clear glass
WGKU	8oz unpreserved clear jar	BG1T	1 liter Na Thiosulfate clear glass
WGFU	4oz clear soil jar	BG1U	1 liter unpreserved glass
JGFU	4oz unpreserved amber wide	BG3H	250mL HCl Clear Glass
		BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic
BP1N	1 liter HNO3 plastic
BP1S	1 liter H2SO4 plastic
BP1U	1 liter unpreserved plastic
BP1Z	1 liter NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3S	250mL H2SO4 plastic
BP3U	250mL unpreserved plastic
BP3Z	250mL NaOH, Zn Ac plastic

AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 30, 2019

Pace Analytical - Indianapolis, IN

Sample Delivery Group:	L1101712
Samples Received:	05/23/2019
Project Number:	50225468
Description:	216 College / 19-146

Report To: Regina Bedel
7726 Moller Rd.
Indianapolis, IN 46268

Entire Report Reviewed By: Nancy F. McLain

Nancy McLain
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 4

Sr: Sample Results 5

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SP-4 L1101712-02 6

SP-5 L1101712-03 7

SP-5 DUP L1101712-04 8

EQ BLANK L1101712-05 9

Qc: Quality Control Summary 10

Wet Chemistry by Method 7199 10

Gl: Glossary of Terms 11

Al: Accreditations & Locations 12

Sc: Sample Chain of Custody 13

SP-1 L1101712-01 GW

Collected by | Collected date/time 05/17/19 11:45 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 18:29	05/29/19 18:29	GB	Mt. Juliet, TN

SP-4 L1101712-02 GW

Collected by | Collected date/time 05/17/19 13:45 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 21:04	05/29/19 21:04	GB	Mt. Juliet, TN

SP-5 L1101712-03 GW

Collected by | Collected date/time 05/17/19 10:23 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:08	05/29/19 19:08	GB	Mt. Juliet, TN

SP-5 DUP L1101712-04 GW

Collected by | Collected date/time 05/17/19 10:23 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:23	05/29/19 19:23	GB	Mt. Juliet, TN

EQ BLANK L1101712-05 GW

Collected by | Collected date/time 05/17/19 14:50 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:32	05/29/19 19:32	GB	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Nancy McLain
Project Manager

Sample Handling and Receiving

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1101712-01	SP-1	7199
L1101712-02	SP-4	7199
L1101712-03	SP-5	7199
L1101712-04	SP-5 DUP	7199
L1101712-05	EQ BLANK	7199

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.224	J6	0.0200	0.0600	1	05/29/2019 18:29	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.0539	J P1	0.0200	0.0600	1	05/29/2019 21:04	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.124		0.0200	0.0600	1	05/29/2019 19:08	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.0999		0.0200	0.0600	1	05/29/2019 19:23	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.135		0.0200	0.0600	1	05/29/2019 19:32	WG1287501

Method Blank (MB)

(MB) R3416028-1 05/29/19 17:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexavalent Chromium-Low Level	U		0.0200	0.0600

L1101712-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1101712-02 05/29/19 21:04 • (DUP) R3416028-7 05/29/19 21:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium-Low Level	0.0539	0.0266	1	67.8	J P1	20

Laboratory Control Sample (LCS)

(LCS) R3416028-2 05/29/19 18:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium-Low Level	0.500	0.499	99.8	90.0-110	

L1101712-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1101712-01 05/29/19 18:29 • (MS) R3416028-3 05/29/19 18:38 • (MSD) R3416028-4 05/29/19 18:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium-Low Level	1.00	0.224	1.04	1.03	81.1	80.9	1	90.0-110	J6	J6	0.222	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

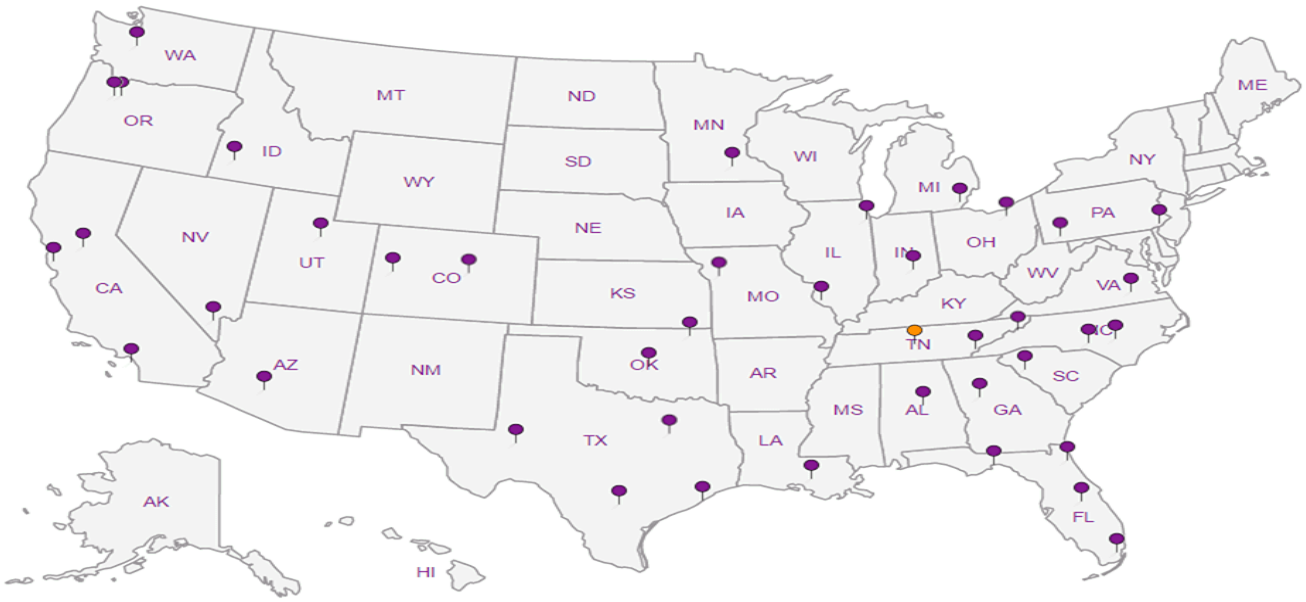
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Chain of Custody

Pace Analytical®
www.pacelabs.com

A116

Workorder: 50225468 **Workorder Name:** 216 College / 19-146 **Results Requested By:** 6/4/2019

Report / Invoice To	Subcontract To
Regina Bedel Pace Analytical Indianapolis 7726 Moller Road Indianapolis, IN 46268 Phone (317)228-3100 Email: regina.bedel@pacelabs.com	Pace National 12065 Lebanon Rd Mt Juliet, TN 37122 P.O. 50225468

State of Sample Origin: IN

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: General	7199 CR6 LLFFP + MS/MSD	7199 CR6 LLFFP	LAB USE ONLY
1	SP-1	5/17/2019 11:45	50225468001	Water	3	X		-01
2	SP-4	5/17/2019 13:45	50225468003	Water	1		X	-02
3	SP-5	5/17/2019 10:23	50225468004	Water	1		X	-03
4	SP-5 DUP	5/17/2019 10:23	50225468005	Water	1		X	-04
5	EQ Blank	5/17/2019 14:50	50225468006	Water	1		X	-05

L1101712

Transfers	Released By	Date/Time	Received By	Date/Time
1		5-22-19 1649		5-23-19 8:45
2				
3				

Comments: OK

Cooler Temperature on Receipt 3.4±0 °C 3.4 A39F | Custody Seal Y or N 4893 0206 3376 | Received on Ice (Y) or N | Samples Intact (Y) or N

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACEEEN	SDG#:	L1101712	
Cooler Received/Opened On: 5/23/19	Temperature:	3.4	
Received By: Lexxi Romero			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Analytical Data Package

Prepared by:

Pace Analytical Services

Pace Project No.: 50225466

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ICP

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 04, 2019

Mr. Jacob Teuschler
BCA Environmental Consultants, LLC
7202 E. 87th St.
Suite 110
Indianapolis, IN 46256

RE: Project: 216 College / 19-146
Pace Project No.: 50225466

Dear Mr. Teuschler:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Bedel
regina.bedel@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. John Kilmer, BCA Environmental Consultants, LLC
Rod Manny, BCA Environmental Consultants
Mr. Dan Rust, BCA Environmental Consultants, LLC

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CERTIFICATIONS

Project: 216 College / 19-146
Pace Project No.: 50225466

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50225466001	**SP-1 (3-5)**	Solid	05/16/19 12:40	05/17/19 18:01
50225466002	**SP-1 (5-7)**	Solid	05/16/19 12:45	05/17/19 18:01
50225466003	**SP-2 (0-2)**	Solid	05/16/19 10:00	05/17/19 18:01
50225466004	**SP-2 (2-4)**	Solid	05/16/19 10:05	05/17/19 18:01
50225466005	**SP-3 (0-2)**	Solid	05/16/19 10:25	05/17/19 18:01
50225466006	**SP-3 (2-4)**	Solid	05/16/19 10:30	05/17/19 18:01
50225466007	**SP-4 (0-2)**	Solid	05/16/19 12:15	05/17/19 18:01
50225466008	**SP-4 (2-4)**	Solid	05/16/19 12:20	05/17/19 18:01
50225466009	**SP-4 (6-8)**	Solid	05/16/19 12:00	05/17/19 18:01
50225466010	**SP-4 (8-9)**	Solid	05/16/19 12:05	05/17/19 18:01
50225466011	**SP-4 (9-10.5)**	Solid	05/16/19 12:10	05/17/19 18:01
50225466012	**SP-5 (0-2)**	Solid	05/16/19 11:40	05/17/19 18:01
50225466013	**SP-5 (0-2) DUP**	Solid	05/16/19 11:40	05/17/19 18:01
50225466014	**SP-5 (2-4)**	Solid	05/16/19 11:45	05/17/19 18:01
50225466015	**SP-5 (9-11)**	Solid	05/16/19 11:30	05/17/19 18:01
50225466016	**SP-5 (11-13)**	Solid	05/16/19 11:35	05/17/19 18:01
50225466017	**SP-5 (11-13) DUP**	Solid	05/16/19 11:35	05/17/19 18:01
50225466018	**SP-5 (6-8)**	Solid	05/16/19 11:37	05/17/19 18:01

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SAMPLE ANALYTE COUNT

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50225466001	**SP-1 (3-5)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466002	**SP-1 (5-7)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466003	**SP-2 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466004	**SP-2 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466005	**SP-3 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466006	**SP-3 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466007	**SP-4 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466008	**SP-4 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466009	**SP-4 (6-8)**	EPA 8270 by SIM	JCM	20	PASI-I

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SAMPLE ANALYTE COUNT

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466010	**SP-4 (8-9)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466011	**SP-4 (9-10.5)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466012	**SP-5 (0-2)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466013	**SP-5 (0-2) DUP**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466014	**SP-5 (2-4)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466015	**SP-5 (9-11)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466016	**SP-5 (11-13)**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466017	**SP-5 (11-13) DUP**	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I
50225466018	**SP-5 (6-8)**	EPA 6010	KJE	13	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8270	JCM	47	PASI-I
		SM 2540G	RM1	1	PASI-I

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466001	**SP-1 (3-5)**					
EPA 6010	Arsenic	12.0	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Barium	72.6	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Beryllium	0.91	mg/kg	0.53	05/28/19 16:50	
EPA 6010	Cadmium	0.18J	mg/kg	0.53	05/28/19 16:50	
EPA 6010	Chromium	13.6	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Copper	17.8	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Lead	16.3	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Nickel	17.0	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Selenium	0.64J	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Thallium	1.6	mg/kg	1.1	05/28/19 16:50	
EPA 6010	Zinc	37.0	mg/kg	1.1	05/28/19 16:50	
EPA 7471	Mercury	0.11J	mg/kg	0.22	05/30/19 20:16	
EPA 8270 by SIM	Acenaphthene	301	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Acenaphthylene	86.8	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Anthracene	761	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(a)anthracene	1980	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(a)pyrene	1400	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(b)fluoranthene	1550	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(g,h,i)perylene	810	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Benzo(k)fluoranthene	1240	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Chrysene	2270	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Dibenz(a,h)anthracene	428	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Fluoranthene	4460	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Fluorene	270	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	814	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	1-Methylnaphthalene	249	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	2-Methylnaphthalene	282	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Naphthalene	234	ug/kg	29.8	06/02/19 15:59	ED
EPA 8270 by SIM	Phenanthrene	3250	ug/kg	29.8	06/02/19 15:59	
EPA 8270 by SIM	Pyrene	4200	ug/kg	29.8	06/02/19 15:59	
EPA 8270	Dibenzofuran	494	ug/kg	394	06/02/19 15:20	
SM 2540G	Percent Moisture	16.2	%	0.10	05/28/19 11:52	
50225466002	**SP-1 (5-7)**					
EPA 6010	Arsenic	8.2	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Barium	49.1	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Beryllium	1.4	mg/kg	0.57	05/28/19 16:53	
EPA 6010	Cadmium	0.13J	mg/kg	0.57	05/28/19 16:53	
EPA 6010	Chromium	8.7	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Copper	37.2	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Lead	43.9	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Nickel	19.1	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Selenium	1.2	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Thallium	0.95J	mg/kg	1.1	05/28/19 16:53	
EPA 6010	Zinc	49.9	mg/kg	1.1	05/28/19 16:53	
EPA 7471	Mercury	0.13J	mg/kg	0.24	05/30/19 20:18	
EPA 8270 by SIM	Acenaphthene	149	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Acenaphthylene	33.3	ug/kg	30.9	06/02/19 16:15	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466002	**SP-1 (5-7)**					
EPA 8270 by SIM	Anthracene	300	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(a)anthracene	268	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(a)pyrene	106	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(b)fluoranthene	108	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(g,h,i)perylene	62.6	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Benzo(k)fluoranthene	82.8	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Chrysene	322	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Dibenz(a,h)anthracene	17.9J	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Fluoranthene	486	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Fluorene	207	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	34.1	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	1-Methylnaphthalene	562	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	2-Methylnaphthalene	565	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Naphthalene	315	ug/kg	30.9	06/02/19 16:15	ED
EPA 8270 by SIM	Phenanthrene	1230	ug/kg	30.9	06/02/19 16:15	
EPA 8270 by SIM	Pyrene	515	ug/kg	30.9	06/02/19 16:15	
EPA 8270	Dibenzofuran	238J	ug/kg	408	06/02/19 15:36	
SM 2540G	Percent Moisture	19.5	%	0.10	05/28/19 11:52	
50225466003	**SP-2 (0-2)**					
EPA 6010	Arsenic	0.97J	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Barium	42.2	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Cadmium	0.37J	mg/kg	0.50	05/28/19 16:55	
EPA 6010	Chromium	7.1	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Copper	2.2	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Lead	2.1	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Nickel	8.6	mg/kg	1.0	05/28/19 16:55	
EPA 6010	Silver	0.68	mg/kg	0.50	05/28/19 16:55	
EPA 6010	Zinc	22.0	mg/kg	1.0	05/28/19 16:55	
EPA 8270 by SIM	Pyrene	2.9J	ug/kg	5.1	06/04/19 13:55	
SM 2540G	Percent Moisture	3.4	%	0.10	05/28/19 11:52	
50225466004	**SP-2 (2-4)**					
EPA 6010	Arsenic	14.2	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Barium	75.2	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Beryllium	0.46J	mg/kg	0.51	05/28/19 16:57	
EPA 6010	Cadmium	0.26J	mg/kg	0.51	05/28/19 16:57	
EPA 6010	Chromium	15.8	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Copper	9.1	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Lead	14.7	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Nickel	11.2	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Thallium	0.86J	mg/kg	1.0	05/28/19 16:57	
EPA 6010	Zinc	33.1	mg/kg	1.0	05/28/19 16:57	
EPA 8270 by SIM	Acenaphthene	61.2	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Acenaphthylene	134	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Anthracene	155	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(a)anthracene	294	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(a)pyrene	349	ug/kg	27.0	06/02/19 16:48	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466004	**SP-2 (2-4)**					
EPA 8270 by SIM	Benzo(b)fluoranthene	255	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	243	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Benzo(k)fluoranthene	215	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Chrysene	334	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Dibenz(a,h)anthracene	106	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Fluoranthene	385	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	221	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	1-Methylnaphthalene	22.6J	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	2-Methylnaphthalene	23.6J	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Naphthalene	36.3	ug/kg	27.0	06/02/19 16:48	ED
EPA 8270 by SIM	Phenanthrene	97.4	ug/kg	27.0	06/02/19 16:48	
EPA 8270 by SIM	Pyrene	983	ug/kg	27.0	06/02/19 16:48	
SM 2540G	Percent Moisture	8.5	%	0.10	05/28/19 11:52	
50225466005	**SP-3 (0-2)**					
EPA 6010	Arsenic	6.3	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Barium	301	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Beryllium	0.51J	mg/kg	0.53	05/28/19 16:59	
EPA 6010	Cadmium	0.34J	mg/kg	0.53	05/28/19 16:59	
EPA 6010	Chromium	13.3	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Copper	17.6	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Lead	96.5	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Nickel	13.2	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Thallium	0.83J	mg/kg	1.1	05/28/19 16:59	
EPA 6010	Zinc	97.4	mg/kg	1.1	05/28/19 16:59	
EPA 7471	Mercury	0.59	mg/kg	0.22	05/30/19 20:29	
EPA 8270 by SIM	Acenaphthylene	23.9J	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Anthracene	59.3	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(a)anthracene	380	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(a)pyrene	400	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(b)fluoranthene	441	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(g,h,i)perylene	406	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Benzo(k)fluoranthene	346	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Chrysene	488	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Dibenz(a,h)anthracene	107	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Fluoranthene	724	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	337	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Phenanthrene	196	ug/kg	59.1	06/02/19 17:04	
EPA 8270 by SIM	Pyrene	786	ug/kg	59.1	06/02/19 17:04	M6
SM 2540G	Percent Moisture	16.2	%	0.10	05/28/19 11:53	
50225466006	**SP-3 (2-4)**					
EPA 6010	Arsenic	13.6	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Barium	72.8	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Beryllium	0.77	mg/kg	0.59	05/28/19 17:10	
EPA 6010	Cadmium	0.13J	mg/kg	0.59	05/28/19 17:10	
EPA 6010	Chromium	19.2	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Copper	22.1	mg/kg	1.2	05/28/19 17:10	

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7726 Moller Road
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(317)228-3100

SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466006	**SP-3 (2-4)**					
EPA 6010	Lead	20.0	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Nickel	15.8	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Thallium	1.1J	mg/kg	1.2	05/28/19 17:10	
EPA 6010	Zinc	49.8	mg/kg	1.2	05/28/19 17:10	
EPA 8270 by SIM	Naphthalene	4.1J	ug/kg	6.4	06/02/19 17:53	
EPA 8270 by SIM	Phenanthrene	2.7J	ug/kg	6.4	06/02/19 17:53	
SM 2540G	Percent Moisture	22.2	%	0.10	05/28/19 12:39	
50225466007	**SP-4 (0-2)**					
EPA 6010	Arsenic	7.7	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Barium	187	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Beryllium	0.60	mg/kg	0.55	05/28/19 17:17	
EPA 6010	Cadmium	0.63	mg/kg	0.55	05/28/19 17:17	
EPA 6010	Chromium	17.3	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Copper	16.3	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Lead	44.7	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Nickel	12.8	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Selenium	0.50J	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Thallium	0.72J	mg/kg	1.1	05/28/19 17:17	
EPA 6010	Zinc	111	mg/kg	1.1	05/28/19 17:17	
EPA 7471	Mercury	0.15J	mg/kg	0.25	05/30/19 20:37	
SM 2540G	Percent Moisture	18.5	%	0.10	05/28/19 12:39	
50225466008	**SP-4 (2-4)**					
EPA 6010	Arsenic	18.5	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Barium	98.4	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Beryllium	0.91	mg/kg	0.59	05/28/19 17:19	
EPA 6010	Cadmium	0.18J	mg/kg	0.59	05/28/19 17:19	
EPA 6010	Chromium	22.5	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Copper	26.4	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Lead	15.1	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Nickel	15.9	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Thallium	0.84J	mg/kg	1.2	05/28/19 17:19	
EPA 6010	Zinc	57.4	mg/kg	1.2	05/28/19 17:19	
SM 2540G	Percent Moisture	21.9	%	0.10	05/28/19 12:40	
50225466009	**SP-4 (6-8)**					
EPA 8270 by SIM	Acenaphthene	4.4J	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Anthracene	6.6	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Benzo(a)anthracene	8.3	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Chrysene	14.6	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Fluoranthene	11.5	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Fluorene	7.4	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	1-Methylnaphthalene	672	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	2-Methylnaphthalene	1390	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Naphthalene	221	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Phenanthrene	22.2	ug/kg	6.2	06/02/19 18:10	
EPA 8270 by SIM	Pyrene	14.8	ug/kg	6.2	06/02/19 18:10	
SM 2540G	Percent Moisture	20.7	%	0.10	05/28/19 12:40	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466010	**SP-4 (8-9)**					
EPA 8270 by SIM	Benzo(a)anthracene	2.7J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Chrysene	4.3J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Fluoranthene	4.1J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Fluorene	2.4J	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	1-Methylnaphthalene	195	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	2-Methylnaphthalene	398	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Naphthalene	121	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Phenanthrene	7.4	ug/kg	6.2	06/02/19 18:26	
EPA 8270 by SIM	Pyrene	5.0J	ug/kg	6.2	06/02/19 18:26	
SM 2540G	Percent Moisture	19.3	%	0.10	05/28/19 12:40	
50225466011	**SP-4 (9-10.5)**					
EPA 8270 by SIM	Anthracene	3.4J	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Benzo(a)anthracene	6.5	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Chrysene	11.9	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Fluoranthene	9.6	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Fluorene	5.8J	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	1-Methylnaphthalene	314	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	2-Methylnaphthalene	592	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Naphthalene	200	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Phenanthrene	17.8	ug/kg	6.2	06/02/19 18:43	
EPA 8270 by SIM	Pyrene	11.9	ug/kg	6.2	06/02/19 18:43	
SM 2540G	Percent Moisture	20.3	%	0.10	05/28/19 12:40	
50225466012	**SP-5 (0-2)**					
EPA 6010	Antimony	0.23J	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Arsenic	6.1	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Barium	147	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Beryllium	0.54	mg/kg	0.48	05/28/19 17:21	
EPA 6010	Cadmium	0.20J	mg/kg	0.48	05/28/19 17:21	
EPA 6010	Chromium	14.9	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Copper	12.1	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Lead	107	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Nickel	9.3	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Thallium	0.59J	mg/kg	0.95	05/28/19 17:21	
EPA 6010	Zinc	57.5	mg/kg	0.95	05/28/19 17:21	
EPA 7471	Mercury	0.85	mg/kg	0.21	05/30/19 20:42	
SM 2540G	Percent Moisture	12.3	%	0.10	05/28/19 12:41	
50225466013	**SP-5 (0-2) DUP**					
EPA 6010	Arsenic	7.5	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Barium	136	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Beryllium	0.66	mg/kg	0.49	05/28/19 17:23	
EPA 6010	Cadmium	0.14J	mg/kg	0.49	05/28/19 17:23	
EPA 6010	Chromium	13.9	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Copper	116	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Lead	95.3	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Nickel	10.5	mg/kg	0.98	05/28/19 17:23	
EPA 6010	Thallium	0.60J	mg/kg	0.98	05/28/19 17:23	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466013	**SP-5 (0-2) DUP**					
EPA 6010	Zinc	74.1	mg/kg	0.98	05/28/19 17:23	
EPA 7471	Mercury	1.0	mg/kg	0.21	05/30/19 20:44	
SM 2540G	Percent Moisture	12.1	%	0.10	05/28/19 12:41	
50225466014	**SP-5 (2-4)**					
EPA 6010	Arsenic	7.7	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Barium	91.6	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Beryllium	0.67	mg/kg	0.57	05/28/19 17:25	
EPA 6010	Cadmium	0.099J	mg/kg	0.57	05/28/19 17:25	
EPA 6010	Chromium	15.1	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Copper	11.8	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Lead	17.8	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Nickel	11.4	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Thallium	0.54J	mg/kg	1.1	05/28/19 17:25	
EPA 6010	Zinc	49.4	mg/kg	1.1	05/28/19 17:25	
EPA 7471	Mercury	0.42	mg/kg	0.24	05/30/19 20:46	
SM 2540G	Percent Moisture	17.8	%	0.10	05/28/19 12:41	
50225466015	**SP-5 (9-11)**					
EPA 8270 by SIM	Acenaphthene	6.3J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Anthracene	5.9J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(a)anthracene	9.6	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(a)pyrene	2.9J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(b)fluoranthene	4.0J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Benzo(k)fluoranthene	3.2J	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Chrysene	13.9	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Fluoranthene	17.2	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Fluorene	11.2	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	1-Methylnaphthalene	395	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	2-Methylnaphthalene	469	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Phenanthrene	29.1	ug/kg	6.6	06/02/19 18:59	
EPA 8270 by SIM	Pyrene	20.7	ug/kg	6.6	06/02/19 18:59	
SM 2540G	Percent Moisture	24.8	%	0.10	05/28/19 12:41	
50225466016	**SP-5 (11-13)**					
EPA 8270 by SIM	Acenaphthene	37.6	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Acenaphthylene	11.0	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Anthracene	41.0	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(a)anthracene	22.2	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(a)pyrene	6.3J	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(b)fluoranthene	8.1	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Benzo(k)fluoranthene	6.6J	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Chrysene	22.6	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Fluoranthene	134	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Fluorene	89.4	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	1-Methylnaphthalene	27.4	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	2-Methylnaphthalene	38.9	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Naphthalene	144	ug/kg	7.3	06/02/19 19:16	
EPA 8270 by SIM	Phenanthrene	179	ug/kg	7.3	06/02/19 19:16	

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225466016	**SP-5 (11-13)**					
EPA 8270 by SIM	Pyrene	110	ug/kg	7.3	06/02/19 19:16	
SM 2540G	Percent Moisture	32.6	%	0.10	05/28/19 12:42	
50225466017	**SP-5 (11-13) DUP**					
EPA 8270 by SIM	1-Methylnaphthalene	19.0	ug/kg	6.5	06/02/19 19:32	
EPA 8270 by SIM	2-Methylnaphthalene	21.3	ug/kg	6.5	06/02/19 19:32	
EPA 8270 by SIM	Naphthalene	14.8	ug/kg	6.5	06/02/19 19:32	
SM 2540G	Percent Moisture	23.7	%	0.10	05/28/19 12:42	
50225466018	**SP-5 (6-8)**					
EPA 6010	Arsenic	6.6	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Barium	118	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Beryllium	1.1	mg/kg	0.56	05/28/19 17:28	
EPA 6010	Cadmium	0.16J	mg/kg	0.56	05/28/19 17:28	
EPA 6010	Chromium	32.3	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Copper	13.5	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Lead	14.0	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Nickel	15.0	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Thallium	0.50J	mg/kg	1.1	05/28/19 17:28	
EPA 6010	Zinc	57.3	mg/kg	1.1	05/28/19 17:28	
SM 2540G	Percent Moisture	19.0	%	0.10	05/28/19 12:42	

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (3-5) **Lab ID: 50225466001** Collected: 05/16/19 12:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.124 g Final Volume/Weight: 50 mL								
Antimony	**<0.25**	mg/kg	1.1	0.25	1	05/28/19 07:10	05/28/19 16:50	7440-36-0	
Arsenic	**12.0**	mg/kg	1.1	0.15	1	05/28/19 07:10	05/28/19 16:50	7440-38-2	
Barium	**72.6**	mg/kg	1.1	0.032	1	05/28/19 07:10	05/28/19 16:50	7440-39-3	
Beryllium	**0.91**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:50	7440-41-7	
Cadmium	**0.18J**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:50	7440-43-9	
Chromium	**13.6**	mg/kg	1.1	0.31	1	05/28/19 07:10	05/28/19 16:50	7440-47-3	
Copper	**17.8**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:50	7440-50-8	
Lead	**16.3**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 16:50	7439-92-1	
Nickel	**17.0**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:50	7440-02-0	
Selenium	**0.64J**	mg/kg	1.1	0.39	1	05/28/19 07:10	05/28/19 16:50	7782-49-2	
Silver	**<0.30**	mg/kg	0.53	0.30	1	05/28/19 07:10	05/28/19 16:50	7440-22-4	
Thallium	**1.6**	mg/kg	1.1	0.25	1	05/28/19 07:10	05/28/19 16:50	7440-28-0	
Zinc	**37.0**	mg/kg	1.1	0.37	1	05/28/19 07:10	05/28/19 16:50	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.319 g Final Volume/Weight: 50 mL								
Mercury	**0.11J**	mg/kg	0.22	0.11	1	05/30/19 12:54	05/30/19 20:16	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Acenaphthene	**301**	ug/kg	29.8	7.5	5	05/29/19 09:25	06/02/19 15:59	83-32-9	
Acenaphthylene	**86.8**	ug/kg	29.8	8.9	5	05/29/19 09:25	06/02/19 15:59	208-96-8	
Anthracene	**761**	ug/kg	29.8	8.5	5	05/29/19 09:25	06/02/19 15:59	120-12-7	
Benzo(a)anthracene	**1980**	ug/kg	29.8	8.9	5	05/29/19 09:25	06/02/19 15:59	56-55-3	
Benzo(a)pyrene	**1400**	ug/kg	29.8	10.7	5	05/29/19 09:25	06/02/19 15:59	50-32-8	
Benzo(b)fluoranthene	**1550**	ug/kg	29.8	12.0	5	05/29/19 09:25	06/02/19 15:59	205-99-2	
Benzo(g,h,i)perylene	**810**	ug/kg	29.8	12.8	5	05/29/19 09:25	06/02/19 15:59	191-24-2	
Benzo(k)fluoranthene	**1240**	ug/kg	29.8	11.4	5	05/29/19 09:25	06/02/19 15:59	207-08-9	
Chrysene	**2270**	ug/kg	29.8	10.2	5	05/29/19 09:25	06/02/19 15:59	218-01-9	
Dibenz(a,h)anthracene	**428**	ug/kg	29.8	12.4	5	05/29/19 09:25	06/02/19 15:59	53-70-3	
Fluoranthene	**4460**	ug/kg	29.8	15.5	5	05/29/19 09:25	06/02/19 15:59	206-44-0	
Fluorene	**270**	ug/kg	29.8	7.5	5	05/29/19 09:25	06/02/19 15:59	86-73-7	
Indeno(1,2,3-cd)pyrene	**814**	ug/kg	29.8	11.5	5	05/29/19 09:25	06/02/19 15:59	193-39-5	
1-Methylnaphthalene	**249**	ug/kg	29.8	6.1	5	05/29/19 09:25	06/02/19 15:59	90-12-0	
2-Methylnaphthalene	**282**	ug/kg	29.8	6.3	5	05/29/19 09:25	06/02/19 15:59	91-57-6	
Naphthalene	**234**	ug/kg	29.8	5.9	5	05/29/19 09:25	06/02/19 15:59	91-20-3	ED
Phenanthrene	**3250**	ug/kg	29.8	11.3	5	05/29/19 09:25	06/02/19 15:59	85-01-8	
Pyrene	**4200**	ug/kg	29.8	11.9	5	05/29/19 09:25	06/02/19 15:59	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	36	%.	23-107		5	05/29/19 09:25	06/02/19 15:59	321-60-8	
p-Terphenyl-d14 (S)	49	%.	16-117		5	05/29/19 09:25	06/02/19 15:59	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (3-5) **Lab ID: 50225466001** Collected: 05/16/19 12:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20	100-51-6	
4-Bromophenylphenyl ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	101-55-3	
Butylbenzylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	85-68-7	
4-Chloro-3-methylphenol	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20	59-50-7	
4-Chloroaniline	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20	106-47-8	
bis(2-Chloroethoxy)methane	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	111-91-1	
bis(2-Chloroethyl) ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	111-44-4	
bis(2chloro1methylethyl) ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	108-60-1	
2-Chloronaphthalene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	91-58-7	
2-Chlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	95-57-8	
4-Chlorophenylphenyl ether	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	7005-72-3	
Dibenzofuran	**494**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	132-64-9	
3,3'-Dichlorobenzidine	**<394**	ug/kg	788	394	1	05/29/19 09:29	06/02/19 15:20	91-94-1	
2,4-Dichlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	120-83-2	
Diethylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	84-66-2	
2,4-Dimethylphenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	105-67-9	
Dimethylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	131-11-3	
Di-n-butylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	84-74-2	
4,6-Dinitro-2-methylphenol	**<394**	ug/kg	788	394	1	05/29/19 09:29	06/02/19 15:20	534-52-1	
2,4-Dinitrophenol	**<955**	ug/kg	1910	955	1	05/29/19 09:29	06/02/19 15:20	51-28-5	
2,4-Dinitrotoluene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	121-14-2	
2,6-Dinitrotoluene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	606-20-2	
Di-n-octylphthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	117-84-0	
bis(2-Ethylhexyl)phthalate	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	117-81-7	
Hexachloro-1,3-butadiene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	87-68-3	
Hexachlorobenzene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	118-74-1	
Hexachlorocyclopentadiene	**<394**	ug/kg	394	394	1	05/29/19 09:29	06/02/19 15:20	77-47-4	
Hexachloroethane	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	67-72-1	
Isophorone	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	78-59-1	
2-Methylphenol(o-Cresol)	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<197**	ug/kg	788	197	1	05/29/19 09:29	06/02/19 15:20		
2-Nitroaniline	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	88-74-4	
3-Nitroaniline	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	99-09-2	
4-Nitroaniline	**<198**	ug/kg	394	198	1	05/29/19 09:29	06/02/19 15:20	100-01-6	
Nitrobenzene	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	98-95-3	
2-Nitrophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	88-75-5	
4-Nitrophenol	**<955**	ug/kg	1910	955	1	05/29/19 09:29	06/02/19 15:20	100-02-7	
N-Nitroso-di-n-propylamine	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	621-64-7	
N-Nitrosodiphenylamine	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	86-30-6	
Pentachlorophenol	**<955**	ug/kg	1910	955	1	05/29/19 09:29	06/02/19 15:20	87-86-5	
Phenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	108-95-2	
2,4,5-Trichlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	95-95-4	
2,4,6-Trichlorophenol	**<197**	ug/kg	394	197	1	05/29/19 09:29	06/02/19 15:20	88-06-2	

REPORT OF LABORATORY ANALYSIS

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (3-5) **Lab ID: 50225466001** Collected: 05/16/19 12:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	90	%.	18-98		1	05/29/19 09:29	06/02/19 15:20	4165-60-0	
Phenol-d5 (S)	85	%.	18-108		1	05/29/19 09:29	06/02/19 15:20	4165-62-2	
2-Fluorophenol (S)	67	%.	16-104		1	05/29/19 09:29	06/02/19 15:20	367-12-4	
2,4,6-Tribromophenol (S)	57	%.	10-114		1	05/29/19 09:29	06/02/19 15:20	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**16.2**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (5-7) **Lab ID: 50225466002** Collected: 05/16/19 12:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.086 g Final Volume/Weight: 50 mL								
Antimony	**<0.27**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 16:53	7440-36-0	
Arsenic	**8.2**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 16:53	7440-38-2	
Barium	**49.1**	mg/kg	1.1	0.034	1	05/28/19 07:10	05/28/19 16:53	7440-39-3	
Beryllium	**1.4**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 16:53	7440-41-7	
Cadmium	**0.13J**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 16:53	7440-43-9	
Chromium	**8.7**	mg/kg	1.1	0.33	1	05/28/19 07:10	05/28/19 16:53	7440-47-3	
Copper	**37.2**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 16:53	7440-50-8	
Lead	**43.9**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 16:53	7439-92-1	
Nickel	**19.1**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 16:53	7440-02-0	
Selenium	**1.2**	mg/kg	1.1	0.42	1	05/28/19 07:10	05/28/19 16:53	7782-49-2	
Silver	**<0.32**	mg/kg	0.57	0.32	1	05/28/19 07:10	05/28/19 16:53	7440-22-4	
Thallium	**0.95J**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 16:53	7440-28-0	
Zinc	**49.9**	mg/kg	1.1	0.40	1	05/28/19 07:10	05/28/19 16:53	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.312 g Final Volume/Weight: 50 mL								
Mercury	**0.13J**	mg/kg	0.24	0.12	1	05/30/19 12:54	05/30/19 20:18	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.1 g Final Volume/Weight: 1 mL								
Acenaphthene	**149**	ug/kg	30.9	7.8	5	05/29/19 09:25	06/02/19 16:15	83-32-9	
Acenaphthylene	**33.3**	ug/kg	30.9	9.2	5	05/29/19 09:25	06/02/19 16:15	208-96-8	
Anthracene	**300**	ug/kg	30.9	8.8	5	05/29/19 09:25	06/02/19 16:15	120-12-7	
Benzo(a)anthracene	**268**	ug/kg	30.9	9.2	5	05/29/19 09:25	06/02/19 16:15	56-55-3	
Benzo(a)pyrene	**106**	ug/kg	30.9	11.1	5	05/29/19 09:25	06/02/19 16:15	50-32-8	
Benzo(b)fluoranthene	**108**	ug/kg	30.9	12.5	5	05/29/19 09:25	06/02/19 16:15	205-99-2	
Benzo(g,h,i)perylene	**62.6**	ug/kg	30.9	13.3	5	05/29/19 09:25	06/02/19 16:15	191-24-2	
Benzo(k)fluoranthene	**82.8**	ug/kg	30.9	11.8	5	05/29/19 09:25	06/02/19 16:15	207-08-9	
Chrysene	**322**	ug/kg	30.9	10.6	5	05/29/19 09:25	06/02/19 16:15	218-01-9	
Dibenz(a,h)anthracene	**17.9J**	ug/kg	30.9	12.9	5	05/29/19 09:25	06/02/19 16:15	53-70-3	
Fluoranthene	**486**	ug/kg	30.9	16.1	5	05/29/19 09:25	06/02/19 16:15	206-44-0	
Fluorene	**207**	ug/kg	30.9	7.8	5	05/29/19 09:25	06/02/19 16:15	86-73-7	
Indeno(1,2,3-cd)pyrene	**34.1**	ug/kg	30.9	12.0	5	05/29/19 09:25	06/02/19 16:15	193-39-5	
1-Methylnaphthalene	**562**	ug/kg	30.9	6.3	5	05/29/19 09:25	06/02/19 16:15	90-12-0	
2-Methylnaphthalene	**565**	ug/kg	30.9	6.5	5	05/29/19 09:25	06/02/19 16:15	91-57-6	
Naphthalene	**315**	ug/kg	30.9	6.2	5	05/29/19 09:25	06/02/19 16:15	91-20-3	ED
Phenanthrene	**1230**	ug/kg	30.9	11.7	5	05/29/19 09:25	06/02/19 16:15	85-01-8	
Pyrene	**515**	ug/kg	30.9	12.4	5	05/29/19 09:25	06/02/19 16:15	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	48	%.	23-107		5	05/29/19 09:25	06/02/19 16:15	321-60-8	
p-Terphenyl-d14 (S)	60	%.	16-117		5	05/29/19 09:25	06/02/19 16:15	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (5-7) **Lab ID: 50225466002** Collected: 05/16/19 12:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.1 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36	100-51-6	
4-Bromophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	101-55-3	
Butylbenzylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	85-68-7	
4-Chloro-3-methylphenol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36	59-50-7	
4-Chloroaniline	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36	106-47-8	
bis(2-Chloroethoxy)methane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	111-91-1	
bis(2-Chloroethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	111-44-4	
bis(2chloro1methylethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	108-60-1	
2-Chloronaphthalene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	91-58-7	
2-Chlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	95-57-8	
4-Chlorophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	7005-72-3	
Dibenzofuran	**238J**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	132-64-9	
3,3'-Dichlorobenzidine	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 15:36	91-94-1	
2,4-Dichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	120-83-2	
Diethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	84-66-2	
2,4-Dimethylphenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	105-67-9	
Dimethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	131-11-3	
Di-n-butylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	84-74-2	
4,6-Dinitro-2-methylphenol	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 15:36	534-52-1	
2,4-Dinitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 15:36	51-28-5	
2,4-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	121-14-2	
2,6-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	606-20-2	
Di-n-octylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	117-84-0	
bis(2-Ethylhexyl)phthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	117-81-7	
Hexachloro-1,3-butadiene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	87-68-3	
Hexachlorobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	118-74-1	
Hexachlorocyclopentadiene	**<408**	ug/kg	408	408	1	05/29/19 09:29	06/02/19 15:36	77-47-4	
Hexachloroethane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	67-72-1	
Isophorone	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	78-59-1	
2-Methylphenol(o-Cresol)	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 15:36		
2-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	88-74-4	
3-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	99-09-2	
4-Nitroaniline	**<205**	ug/kg	408	205	1	05/29/19 09:29	06/02/19 15:36	100-01-6	
Nitrobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	98-95-3	
2-Nitrophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	88-75-5	
4-Nitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 15:36	100-02-7	
N-Nitroso-di-n-propylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	621-64-7	
N-Nitrosodiphenylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	86-30-6	
Pentachlorophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 15:36	87-86-5	
Phenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	108-95-2	
2,4,5-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	95-95-4	
2,4,6-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 15:36	88-06-2	

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7726 Moller Road
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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-1 (5-7) **Lab ID: 50225466002** Collected: 05/16/19 12:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.1 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	52	%.	18-98		1	05/29/19 09:29	06/02/19 15:36	4165-60-0	
Phenol-d5 (S)	57	%.	18-108		1	05/29/19 09:29	06/02/19 15:36	4165-62-2	
2-Fluorophenol (S)	50	%.	16-104		1	05/29/19 09:29	06/02/19 15:36	367-12-4	
2,4,6-Tribromophenol (S)	38	%.	10-114		1	05/29/19 09:29	06/02/19 15:36	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**19.5**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (0-2) **Lab ID: 50225466003** Collected: 05/16/19 10:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.031 g Final Volume/Weight: 50 mL								
Antimony	**<0.24**	mg/kg	1.0	0.24	1	05/28/19 07:10	05/28/19 16:55	7440-36-0	
Arsenic	**0.97J**	mg/kg	1.0	0.14	1	05/28/19 07:10	05/28/19 16:55	7440-38-2	
Barium	**42.2**	mg/kg	1.0	0.030	1	05/28/19 07:10	05/28/19 16:55	7440-39-3	
Beryllium	**<0.020**	mg/kg	0.50	0.020	1	05/28/19 07:10	05/28/19 16:55	7440-41-7	
Cadmium	**0.37J**	mg/kg	0.50	0.020	1	05/28/19 07:10	05/28/19 16:55	7440-43-9	
Chromium	**7.1**	mg/kg	1.0	0.29	1	05/28/19 07:10	05/28/19 16:55	7440-47-3	
Copper	**2.2**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:55	7440-50-8	
Lead	**2.1**	mg/kg	1.0	0.15	1	05/28/19 07:10	05/28/19 16:55	7439-92-1	
Nickel	**8.6**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:55	7440-02-0	
Selenium	**<0.37**	mg/kg	1.0	0.37	1	05/28/19 07:10	05/28/19 16:55	7782-49-2	
Silver	**0.68**	mg/kg	0.50	0.28	1	05/28/19 07:10	05/28/19 16:55	7440-22-4	
Thallium	**<0.24**	mg/kg	1.0	0.24	1	05/28/19 07:10	05/28/19 16:55	7440-28-0	
Zinc	**22.0**	mg/kg	1.0	0.35	1	05/28/19 07:10	05/28/19 16:55	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.288 g Final Volume/Weight: 50 mL								
Mercury	**<0.10**	mg/kg	0.22	0.10	1	05/30/19 12:54	05/30/19 20:20	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.3**	ug/kg	5.1	1.3	1	05/29/19 09:25	06/04/19 13:55	83-32-9	
Acenaphthylene	**<1.5**	ug/kg	5.1	1.5	1	05/29/19 09:25	06/04/19 13:55	208-96-8	
Anthracene	**<1.5**	ug/kg	5.1	1.5	1	05/29/19 09:25	06/04/19 13:55	120-12-7	
Benzo(a)anthracene	**<1.5**	ug/kg	5.1	1.5	1	05/29/19 09:25	06/04/19 13:55	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/kg	5.1	1.8	1	05/29/19 09:25	06/04/19 13:55	50-32-8	
Benzo(b)fluoranthene	**<2.1**	ug/kg	5.1	2.1	1	05/29/19 09:25	06/04/19 13:55	205-99-2	
Benzo(g,h,i)perylene	**<2.2**	ug/kg	5.1	2.2	1	05/29/19 09:25	06/04/19 13:55	191-24-2	
Benzo(k)fluoranthene	**<2.0**	ug/kg	5.1	2.0	1	05/29/19 09:25	06/04/19 13:55	207-08-9	
Chrysene	**<1.8**	ug/kg	5.1	1.8	1	05/29/19 09:25	06/04/19 13:55	218-01-9	
Dibenz(a,h)anthracene	**<2.1**	ug/kg	5.1	2.1	1	05/29/19 09:25	06/04/19 13:55	53-70-3	
Fluoranthene	**<2.7**	ug/kg	5.1	2.7	1	05/29/19 09:25	06/04/19 13:55	206-44-0	
Fluorene	**<1.3**	ug/kg	5.1	1.3	1	05/29/19 09:25	06/04/19 13:55	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.0**	ug/kg	5.1	2.0	1	05/29/19 09:25	06/04/19 13:55	193-39-5	
1-Methylnaphthalene	**<1.1**	ug/kg	5.1	1.1	1	05/29/19 09:25	06/04/19 13:55	90-12-0	
2-Methylnaphthalene	**<1.1**	ug/kg	5.1	1.1	1	05/29/19 09:25	06/04/19 13:55	91-57-6	
Naphthalene	**<1.0**	ug/kg	5.1	1.0	1	05/29/19 09:25	06/04/19 13:55	91-20-3	
Phenanthrene	**<1.9**	ug/kg	5.1	1.9	1	05/29/19 09:25	06/04/19 13:55	85-01-8	
Pyrene	**2.9J**	ug/kg	5.1	2.1	1	05/29/19 09:25	06/04/19 13:55	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%.	23-107		1	05/29/19 09:25	06/04/19 13:55	321-60-8	
p-Terphenyl-d14 (S)	96	%.	16-117		1	05/29/19 09:25	06/04/19 13:55	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (0-2) **Lab ID: 50225466003** Collected: 05/16/19 10:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52	100-51-6	
4-Bromophenylphenyl ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	101-55-3	
Butylbenzylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	85-68-7	
4-Chloro-3-methylphenol	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52	59-50-7	
4-Chloroaniline	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52	106-47-8	
bis(2-Chloroethoxy)methane	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	111-91-1	
bis(2-Chloroethyl) ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	111-44-4	
bis(2chloro1methylethyl) ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	108-60-1	
2-Chloronaphthalene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	91-58-7	
2-Chlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	95-57-8	
4-Chlorophenylphenyl ether	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	7005-72-3	
Dibenzofuran	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	132-64-9	
3,3'-Dichlorobenzidine	**<339**	ug/kg	679	339	1	05/29/19 09:29	06/02/19 15:52	91-94-1	
2,4-Dichlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	120-83-2	
Diethylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	84-66-2	
2,4-Dimethylphenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	105-67-9	
Dimethylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	131-11-3	
Di-n-butylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	84-74-2	
4,6-Dinitro-2-methylphenol	**<339**	ug/kg	679	339	1	05/29/19 09:29	06/02/19 15:52	534-52-1	
2,4-Dinitrophenol	**<823**	ug/kg	1650	823	1	05/29/19 09:29	06/02/19 15:52	51-28-5	
2,4-Dinitrotoluene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	121-14-2	
2,6-Dinitrotoluene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	606-20-2	
Di-n-octylphthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	117-84-0	
bis(2-Ethylhexyl)phthalate	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	117-81-7	
Hexachloro-1,3-butadiene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	87-68-3	
Hexachlorobenzene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	118-74-1	
Hexachlorocyclopentadiene	**<339**	ug/kg	339	339	1	05/29/19 09:29	06/02/19 15:52	77-47-4	
Hexachloroethane	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	67-72-1	
Isophorone	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	78-59-1	
2-Methylphenol(o-Cresol)	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<170**	ug/kg	679	170	1	05/29/19 09:29	06/02/19 15:52		
2-Nitroaniline	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	88-74-4	
3-Nitroaniline	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	99-09-2	
4-Nitroaniline	**<171**	ug/kg	339	171	1	05/29/19 09:29	06/02/19 15:52	100-01-6	
Nitrobenzene	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	98-95-3	
2-Nitrophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	88-75-5	
4-Nitrophenol	**<823**	ug/kg	1650	823	1	05/29/19 09:29	06/02/19 15:52	100-02-7	
N-Nitroso-di-n-propylamine	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	621-64-7	
N-Nitrosodiphenylamine	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	86-30-6	
Pentachlorophenol	**<823**	ug/kg	1650	823	1	05/29/19 09:29	06/02/19 15:52	87-86-5	
Phenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	108-95-2	
2,4,5-Trichlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	95-95-4	
2,4,6-Trichlorophenol	**<170**	ug/kg	339	170	1	05/29/19 09:29	06/02/19 15:52	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (0-2) **Lab ID: 50225466003** Collected: 05/16/19 10:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	73	%.	18-98		1	05/29/19 09:29	06/02/19 15:52	4165-60-0	
Phenol-d5 (S)	78	%.	18-108		1	05/29/19 09:29	06/02/19 15:52	4165-62-2	
2-Fluorophenol (S)	69	%.	16-104		1	05/29/19 09:29	06/02/19 15:52	367-12-4	
2,4,6-Tribromophenol (S)	69	%.	10-114		1	05/29/19 09:29	06/02/19 15:52	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**3.4**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (2-4) **Lab ID: 50225466004** Collected: 05/16/19 10:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.068 g Final Volume/Weight: 50 mL								
Antimony	**<0.25**	mg/kg	1.0	0.25	1	05/28/19 07:10	05/28/19 16:57	7440-36-0	
Arsenic	**14.2**	mg/kg	1.0	0.14	1	05/28/19 07:10	05/28/19 16:57	7440-38-2	
Barium	**75.2**	mg/kg	1.0	0.031	1	05/28/19 07:10	05/28/19 16:57	7440-39-3	
Beryllium	**0.46J**	mg/kg	0.51	0.020	1	05/28/19 07:10	05/28/19 16:57	7440-41-7	
Cadmium	**0.26J**	mg/kg	0.51	0.020	1	05/28/19 07:10	05/28/19 16:57	7440-43-9	
Chromium	**15.8**	mg/kg	1.0	0.30	1	05/28/19 07:10	05/28/19 16:57	7440-47-3	
Copper	**9.1**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:57	7440-50-8	
Lead	**14.7**	mg/kg	1.0	0.15	1	05/28/19 07:10	05/28/19 16:57	7439-92-1	
Nickel	**11.2**	mg/kg	1.0	0.11	1	05/28/19 07:10	05/28/19 16:57	7440-02-0	
Selenium	**<0.38**	mg/kg	1.0	0.38	1	05/28/19 07:10	05/28/19 16:57	7782-49-2	
Silver	**<0.29**	mg/kg	0.51	0.29	1	05/28/19 07:10	05/28/19 16:57	7440-22-4	
Thallium	**0.86J**	mg/kg	1.0	0.25	1	05/28/19 07:10	05/28/19 16:57	7440-28-0	
Zinc	**33.1**	mg/kg	1.0	0.36	1	05/28/19 07:10	05/28/19 16:57	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.293 g Final Volume/Weight: 50 mL								
Mercury	**<0.11**	mg/kg	0.22	0.11	1	05/30/19 12:54	05/30/19 20:22	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**61.2**	ug/kg	27.0	6.8	5	05/29/19 09:25	06/02/19 16:48	83-32-9	
Acenaphthylene	**134**	ug/kg	27.0	8.0	5	05/29/19 09:25	06/02/19 16:48	208-96-8	
Anthracene	**155**	ug/kg	27.0	7.7	5	05/29/19 09:25	06/02/19 16:48	120-12-7	
Benzo(a)anthracene	**294**	ug/kg	27.0	8.1	5	05/29/19 09:25	06/02/19 16:48	56-55-3	
Benzo(a)pyrene	**349**	ug/kg	27.0	9.7	5	05/29/19 09:25	06/02/19 16:48	50-32-8	
Benzo(b)fluoranthene	**255**	ug/kg	27.0	10.9	5	05/29/19 09:25	06/02/19 16:48	205-99-2	
Benzo(g,h,i)perylene	**243**	ug/kg	27.0	11.6	5	05/29/19 09:25	06/02/19 16:48	191-24-2	
Benzo(k)fluoranthene	**215**	ug/kg	27.0	10.3	5	05/29/19 09:25	06/02/19 16:48	207-08-9	
Chrysene	**334**	ug/kg	27.0	9.3	5	05/29/19 09:25	06/02/19 16:48	218-01-9	
Dibenz(a,h)anthracene	**106**	ug/kg	27.0	11.2	5	05/29/19 09:25	06/02/19 16:48	53-70-3	
Fluoranthene	**385**	ug/kg	27.0	14.1	5	05/29/19 09:25	06/02/19 16:48	206-44-0	
Fluorene	**<6.8**	ug/kg	27.0	6.8	5	05/29/19 09:25	06/02/19 16:48	86-73-7	
Indeno(1,2,3-cd)pyrene	**221**	ug/kg	27.0	10.4	5	05/29/19 09:25	06/02/19 16:48	193-39-5	
1-Methylnaphthalene	**22.6J**	ug/kg	27.0	5.5	5	05/29/19 09:25	06/02/19 16:48	90-12-0	
2-Methylnaphthalene	**23.6J**	ug/kg	27.0	5.7	5	05/29/19 09:25	06/02/19 16:48	91-57-6	
Naphthalene	**36.3**	ug/kg	27.0	5.4	5	05/29/19 09:25	06/02/19 16:48	91-20-3	ED
Phenanthrene	**97.4**	ug/kg	27.0	10.2	5	05/29/19 09:25	06/02/19 16:48	85-01-8	
Pyrene	**983**	ug/kg	27.0	10.8	5	05/29/19 09:25	06/02/19 16:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%.	23-107		5	05/29/19 09:25	06/02/19 16:48	321-60-8	
p-Terphenyl-d14 (S)	77	%.	16-117		5	05/29/19 09:25	06/02/19 16:48	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (2-4) **Lab ID: 50225466004** Collected: 05/16/19 10:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08	100-51-6	
4-Bromophenylphenyl ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	101-55-3	
Butylbenzylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	85-68-7	
4-Chloro-3-methylphenol	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08	59-50-7	
4-Chloroaniline	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08	106-47-8	
bis(2-Chloroethoxy)methane	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	111-91-1	
bis(2-Chloroethyl) ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	111-44-4	
bis(2chloro1methylethyl) ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	108-60-1	
2-Chloronaphthalene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	91-58-7	
2-Chlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	95-57-8	
4-Chlorophenylphenyl ether	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	7005-72-3	
Dibenzofuran	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	132-64-9	
3,3'-Dichlorobenzidine	**<357**	ug/kg	714	357	1	05/29/19 09:29	06/02/19 16:08	91-94-1	
2,4-Dichlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	120-83-2	
Diethylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	84-66-2	
2,4-Dimethylphenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	105-67-9	
Dimethylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	131-11-3	
Di-n-butylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	84-74-2	
4,6-Dinitro-2-methylphenol	**<357**	ug/kg	714	357	1	05/29/19 09:29	06/02/19 16:08	534-52-1	
2,4-Dinitrophenol	**<865**	ug/kg	1730	865	1	05/29/19 09:29	06/02/19 16:08	51-28-5	
2,4-Dinitrotoluene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	121-14-2	
2,6-Dinitrotoluene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	606-20-2	
Di-n-octylphthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	117-84-0	
bis(2-Ethylhexyl)phthalate	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	117-81-7	
Hexachloro-1,3-butadiene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	87-68-3	
Hexachlorobenzene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	118-74-1	
Hexachlorocyclopentadiene	**<357**	ug/kg	357	357	1	05/29/19 09:29	06/02/19 16:08	77-47-4	
Hexachloroethane	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	67-72-1	
Isophorone	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	78-59-1	
2-Methylphenol(o-Cresol)	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<178**	ug/kg	714	178	1	05/29/19 09:29	06/02/19 16:08		
2-Nitroaniline	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	88-74-4	
3-Nitroaniline	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	99-09-2	
4-Nitroaniline	**<180**	ug/kg	357	180	1	05/29/19 09:29	06/02/19 16:08	100-01-6	
Nitrobenzene	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	98-95-3	
2-Nitrophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	88-75-5	
4-Nitrophenol	**<865**	ug/kg	1730	865	1	05/29/19 09:29	06/02/19 16:08	100-02-7	
N-Nitroso-di-n-propylamine	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	621-64-7	
N-Nitrosodiphenylamine	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	86-30-6	
Pentachlorophenol	**<865**	ug/kg	1730	865	1	05/29/19 09:29	06/02/19 16:08	87-86-5	
Phenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	108-95-2	
2,4,5-Trichlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	95-95-4	
2,4,6-Trichlorophenol	**<178**	ug/kg	357	178	1	05/29/19 09:29	06/02/19 16:08	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-2 (2-4) **Lab ID: 50225466004** Collected: 05/16/19 10:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	71	%.	18-98		1	05/29/19 09:29	06/02/19 16:08	4165-60-0	
Phenol-d5 (S)	73	%.	18-108		1	05/29/19 09:29	06/02/19 16:08	4165-62-2	
2-Fluorophenol (S)	49	%.	16-104		1	05/29/19 09:29	06/02/19 16:08	367-12-4	
2,4,6-Tribromophenol (S)	25	%.	10-114		1	05/29/19 09:29	06/02/19 16:08	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**8.5**	%	0.10	0.10	1		05/28/19 11:52		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (0-2) **Lab ID: 50225466005** Collected: 05/16/19 10:25 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.115 g Final Volume/Weight: 50 mL								
Antimony	**<0.26**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 16:59	7440-36-0	
Arsenic	**6.3**	mg/kg	1.1	0.15	1	05/28/19 07:10	05/28/19 16:59	7440-38-2	
Barium	**301**	mg/kg	1.1	0.032	1	05/28/19 07:10	05/28/19 16:59	7440-39-3	
Beryllium	**0.51J**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:59	7440-41-7	
Cadmium	**0.34J**	mg/kg	0.53	0.021	1	05/28/19 07:10	05/28/19 16:59	7440-43-9	
Chromium	**13.3**	mg/kg	1.1	0.31	1	05/28/19 07:10	05/28/19 16:59	7440-47-3	
Copper	**17.6**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:59	7440-50-8	
Lead	**96.5**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 16:59	7439-92-1	
Nickel	**13.2**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 16:59	7440-02-0	
Selenium	**<0.40**	mg/kg	1.1	0.40	1	05/28/19 07:10	05/28/19 16:59	7782-49-2	
Silver	**<0.30**	mg/kg	0.53	0.30	1	05/28/19 07:10	05/28/19 16:59	7440-22-4	
Thallium	**0.83J**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 16:59	7440-28-0	
Zinc	**97.4**	mg/kg	1.1	0.37	1	05/28/19 07:10	05/28/19 16:59	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.323 g Final Volume/Weight: 50 mL								
Mercury	**0.59**	mg/kg	0.22	0.11	1	05/30/19 12:54	05/30/19 20:29	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**<14.8**	ug/kg	59.1	14.8	10	05/29/19 09:25	06/02/19 17:04	83-32-9	
Acenaphthylene	**23.9J**	ug/kg	59.1	17.5	10	05/29/19 09:25	06/02/19 17:04	208-96-8	
Anthracene	**59.3**	ug/kg	59.1	16.9	10	05/29/19 09:25	06/02/19 17:04	120-12-7	
Benzo(a)anthracene	**380**	ug/kg	59.1	17.6	10	05/29/19 09:25	06/02/19 17:04	56-55-3	
Benzo(a)pyrene	**400**	ug/kg	59.1	21.1	10	05/29/19 09:25	06/02/19 17:04	50-32-8	
Benzo(b)fluoranthene	**441**	ug/kg	59.1	23.8	10	05/29/19 09:25	06/02/19 17:04	205-99-2	
Benzo(g,h,i)perylene	**406**	ug/kg	59.1	25.3	10	05/29/19 09:25	06/02/19 17:04	191-24-2	
Benzo(k)fluoranthene	**346**	ug/kg	59.1	22.5	10	05/29/19 09:25	06/02/19 17:04	207-08-9	
Chrysene	**488**	ug/kg	59.1	20.2	10	05/29/19 09:25	06/02/19 17:04	218-01-9	
Dibenz(a,h)anthracene	**107**	ug/kg	59.1	24.5	10	05/29/19 09:25	06/02/19 17:04	53-70-3	
Fluoranthene	**724**	ug/kg	59.1	30.7	10	05/29/19 09:25	06/02/19 17:04	206-44-0	
Fluorene	**<14.8**	ug/kg	59.1	14.8	10	05/29/19 09:25	06/02/19 17:04	86-73-7	
Indeno(1,2,3-cd)pyrene	**337**	ug/kg	59.1	22.8	10	05/29/19 09:25	06/02/19 17:04	193-39-5	
1-Methylnaphthalene	**<12.1**	ug/kg	59.1	12.1	10	05/29/19 09:25	06/02/19 17:04	90-12-0	
2-Methylnaphthalene	**<12.4**	ug/kg	59.1	12.4	10	05/29/19 09:25	06/02/19 17:04	91-57-6	
Naphthalene	**<11.8**	ug/kg	59.1	11.8	10	05/29/19 09:25	06/02/19 17:04	91-20-3	ED
Phenanthrene	**196**	ug/kg	59.1	22.3	10	05/29/19 09:25	06/02/19 17:04	85-01-8	
Pyrene	**786**	ug/kg	59.1	23.6	10	05/29/19 09:25	06/02/19 17:04	129-00-0	M6
Surrogates									
2-Fluorobiphenyl (S)	62	%.	23-107		10	05/29/19 09:25	06/02/19 17:04	321-60-8	
p-Terphenyl-d14 (S)	80	%.	16-117		10	05/29/19 09:25	06/02/19 17:04	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (0-2) **Lab ID: 50225466005** Collected: 05/16/19 10:25 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24	100-51-6	
4-Bromophenylphenyl ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	101-55-3	
Butylbenzylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	85-68-7	
4-Chloro-3-methylphenol	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24	59-50-7	
4-Chloroaniline	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24	106-47-8	
bis(2-Chloroethoxy)methane	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	111-91-1	
bis(2-Chloroethyl) ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	111-44-4	
bis(2chloro1methylethyl) ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	108-60-1	
2-Chloronaphthalene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	91-58-7	
2-Chlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	95-57-8	
4-Chlorophenylphenyl ether	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	7005-72-3	
Dibenzofuran	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	132-64-9	
3,3'-Dichlorobenzidine	**<390**	ug/kg	780	390	1	05/29/19 09:29	06/02/19 16:24	91-94-1	
2,4-Dichlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	120-83-2	
Diethylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	84-66-2	
2,4-Dimethylphenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	105-67-9	
Dimethylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	131-11-3	
Di-n-butylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	84-74-2	
4,6-Dinitro-2-methylphenol	**<390**	ug/kg	780	390	1	05/29/19 09:29	06/02/19 16:24	534-52-1	
2,4-Dinitrophenol	**<945**	ug/kg	1890	945	1	05/29/19 09:29	06/02/19 16:24	51-28-5	
2,4-Dinitrotoluene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	121-14-2	
2,6-Dinitrotoluene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	606-20-2	
Di-n-octylphthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	117-84-0	
bis(2-Ethylhexyl)phthalate	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	117-81-7	
Hexachloro-1,3-butadiene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	87-68-3	
Hexachlorobenzene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	118-74-1	
Hexachlorocyclopentadiene	**<390**	ug/kg	390	390	1	05/29/19 09:29	06/02/19 16:24	77-47-4	
Hexachloroethane	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	67-72-1	
Isophorone	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	78-59-1	
2-Methylphenol(o-Cresol)	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<195**	ug/kg	780	195	1	05/29/19 09:29	06/02/19 16:24		
2-Nitroaniline	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	88-74-4	
3-Nitroaniline	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	99-09-2	
4-Nitroaniline	**<196**	ug/kg	390	196	1	05/29/19 09:29	06/02/19 16:24	100-01-6	
Nitrobenzene	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	98-95-3	
2-Nitrophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	88-75-5	
4-Nitrophenol	**<945**	ug/kg	1890	945	1	05/29/19 09:29	06/02/19 16:24	100-02-7	
N-Nitroso-di-n-propylamine	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	621-64-7	
N-Nitrosodiphenylamine	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	86-30-6	
Pentachlorophenol	**<945**	ug/kg	1890	945	1	05/29/19 09:29	06/02/19 16:24	87-86-5	
Phenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	108-95-2	
2,4,5-Trichlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	95-95-4	
2,4,6-Trichlorophenol	**<195**	ug/kg	390	195	1	05/29/19 09:29	06/02/19 16:24	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (0-2) **Lab ID: 50225466005** Collected: 05/16/19 10:25 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	72	%.	18-98		1	05/29/19 09:29	06/02/19 16:24	4165-60-0	
Phenol-d5 (S)	78	%.	18-108		1	05/29/19 09:29	06/02/19 16:24	4165-62-2	
2-Fluorophenol (S)	64	%.	16-104		1	05/29/19 09:29	06/02/19 16:24	367-12-4	
2,4,6-Tribromophenol (S)	63	%.	10-114		1	05/29/19 09:29	06/02/19 16:24	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**16.2**	%	0.10	0.10	1		05/28/19 11:53		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (2-4) **Lab ID: 50225466006** Collected: 05/16/19 10:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.091 g Final Volume/Weight: 50 mL								
Antimony	**<0.28**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:10	7440-36-0	
Arsenic	**13.6**	mg/kg	1.2	0.17	1	05/28/19 07:10	05/28/19 17:10	7440-38-2	
Barium	**72.8**	mg/kg	1.2	0.035	1	05/28/19 07:10	05/28/19 17:10	7440-39-3	
Beryllium	**0.77**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:10	7440-41-7	
Cadmium	**0.13J**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:10	7440-43-9	
Chromium	**19.2**	mg/kg	1.2	0.34	1	05/28/19 07:10	05/28/19 17:10	7440-47-3	
Copper	**22.1**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:10	7440-50-8	
Lead	**20.0**	mg/kg	1.2	0.18	1	05/28/19 07:10	05/28/19 17:10	7439-92-1	
Nickel	**15.8**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:10	7440-02-0	
Selenium	**<0.44**	mg/kg	1.2	0.44	1	05/28/19 07:10	05/28/19 17:10	7782-49-2	
Silver	**<0.33**	mg/kg	0.59	0.33	1	05/28/19 07:10	05/28/19 17:10	7440-22-4	
Thallium	**1.1J**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:10	7440-28-0	
Zinc	**49.8**	mg/kg	1.2	0.41	1	05/28/19 07:10	05/28/19 17:10	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.324 g Final Volume/Weight: 50 mL								
Mercury	**<0.12**	mg/kg	0.24	0.12	1	05/30/19 12:54	05/30/19 20:35	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.4	1.6	1	05/29/19 09:25	06/02/19 17:53	83-32-9	
Acenaphthylene	**<1.9**	ug/kg	6.4	1.9	1	05/29/19 09:25	06/02/19 17:53	208-96-8	
Anthracene	**<1.8**	ug/kg	6.4	1.8	1	05/29/19 09:25	06/02/19 17:53	120-12-7	
Benzo(a)anthracene	**<1.9**	ug/kg	6.4	1.9	1	05/29/19 09:25	06/02/19 17:53	56-55-3	
Benzo(a)pyrene	**<2.3**	ug/kg	6.4	2.3	1	05/29/19 09:25	06/02/19 17:53	50-32-8	
Benzo(b)fluoranthene	**<2.6**	ug/kg	6.4	2.6	1	05/29/19 09:25	06/02/19 17:53	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.4	2.7	1	05/29/19 09:25	06/02/19 17:53	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.4	2.4	1	05/29/19 09:25	06/02/19 17:53	207-08-9	
Chrysene	**<2.2**	ug/kg	6.4	2.2	1	05/29/19 09:25	06/02/19 17:53	218-01-9	
Dibenz(a,h)anthracene	**<2.7**	ug/kg	6.4	2.7	1	05/29/19 09:25	06/02/19 17:53	53-70-3	
Fluoranthene	**<3.3**	ug/kg	6.4	3.3	1	05/29/19 09:25	06/02/19 17:53	206-44-0	
Fluorene	**<1.6**	ug/kg	6.4	1.6	1	05/29/19 09:25	06/02/19 17:53	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.5**	ug/kg	6.4	2.5	1	05/29/19 09:25	06/02/19 17:53	193-39-5	
1-Methylnaphthalene	**<1.3**	ug/kg	6.4	1.3	1	05/29/19 09:25	06/02/19 17:53	90-12-0	
2-Methylnaphthalene	**<1.3**	ug/kg	6.4	1.3	1	05/29/19 09:25	06/02/19 17:53	91-57-6	
Naphthalene	**4.1J**	ug/kg	6.4	1.3	1	05/29/19 09:25	06/02/19 17:53	91-20-3	
Phenanthrene	**2.7J**	ug/kg	6.4	2.4	1	05/29/19 09:25	06/02/19 17:53	85-01-8	
Pyrene	**<2.6**	ug/kg	6.4	2.6	1	05/29/19 09:25	06/02/19 17:53	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%.	23-107		1	05/29/19 09:25	06/02/19 17:53	321-60-8	
p-Terphenyl-d14 (S)	82	%.	16-117		1	05/29/19 09:25	06/02/19 17:53	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (2-4) **Lab ID: 50225466006** Collected: 05/16/19 10:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12	100-51-6	
4-Bromophenylphenyl ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	101-55-3	
Butylbenzylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	85-68-7	
4-Chloro-3-methylphenol	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12	59-50-7	
4-Chloroaniline	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12	106-47-8	
bis(2-Chloroethoxy)methane	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	111-91-1	
bis(2-Chloroethyl) ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	111-44-4	
bis(2chloro1methylethyl) ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	108-60-1	
2-Chloronaphthalene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	91-58-7	
2-Chlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	95-57-8	
4-Chlorophenylphenyl ether	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	7005-72-3	
Dibenzofuran	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	132-64-9	
3,3'-Dichlorobenzidine	**<422**	ug/kg	843	422	1	05/29/19 09:29	06/02/19 17:12	91-94-1	
2,4-Dichlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	120-83-2	
Diethylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	84-66-2	
2,4-Dimethylphenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	105-67-9	
Dimethylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	131-11-3	
Di-n-butylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	84-74-2	
4,6-Dinitro-2-methylphenol	**<422**	ug/kg	843	422	1	05/29/19 09:29	06/02/19 17:12	534-52-1	
2,4-Dinitrophenol	**<1020**	ug/kg	2040	1020	1	05/29/19 09:29	06/02/19 17:12	51-28-5	
2,4-Dinitrotoluene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	121-14-2	
2,6-Dinitrotoluene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	606-20-2	
Di-n-octylphthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	117-84-0	
bis(2-Ethylhexyl)phthalate	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	117-81-7	
Hexachloro-1,3-butadiene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	87-68-3	
Hexachlorobenzene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	118-74-1	
Hexachlorocyclopentadiene	**<422**	ug/kg	422	422	1	05/29/19 09:29	06/02/19 17:12	77-47-4	
Hexachloroethane	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	67-72-1	
Isophorone	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	78-59-1	
2-Methylphenol(o-Cresol)	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<211**	ug/kg	843	211	1	05/29/19 09:29	06/02/19 17:12		
2-Nitroaniline	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	88-74-4	
3-Nitroaniline	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	99-09-2	
4-Nitroaniline	**<212**	ug/kg	422	212	1	05/29/19 09:29	06/02/19 17:12	100-01-6	
Nitrobenzene	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	98-95-3	
2-Nitrophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	88-75-5	
4-Nitrophenol	**<1020**	ug/kg	2040	1020	1	05/29/19 09:29	06/02/19 17:12	100-02-7	
N-Nitroso-di-n-propylamine	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	621-64-7	
N-Nitrosodiphenylamine	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	86-30-6	
Pentachlorophenol	**<1020**	ug/kg	2040	1020	1	05/29/19 09:29	06/02/19 17:12	87-86-5	
Phenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	108-95-2	
2,4,5-Trichlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	95-95-4	
2,4,6-Trichlorophenol	**<211**	ug/kg	422	211	1	05/29/19 09:29	06/02/19 17:12	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-3 (2-4) **Lab ID: 50225466006** Collected: 05/16/19 10:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	78	%.	18-98		1	05/29/19 09:29	06/02/19 17:12	4165-60-0	
Phenol-d5 (S)	76	%.	18-108		1	05/29/19 09:29	06/02/19 17:12	4165-62-2	
2-Fluorophenol (S)	67	%.	16-104		1	05/29/19 09:29	06/02/19 17:12	367-12-4	
2,4,6-Tribromophenol (S)	63	%.	10-114		1	05/29/19 09:29	06/02/19 17:12	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**22.2**	%	0.10	0.10	1		05/28/19 12:39		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (0-2) **Lab ID: 50225466007** Collected: 05/16/19 12:15 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.113 g Final Volume/Weight: 50 mL								
Antimony	**<0.26**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 17:17	7440-36-0	
Arsenic	**7.7**	mg/kg	1.1	0.15	1	05/28/19 07:10	05/28/19 17:17	7440-38-2	
Barium	**187**	mg/kg	1.1	0.033	1	05/28/19 07:10	05/28/19 17:17	7440-39-3	
Beryllium	**0.60**	mg/kg	0.55	0.022	1	05/28/19 07:10	05/28/19 17:17	7440-41-7	
Cadmium	**0.63**	mg/kg	0.55	0.022	1	05/28/19 07:10	05/28/19 17:17	7440-43-9	
Chromium	**17.3**	mg/kg	1.1	0.32	1	05/28/19 07:10	05/28/19 17:17	7440-47-3	
Copper	**16.3**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:17	7440-50-8	
Lead	**44.7**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 17:17	7439-92-1	
Nickel	**12.8**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:17	7440-02-0	
Selenium	**0.50J**	mg/kg	1.1	0.41	1	05/28/19 07:10	05/28/19 17:17	7782-49-2	
Silver	**<0.31**	mg/kg	0.55	0.31	1	05/28/19 07:10	05/28/19 17:17	7440-22-4	
Thallium	**0.72J**	mg/kg	1.1	0.26	1	05/28/19 07:10	05/28/19 17:17	7440-28-0	
Zinc	**111**	mg/kg	1.1	0.39	1	05/28/19 07:10	05/28/19 17:17	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.297 g Final Volume/Weight: 50 mL								
Mercury	**0.15J**	mg/kg	0.25	0.12	1	05/30/19 12:54	05/30/19 20:37	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**18.5**	%	0.10	0.10	1		05/28/19 12:39		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (2-4) **Lab ID: 50225466008** Collected: 05/16/19 12:20 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.086 g Final Volume/Weight: 50 mL								
Antimony	**<0.28**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:19	7440-36-0	
Arsenic	**18.5**	mg/kg	1.2	0.17	1	05/28/19 07:10	05/28/19 17:19	7440-38-2	
Barium	**98.4**	mg/kg	1.2	0.035	1	05/28/19 07:10	05/28/19 17:19	7440-39-3	
Beryllium	**0.91**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:19	7440-41-7	
Cadmium	**0.18J**	mg/kg	0.59	0.024	1	05/28/19 07:10	05/28/19 17:19	7440-43-9	
Chromium	**22.5**	mg/kg	1.2	0.34	1	05/28/19 07:10	05/28/19 17:19	7440-47-3	
Copper	**26.4**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:19	7440-50-8	
Lead	**15.1**	mg/kg	1.2	0.18	1	05/28/19 07:10	05/28/19 17:19	7439-92-1	
Nickel	**15.9**	mg/kg	1.2	0.13	1	05/28/19 07:10	05/28/19 17:19	7440-02-0	
Selenium	**<0.44**	mg/kg	1.2	0.44	1	05/28/19 07:10	05/28/19 17:19	7782-49-2	
Silver	**<0.33**	mg/kg	0.59	0.33	1	05/28/19 07:10	05/28/19 17:19	7440-22-4	
Thallium	**0.84J**	mg/kg	1.2	0.28	1	05/28/19 07:10	05/28/19 17:19	7440-28-0	
Zinc	**57.4**	mg/kg	1.2	0.41	1	05/28/19 07:10	05/28/19 17:19	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.303 g Final Volume/Weight: 50 mL								
Mercury	**<0.12**	mg/kg	0.25	0.12	1	05/30/19 12:54	05/30/19 20:39	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**21.9**	%	0.10	0.10	1		05/28/19 12:40		

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (6-8) **Lab ID: 50225466009** Collected: 05/16/19 12:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**4.4J**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:10	83-32-9	
Acenaphthylene	**<1.9**	ug/kg	6.2	1.9	1	05/29/19 09:25	06/02/19 18:10	208-96-8	
Anthracene	**6.6**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:10	120-12-7	
Benzo(a)anthracene	**8.3**	ug/kg	6.2	1.9	1	05/29/19 09:25	06/02/19 18:10	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.2	2.2	1	05/29/19 09:25	06/02/19 18:10	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:10	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.2	2.7	1	05/29/19 09:25	06/02/19 18:10	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:10	207-08-9	
Chrysene	**14.6**	ug/kg	6.2	2.1	1	05/29/19 09:25	06/02/19 18:10	218-01-9	
Dibenz(a,h)anthracene	**<2.6**	ug/kg	6.2	2.6	1	05/29/19 09:25	06/02/19 18:10	53-70-3	
Fluoranthene	**11.5**	ug/kg	6.2	3.2	1	05/29/19 09:25	06/02/19 18:10	206-44-0	
Fluorene	**7.4**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:10	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:10	193-39-5	
1-Methylnaphthalene	**672**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:10	90-12-0	
2-Methylnaphthalene	**1390**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:10	91-57-6	
Naphthalene	**221**	ug/kg	6.2	1.2	1	05/29/19 09:25	06/02/19 18:10	91-20-3	
Phenanthrene	**22.2**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:10	85-01-8	
Pyrene	**14.8**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:10	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%.	23-107		1	05/29/19 09:25	06/02/19 18:10	321-60-8	
p-Terphenyl-d14 (S)	89	%.	16-117		1	05/29/19 09:25	06/02/19 18:10	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28	100-51-6	
4-Bromophenylphenyl ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	101-55-3	
Butylbenzylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	85-68-7	
4-Chloro-3-methylphenol	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28	59-50-7	
4-Chloroaniline	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28	106-47-8	
bis(2-Chloroethoxy)methane	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	111-91-1	
bis(2-Chloroethyl) ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	111-44-4	
bis(2chloro1methylethyl) ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	108-60-1	
2-Chloronaphthalene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	91-58-7	
2-Chlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	95-57-8	
4-Chlorophenylphenyl ether	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	7005-72-3	
Dibenzofuran	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	132-64-9	
3,3'-Dichlorobenzidine	**<412**	ug/kg	824	412	1	05/29/19 09:29	06/02/19 17:28	91-94-1	
2,4-Dichlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	120-83-2	
Diethylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	84-66-2	
2,4-Dimethylphenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	105-67-9	
Dimethylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	131-11-3	
Di-n-butylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	84-74-2	
4,6-Dinitro-2-methylphenol	**<412**	ug/kg	824	412	1	05/29/19 09:29	06/02/19 17:28	534-52-1	
2,4-Dinitrophenol	**<998**	ug/kg	2000	998	1	05/29/19 09:29	06/02/19 17:28	51-28-5	

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7726 Moller Road
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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (6-8) **Lab ID: 50225466009** Collected: 05/16/19 12:00 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	121-14-2	
2,6-Dinitrotoluene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	606-20-2	
Di-n-octylphthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	117-84-0	
bis(2-Ethylhexyl)phthalate	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	117-81-7	
Hexachloro-1,3-butadiene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	87-68-3	
Hexachlorobenzene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	118-74-1	
Hexachlorocyclopentadiene	**<412**	ug/kg	412	412	1	05/29/19 09:29	06/02/19 17:28	77-47-4	
Hexachloroethane	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	67-72-1	
Isophorone	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	78-59-1	
2-Methylphenol(o-Cresol)	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<206**	ug/kg	824	206	1	05/29/19 09:29	06/02/19 17:28		
2-Nitroaniline	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	88-74-4	
3-Nitroaniline	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	99-09-2	
4-Nitroaniline	**<207**	ug/kg	412	207	1	05/29/19 09:29	06/02/19 17:28	100-01-6	
Nitrobenzene	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	98-95-3	
2-Nitrophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	88-75-5	
4-Nitrophenol	**<998**	ug/kg	2000	998	1	05/29/19 09:29	06/02/19 17:28	100-02-7	
N-Nitroso-di-n-propylamine	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	621-64-7	
N-Nitrosodiphenylamine	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	86-30-6	
Pentachlorophenol	**<998**	ug/kg	2000	998	1	05/29/19 09:29	06/02/19 17:28	87-86-5	
Phenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	108-95-2	
2,4,5-Trichlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	95-95-4	
2,4,6-Trichlorophenol	**<206**	ug/kg	412	206	1	05/29/19 09:29	06/02/19 17:28	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	76	%.	18-98		1	05/29/19 09:29	06/02/19 17:28	4165-60-0	
Phenol-d5 (S)	70	%.	18-108		1	05/29/19 09:29	06/02/19 17:28	4165-62-2	
2-Fluorophenol (S)	64	%.	16-104		1	05/29/19 09:29	06/02/19 17:28	367-12-4	
2,4,6-Tribromophenol (S)	69	%.	10-114		1	05/29/19 09:29	06/02/19 17:28	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**20.7**	%	0.10	0.10	1		05/28/19 12:40		

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (8-9) **Lab ID: 50225466010** Collected: 05/16/19 12:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:26	83-32-9	
Acenaphthylene	**<1.8**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:26	208-96-8	
Anthracene	**<1.8**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:26	120-12-7	
Benzo(a)anthracene	**2.7J**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:26	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.2	2.2	1	05/29/19 09:25	06/02/19 18:26	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:26	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.2	2.7	1	05/29/19 09:25	06/02/19 18:26	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:26	207-08-9	
Chrysene	**4.3J**	ug/kg	6.2	2.1	1	05/29/19 09:25	06/02/19 18:26	218-01-9	
Dibenz(a,h)anthracene	**<2.6**	ug/kg	6.2	2.6	1	05/29/19 09:25	06/02/19 18:26	53-70-3	
Fluoranthene	**4.1J**	ug/kg	6.2	3.2	1	05/29/19 09:25	06/02/19 18:26	206-44-0	
Fluorene	**2.4J**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:26	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:26	193-39-5	
1-Methylnaphthalene	**195**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:26	90-12-0	
2-Methylnaphthalene	**398**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:26	91-57-6	
Naphthalene	**121**	ug/kg	6.2	1.2	1	05/29/19 09:25	06/02/19 18:26	91-20-3	
Phenanthrene	**7.4**	ug/kg	6.2	2.3	1	05/29/19 09:25	06/02/19 18:26	85-01-8	
Pyrene	**5.0J**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	65	%.	23-107		1	05/29/19 09:25	06/02/19 18:26	321-60-8	
p-Terphenyl-d14 (S)	90	%.	16-117		1	05/29/19 09:25	06/02/19 18:26	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44	100-51-6	
4-Bromophenylphenyl ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	101-55-3	
Butylbenzylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	85-68-7	
4-Chloro-3-methylphenol	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44	59-50-7	
4-Chloroaniline	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44	106-47-8	
bis(2-Chloroethoxy)methane	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	111-91-1	
bis(2-Chloroethyl) ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	111-44-4	
bis(2chloro1methylethyl) ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	108-60-1	
2-Chloronaphthalene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	91-58-7	
2-Chlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	95-57-8	
4-Chlorophenylphenyl ether	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	7005-72-3	
Dibenzofuran	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	132-64-9	
3,3'-Dichlorobenzidine	**<409**	ug/kg	818	409	1	05/29/19 09:29	06/02/19 17:44	91-94-1	
2,4-Dichlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	120-83-2	
Diethylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	84-66-2	
2,4-Dimethylphenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	105-67-9	
Dimethylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	131-11-3	
Di-n-butylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	84-74-2	
4,6-Dinitro-2-methylphenol	**<409**	ug/kg	818	409	1	05/29/19 09:29	06/02/19 17:44	534-52-1	
2,4-Dinitrophenol	**<991**	ug/kg	1980	991	1	05/29/19 09:29	06/02/19 17:44	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (8-9) **Lab ID: 50225466010** Collected: 05/16/19 12:05 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	121-14-2	
2,6-Dinitrotoluene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	606-20-2	
Di-n-octylphthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	117-84-0	
bis(2-Ethylhexyl)phthalate	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	117-81-7	
Hexachloro-1,3-butadiene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	87-68-3	
Hexachlorobenzene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	118-74-1	
Hexachlorocyclopentadiene	**<409**	ug/kg	409	409	1	05/29/19 09:29	06/02/19 17:44	77-47-4	
Hexachloroethane	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	67-72-1	
Isophorone	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	78-59-1	
2-Methylphenol(o-Cresol)	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<204**	ug/kg	818	204	1	05/29/19 09:29	06/02/19 17:44		
2-Nitroaniline	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	88-74-4	
3-Nitroaniline	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	99-09-2	
4-Nitroaniline	**<206**	ug/kg	409	206	1	05/29/19 09:29	06/02/19 17:44	100-01-6	
Nitrobenzene	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	98-95-3	
2-Nitrophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	88-75-5	
4-Nitrophenol	**<991**	ug/kg	1980	991	1	05/29/19 09:29	06/02/19 17:44	100-02-7	
N-Nitroso-di-n-propylamine	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	621-64-7	
N-Nitrosodiphenylamine	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	86-30-6	
Pentachlorophenol	**<991**	ug/kg	1980	991	1	05/29/19 09:29	06/02/19 17:44	87-86-5	
Phenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	108-95-2	
2,4,5-Trichlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	95-95-4	
2,4,6-Trichlorophenol	**<204**	ug/kg	409	204	1	05/29/19 09:29	06/02/19 17:44	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	70	%.	18-98		1	05/29/19 09:29	06/02/19 17:44	4165-60-0	
Phenol-d5 (S)	76	%.	18-108		1	05/29/19 09:29	06/02/19 17:44	4165-62-2	
2-Fluorophenol (S)	70	%.	16-104		1	05/29/19 09:29	06/02/19 17:44	367-12-4	
2,4,6-Tribromophenol (S)	67	%.	10-114		1	05/29/19 09:29	06/02/19 17:44	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**19.3**	%	0.10	0.10	1		05/28/19 12:40		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (9-10.5) **Lab ID: 50225466011** Collected: 05/16/19 12:10 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.4 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:43	83-32-9	
Acenaphthylene	**<1.8**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:43	208-96-8	
Anthracene	**3.4J**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:43	120-12-7	
Benzo(a)anthracene	**6.5**	ug/kg	6.2	1.8	1	05/29/19 09:25	06/02/19 18:43	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.2	2.2	1	05/29/19 09:25	06/02/19 18:43	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:43	205-99-2	
Benzo(g,h,i)perylene	**<2.7**	ug/kg	6.2	2.7	1	05/29/19 09:25	06/02/19 18:43	191-24-2	
Benzo(k)fluoranthene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:43	207-08-9	
Chrysene	**11.9**	ug/kg	6.2	2.1	1	05/29/19 09:25	06/02/19 18:43	218-01-9	
Dibenz(a,h)anthracene	**<2.6**	ug/kg	6.2	2.6	1	05/29/19 09:25	06/02/19 18:43	53-70-3	
Fluoranthene	**9.6**	ug/kg	6.2	3.2	1	05/29/19 09:25	06/02/19 18:43	206-44-0	
Fluorene	**5.8J**	ug/kg	6.2	1.6	1	05/29/19 09:25	06/02/19 18:43	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.2	2.4	1	05/29/19 09:25	06/02/19 18:43	193-39-5	
1-Methylnaphthalene	**314**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:43	90-12-0	
2-Methylnaphthalene	**592**	ug/kg	6.2	1.3	1	05/29/19 09:25	06/02/19 18:43	91-57-6	
Naphthalene	**200**	ug/kg	6.2	1.2	1	05/29/19 09:25	06/02/19 18:43	91-20-3	
Phenanthrene	**17.8**	ug/kg	6.2	2.3	1	05/29/19 09:25	06/02/19 18:43	85-01-8	
Pyrene	**11.9**	ug/kg	6.2	2.5	1	05/29/19 09:25	06/02/19 18:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%.	23-107		1	05/29/19 09:25	06/02/19 18:43	321-60-8	
p-Terphenyl-d14 (S)	89	%.	16-117		1	05/29/19 09:25	06/02/19 18:43	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.4 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00	100-51-6	
4-Bromophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	101-55-3	
Butylbenzylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	85-68-7	
4-Chloro-3-methylphenol	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00	59-50-7	
4-Chloroaniline	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00	106-47-8	
bis(2-Chloroethoxy)methane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	111-91-1	
bis(2-Chloroethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	111-44-4	
bis(2chloro1methylethyl) ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	108-60-1	
2-Chloronaphthalene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	91-58-7	
2-Chlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	95-57-8	
4-Chlorophenylphenyl ether	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	7005-72-3	
Dibenzofuran	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	132-64-9	
3,3'-Dichlorobenzidine	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 18:00	91-94-1	
2,4-Dichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	120-83-2	
Diethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	84-66-2	
2,4-Dimethylphenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	105-67-9	
Dimethylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	131-11-3	
Di-n-butylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	84-74-2	
4,6-Dinitro-2-methylphenol	**<408**	ug/kg	817	408	1	05/29/19 09:29	06/02/19 18:00	534-52-1	
2,4-Dinitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 18:00	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-4 (9-10.5) **Lab ID: 50225466011** Collected: 05/16/19 12:10 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.4 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	121-14-2	
2,6-Dinitrotoluene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	606-20-2	
Di-n-octylphthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	117-84-0	
bis(2-Ethylhexyl)phthalate	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	117-81-7	
Hexachloro-1,3-butadiene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	87-68-3	
Hexachlorobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	118-74-1	
Hexachlorocyclopentadiene	**<408**	ug/kg	408	408	1	05/29/19 09:29	06/02/19 18:00	77-47-4	
Hexachloroethane	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	67-72-1	
Isophorone	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	78-59-1	
2-Methylphenol(o-Cresol)	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<204**	ug/kg	817	204	1	05/29/19 09:29	06/02/19 18:00		
2-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	88-74-4	
3-Nitroaniline	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	99-09-2	
4-Nitroaniline	**<205**	ug/kg	408	205	1	05/29/19 09:29	06/02/19 18:00	100-01-6	
Nitrobenzene	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	98-95-3	
2-Nitrophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	88-75-5	
4-Nitrophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 18:00	100-02-7	
N-Nitroso-di-n-propylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	621-64-7	
N-Nitrosodiphenylamine	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	86-30-6	
Pentachlorophenol	**<990**	ug/kg	1980	990	1	05/29/19 09:29	06/02/19 18:00	87-86-5	
Phenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	108-95-2	
2,4,5-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	95-95-4	
2,4,6-Trichlorophenol	**<204**	ug/kg	408	204	1	05/29/19 09:29	06/02/19 18:00	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	76	%.	18-98		1	05/29/19 09:29	06/02/19 18:00	4165-60-0	
Phenol-d5 (S)	75	%.	18-108		1	05/29/19 09:29	06/02/19 18:00	4165-62-2	
2-Fluorophenol (S)	68	%.	16-104		1	05/29/19 09:29	06/02/19 18:00	367-12-4	
2,4,6-Tribromophenol (S)	63	%.	10-114		1	05/29/19 09:29	06/02/19 18:00	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**20.3**	%	0.10	0.10	1		05/28/19 12:40		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (0-2) **Lab ID: 50225466012** Collected: 05/16/19 11:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.195 g Final Volume/Weight: 50 mL								
Antimony	**0.23J**	mg/kg	0.95	0.23	1	05/28/19 07:10	05/28/19 17:21	7440-36-0	
Arsenic	**6.1**	mg/kg	0.95	0.13	1	05/28/19 07:10	05/28/19 17:21	7440-38-2	
Barium	**147**	mg/kg	0.95	0.029	1	05/28/19 07:10	05/28/19 17:21	7440-39-3	
Beryllium	**0.54**	mg/kg	0.48	0.019	1	05/28/19 07:10	05/28/19 17:21	7440-41-7	
Cadmium	**0.20J**	mg/kg	0.48	0.019	1	05/28/19 07:10	05/28/19 17:21	7440-43-9	
Chromium	**14.9**	mg/kg	0.95	0.28	1	05/28/19 07:10	05/28/19 17:21	7440-47-3	
Copper	**12.1**	mg/kg	0.95	0.10	1	05/28/19 07:10	05/28/19 17:21	7440-50-8	
Lead	**107**	mg/kg	0.95	0.14	1	05/28/19 07:10	05/28/19 17:21	7439-92-1	
Nickel	**9.3**	mg/kg	0.95	0.10	1	05/28/19 07:10	05/28/19 17:21	7440-02-0	
Selenium	**<0.35**	mg/kg	0.95	0.35	1	05/28/19 07:10	05/28/19 17:21	7782-49-2	
Silver	**<0.27**	mg/kg	0.48	0.27	1	05/28/19 07:10	05/28/19 17:21	7440-22-4	
Thallium	**0.59J**	mg/kg	0.95	0.23	1	05/28/19 07:10	05/28/19 17:21	7440-28-0	
Zinc	**57.5**	mg/kg	0.95	0.33	1	05/28/19 07:10	05/28/19 17:21	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.322 g Final Volume/Weight: 50 mL								
Mercury	**0.85**	mg/kg	0.21	0.10	1	05/30/19 12:54	05/30/19 20:42	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**12.3**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (0-2) DUP **Lab ID: 50225466013** Collected: 05/16/19 11:40 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.166 g Final Volume/Weight: 50 mL								
Antimony	**<0.23**	mg/kg	0.98	0.23	1	05/28/19 07:10	05/28/19 17:23	7440-36-0	
Arsenic	**7.5**	mg/kg	0.98	0.14	1	05/28/19 07:10	05/28/19 17:23	7440-38-2	
Barium	**136**	mg/kg	0.98	0.029	1	05/28/19 07:10	05/28/19 17:23	7440-39-3	
Beryllium	**0.66**	mg/kg	0.49	0.020	1	05/28/19 07:10	05/28/19 17:23	7440-41-7	
Cadmium	**0.14J**	mg/kg	0.49	0.020	1	05/28/19 07:10	05/28/19 17:23	7440-43-9	
Chromium	**13.9**	mg/kg	0.98	0.28	1	05/28/19 07:10	05/28/19 17:23	7440-47-3	
Copper	**116**	mg/kg	0.98	0.11	1	05/28/19 07:10	05/28/19 17:23	7440-50-8	
Lead	**95.3**	mg/kg	0.98	0.15	1	05/28/19 07:10	05/28/19 17:23	7439-92-1	
Nickel	**10.5**	mg/kg	0.98	0.11	1	05/28/19 07:10	05/28/19 17:23	7440-02-0	
Selenium	**<0.36**	mg/kg	0.98	0.36	1	05/28/19 07:10	05/28/19 17:23	7782-49-2	
Silver	**<0.27**	mg/kg	0.49	0.27	1	05/28/19 07:10	05/28/19 17:23	7440-22-4	
Thallium	**0.60J**	mg/kg	0.98	0.23	1	05/28/19 07:10	05/28/19 17:23	7440-28-0	
Zinc	**74.1**	mg/kg	0.98	0.34	1	05/28/19 07:10	05/28/19 17:23	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.328 g Final Volume/Weight: 50 mL								
Mercury	**1.0**	mg/kg	0.21	0.10	1	05/30/19 12:54	05/30/19 20:44	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**12.1**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (2-4) **Lab ID: 50225466014** Collected: 05/16/19 11:45 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.065 g Final Volume/Weight: 50 mL								
Antimony	**<0.27**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:25	7440-36-0	
Arsenic	**7.7**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 17:25	7440-38-2	
Barium	**91.6**	mg/kg	1.1	0.034	1	05/28/19 07:10	05/28/19 17:25	7440-39-3	
Beryllium	**0.67**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 17:25	7440-41-7	
Cadmium	**0.099J**	mg/kg	0.57	0.023	1	05/28/19 07:10	05/28/19 17:25	7440-43-9	
Chromium	**15.1**	mg/kg	1.1	0.33	1	05/28/19 07:10	05/28/19 17:25	7440-47-3	
Copper	**11.8**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 17:25	7440-50-8	
Lead	**17.8**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 17:25	7439-92-1	
Nickel	**11.4**	mg/kg	1.1	0.13	1	05/28/19 07:10	05/28/19 17:25	7440-02-0	
Selenium	**<0.42**	mg/kg	1.1	0.42	1	05/28/19 07:10	05/28/19 17:25	7782-49-2	
Silver	**<0.32**	mg/kg	0.57	0.32	1	05/28/19 07:10	05/28/19 17:25	7440-22-4	
Thallium	**0.54J**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:25	7440-28-0	
Zinc	**49.4**	mg/kg	1.1	0.40	1	05/28/19 07:10	05/28/19 17:25	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.307 g Final Volume/Weight: 50 mL								
Mercury	**0.42**	mg/kg	0.24	0.12	1	05/30/19 12:54	05/30/19 20:46	7439-97-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**17.8**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (9-11) **Lab ID: 50225466015** Collected: 05/16/19 11:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**6.3J**	ug/kg	6.6	1.7	1	05/29/19 09:25	06/02/19 18:59	83-32-9	
Acenaphthylene	**<2.0**	ug/kg	6.6	2.0	1	05/29/19 09:25	06/02/19 18:59	208-96-8	
Anthracene	**5.9J**	ug/kg	6.6	1.9	1	05/29/19 09:25	06/02/19 18:59	120-12-7	
Benzo(a)anthracene	**9.6**	ug/kg	6.6	2.0	1	05/29/19 09:25	06/02/19 18:59	56-55-3	
Benzo(a)pyrene	**2.9J**	ug/kg	6.6	2.4	1	05/29/19 09:25	06/02/19 18:59	50-32-8	
Benzo(b)fluoranthene	**4.0J**	ug/kg	6.6	2.7	1	05/29/19 09:25	06/02/19 18:59	205-99-2	
Benzo(g,h,i)perylene	**<2.8**	ug/kg	6.6	2.8	1	05/29/19 09:25	06/02/19 18:59	191-24-2	
Benzo(k)fluoranthene	**3.2J**	ug/kg	6.6	2.5	1	05/29/19 09:25	06/02/19 18:59	207-08-9	
Chrysene	**13.9**	ug/kg	6.6	2.3	1	05/29/19 09:25	06/02/19 18:59	218-01-9	
Dibenz(a,h)anthracene	**<2.7**	ug/kg	6.6	2.7	1	05/29/19 09:25	06/02/19 18:59	53-70-3	
Fluoranthene	**17.2**	ug/kg	6.6	3.4	1	05/29/19 09:25	06/02/19 18:59	206-44-0	
Fluorene	**11.2**	ug/kg	6.6	1.7	1	05/29/19 09:25	06/02/19 18:59	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.6**	ug/kg	6.6	2.6	1	05/29/19 09:25	06/02/19 18:59	193-39-5	
1-Methylnaphthalene	**395**	ug/kg	6.6	1.4	1	05/29/19 09:25	06/02/19 18:59	90-12-0	
2-Methylnaphthalene	**469**	ug/kg	6.6	1.4	1	05/29/19 09:25	06/02/19 18:59	91-57-6	
Naphthalene	**<1.3**	ug/kg	6.6	1.3	1	05/29/19 09:25	06/02/19 18:59	91-20-3	
Phenanthrene	**29.1**	ug/kg	6.6	2.5	1	05/29/19 09:25	06/02/19 18:59	85-01-8	
Pyrene	**20.7**	ug/kg	6.6	2.6	1	05/29/19 09:25	06/02/19 18:59	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%.	23-107		1	05/29/19 09:25	06/02/19 18:59	321-60-8	
p-Terphenyl-d14 (S)	93	%.	16-117		1	05/29/19 09:25	06/02/19 18:59	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16	100-51-6	
4-Bromophenylphenyl ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	101-55-3	
Butylbenzylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	85-68-7	
4-Chloro-3-methylphenol	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16	59-50-7	
4-Chloroaniline	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16	106-47-8	
bis(2-Chloroethoxy)methane	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	111-91-1	
bis(2-Chloroethyl) ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	111-44-4	
bis(2chloro1methylethyl) ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	108-60-1	
2-Chloronaphthalene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	91-58-7	
2-Chlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	95-57-8	
4-Chlorophenylphenyl ether	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	7005-72-3	
Dibenzofuran	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	132-64-9	
3,3'-Dichlorobenzidine	**<436**	ug/kg	871	436	1	05/29/19 09:29	06/02/19 18:16	91-94-1	
2,4-Dichlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	120-83-2	
Diethylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	84-66-2	
2,4-Dimethylphenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	105-67-9	
Dimethylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	131-11-3	
Di-n-butylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	84-74-2	
4,6-Dinitro-2-methylphenol	**<436**	ug/kg	871	436	1	05/29/19 09:29	06/02/19 18:16	534-52-1	
2,4-Dinitrophenol	**<1060**	ug/kg	2110	1060	1	05/29/19 09:29	06/02/19 18:16	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (9-11) **Lab ID: 50225466015** Collected: 05/16/19 11:30 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	121-14-2	
2,6-Dinitrotoluene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	606-20-2	
Di-n-octylphthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	117-84-0	
bis(2-Ethylhexyl)phthalate	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	117-81-7	
Hexachloro-1,3-butadiene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	87-68-3	
Hexachlorobenzene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	118-74-1	
Hexachlorocyclopentadiene	**<436**	ug/kg	436	436	1	05/29/19 09:29	06/02/19 18:16	77-47-4	
Hexachloroethane	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	67-72-1	
Isophorone	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	78-59-1	
2-Methylphenol(o-Cresol)	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<218**	ug/kg	871	218	1	05/29/19 09:29	06/02/19 18:16		
2-Nitroaniline	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	88-74-4	
3-Nitroaniline	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	99-09-2	
4-Nitroaniline	**<219**	ug/kg	436	219	1	05/29/19 09:29	06/02/19 18:16	100-01-6	
Nitrobenzene	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	98-95-3	
2-Nitrophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	88-75-5	
4-Nitrophenol	**<1060**	ug/kg	2110	1060	1	05/29/19 09:29	06/02/19 18:16	100-02-7	
N-Nitroso-di-n-propylamine	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	621-64-7	
N-Nitrosodiphenylamine	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	86-30-6	
Pentachlorophenol	**<1060**	ug/kg	2110	1060	1	05/29/19 09:29	06/02/19 18:16	87-86-5	
Phenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	108-95-2	
2,4,5-Trichlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	95-95-4	
2,4,6-Trichlorophenol	**<218**	ug/kg	436	218	1	05/29/19 09:29	06/02/19 18:16	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	70	%.	18-98		1	05/29/19 09:29	06/02/19 18:16	4165-60-0	
Phenol-d5 (S)	76	%.	18-108		1	05/29/19 09:29	06/02/19 18:16	4165-62-2	
2-Fluorophenol (S)	69	%.	16-104		1	05/29/19 09:29	06/02/19 18:16	367-12-4	
2,4,6-Tribromophenol (S)	68	%.	10-114		1	05/29/19 09:29	06/02/19 18:16	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**24.8**	%	0.10	0.10	1		05/28/19 12:41		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) **Lab ID: 50225466016** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**37.6**	ug/kg	7.3	1.8	1	05/29/19 09:25	06/02/19 19:16	83-32-9	
Acenaphthylene	**11.0**	ug/kg	7.3	2.2	1	05/29/19 09:25	06/02/19 19:16	208-96-8	
Anthracene	**41.0**	ug/kg	7.3	2.1	1	05/29/19 09:25	06/02/19 19:16	120-12-7	
Benzo(a)anthracene	**22.2**	ug/kg	7.3	2.2	1	05/29/19 09:25	06/02/19 19:16	56-55-3	
Benzo(a)pyrene	**6.3J**	ug/kg	7.3	2.6	1	05/29/19 09:25	06/02/19 19:16	50-32-8	
Benzo(b)fluoranthene	**8.1**	ug/kg	7.3	3.0	1	05/29/19 09:25	06/02/19 19:16	205-99-2	
Benzo(g,h,i)perylene	**<3.1**	ug/kg	7.3	3.1	1	05/29/19 09:25	06/02/19 19:16	191-24-2	
Benzo(k)fluoranthene	**6.6J**	ug/kg	7.3	2.8	1	05/29/19 09:25	06/02/19 19:16	207-08-9	
Chrysene	**22.6**	ug/kg	7.3	2.5	1	05/29/19 09:25	06/02/19 19:16	218-01-9	
Dibenz(a,h)anthracene	**<3.1**	ug/kg	7.3	3.1	1	05/29/19 09:25	06/02/19 19:16	53-70-3	
Fluoranthene	**134**	ug/kg	7.3	3.8	1	05/29/19 09:25	06/02/19 19:16	206-44-0	
Fluorene	**89.4**	ug/kg	7.3	1.8	1	05/29/19 09:25	06/02/19 19:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.8**	ug/kg	7.3	2.8	1	05/29/19 09:25	06/02/19 19:16	193-39-5	
1-Methylnaphthalene	**27.4**	ug/kg	7.3	1.5	1	05/29/19 09:25	06/02/19 19:16	90-12-0	
2-Methylnaphthalene	**38.9**	ug/kg	7.3	1.5	1	05/29/19 09:25	06/02/19 19:16	91-57-6	
Naphthalene	**144**	ug/kg	7.3	1.5	1	05/29/19 09:25	06/02/19 19:16	91-20-3	
Phenanthrene	**179**	ug/kg	7.3	2.8	1	05/29/19 09:25	06/02/19 19:16	85-01-8	
Pyrene	**110**	ug/kg	7.3	2.9	1	05/29/19 09:25	06/02/19 19:16	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%.	23-107		1	05/29/19 09:25	06/02/19 19:16	321-60-8	
p-Terphenyl-d14 (S)	87	%.	16-117		1	05/29/19 09:25	06/02/19 19:16	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31	100-51-6	
4-Bromophenylphenyl ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	101-55-3	
Butylbenzylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	85-68-7	
4-Chloro-3-methylphenol	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31	59-50-7	
4-Chloroaniline	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31	106-47-8	
bis(2-Chloroethoxy)methane	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	111-91-1	
bis(2-Chloroethyl) ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	111-44-4	
bis(2chloro1methylethyl) ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	108-60-1	
2-Chloronaphthalene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	91-58-7	
2-Chlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	95-57-8	
4-Chlorophenylphenyl ether	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	7005-72-3	
Dibenzofuran	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	132-64-9	
3,3'-Dichlorobenzidine	**<484**	ug/kg	969	484	1	05/29/19 09:29	06/02/19 18:31	91-94-1	
2,4-Dichlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	120-83-2	
Diethylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	84-66-2	
2,4-Dimethylphenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	105-67-9	
Dimethylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	131-11-3	
Di-n-butylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	84-74-2	
4,6-Dinitro-2-methylphenol	**<484**	ug/kg	969	484	1	05/29/19 09:29	06/02/19 18:31	534-52-1	
2,4-Dinitrophenol	**<1170**	ug/kg	2350	1170	1	05/29/19 09:29	06/02/19 18:31	51-28-5	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) **Lab ID: 50225466016** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	121-14-2	
2,6-Dinitrotoluene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	606-20-2	
Di-n-octylphthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	117-84-0	
bis(2-Ethylhexyl)phthalate	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	117-81-7	
Hexachloro-1,3-butadiene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	87-68-3	
Hexachlorobenzene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	118-74-1	
Hexachlorocyclopentadiene	**<484**	ug/kg	484	484	1	05/29/19 09:29	06/02/19 18:31	77-47-4	
Hexachloroethane	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	67-72-1	
Isophorone	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	78-59-1	
2-Methylphenol(o-Cresol)	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<242**	ug/kg	969	242	1	05/29/19 09:29	06/02/19 18:31		
2-Nitroaniline	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	88-74-4	
3-Nitroaniline	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	99-09-2	
4-Nitroaniline	**<244**	ug/kg	484	244	1	05/29/19 09:29	06/02/19 18:31	100-01-6	
Nitrobenzene	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	98-95-3	
2-Nitrophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	88-75-5	
4-Nitrophenol	**<1170**	ug/kg	2350	1170	1	05/29/19 09:29	06/02/19 18:31	100-02-7	
N-Nitroso-di-n-propylamine	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	621-64-7	
N-Nitrosodiphenylamine	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	86-30-6	
Pentachlorophenol	**<1170**	ug/kg	2350	1170	1	05/29/19 09:29	06/02/19 18:31	87-86-5	
Phenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	108-95-2	
2,4,5-Trichlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	95-95-4	
2,4,6-Trichlorophenol	**<242**	ug/kg	484	242	1	05/29/19 09:29	06/02/19 18:31	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%.	18-98		1	05/29/19 09:29	06/02/19 18:31	4165-60-0	
Phenol-d5 (S)	77	%.	18-108		1	05/29/19 09:29	06/02/19 18:31	4165-62-2	
2-Fluorophenol (S)	67	%.	16-104		1	05/29/19 09:29	06/02/19 18:31	367-12-4	
2,4,6-Tribromophenol (S)	68	%.	10-114		1	05/29/19 09:29	06/02/19 18:31	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**32.6**	%	0.10	0.10	1		05/28/19 12:42		

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) DUP **Lab ID: 50225466017** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.6**	ug/kg	6.5	1.6	1	05/29/19 09:25	06/02/19 19:32	83-32-9	
Acenaphthylene	**<1.9**	ug/kg	6.5	1.9	1	05/29/19 09:25	06/02/19 19:32	208-96-8	
Anthracene	**<1.9**	ug/kg	6.5	1.9	1	05/29/19 09:25	06/02/19 19:32	120-12-7	
Benzo(a)anthracene	**<1.9**	ug/kg	6.5	1.9	1	05/29/19 09:25	06/02/19 19:32	56-55-3	
Benzo(a)pyrene	**<2.3**	ug/kg	6.5	2.3	1	05/29/19 09:25	06/02/19 19:32	50-32-8	
Benzo(b)fluoranthene	**<2.6**	ug/kg	6.5	2.6	1	05/29/19 09:25	06/02/19 19:32	205-99-2	
Benzo(g,h,i)perylene	**<2.8**	ug/kg	6.5	2.8	1	05/29/19 09:25	06/02/19 19:32	191-24-2	
Benzo(k)fluoranthene	**<2.5**	ug/kg	6.5	2.5	1	05/29/19 09:25	06/02/19 19:32	207-08-9	
Chrysene	**<2.2**	ug/kg	6.5	2.2	1	05/29/19 09:25	06/02/19 19:32	218-01-9	
Dibenz(a,h)anthracene	**<2.7**	ug/kg	6.5	2.7	1	05/29/19 09:25	06/02/19 19:32	53-70-3	
Fluoranthene	**<3.4**	ug/kg	6.5	3.4	1	05/29/19 09:25	06/02/19 19:32	206-44-0	
Fluorene	**<1.6**	ug/kg	6.5	1.6	1	05/29/19 09:25	06/02/19 19:32	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.5**	ug/kg	6.5	2.5	1	05/29/19 09:25	06/02/19 19:32	193-39-5	
1-Methylnaphthalene	**19.0**	ug/kg	6.5	1.3	1	05/29/19 09:25	06/02/19 19:32	90-12-0	
2-Methylnaphthalene	**21.3**	ug/kg	6.5	1.4	1	05/29/19 09:25	06/02/19 19:32	91-57-6	
Naphthalene	**14.8**	ug/kg	6.5	1.3	1	05/29/19 09:25	06/02/19 19:32	91-20-3	
Phenanthrene	**<2.4**	ug/kg	6.5	2.4	1	05/29/19 09:25	06/02/19 19:32	85-01-8	
Pyrene	**<2.6**	ug/kg	6.5	2.6	1	05/29/19 09:25	06/02/19 19:32	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%.	23-107		1	05/29/19 09:25	06/02/19 19:32	321-60-8	
p-Terphenyl-d14 (S)	85	%.	16-117		1	05/29/19 09:25	06/02/19 19:32	1718-51-0	
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47	100-51-6	
4-Bromophenylphenyl ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	101-55-3	
Butylbenzylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	85-68-7	
4-Chloro-3-methylphenol	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47	59-50-7	
4-Chloroaniline	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47	106-47-8	
bis(2-Chloroethoxy)methane	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	111-91-1	
bis(2-Chloroethyl) ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	111-44-4	
bis(2chloro1methylethyl) ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	108-60-1	
2-Chloronaphthalene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	91-58-7	
2-Chlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	95-57-8	
4-Chlorophenylphenyl ether	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	7005-72-3	
Dibenzofuran	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	132-64-9	
3,3'-Dichlorobenzidine	**<428**	ug/kg	856	428	1	05/29/19 09:29	06/02/19 18:47	91-94-1	
2,4-Dichlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	120-83-2	
Diethylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	84-66-2	
2,4-Dimethylphenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	105-67-9	
Dimethylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	131-11-3	
Di-n-butylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	84-74-2	
4,6-Dinitro-2-methylphenol	**<428**	ug/kg	856	428	1	05/29/19 09:29	06/02/19 18:47	534-52-1	
2,4-Dinitrophenol	**<1040**	ug/kg	2070	1040	1	05/29/19 09:29	06/02/19 18:47	51-28-5	

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Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (11-13) DUP **Lab ID: 50225466017** Collected: 05/16/19 11:35 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.3 g Final Volume/Weight: 1 mL								
2,4-Dinitrotoluene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	121-14-2	
2,6-Dinitrotoluene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	606-20-2	
Di-n-octylphthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	117-84-0	
bis(2-Ethylhexyl)phthalate	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	117-81-7	
Hexachloro-1,3-butadiene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	87-68-3	
Hexachlorobenzene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	118-74-1	
Hexachlorocyclopentadiene	**<428**	ug/kg	428	428	1	05/29/19 09:29	06/02/19 18:47	77-47-4	
Hexachloroethane	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	67-72-1	
Isophorone	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	78-59-1	
2-Methylphenol(o-Cresol)	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<214**	ug/kg	856	214	1	05/29/19 09:29	06/02/19 18:47		
2-Nitroaniline	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	88-74-4	
3-Nitroaniline	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	99-09-2	
4-Nitroaniline	**<215**	ug/kg	428	215	1	05/29/19 09:29	06/02/19 18:47	100-01-6	
Nitrobenzene	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	98-95-3	
2-Nitrophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	88-75-5	
4-Nitrophenol	**<1040**	ug/kg	2070	1040	1	05/29/19 09:29	06/02/19 18:47	100-02-7	
N-Nitroso-di-n-propylamine	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	621-64-7	
N-Nitrosodiphenylamine	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	86-30-6	
Pentachlorophenol	**<1040**	ug/kg	2070	1040	1	05/29/19 09:29	06/02/19 18:47	87-86-5	
Phenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	108-95-2	
2,4,5-Trichlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	95-95-4	
2,4,6-Trichlorophenol	**<214**	ug/kg	428	214	1	05/29/19 09:29	06/02/19 18:47	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%.	18-98		1	05/29/19 09:29	06/02/19 18:47	4165-60-0	
Phenol-d5 (S)	80	%.	18-108		1	05/29/19 09:29	06/02/19 18:47	4165-62-2	
2-Fluorophenol (S)	71	%.	16-104		1	05/29/19 09:29	06/02/19 18:47	367-12-4	
2,4,6-Tribromophenol (S)	66	%.	10-114		1	05/29/19 09:29	06/02/19 18:47	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**23.7**	%	0.10	0.10	1		05/28/19 12:42		

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Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (6-8) **Lab ID: 50225466018** Collected: 05/16/19 11:37 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.11 g Final Volume/Weight: 50 mL								
Antimony	**<0.27**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:28	7440-36-0	
Arsenic	**6.6**	mg/kg	1.1	0.16	1	05/28/19 07:10	05/28/19 17:28	7440-38-2	
Barium	**118**	mg/kg	1.1	0.033	1	05/28/19 07:10	05/28/19 17:28	7440-39-3	
Beryllium	**1.1**	mg/kg	0.56	0.022	1	05/28/19 07:10	05/28/19 17:28	7440-41-7	
Cadmium	**0.16J**	mg/kg	0.56	0.022	1	05/28/19 07:10	05/28/19 17:28	7440-43-9	
Chromium	**32.3**	mg/kg	1.1	0.32	1	05/28/19 07:10	05/28/19 17:28	7440-47-3	
Copper	**13.5**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:28	7440-50-8	
Lead	**14.0**	mg/kg	1.1	0.17	1	05/28/19 07:10	05/28/19 17:28	7439-92-1	
Nickel	**15.0**	mg/kg	1.1	0.12	1	05/28/19 07:10	05/28/19 17:28	7440-02-0	
Selenium	**<0.41**	mg/kg	1.1	0.41	1	05/28/19 07:10	05/28/19 17:28	7782-49-2	
Silver	**<0.31**	mg/kg	0.56	0.31	1	05/28/19 07:10	05/28/19 17:28	7440-22-4	
Thallium	**0.50J**	mg/kg	1.1	0.27	1	05/28/19 07:10	05/28/19 17:28	7440-28-0	
Zinc	**57.3**	mg/kg	1.1	0.39	1	05/28/19 07:10	05/28/19 17:28	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Initial Volume/Weight: 0.324 g Final Volume/Weight: 50 mL								
Mercury	**<0.11**	mg/kg	0.23	0.11	1	05/30/19 12:54	05/30/19 20:48	7439-97-6	
8270 PAH Combo Soil	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Acenaphthene	**<1.5**	ug/kg	6.1	1.5	1	05/29/19 09:25	06/03/19 13:19	83-32-9	
Acenaphthylene	**<1.8**	ug/kg	6.1	1.8	1	05/29/19 09:25	06/03/19 13:19	208-96-8	
Anthracene	**<1.8**	ug/kg	6.1	1.8	1	05/29/19 09:25	06/03/19 13:19	120-12-7	
Benzo(a)anthracene	**<1.8**	ug/kg	6.1	1.8	1	05/29/19 09:25	06/03/19 13:19	56-55-3	
Benzo(a)pyrene	**<2.2**	ug/kg	6.1	2.2	1	05/29/19 09:25	06/03/19 13:19	50-32-8	
Benzo(b)fluoranthene	**<2.5**	ug/kg	6.1	2.5	1	05/29/19 09:25	06/03/19 13:19	205-99-2	
Benzo(g,h,i)perylene	**<2.6**	ug/kg	6.1	2.6	1	05/29/19 09:25	06/03/19 13:19	191-24-2	
Benzo(k)fluoranthene	**<2.3**	ug/kg	6.1	2.3	1	05/29/19 09:25	06/03/19 13:19	207-08-9	
Chrysene	**<2.1**	ug/kg	6.1	2.1	1	05/29/19 09:25	06/03/19 13:19	218-01-9	
Dibenz(a,h)anthracene	**<2.5**	ug/kg	6.1	2.5	1	05/29/19 09:25	06/03/19 13:19	53-70-3	
Fluoranthene	**<3.2**	ug/kg	6.1	3.2	1	05/29/19 09:25	06/03/19 13:19	206-44-0	
Fluorene	**<1.5**	ug/kg	6.1	1.5	1	05/29/19 09:25	06/03/19 13:19	86-73-7	
Indeno(1,2,3-cd)pyrene	**<2.4**	ug/kg	6.1	2.4	1	05/29/19 09:25	06/03/19 13:19	193-39-5	
1-Methylnaphthalene	**<1.3**	ug/kg	6.1	1.3	1	05/29/19 09:25	06/03/19 13:19	90-12-0	
2-Methylnaphthalene	**<1.3**	ug/kg	6.1	1.3	1	05/29/19 09:25	06/03/19 13:19	91-57-6	
Naphthalene	**<1.2**	ug/kg	6.1	1.2	1	05/29/19 09:25	06/03/19 13:19	91-20-3	
Phenanthrene	**<2.3**	ug/kg	6.1	2.3	1	05/29/19 09:25	06/03/19 13:19	85-01-8	
Pyrene	**<2.5**	ug/kg	6.1	2.5	1	05/29/19 09:25	06/03/19 13:19	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%.	23-107		1	05/29/19 09:25	06/03/19 13:19	321-60-8	
p-Terphenyl-d14 (S)	86	%.	16-117		1	05/29/19 09:25	06/03/19 13:19	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (6-8) **Lab ID: 50225466018** Collected: 05/16/19 11:37 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Benzyl alcohol	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03	100-51-6	
4-Bromophenylphenyl ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	101-55-3	
Butylbenzylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	85-68-7	
4-Chloro-3-methylphenol	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03	59-50-7	
4-Chloroaniline	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03	106-47-8	
bis(2-Chloroethoxy)methane	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	111-91-1	
bis(2-Chloroethyl) ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	111-44-4	
bis(2chloro1methylethyl) ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	108-60-1	
2-Chloronaphthalene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	91-58-7	
2-Chlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	95-57-8	
4-Chlorophenylphenyl ether	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	7005-72-3	
Dibenzofuran	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	132-64-9	
3,3'-Dichlorobenzidine	**<405**	ug/kg	809	405	1	05/29/19 09:29	06/02/19 19:03	91-94-1	
2,4-Dichlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	120-83-2	
Diethylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	84-66-2	
2,4-Dimethylphenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	105-67-9	
Dimethylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	131-11-3	
Di-n-butylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	84-74-2	
4,6-Dinitro-2-methylphenol	**<405**	ug/kg	809	405	1	05/29/19 09:29	06/02/19 19:03	534-52-1	
2,4-Dinitrophenol	**<981**	ug/kg	1960	981	1	05/29/19 09:29	06/02/19 19:03	51-28-5	
2,4-Dinitrotoluene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	121-14-2	
2,6-Dinitrotoluene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	606-20-2	
Di-n-octylphthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	117-84-0	
bis(2-Ethylhexyl)phthalate	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	117-81-7	
Hexachloro-1,3-butadiene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	87-68-3	
Hexachlorobenzene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	118-74-1	
Hexachlorocyclopentadiene	**<405**	ug/kg	405	405	1	05/29/19 09:29	06/02/19 19:03	77-47-4	
Hexachloroethane	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	67-72-1	
Isophorone	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	78-59-1	
2-Methylphenol(o-Cresol)	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<202**	ug/kg	809	202	1	05/29/19 09:29	06/02/19 19:03		
2-Nitroaniline	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	88-74-4	
3-Nitroaniline	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	99-09-2	
4-Nitroaniline	**<203**	ug/kg	405	203	1	05/29/19 09:29	06/02/19 19:03	100-01-6	
Nitrobenzene	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	98-95-3	
2-Nitrophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	88-75-5	
4-Nitrophenol	**<981**	ug/kg	1960	981	1	05/29/19 09:29	06/02/19 19:03	100-02-7	
N-Nitroso-di-n-propylamine	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	621-64-7	
N-Nitrosodiphenylamine	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	86-30-6	
Pentachlorophenol	**<981**	ug/kg	1960	981	1	05/29/19 09:29	06/02/19 19:03	87-86-5	
Phenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	108-95-2	
2,4,5-Trichlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	95-95-4	
2,4,6-Trichlorophenol	**<202**	ug/kg	405	202	1	05/29/19 09:29	06/02/19 19:03	88-06-2	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225466

Sample: SP-5 (6-8) **Lab ID: 50225466018** Collected: 05/16/19 11:37 Received: 05/17/19 18:01 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Soil	Analytical Method: EPA 8270 Preparation Method: EPA 3546 Initial Volume/Weight: 30.2 g Final Volume/Weight: 1 mL								
Surrogates									
Nitrobenzene-d5 (S)	72	%.	18-98		1	05/29/19 09:29	06/02/19 19:03	4165-60-0	
Phenol-d5 (S)	86	%.	18-108		1	05/29/19 09:29	06/02/19 19:03	4165-62-2	
2-Fluorophenol (S)	72	%.	16-104		1	05/29/19 09:29	06/02/19 19:03	367-12-4	
2,4,6-Tribromophenol (S)	71	%.	10-114		1	05/29/19 09:29	06/02/19 19:03	118-79-6	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**19.0**	%	0.10	0.10	1		05/28/19 12:42		

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 503160 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

METHOD BLANK: 2321759 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.091	0.19	0.091	05/30/19 20:12	

LABORATORY CONTROL SAMPLE: 2321760

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.49	0.52	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2321761 2321762

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.59	0.54	0.55	1.6	0.96	184	67	75-125	49	20	1d,M0

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502188 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

METHOD BLANK: 2317323 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466007, 50225466008, 50225466012, 50225466013, 50225466014, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/kg	<0.24	1.0	0.24	05/28/19 16:42	
Arsenic	mg/kg	<0.14	1.0	0.14	05/28/19 16:42	
Barium	mg/kg	<0.030	1.0	0.030	05/28/19 16:42	
Beryllium	mg/kg	<0.020	0.50	0.020	05/28/19 16:42	
Cadmium	mg/kg	<0.020	0.50	0.020	05/28/19 16:42	
Chromium	mg/kg	<0.29	1.0	0.29	05/28/19 16:42	
Copper	mg/kg	0.18J	1.0	0.11	05/28/19 16:42	
Lead	mg/kg	<0.15	1.0	0.15	05/28/19 16:42	
Nickel	mg/kg	<0.11	1.0	0.11	05/28/19 16:42	
Selenium	mg/kg	<0.37	1.0	0.37	05/28/19 16:42	
Silver	mg/kg	<0.28	0.50	0.28	05/28/19 16:42	
Thallium	mg/kg	<0.24	1.0	0.24	05/28/19 16:42	
Zinc	mg/kg	<0.35	1.0	0.35	05/28/19 16:42	

LABORATORY CONTROL SAMPLE: 2317324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	50	49.9	100	80-120	
Arsenic	mg/kg	50	48.2	96	80-120	
Barium	mg/kg	50	51.2	102	80-120	
Beryllium	mg/kg	50	49.6	99	80-120	
Cadmium	mg/kg	50	48.7	97	80-120	
Chromium	mg/kg	50	49.1	98	80-120	
Copper	mg/kg	50	49.3	99	80-120	
Lead	mg/kg	50	46.9	94	80-120	
Nickel	mg/kg	50	48.5	97	80-120	
Selenium	mg/kg	50	49.1	98	80-120	
Silver	mg/kg	25	24.9	100	80-120	
Thallium	mg/kg	50	47.5	95	80-120	
Zinc	mg/kg	50	47.9	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2317325 2317326

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/kg	<0.26	51.9	58.9	17.1	22.6	33	38	75-125	28	20	2d,M3
Arsenic	mg/kg	6.3	51.9	58.9	50.6	59.2	85	90	75-125	16	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2317325 2317326

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	301	51.9	58.9	408	345	206	74	75-125	17	20	P6
Beryllium	mg/kg	0.51J	51.9	58.9	44.9	52.1	86	88	75-125	15	20	
Cadmium	mg/kg	0.34J	51.9	58.9	45.9	54.2	88	92	75-125	17	20	
Chromium	mg/kg	13.3	51.9	58.9	59.9	65.7	90	89	75-125	9	20	
Copper	mg/kg	17.6	51.9	58.9	67.1	74.1	95	96	75-125	10	20	
Lead	mg/kg	96.5	51.9	58.9	150	162	102	111	75-125	8	20	
Nickel	mg/kg	13.2	51.9	58.9	54.3	60.9	79	81	75-125	12	20	
Selenium	mg/kg	<0.40	51.9	58.9	44.4	52.9	85	89	75-125	18	20	
Silver	mg/kg	<0.30	25.9	29.5	24.2	28.9	93	97	75-125	17	20	
Thallium	mg/kg	0.83J	51.9	58.9	37.7	42.6	71	71	75-125	12	20	M3
Zinc	mg/kg	97.4	51.9	58.9	142	159	87	104	75-125	11	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502966 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270 MSSV PAH by SIM
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

METHOD BLANK: 2320950 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<1.0	5.0	1.0	05/30/19 15:26	
2-Methylnaphthalene	ug/kg	<1.0	5.0	1.0	05/30/19 15:26	
Acenaphthene	ug/kg	<1.2	5.0	1.2	05/30/19 15:26	
Acenaphthylene	ug/kg	<1.5	5.0	1.5	05/30/19 15:26	
Anthracene	ug/kg	<1.4	5.0	1.4	05/30/19 15:26	
Benzo(a)anthracene	ug/kg	<1.5	5.0	1.5	05/30/19 15:26	
Benzo(a)pyrene	ug/kg	<1.8	5.0	1.8	05/30/19 15:26	
Benzo(b)fluoranthene	ug/kg	<2.0	5.0	2.0	05/30/19 15:26	
Benzo(g,h,i)perylene	ug/kg	<2.1	5.0	2.1	05/30/19 15:26	
Benzo(k)fluoranthene	ug/kg	<1.9	5.0	1.9	05/30/19 15:26	
Chrysene	ug/kg	<1.7	5.0	1.7	05/30/19 15:26	
Dibenz(a,h)anthracene	ug/kg	<2.1	5.0	2.1	05/30/19 15:26	
Fluoranthene	ug/kg	<2.6	5.0	2.6	05/30/19 15:26	
Fluorene	ug/kg	<1.2	5.0	1.2	05/30/19 15:26	
Indeno(1,2,3-cd)pyrene	ug/kg	<1.9	5.0	1.9	05/30/19 15:26	
Naphthalene	ug/kg	<0.99	5.0	0.99	05/30/19 15:26	
Phenanthrene	ug/kg	<1.9	5.0	1.9	05/30/19 15:26	
Pyrene	ug/kg	<2.0	5.0	2.0	05/30/19 15:26	
2-Fluorobiphenyl (S)	%.	62	23-107		05/30/19 15:26	
p-Terphenyl-d14 (S)	%.	89	16-117		05/30/19 15:26	

LABORATORY CONTROL SAMPLE: 2320951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	215	64	44-111	
2-Methylnaphthalene	ug/kg	333	218	66	45-111	
Acenaphthene	ug/kg	333	211	63	48-109	
Acenaphthylene	ug/kg	333	211	63	49-108	
Anthracene	ug/kg	333	244	73	44-104	
Benzo(a)anthracene	ug/kg	333	242	73	46-122	
Benzo(a)pyrene	ug/kg	333	193	58	31-156	
Benzo(b)fluoranthene	ug/kg	333	218	65	29-158	
Benzo(g,h,i)perylene	ug/kg	333	203	61	35-145	
Benzo(k)fluoranthene	ug/kg	333	191	57	33-150	
Chrysene	ug/kg	333	277	83	47-120	
Dibenz(a,h)anthracene	ug/kg	333	197	59	28-160	
Fluoranthene	ug/kg	333	236	71	49-121	
Fluorene	ug/kg	333	211	63	47-116	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

LABORATORY CONTROL SAMPLE: 2320951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/kg	333	200	60	31-155	
Naphthalene	ug/kg	333	210	63	47-103	
Phenanthrene	ug/kg	333	243	73	50-114	
Pyrene	ug/kg	333	277	83	49-114	
2-Fluorobiphenyl (S)	%.			57	23-107	
p-Terphenyl-d14 (S)	%.			82	16-117	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2320952 2320953

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<12.1	396	397	277	291	70	73	10-145	5	20	
2-Methylnaphthalene	ug/kg	<12.4	396	397	280	291	71	73	10-135	4	20	
Acenaphthene	ug/kg	<14.8	396	397	272	291	69	73	10-138	7	20	
Acenaphthylene	ug/kg	23.9J	396	397	282	300	65	70	11-133	6	20	
Anthracene	ug/kg	59.3	396	397	349	363	73	76	10-131	4	20	
Benzo(a)anthracene	ug/kg	380	396	397	810	835	108	114	10-158	3	20	
Benzo(a)pyrene	ug/kg	400	396	397	786	907	98	128	10-174	14	20	
Benzo(b)fluoranthene	ug/kg	441	396	397	865	947	107	127	10-184	9	20	
Benzo(g,h,i)perylene	ug/kg	406	396	397	729	784	81	95	10-170	7	20	
Benzo(k)fluoranthene	ug/kg	346	396	397	708	757	91	103	10-183	7	20	
Chrysene	ug/kg	488	396	397	979	1010	124	131	10-147	3	20	
Dibenz(a,h)anthracene	ug/kg	107	396	397	351	369	62	66	10-166	5	20	
Fluoranthene	ug/kg	724	396	397	1270	1200	138	121	10-158	5	20	
Fluorene	ug/kg	<14.8	396	397	268	284	68	71	10-142	6	20	
Indeno(1,2,3-cd)pyrene	ug/kg	337	396	397	667	723	83	97	11-167	8	20	
Naphthalene	ug/kg	<11.8	396	397	284	294	72	74	13-128	3	20	ED
Phenanthrene	ug/kg	196	396	397	549	509	89	79	10-164	8	20	
Pyrene	ug/kg	786	396	397	1410	1320	157	133	10-152	7	20	M6
2-Fluorobiphenyl (S)	%.						61	64	23-107			
p-Terphenyl-d14 (S)	%.						78	80	16-117			

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502967 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 MSSV Microwave Scan Spike
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

METHOD BLANK: 2320954 Matrix: Solid
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-Trichlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4,6-Trichlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4-Dichlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4-Dimethylphenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4-Dinitrophenol	ug/kg	<795	1590	795	05/30/19 20:22	
2,4-Dinitrotoluene	ug/kg	<164	328	164	05/30/19 20:22	
2,6-Dinitrotoluene	ug/kg	<164	328	164	05/30/19 20:22	
2-Chloronaphthalene	ug/kg	<164	328	164	05/30/19 20:22	
2-Chlorophenol	ug/kg	<164	328	164	05/30/19 20:22	
2-Methylphenol(o-Cresol)	ug/kg	<164	328	164	05/30/19 20:22	
2-Nitroaniline	ug/kg	<164	328	164	05/30/19 20:22	
2-Nitrophenol	ug/kg	<164	328	164	05/30/19 20:22	
3&4-Methylphenol(m&p Cresol)	ug/kg	<164	656	164	05/30/19 20:22	
3,3'-Dichlorobenzidine	ug/kg	<328	656	328	05/30/19 20:22	
3-Nitroaniline	ug/kg	<164	328	164	05/30/19 20:22	
4,6-Dinitro-2-methylphenol	ug/kg	<328	656	328	05/30/19 20:22	
4-Bromophenylphenyl ether	ug/kg	<164	328	164	05/30/19 20:22	
4-Chloro-3-methylphenol	ug/kg	<164	656	164	05/30/19 20:22	
4-Chloroaniline	ug/kg	<164	656	164	05/30/19 20:22	
4-Chlorophenylphenyl ether	ug/kg	<164	328	164	05/30/19 20:22	
4-Nitroaniline	ug/kg	<165	328	165	05/30/19 20:22	
4-Nitrophenol	ug/kg	<795	1590	795	05/30/19 20:22	
Benzyl alcohol	ug/kg	<164	656	164	05/30/19 20:22	
bis(2-Chloroethoxy)methane	ug/kg	<164	328	164	05/30/19 20:22	
bis(2-Chloroethyl) ether	ug/kg	<164	328	164	05/30/19 20:22	
bis(2-Ethylhexyl)phthalate	ug/kg	<164	328	164	05/30/19 20:22	
bis(2chloro1methylethyl) ether	ug/kg	<164	328	164	05/30/19 20:22	
Butylbenzylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Di-n-butylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Di-n-octylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Dibenzofuran	ug/kg	<164	328	164	05/30/19 20:22	
Diethylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Dimethylphthalate	ug/kg	<164	328	164	05/30/19 20:22	
Hexachloro-1,3-butadiene	ug/kg	<164	328	164	05/30/19 20:22	
Hexachlorobenzene	ug/kg	<164	328	164	05/30/19 20:22	
Hexachlorocyclopentadiene	ug/kg	<328	328	328	05/30/19 20:22	
Hexachloroethane	ug/kg	<164	328	164	05/30/19 20:22	
Isophorone	ug/kg	<164	328	164	05/30/19 20:22	
N-Nitroso-di-n-propylamine	ug/kg	<164	328	164	05/30/19 20:22	
N-Nitrosodiphenylamine	ug/kg	<164	328	164	05/30/19 20:22	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

METHOD BLANK: 2320954 Matrix: Solid

Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005, 50225466006, 50225466009, 50225466010, 50225466011, 50225466015, 50225466016, 50225466017, 50225466018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrobenzene	ug/kg	<164	328	164	05/30/19 20:22	
Pentachlorophenol	ug/kg	<795	1590	795	05/30/19 20:22	
Phenol	ug/kg	<164	328	164	05/30/19 20:22	
2,4,6-Tribromophenol (S)	%.	69	10-114		05/30/19 20:22	
2-Fluorophenol (S)	%.	85	16-104		05/30/19 20:22	
Nitrobenzene-d5 (S)	%.	61	18-98		05/30/19 20:22	
Phenol-d5 (S)	%.	64	18-108		05/30/19 20:22	

LABORATORY CONTROL SAMPLE: 2320955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/kg	3330	2190	66	32-115	
2-Chlorophenol	ug/kg	3330	2130	64	47-102	
4-Chloro-3-methylphenol	ug/kg	3330	2000	60	46-112	
4-Nitrophenol	ug/kg	3330	2170	65	28-123	
N-Nitroso-di-n-propylamine	ug/kg	3330	2000	60	40-103	
Pentachlorophenol	ug/kg	3330	2170	65	27-124	
Phenol	ug/kg	3330	2220	67	40-104	
2,4,6-Tribromophenol (S)	%.			65	10-114	
2-Fluorophenol (S)	%.			65	16-104	
Nitrobenzene-d5 (S)	%.			58	18-98	
Phenol-d5 (S)	%.			64	18-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2320956 2320957

Parameter	Units	50225466005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4-Dinitrotoluene	ug/kg	<195	3960	3970	2840	2960	72	75	10-125	4	20	
2-Chlorophenol	ug/kg	<195	3960	3970	2660	2720	67	68	14-115	2	20	
4-Chloro-3-methylphenol	ug/kg	<195	3960	3970	3090	3300	78	83	14-127	7	20	
4-Nitrophenol	ug/kg	<945	3960	3970	3000	3080	76	77	10-137	2	20	
N-Nitroso-di-n-propylamine	ug/kg	<195	3960	3970	3200	3260	81	82	24-108	2	20	
Pentachlorophenol	ug/kg	<945	3960	3970	2370	2550	60	64	10-139	7	20	
Phenol	ug/kg	<195	3960	3970	2930	2900	74	73	10-117	1	20	
2,4,6-Tribromophenol (S)	%.						61	62	10-114			
2-Fluorophenol (S)	%.						63	64	16-104			
Nitrobenzene-d5 (S)	%.						68	71	18-98			
Phenol-d5 (S)	%.						73	74	18-108			

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502826 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 50225466001, 50225466002, 50225466003, 50225466004, 50225466005

SAMPLE DUPLICATE: 2320587

Parameter	Units	50225398001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.0	9.5	5	5	

SAMPLE DUPLICATE: 2320588

Parameter	Units	50225466005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.2	16.5	2	5	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225466

QC Batch: 502836 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 50225466006, 50225466007, 50225466008, 50225466009, 50225466010, 50225466011, 50225466012, 50225466013, 50225466014, 50225466015, 50225466016, 50225466017, 50225466018

SAMPLE DUPLICATE: 2320625

Parameter	Units	50225404004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.6	18.2	3	5	

SAMPLE DUPLICATE: 2320626

Parameter	Units	50225466016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	32.6	32.0	2	5	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: 216 College / 19-146
Pace Project No.: 50225466

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

1d	RPD is outside control limits due to sample non-homogeneity
2d	RPD is outside control limits due to sample non-homogeneity KJE 5/28/19
ED	Due to the extract's physical characteristics, the analysis was performed at dilution.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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METHOD CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225466

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Solid	SW-846 6010B	SW-846 3050B
7471 Mercury	Solid	SW-846 7471A	SW-846 7471A
8270 PAH Combo Soil	Solid	SW-846 8270C	SW-846 3546
8270 SVOC Combo Soil	Solid	SW-846 8270C	SW-846 3546

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Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50225466001	**SP-1 (3-5)**	EPA 3050	502188	EPA 6010	502901
50225466002	**SP-1 (5-7)**	EPA 3050	502188	EPA 6010	502901
50225466003	**SP-2 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466004	**SP-2 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466005	**SP-3 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466006	**SP-3 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466007	**SP-4 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466008	**SP-4 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466012	**SP-5 (0-2)**	EPA 3050	502188	EPA 6010	502901
50225466013	**SP-5 (0-2) DUP**	EPA 3050	502188	EPA 6010	502901
50225466014	**SP-5 (2-4)**	EPA 3050	502188	EPA 6010	502901
50225466018	**SP-5 (6-8)**	EPA 3050	502188	EPA 6010	502901
50225466001	**SP-1 (3-5)**	EPA 7471	503160	EPA 7471	503520
50225466002	**SP-1 (5-7)**	EPA 7471	503160	EPA 7471	503520
50225466003	**SP-2 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466004	**SP-2 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466005	**SP-3 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466006	**SP-3 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466007	**SP-4 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466008	**SP-4 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466012	**SP-5 (0-2)**	EPA 7471	503160	EPA 7471	503520
50225466013	**SP-5 (0-2) DUP**	EPA 7471	503160	EPA 7471	503520
50225466014	**SP-5 (2-4)**	EPA 7471	503160	EPA 7471	503520
50225466018	**SP-5 (6-8)**	EPA 7471	503160	EPA 7471	503520
50225466001	**SP-1 (3-5)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466002	**SP-1 (5-7)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466003	**SP-2 (0-2)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466004	**SP-2 (2-4)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466005	**SP-3 (0-2)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466006	**SP-3 (2-4)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466009	**SP-4 (6-8)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466010	**SP-4 (8-9)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466011	**SP-4 (9-10.5)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466015	**SP-5 (9-11)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466016	**SP-5 (11-13)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466017	**SP-5 (11-13) DUP**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466018	**SP-5 (6-8)**	EPA 3546	502966	EPA 8270 by SIM	503443
50225466001	**SP-1 (3-5)**	EPA 3546	502967	EPA 8270	503444
50225466002	**SP-1 (5-7)**	EPA 3546	502967	EPA 8270	503444
50225466003	**SP-2 (0-2)**	EPA 3546	502967	EPA 8270	503444
50225466004	**SP-2 (2-4)**	EPA 3546	502967	EPA 8270	503444
50225466005	**SP-3 (0-2)**	EPA 3546	502967	EPA 8270	503444
50225466006	**SP-3 (2-4)**	EPA 3546	502967	EPA 8270	503444
50225466009	**SP-4 (6-8)**	EPA 3546	502967	EPA 8270	503444
50225466010	**SP-4 (8-9)**	EPA 3546	502967	EPA 8270	503444
50225466011	**SP-4 (9-10.5)**	EPA 3546	502967	EPA 8270	503444
50225466015	**SP-5 (9-11)**	EPA 3546	502967	EPA 8270	503444

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50225466016	**SP-5 (11-13)**	EPA 3546	502967	EPA 8270	503444
50225466017	**SP-5 (11-13) DUP**	EPA 3546	502967	EPA 8270	503444
50225466018	**SP-5 (6-8)**	EPA 3546	502967	EPA 8270	503444
50225466001	**SP-1 (3-5)**	SM 2540G	502826		
50225466002	**SP-1 (5-7)**	SM 2540G	502826		
50225466003	**SP-2 (0-2)**	SM 2540G	502826		
50225466004	**SP-2 (2-4)**	SM 2540G	502826		
50225466005	**SP-3 (0-2)**	SM 2540G	502826		
50225466006	**SP-3 (2-4)**	SM 2540G	502836		
50225466007	**SP-4 (0-2)**	SM 2540G	502836		
50225466008	**SP-4 (2-4)**	SM 2540G	502836		
50225466009	**SP-4 (6-8)**	SM 2540G	502836		
50225466010	**SP-4 (8-9)**	SM 2540G	502836		
50225466011	**SP-4 (9-10.5)**	SM 2540G	502836		
50225466012	**SP-5 (0-2)**	SM 2540G	502836		
50225466013	**SP-5 (0-2) DUP**	SM 2540G	502836		
50225466014	**SP-5 (2-4)**	SM 2540G	502836		
50225466015	**SP-5 (9-11)**	SM 2540G	502836		
50225466016	**SP-5 (11-13)**	SM 2540G	502836		
50225466017	**SP-5 (11-13) DUP**	SM 2540G	502836		
50225466018	**SP-5 (6-8)**	SM 2540G	502836		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

2276474

Section A — **Required** Client Information:

Company:	BCA
Address:	
Email To:	JTEUSCHLER
Phone:	Fax:
Requested Due Date/TAT:	STD

Section B — **Required** Project Information:

Report To:	JTEUSCHLER
Copy To:	LMinnicks
Purchase Order No.:	
Project Name:	216 College
Project Number:	19-146

Section C — Invoice Information:

Attention:	SAME
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: IN

Section D — **Required** Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: SVOCs + 5 IM	14 Metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 50225466
1	SP-1 (3-5)					5-16-19	1240		1	1												001
2	SP-1 (5-7)						1245		1	1												002
3	SP-2 (0-2)						1000		1	1												003
4	SP-2 (2-4)						1005		1	1												004
5	SP-3 (0-2)						1025		3	3												MS/MSD 005
6	SP-3 (2-4)						1030		1	1												006
7	SP-4 (0-2)						1215		1	1												007
8	SP-4 (2-4)						1220		1	1												008
9	SP-4 (6-8)						1200		1	1												009
10	SP-4 (8-9)						1205		1	1												016
11	SP-4 (9-10.5)						1210		1	1												011
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Rod Manny/BCA	5.17.19	1801		5/17/19	1801	1.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rod Manny

SIGNATURE of SAMPLER: Rod Manny

DATE Signed (MM/DD/YY): 05/17/19

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-C-010-rev.00, 09Nov2017

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2276473

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: BCA	Report To: SAME	Attention: SAME
Address:	Copy To:	Company Name:
		Address:
Email To: JTEUSCHER	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: 216 College	Pace Project Manager:
Requested Due Date/TAT: STD	Project Number: 19-146	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	Sample ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	SVOCs + SIM	14 metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP-5(0-2)					5/16/19	1140		1	1									1	1		50225466 012
2	SP-5(0-2) DUP						1146		1	1									1	1		013
3	SP-5(2-4)						1145		1	1									1	1		014
4	SP-5(9-11)						1130		1	1									1			015
5	SP-5(11-13)						1135		1	1									1			016
6	SP-5(11-13) DUP						1135		1	1									1			017
7	SP-5(6-8)						1137		1	1									1	1		018
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Rod Manny/BCA	5.17.19	1801		5/17/19	1801	1.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rod Manny

SIGNATURE of SAMPLER: Rod Manny

DATE Signed (MM/DD/YY): 05/17/19

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

SAMPLE CONDITION UPON RECEIPT FORM

Pace Analytical

Project #: 50225466

Date/Time and Initials of person examining contents: LWG 5/17/19 1820

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals Intact:** ☐ Yes ☒ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer: 1 2 3 4 5 6 A B C D E F Ice Type: ☒ Wet ☐ Blue ☐ None | Samples collected today and on ice: ☒ Yes ☐ No ☐ N/A

Cooler Temperature: 1.5 / 1.5 Ice Visible in Sample Containers?: ☐ Yes ☒ No ☐ N/A

(Initial/Corrected) Temp should be above freezing to 6°C If temp. is Over 6°C or under 0°C, was the PM Notified?: ☐ Yes ☐ No ☒ N/A

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been checked?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.			
USDA Regulated Soils? (ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Chain of Custody Present:	✓		Circle: HNO3 H2SO4 NaOH NaOH/ZnAc			✓
Chain of Custody Filled Out:	✓		Dissolved Metals field filtered?:			✓
Short Hold Time Analysis (<72hr)?: Analysis:		✓	Headspace Wisconsin Sulfide			✓
Time 5035A TC placed in Freezer or Short Holds To Lab:				Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
			Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested:		✓	Headspace in VOA Vials (>6mm):			✓
Containers Intact?:	✓		Trip Blank Present?:		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Custody Seals?:		✓	

Comments:

Sample Container Count

CLIENT: BCA

COC PAGE 1 of 2

COC ID# 2276474

Project # 50225466

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	SBS DI Bulk Kit R			Matrix Sl/Wt/NAL (Soil/Water/Non-Aqueous Liquid)	pH <2	pH >9	pH>12
1																				3C			
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

3 5/20/19 MM3

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpreserved amber glass
DG9H	40mL HCL amber voa vial	AG1H	1 liter HCL amber glass
DG9M	40mL MeOH clear vial	AG1S	1 liter H2SO4 amber glass
DG9P	40mL TSP amber vial	AG1T	1 liter Na Thiosulfate amber glass
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpreserved amber glass
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass
DG9U	40mL unpreserved **amber** vial	AG2S	500mL H2SO4 amber glass
VG9H	40mL HCL clear vial	AG2U	500mL unpreserved amber glass
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 glass amber
VG9U	40mL unpreserved **clear** vial	AG3U	250mL unpreserved amber glass
VGFX	40mL w/hexane wipe vial	BG1H	1 liter HCL clear glass
VSG	Headspace septa vial & HCL	BG1S	1 liter H2SO4 clear glass
WGKU	8oz unpreserved clear jar	BG1T	1 liter Na Thiosulfate clear glass
WGFU	4oz clear soil jar	BG1U	1 liter unpreserved glass
JGFU	4oz unpreserved amber wide	BG3H	250mL HCl Clear Glass
		BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic	BP3U	250mL unpreserved plastic
BP1N	1 liter HNO3 plastic	BP3Z	250mL NaOH, Zn Ac plastic
BP1S	1 liter H2SO4 plastic		
BP1U	1 liter unpreserved plastic	AF	Air Filter
BP1Z	1 liter NaOH, Zn, Ac	C	Air Cassettes
BP2A	500mL NaOH, Asc Acid plastic	R	Terra core kit
BP2N	500mL HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
BP2O	500mL NaOH plastic	U	Summa Can
BP2S	500mL H2SO4 plastic	ZPLC	Ziploc Bag
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3S	250mL H2SO4 plastic		

Sample Container Count

WO# : 50225466

CLIENT: BCA

COC PAGE 1 of 1

COC ID# 22764 73

Project # 50225466

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	Bulk Kit R	Matrix SI/W (Soil/Water) Aqueous Li	pH <2	pH >9	pH>12
1							1											52			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial
DG9H	40mL HCL amber voa vial
DG9M	40mL MeOH clear vial
DG9P	40mL TSP amber vial
DG9S	40mL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved amber vial
VG9H	40mL HCL clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved clear vial
VGFX	40mL w/hexane wipe vial
VSG	Headspace septa vial & HCL
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide

AG0U	100mL unpreserved amber glass
AG1H	1 liter HCL amber glass
AG1S	1 liter H2SO4 amber glass
AG1T	1 liter Na Thiosulfate amber glass
AG1U	1liter unpreserved amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpreserved amber glass
AG3S	250mL H2SO4 glass amber
AG3U	250mL unpreserved amber glass
BG1H	1 liter HCL clear glass
BG1S	1 liter H2SO4 clear glass
BG1T	1 liter Na Thiosulfate clear glass
BG1U	1 liter unpreserved glass
BG3H	250mL HCl Clear Glass
BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic
BP1N	1 liter HNO3 plastic
BP1S	1 liter H2SO4 plastic
BP1U	1 liter unpreserved plastic
BP1Z	1 liter NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3S	250mL H2SO4 plastic
BP3U	250mL unpreserved plastic
BP3Z	250mL NaOH, Zn Ac plastic

AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

MSSV FULL SCAN - FORM II SVOA-1
SOLID SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Instrument ID: 50MSS9

LAB SAMPLE ID	SAMPLE NAME	24B6	2FPH	NIT5	PHD5
2320956	2320956MS	61	63	68	73
2320957	2320957MSD	62	64	71	74
50225466001	SP-1 (3-5)	57	67	90	85
50225466002	SP-1 (5-7)	38	50	52	57
50225466003	SP-2 (0-2)	69	69	73	78
50225466004	SP-2 (2-4)	25	49	71	73
50225466005	SP-3 (0-2)	63	64	72	78
50225466006	SP-3 (2-4)	63	67	78	76
50225466009	SP-4 (6-8)	69	64	76	70
50225466010	SP-4 (8-9)	67	70	70	76
50225466011	SP-4 (9-10.5)	63	68	76	75
50225466015	SP-5 (9-11)	68	69	70	76
50225466016	SP-5 (11-13)	68	67	63	77
50225466017	SP-5 (11-13) DUP	66	71	63	80
50225466018	SP-5 (6-8)	71	72	72	86

	QC LIMITS
(24B6) = 2,4,6-Tribromophenol (S)	(10-114)
(2FPH) = 2-Fluorophenol (S)	(16-104)
(NIT5) = Nitrobenzene-d5 (S)	(18-98)
(PHD5) = Phenol-d5 (S)	(18-108)

* Values outside of QC Limits

MSSV FULL SCAN - FORM II SVOA-1
SOLID SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Instrument ID: 50MSS8

LAB SAMPLE ID	SAMPLE NAME	24B6	2FPH	NIT5	PHD5
2320954	2320954BLANK	69	85	61	64
2320955	2320955LCS	65	65	58	64

	QC LIMITS
(24B6) = 2,4,6-Tribromophenol (S)	(10-114)
(2FPH) = 2-Fluorophenol (S)	(16-104)
(NIT5) = Nitrobenzene-d5 (S)	(18-98)
(PHD5) = Phenol-d5 (S)	(18-108)

* Values outside of QC Limits

MSSV FULL SCAN - FORM III SVOA-1
SOLID LABORATORY CONTROL SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana
Lab Sample ID: 2320955LCS
Date Extracted: 05/29/2019
Date Analyzed (1): 05/30/2019
Instrument: 50MSS8
LCS Lot No: 194954
Lab File ID: 053019.B\2320955.D
SDG No.: 50225466

COMPOUND	AMOUNT ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS %REC	QC LIMITS REC.
4-Chloro-3-methylphenol	3330	2000	60	46-112
2-Chlorophenol	3330	2130	64	47-102
2,4-Dinitrotoluene	3330	2190	66	32-115
4-Nitrophenol	3330	2170	65	28-123
N-Nitroso-di-n-propylamine	3330	2000	60	40-103
Pentachlorophenol	3330	2170	65	27-124
Phenol	3330	2220	67	40-104

Spike Recovery: 0 out of 7 outside limits.

MSSV FULL SCAN - FORM III SVOA-1

SOLID SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Pace Analytical - Indiana

Matrix Spike - Sample No: 2320956MS

Date Extracted: 05/29/2019

Date Analyzed (1): 06/02/2019

Instrument: 50MSS9

Lab File ID: 060219A.B\2320956.D

Parent Sample ID: SP-3 (0-2)

SDG No.: 50225466

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS %REC	QC LIMITS REC.
2,4-Dinitrotoluene	3960	<195	2840	72	10-125
2-Chlorophenol	3960	<195	2660	67	14-115
4-Chloro-3-methylphenol	3960	<195	3090	78	14-127
4-Nitrophenol	3960	<945	3000	76	10-137
N-Nitroso-di-n-propylamine	3960	<195	3200	81	24-108
Pentachlorophenol	3960	<945	2370	60	10-139
Phenol	3960	<195	2930	74	10-117

Spike Recovery: 0 out of 7 outside limits.

MSSV FULL SCAN - FORM III SVOA-2

SOLID SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Instrument (2): 50MSS9 Matrix Spike Duplicate - Sample No: 2320957MSD

Lab File ID (2): 060219A.B\2320957.D Date Analyzed (2): 06/02/2019

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD %REC	%RPD	QC LIMITS	
					RPD	REC.
2,4-Dinitrotoluene	3970	2960	75	4	0-20	10-125
2-Chlorophenol	3970	2720	68	2	0-20	14-115
4-Chloro-3-methylphenol	3970	3300	83	7	0-20	14-127
4-Nitrophenol	3970	3080	77	2	0-20	10-137
N-Nitroso-di-n-propylamine	3970	3260	82	2	0-20	24-108
Pentachlorophenol	3970	2550	64	7	0-20	10-139
Phenol	3970	2900	73	1	0-20	10-117

RPD: 0 out of 7 outside limits.

Spike Recovery: 0 out of 7 outside limits.

SAMPLE NO.

2320954BLANK

MSSV FULL SCAN - FORM IV SVOA-1
SEMI-VOLATILE METHOD BLANK SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Instrument ID: 50MSS8 Matrix: Solid Lab Sample ID: 2320954

Lab File ID: 053019.B\2320954.D Date Analyzed: 05/30/2019 Time: 20:22

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	ANALYZED
2320955LCS	2320955	053019.B\2320955.D	05/30/2019 20:38
SP-1 (3-5)	50225466001	060219A.B\50225466001.D	06/02/2019 15:20
SP-1 (5-7)	50225466002	060219A.B\50225466002.D	06/02/2019 15:36
SP-2 (0-2)	50225466003	060219A.B\50225466003.D	06/02/2019 15:52
SP-2 (2-4)	50225466004	060219A.B\50225466004.D	06/02/2019 16:08
SP-3 (0-2)	50225466005	060219A.B\50225466005.D	06/02/2019 16:24
2320956MS	2320956	060219A.B\2320956.D	06/02/2019 16:40
2320957MSD	2320957	060219A.B\2320957.D	06/02/2019 16:56
SP-3 (2-4)	50225466006	060219A.B\50225466006.D	06/02/2019 17:12
SP-4 (6-8)	50225466009	060219A.B\50225466009.D	06/02/2019 17:28
SP-4 (8-9)	50225466010	060219A.B\50225466010.D	06/02/2019 17:44
SP-4 (9-10.5)	50225466011	060219A.B\50225466011.D	06/02/2019 18:00
SP-5 (9-11)	50225466015	060219A.B\50225466015.D	06/02/2019 18:16
SP-5 (11-13)	50225466016	060219A.B\50225466016.D	06/02/2019 18:31
SP-5 (11-13) DUP	50225466017	060219A.B\50225466017.D	06/02/2019 18:47
SP-5 (6-8)	50225466018	060219A.B\50225466018.D	06/02/2019 19:03

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146
Lab File ID: 050119CALN.B\DFTPP.D DFTPP Injection Date 05/01/2019
Instrument ID: 50MSS8 DFTPP Injection Time 09:04

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	33.75	
68	Less than 2.00% of mass 69	0.00	(0.00)[1]
69	Mass 69 relative abundance	33.98	
70	Less than 2.00% of mass 69	0.12	(0.34)[1]
127	40.00 - 60.00% of mass 198	41.16	
197	Less than 1.00% of mass 198	0.15	
198	Base Peak, 100.00% relative	100.00	
199	5.00 - 9.00% of mass 198	6.77	
275	10.00 - 30.00% of mass 198	27.22	
365	Greater than 1.00% of mass 198	3.32	
441	Present, but less than mass 443	16.63	
442	Greater than 40.00% of mass 198	106.57	
443	17.00 - 23.00% of mass 442	20.29	(19.04)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
14987647CAL4	14987647CAL4	050119CALN.B\CAL4.D	05/01/2019	09:13
14987644CAL1	14987644CAL1	050119CALN.B\CAL1.D	05/01/2019	09:30
14987645CAL2	14987645CAL2	050119CALN.B\CAL2.D	05/01/2019	09:46
14987646CAL3	14987646CAL3	050119CALN.B\CAL3.D	05/01/2019	10:02
14987648CAL5	14987648CAL5	050119CALN.B\CAL5.D	05/01/2019	10:19
14987649CAL6	14987649CAL6	050119CALN.B\CAL6.D	05/01/2019	10:35
14987650CAL7	14987650CAL7	050119CALN.B\CAL7.D	05/01/2019	10:51
14987652ICV	14987652ICV	050119CALN.B\ICV.D	05/01/2019	11:08

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146
Lab File ID: 053019.B\DFTPP.D DFTPP Injection Date: 05/30/2019
Instrument ID: 50MSS8 DFTPP Injection Time: 11:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	31.62	
68	Less than 2.00% of mass 69	0.35	(1.02)[1]
69	Mass 69 relative abundance	34.33	
70	Less than 2.00% of mass 69	0.52	(1.51)[1]
127	40.00 - 60.00% of mass 198	40.95	
197	Less than 1.00% of mass 198	0.00	
198	Base Peak, 100.00% relative	100.00	
199	5.00 - 9.00% of mass 198	6.53	
275	10.00 - 30.00% of mass 198	27.67	
365	Greater than 1.00% of mass 198	3.49	
441	Present, but less than mass 443	18.66	
442	Greater than 40.00% of mass 198	116.47	
443	17.00 - 23.00% of mass 442	21.79	(18.71)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
15262842CCV	15262842CCV	053019.B\CCV050.D	05/30/2019	11:51
2320954BLANK	2320954BLANK	053019.B\2320954.D	05/30/2019	20:22
2320955LCS	2320955LCS	053019.B\2320955.D	05/30/2019	20:38

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146
Lab File ID: 051619ICAL.B\DFTPP1.D DFTPP Injection Date: 05/16/2019
Instrument ID: 50MSS9 DFTPP Injection Time: 08:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	45.83	
68	Less than 2.00% of mass 69	0.55	(1.53)[1]
69	Mass 69 relative abundance	35.84	
70	Less than 2.00% of mass 69	0.47	(1.31)[1]
127	40.00 - 60.00% of mass 198	42.76	
197	Less than 1.00% of mass 198	0.54	
198	Base Peak, 100.00% relative	100.00	
199	5.00 - 9.00% of mass 198	7.33	
275	10.00 - 30.00% of mass 198	23.85	
365	Greater than 1.00% of mass 198	3.00	
441	Present, but less than mass 443	18.67	
442	Greater than 40.00% of mass 198	120.35	
443	17.00 - 23.00% of mass 442	22.46	(18.67)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
15078070CAL4	15078070CAL4	051619ICAL.B\CAL4.D	05/16/2019	08:44
15078067CAL1	15078067CAL1	051619ICAL.B\CAL1.D	05/16/2019	09:23
15078068CAL2	15078068CAL2	051619ICAL.B\CAL2.D	05/16/2019	09:38
15078069CAL3	15078069CAL3	051619ICAL.B\CAL3.D	05/16/2019	09:54
15078071CAL5	15078071CAL5	051619ICAL.B\CAL5.D	05/16/2019	10:10
15078072CAL6	15078072CAL6	051619ICAL.B\CAL6.D	05/16/2019	10:26
15078073CAL7	15078073CAL7	051619ICAL.B\CAL7.D	05/16/2019	10:42
15078075ICV	15078075ICV	051619ICAL.B\ICV.D	05/16/2019	10:58

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146
Lab File ID: 060219A.B\DFTPP.D DFTPP Injection Date: 06/02/2019
Instrument ID: 50MSS9 DFTPP Injection Time: 11:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	53.26	
68	Less than 2.00% of mass 69	0.00	(0.00)[1]
69	Mass 69 relative abundance	40.01	
70	Less than 2.00% of mass 69	0.00	(0.00)[1]
127	40.00 - 60.00% of mass 198	40.69	
197	Less than 1.00% of mass 198	0.56	
198	Base Peak, 100.00% relative	100.00	
199	5.00 - 9.00% of mass 198	6.30	
275	10.00 - 30.00% of mass 198	23.40	
365	Greater than 1.00% of mass 198	3.07	
441	Present, but less than mass 443	16.88	
442	Greater than 40.00% of mass 198	95.79	
443	17.00 - 23.00% of mass 442	17.63	(18.41)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
15253810CCV	15253810CCV	060219A.B\CCV050.D	06/02/2019	11:33
SP-1 (3-5)	50225466001	060219A.B\50225466001.D	06/02/2019	15:20
SP-1 (5-7)	50225466002	060219A.B\50225466002.D	06/02/2019	15:36
SP-2 (0-2)	50225466003	060219A.B\50225466003.D	06/02/2019	15:52
SP-2 (2-4)	50225466004	060219A.B\50225466004.D	06/02/2019	16:08
SP-3 (0-2)	50225466005	060219A.B\50225466005.D	06/02/2019	16:24
2320956MS	2320956MS	060219A.B\2320956.D	06/02/2019	16:40
2320957MSD	2320957MSD	060219A.B\2320957.D	06/02/2019	16:56
SP-3 (2-4)	50225466006	060219A.B\50225466006.D	06/02/2019	17:12
SP-4 (6-8)	50225466009	060219A.B\50225466009.D	06/02/2019	17:28
SP-4 (8-9)	50225466010	060219A.B\50225466010.D	06/02/2019	17:44
SP-4 (9-10.5)	50225466011	060219A.B\50225466011.D	06/02/2019	18:00
SP-5 (9-11)	50225466015	060219A.B\50225466015.D	06/02/2019	18:16
SP-5 (11-13)	50225466016	060219A.B\50225466016.D	06/02/2019	18:31
SP-5 (11-13) DUP	50225466017	060219A.B\50225466017.D	06/02/2019	18:47
SP-5 (6-8)	50225466018	060219A.B\50225466018.D	06/02/2019	19:03

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15262842CCV Date Analyzed: 05/30/2019

Instrument ID: 50MSS8 GC Column: Col 1 Time Analyzed: 11:51

Lab File ID: 053019.B\CCV050.D

		AREA ANT	RT	AREA CRY	RT	AREA DCB	RT	AREA NPT	RT
12 HOUR STD		817601	4.921	1913419	8.44	235372	2.118	1347595	3.334
UPPER LIMIT		1635202	5.421	3826838	8.94	470744	2.618	2695190	3.834
LOWER LIMIT		408800.5	4.421	956709.5	7.94	117686	1.618	673797.5	2.834
LAB SAMPLE ID	SAMPLE NO.								
2320954	2320954BLANK	837346	4.921	1928427	8.44	280063	2.124	927414	3.34
2320955	2320955LCS	812138	4.92	1978884	8.446	324428	2.124	1322636	3.34

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
DCB = 1,4-Dichlorobenzene-d4 (IS)
NPT = Naphthalene-d8 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15262842CCV Date Analyzed: 05/30/2019

Instrument ID: 50MSS8 GC Column: Col 1 Time Analyzed: 11:51

Lab File ID: 053019.B\CCV050.D

		AREA PHN	RT	AREA PYL	RT
12 HOUR STD		1670583	6.172	2289184	9.815
UPPER LIMIT		3341166	6.672	4578368	10.315
LOWER LIMIT		835291.5	5.672	1144592	9.315
LAB SAMPLE ID	SAMPLE NO.				
2320954	2320954BLANK	1727028	6.172	2289390	9.821
2320955	2320955LCS	1712971	6.178	2349823	9.821

PHN = Phenanthrene-d10 (IS)
PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15253810CCV Date Analyzed: 06/02/2019

Instrument ID: 50MSS9 GC Column: Col 1 Time Analyzed: 11:33

Lab File ID: 060219A.B\CCV050.D

		AREA ANT	RT	AREA CRY	RT	AREA DCB	RT	AREA NPT	RT
12 HOUR STD		185436	4.756	651791	8.228	50868	1.9	234577	3.146
UPPER LIMIT		370872	5.256	1303582	8.728	101736	2.4	469154	3.646
LOWER LIMIT		92718	4.256	325895.5	7.728	25434	1.4	117288.5	2.646
LAB SAMPLE ID	SAMPLE NO.								
2320956	2320956MS	213088	4.756	422012	8.228	70690	1.906	324774	3.146
2320957	2320957MSD	195250	4.756	400452	8.234	66461	1.906	289025	3.146
50225466001	SP-1 (3-5)	151180	4.756	379486	8.234	48902	1.9	218414	3.14
50225466002	SP-1 (5-7)	208168	4.756	409496	8.234	55111	1.906	256052	3.146
50225466003	SP-2 (0-2)	156071	4.756	386878	8.223	54276	1.906	233895	3.146
50225466004	SP-2 (2-4)	170691	4.756	372140	8.228	56319	1.906	242530	3.146
50225466005	SP-3 (0-2)	191393	4.756	402901	8.228	62039	1.906	285972	3.146
50225466006	SP-3 (2-4)	183167	4.762	375523	8.228	67550	1.906	286225	3.146
50225466009	SP-4 (6-8)	167914	4.762	388266	8.234	59683	1.912	234790	3.152
50225466010	SP-4 (8-9)	168090	4.762	390811	8.234	55169	1.906	244343	3.146
50225466011	SP-4 (9-10.5)	156022	4.762	398655	8.234	53234	1.906	223181	3.146
50225466015	SP-5 (9-11)	174514	4.762	400885	8.234	59291	1.906	265452	3.152
50225466016	SP-5 (11-13)	182882	4.762	380040	8.234	61881	1.906	262187	3.146
50225466017	SP-5 (11-13) DUP	165038	4.762	375540	8.234	55844	1.906	247111	3.146
50225466018	SP-5 (6-8)	205936	4.762	385326	8.234	56947	1.906	273067	3.146

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
DCB = 1,4-Dichlorobenzene-d4 (IS)
NPT = Naphthalene-d8 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15253810CCV Date Analyzed: 06/02/2019

Instrument ID: 50MSS9 GC Column: Col 1 Time Analyzed: 11:33

Lab File ID: 060219A.B\CCV050.D

		AREA PHN	RT	AREA PYL	RT
12 HOUR STD		465700	6.007	786882	9.556
UPPER LIMIT		931400	6.507	1573764	10.056
LOWER LIMIT		232850	5.507	393441	9.056
LAB SAMPLE ID	SAMPLE NO.				
2320956	2320956MS	431546	6.007	482017	9.562
2320957	2320957MSD	415468	6.008	469050	9.568
50225466001	SP-1 (3-5)	347255	6.007	455853	9.568
50225466002	SP-1 (5-7)	455909	6.007	468801	9.574
50225466003	SP-2 (0-2)	349283	6.007	449926	9.556
50225466004	SP-2 (2-4)	386760	6.007	445206	9.562
50225466005	SP-3 (0-2)	380162	6.007	449345	9.562
50225466006	SP-3 (2-4)	381259	6.013	441487	9.568
50225466009	SP-4 (6-8)	372596	6.013	449508	9.568
50225466010	SP-4 (8-9)	380505	6.013	458361	9.568
50225466011	SP-4 (9-10.5)	370910	6.013	453133	9.568
50225466015	SP-5 (9-11)	374410	6.013	462808	9.568
50225466016	SP-5 (11-13)	379312	6.013	429115	9.568
50225466017	SP-5 (11-13) DUP	370543	6.007	424776	9.568
50225466018	SP-5 (6-8)	431571	6.013	433666	9.568

PHN = Phenanthrene-d10 (IS)
PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VI SVOA-1

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS8 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/01/2019 05/01/2019 Calibration Time(s): 09:13 10:51

LAB FILE ID

CAL1 = 050119CALN.B\CAL1.D CAL2 = 050119CALN.B\CAL2.D CAL3 = 050119CALN.B\CAL3.D

CAL4 = 050119CALN.B\CAL4.D CAL5 = 050119CALN.B\CAL5.D CAL6 = 050119CALN.B\CAL6.D

CAL7 = 050119CALN.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
Benzyl alcohol	Averaged	1.21163	1.00956	0.96987	0.85286	0.88024	0.88102
4-Bromophenylphenyl ether	Averaged		0.22397	0.27314	0.23803	0.24866	0.24076
Butylbenzylphthalate	Averaged	0.70590	0.48782	0.59899	0.54307	0.55174	0.53947
4-Chloro-3-methylphenol	Averaged	0.40637	0.35599	0.32926	0.30097	0.30163	0.29866
4-Chloroaniline	Averaged	0.55145	0.47366	0.48514	0.43210	0.43678	0.42489
bis(2-Chloroethoxy)methane	Averaged	0.58590	0.46425	0.45934	0.41167	0.41122	0.40026
bis(2-Chloroethyl) ether	Averaged	1.66756	1.43490	1.37554	1.19611	1.22217	1.20260
bis(2chloro1methylethyl) ether	Averaged	2.87140	2.49474	2.33519	2.00980	2.05236	2.02695
2-Chloronaphthalene	Averaged		1.26282	1.30342	1.17536	1.15818	1.13474
2-Chlorophenol	Averaged	1.83091	1.43311	1.49456	1.29789	1.33496	1.31562
4-Chlorophenylphenyl ether	Averaged		0.75066	0.83916	0.75070	0.74080	0.73350
Dibenzofuran	Averaged		1.78573	2.03591	1.80395	1.79489	1.74354
3,3'-Dichlorobenzidine	Averaged		0.49294	0.53201	0.49848	0.49457	0.46575
2,4-Dichlorophenol	Averaged	0.44907	0.32438	0.35920	0.32264	0.32445	0.31759
Diethylphthalate	Averaged	2.09311	1.49145	1.66183	1.51607	1.51508	1.50398
2,4-Dimethylphenol	Averaged		0.28950	0.34073	0.29971	0.30158	0.29289
Dimethylphthalate	Averaged		1.48979	1.60680	1.45047	1.44653	1.41328
Di-n-butylphthalate	Averaged		1.26756	1.41751	1.27886	1.32759	1.23386
4,6-Dinitro-2-methylphenol	Averaged		0.09678	0.15019	0.13627	0.14495	0.13711
2,4-Dinitrophenol	Averaged			0.23372	0.23345	0.24060	0.23831
2,4-Dinitrotoluene	Averaged	0.63249	0.45012	0.51086	0.46556	0.46074	0.45601
2,6-Dinitrotoluene	Averaged	0.45650	0.33351	0.37098	0.32990	0.33399	0.32834
Di-n-octylphthalate	Averaged	1.47009	1.19017	1.27476	1.19476	1.20176	1.20065
bis(2-Ethylhexyl)phthalate	Averaged	1.04031	0.73295	0.89268	0.82087	0.82413	0.80524
Hexachloro-1,3-butadiene	Averaged		0.22189	0.26737	0.23876	0.24175	0.23421
Hexachlorobenzene	Averaged		0.27478	0.31039	0.27586	0.28783	0.27505
Hexachlorocyclopentadiene	Quadratic	0.77157	1.20665	0.61763	0.56285	0.55844	0.54927
Hexachloroethane	Averaged	0.79686	0.62400	0.64573	0.57212	0.57828	0.56566
Isophorone	Averaged	0.90107	0.79947	0.72578	0.64542	0.64881	0.63794
2-Methylphenol(o-Cresol)	Averaged	1.62276	1.39558	1.30716	1.17055	1.19584	1.17033
3&4-Methylphenol(m&p Cresol)	Averaged	1.76829	1.44409	1.43343	1.24830	1.27230	1.25969
2-Nitroaniline	Wt Linear		0.67482	0.35305	0.31607	0.32202	0.31668
3-Nitroaniline	Averaged	0.44515	0.36888	0.37527	0.34461	0.34354	0.33851
4-Nitroaniline	Averaged	0.48501	0.41210	0.39058	0.35266	0.35865	0.34105
Nitrobenzene	Averaged	0.47574	0.43912	0.38328	0.34252	0.34643	0.33734

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-2

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS8 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/01/2019 05/01/2019 Calibration Time(s): 09:13 10:51

LAB FILE ID

CAL1 = 050119CALN.B\CAL1.D CAL2 = 050119CALN.B\CAL2.D CAL3 = 050119CALN.B\CAL3.D

CAL4 = 050119CALN.B\CAL4.D CAL5 = 050119CALN.B\CAL5.D CAL6 = 050119CALN.B\CAL6.D

CAL7 = 050119CALN.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
2-Nitrophenol	Averaged	0.25334	0.19325	0.20801	0.19198	0.19131	0.19030
4-Nitrophenol	Averaged	0.24206	0.24054	0.20835	0.18991	0.18931	0.18991
N-Nitroso-di-n-propylamine	Averaged	1.34897	1.17708	1.09694	0.97401	0.98030	0.97064
N-Nitrosodiphenylamine	Averaged		0.56772	0.66352	0.58326	0.61580	0.57999
Pentachlorophenol	Averaged			0.19915	0.18739	0.19520	0.18925
Phenol	Averaged		2.08089	1.75250	1.56274	1.55719	1.55124
2,4,5-Trichlorophenol	Averaged		0.46866	0.51125	0.46641	0.47618	0.47397
2,4,6-Trichlorophenol	Averaged	0.59471	0.45198	0.51693	0.44864	0.43388	0.42755
2-Fluorophenol (S)	Averaged	1.58991	1.28724	1.30239	1.13738	1.17188	1.14790
Nitrobenzene-d5 (S)	Averaged		0.45971	0.38581	0.35946	0.35772	0.34942
Phenol-d5 (S)	Averaged	2.14414	1.82752	1.74183	1.53535	1.56713	1.55216
2,4,6-Tribromophenol (S)	Averaged	0.20034	0.14111	0.16860	0.15182	0.15717	0.15221

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-3

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS8 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/01/2019 05/01/2019 Calibration Time(s): 09:13 10:51

LAB FILE ID

CAL1 = 050119CALN.B\CAL1.D CAL2 = 050119CALN.B\CAL2.D CAL3 = 050119CALN.B\CAL3.D

CAL4 = 050119CALN.B\CAL4.D CAL5 = 050119CALN.B\CAL5.D CAL6 = 050119CALN.B\CAL6.D

CAL7 = 050119CALN.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
Benzyl alcohol	Averaged	0.85984	13.52842			0.95215	
4-Bromophenylphenyl ether	Averaged	0.24130	6.66223			0.24431	
Butylbenzylphthalate	Averaged	0.55537	12.06338			0.56891	
4-Chloro-3-methylphenol	Averaged	0.29754	12.56224			0.32720	
4-Chloroaniline	Averaged	0.41887	10.27303			0.46041	
bis(2-Chloroethoxy)methane	Averaged	0.40129	14.85616			0.44770	
bis(2-Chloroethyl) ether	Averaged	1.17100	13.71282			1.32427	
bis(2chloro1methylethyl) ether	Averaged	1.99153	14.78250			2.25457	
2-Chloronaphthalene	Averaged	1.11145	6.35122			1.19099	
2-Chlorophenol	Averaged	1.30941	13.35193			1.43092	
4-Chlorophenylphenyl ether	Averaged	0.72828	5.43575			0.75718	
Dibenzofuran	Averaged	1.68535	6.62828			1.80823	
3,3'-Dichlorobenzidine	Averaged	0.46091	5.23250			0.49078	
2,4-Dichlorophenol	Averaged	0.31612	13.99211			0.34478	
Diethylphthalate	Averaged	1.46953	13.88616			1.60729	
2,4-Dimethylphenol	Averaged	0.29187	6.34450			0.30271	
Dimethylphthalate	Averaged	1.36804	5.58120			1.46249	
Di-n-butylphthalate	Averaged	1.11615	7.85664			1.27359	
4,6-Dinitro-2-methylphenol	Averaged	0.13892	14.18024			0.13404	
2,4-Dinitrophenol	Averaged	0.24161	1.60099			0.23754	
2,4-Dinitrotoluene	Averaged	0.45442	13.48604			0.49003	
2,6-Dinitrotoluene	Averaged	0.32777	13.40364			0.35443	
Di-n-octylphthalate	Averaged	1.08071	9.75390			1.23041	
bis(2-Ethylhexyl)phthalate	Averaged	0.80034	11.58909			0.84522	
Hexachloro-1,3-butadiene	Averaged	0.23276	6.37726			0.23946	
Hexachlorobenzene	Averaged	0.27370	5.10166			0.28293	
Hexachlorocyclopentadiene	Quadratic	0.54454		0.99641	-0.0248138	0.59176	-0.01109
Hexachloroethane	Averaged	0.56448	13.47517			0.62102	
Isophorone	Averaged	0.63918	14.32673			0.71395	
2-Methylphenol(o-Cresol)	Averaged	1.16478	13.25474			1.28957	
3&4-Methylphenol(m&p Cresol)	Averaged	1.25111	13.77903			1.38246	
2-Nitroaniline	Wt Linear	0.31584		0.99914	0.03111990	0.30412	
3-Nitroaniline	Averaged	0.33422	10.67037			0.36431	
4-Nitroaniline	Averaged	0.34332	13.53707			0.38334	
Nitrobenzene	Averaged	0.33502	14.83011			0.37992	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-4

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS8 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/01/2019 05/01/2019 Calibration Time(s): 09:13 10:51

LAB FILE ID

CAL1 = 050119CALN.B\CAL1.D CAL2 = 050119CALN.B\CAL2.D CAL3 = 050119CALN.B\CAL3.D

CAL4 = 050119CALN.B\CAL4.D CAL5 = 050119CALN.B\CAL5.D CAL6 = 050119CALN.B\CAL6.D

CAL7 = 050119CALN.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
2-Nitrophenol	Averaged	0.19154	11.39424			0.20282	
4-Nitrophenol	Averaged	0.18500	12.08524			0.20644	
N-Nitroso-di-n-propylamine	Averaged	0.96359	13.63271			1.07308	
N-Nitrosodiphenylamine	Averaged	0.57188	6.15186			0.59703	
Pentachlorophenol	Averaged	0.19029	2.50463			0.19226	
Phenol	Averaged	1.52010	13.01543			1.67078	
2,4,5-Trichlorophenol	Averaged	0.44877	4.33701			0.47421	
2,4,6-Trichlorophenol	Averaged	0.43450	13.05975			0.47260	
2-Fluorophenol (S)	Averaged	1.14399	13.01767			1.25439	
Nitrobenzene-d5 (S)	Averaged	0.35081	11.27703			0.37715	
Phenol-d5 (S)	Averaged	1.54186	13.29225			1.70143	
2,4,6-Tribromophenol (S)	Averaged	0.15089	12.15119			0.16031	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-1

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS9 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/16/2019 05/16/2019 Calibration Time(s): 08:44 10:42

LAB FILE ID

CAL1 = 051619ICAL.B\CAL1.D CAL2 = 051619ICAL.B\CAL2.D CAL3 = 051619ICAL.B\CAL3.D

CAL4 = 051619ICAL.B\CAL4.D CAL5 = 051619ICAL.B\CAL5.D CAL6 = 051619ICAL.B\CAL6.D

CAL7 = 051619ICAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
Benzyl alcohol	Averaged		1.89992	1.69389	1.59224	1.55320	1.47979
4-Bromophenylphenyl ether	Averaged		0.28651	0.24517	0.21429	0.21616	0.22102
Butylbenzylphthalate	Averaged		0.71449	0.58602	0.54495	0.54804	0.53921
4-Chloro-3-methylphenol	Averaged		0.44776	0.40974	0.36145	0.36642	0.35934
4-Chloroaniline	Averaged	0.63007	0.57778	0.52986	0.45423	0.47312	0.46195
bis(2-Chloroethoxy)methane	Averaged		0.59298	0.52496	0.46057	0.47476	0.45474
bis(2-Chloroethyl) ether	Averaged		1.76175	1.66091	1.52128	1.50045	1.44811
bis(2chloro1methylethyl) ether	Averaged	4.72427	4.33768	3.73217	3.49908	3.48917	3.28444
2-Chloronaphthalene	Averaged		1.43287	1.29180	1.16938	1.14386	1.12597
2-Chlorophenol	Averaged		1.97419	1.61896	1.50864	1.54201	1.42194
4-Chlorophenylphenyl ether	Averaged		0.92745	0.83224	0.70362	0.72876	0.71550
Dibenzofuran	Averaged		2.23608	2.00627	1.72322	1.76003	1.73004
3,3'-Dichlorobenzidine	Averaged	0.71778	0.59067	0.54784	0.52128	0.51451	0.50519
2,4-Dichlorophenol	Averaged	0.41974	0.39064	0.36580	0.31125	0.32543	0.30876
Diethylphthalate	Averaged		1.74980	1.66030	1.36948	1.40190	1.38832
2,4-Dimethylphenol	Averaged	0.44289	0.41992	0.36189	0.32019	0.33186	0.32025
Dimethylphthalate	Averaged		1.70414	1.53915	1.34387	1.34845	1.30631
Di-n-butylphthalate	Averaged	1.64752	1.49645	1.31815	1.17037	1.17436	1.19339
4,6-Dinitro-2-methylphenol	Averaged	0.17445	0.17966	0.15681	0.14065	0.14659	0.14069
2,4-Dinitrophenol	Averaged	0.24785	0.23479	0.24275	0.23173	0.22787	0.23109
2,4-Dinitrotoluene	Averaged		0.53344	0.51869	0.44582	0.45811	0.44960
2,6-Dinitrotoluene	Averaged	0.40587	0.37489	0.36521	0.30921	0.32577	0.31873
Di-n-octylphthalate	Averaged		1.65564	1.38498	1.16223	1.16560	1.22629
bis(2-Ethylhexyl)phthalate	Averaged	1.10460	1.03906	0.93073	0.79668	0.79603	0.79954
Hexachloro-1,3-butadiene	Averaged	0.31538	0.29023	0.25339	0.23211	0.23503	0.23205
Hexachlorobenzene	Averaged		0.34581	0.28847	0.25640	0.26571	0.25664
Hexachlorocyclopentadiene	Averaged	0.68706	0.61362	0.52678	0.50487	0.50338	0.50298
Hexachloroethane	Averaged		0.86300	0.70420	0.66345	0.66611	0.63130
Isophorone	Averaged		0.97470	0.89437	0.78627	0.81137	0.77598
2-Methylphenol(o-Cresol)	Averaged		1.78375	1.63062	1.49444	1.51887	1.41177
3&4-Methylphenol(m&p Cresol)	Averaged		1.89992	1.69389	1.59224	1.55320	1.47979
2-Nitroaniline	Averaged		0.54033	0.50446	0.45975	0.46519	0.45970
3-Nitroaniline	Averaged		0.40244	0.37806	0.34319	0.35247	0.33461
4-Nitroaniline	Averaged		0.42369	0.40698	0.36294	0.34808	0.35948
Nitrobenzene	Averaged		0.54423	0.49575	0.42864	0.44448	0.42422

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-2

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS9 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/16/2019 05/16/2019 Calibration Time(s): 08:44 10:42

LAB FILE ID

CAL1 = 051619ICAL.B\CAL1.D CAL2 = 051619ICAL.B\CAL2.D CAL3 = 051619ICAL.B\CAL3.D

CAL4 = 051619ICAL.B\CAL4.D CAL5 = 051619ICAL.B\CAL5.D CAL6 = 051619ICAL.B\CAL6.D

CAL7 = 051619ICAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
2-Nitrophenol	Averaged	0.26073	0.23681	0.22135	0.18834	0.19857	0.19178
4-Nitrophenol	Averaged	0.30136	0.29292	0.27581	0.24444	0.24428	0.23640
N-Nitroso-di-n-propylamine	Averaged		1.62545	1.36590	1.26288	1.30700	1.22321
N-Nitrosodiphenylamine	Averaged		0.75743	0.66526	0.57815	0.57933	0.58428
Pentachlorophenol	Averaged	0.22076	0.21424	0.19150	0.16098	0.16606	0.16590
Phenol	Averaged		2.47966	2.11829	1.99446	2.00522	1.87559
2,4,5-Trichlorophenol	Averaged		0.58761	0.53544	0.45687	0.45706	0.44111
2,4,6-Trichlorophenol	Averaged		0.52884	0.49623	0.43297	0.44081	0.42176
2-Fluorophenol (S)	Averaged	1.99410	1.65986	1.60833	1.43150	1.43674	1.40719
Nitrobenzene-d5 (S)	Averaged		0.54342	0.49647	0.43938	0.44877	0.43881
Phenol-d5 (S)	Averaged		2.38579	2.12793	1.92283	1.94113	1.80265
2,4,6-Tribromophenol (S)	Averaged	0.20082	0.19422	0.16163	0.14613	0.15408	0.14609

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-3

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS9 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/16/2019 05/16/2019 Calibration Time(s): 08:44 10:42

LAB FILE ID

CAL1 = 051619ICAL.B\CAL1.D CAL2 = 051619ICAL.B\CAL2.D CAL3 = 051619ICAL.B\CAL3.D

CAL4 = 051619ICAL.B\CAL4.D CAL5 = 051619ICAL.B\CAL5.D CAL6 = 051619ICAL.B\CAL6.D

CAL7 = 051619ICAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
Benzyl alcohol	Averaged	1.51881	9.50130			1.62298	
4-Bromophenylphenyl ether	Averaged	0.21892	12.07917			0.23368	
Butylbenzylphthalate	Averaged	0.52008	12.41092			0.57547	
4-Chloro-3-methylphenol	Averaged	0.35644	9.69459			0.38352	
4-Chloroaniline	Averaged	0.45118	13.74882			0.51117	
bis(2-Chloroethoxy)methane	Averaged	0.45368	11.24601			0.49362	
bis(2-Chloroethyl) ether	Averaged	1.47036	7.92583			1.56048	
bis(2chloro1methylethyl) ether	Averaged	3.41520	14.26338			3.78315	
2-Chloronaphthalene	Averaged	1.06456	11.16332			1.20474	
2-Chlorophenol	Averaged	1.47658	12.52731			1.59039	
4-Chlorophenylphenyl ether	Averaged	0.69886	12.04704			0.76774	
Dibenzofuran	Averaged	1.69140	11.71424			1.85784	
3,3'-Dichlorobenzidine	Averaged	0.48110	14.46410			0.55405	
2,4-Dichlorophenol	Averaged	0.30695	13.08136			0.34694	
Diethylphthalate	Averaged	1.34716	11.63271			1.48616	
2,4-Dimethylphenol	Averaged	0.32069	14.34191			0.35967	
Dimethylphthalate	Averaged	1.29015	11.58139			1.42201	
Di-n-butylphthalate	Averaged	1.18298	14.47456			1.31189	
4,6-Dinitro-2-methylphenol	Averaged	0.14386	10.53875			0.15467	
2,4-Dinitrophenol	Averaged	0.23116	3.08466			0.23532	
2,4-Dinitrotoluene	Averaged	0.43970	8.61645			0.47422	
2,6-Dinitrotoluene	Averaged	0.31186	10.89015			0.34451	
Di-n-octylphthalate	Averaged	1.19620	14.89115			1.29849	
bis(2-Ethylhexyl)phthalate	Averaged	0.79771	14.71176			0.89491	
Hexachloro-1,3-butadiene	Averaged	0.22978	13.34811			0.25542	
Hexachlorobenzene	Averaged	0.25912	12.56826			0.27869	
Hexachlorocyclopentadiene	Averaged	0.49308	13.54522			0.54740	
Hexachloroethane	Averaged	0.66517	11.97075			0.69887	
Isophorone	Averaged	0.77576	9.70630			0.83641	
2-Methylphenol(o-Cresol)	Averaged	1.45124	8.85690			1.54845	
3&4-Methylphenol(m&p Cresol)	Averaged	1.51881	9.50130			1.62298	
2-Nitroaniline	Averaged	0.43536	7.96674			0.47747	
3-Nitroaniline	Averaged	0.33312	7.70488			0.35731	
4-Nitroaniline	Averaged	0.32497	10.02171			0.37102	
Nitrobenzene	Averaged	0.42772	10.59243			0.46084	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-4

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS9 GC Column: Col 1 SDG No.: 50225466

Calibration Date(s): 05/16/2019 05/16/2019 Calibration Time(s): 08:44 10:42

LAB FILE ID

CAL1 = 051619ICAL.B\CAL1.D CAL2 = 051619ICAL.B\CAL2.D CAL3 = 051619ICAL.B\CAL3.D

CAL4 = 051619ICAL.B\CAL4.D CAL5 = 051619ICAL.B\CAL5.D CAL6 = 051619ICAL.B\CAL6.D

CAL7 = 051619ICAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
2-Nitrophenol	Averaged	0.19218	13.03172			0.21282	
4-Nitrophenol	Averaged	0.23083	10.99514			0.26086	
N-Nitroso-di-n-propylamine	Averaged	1.25156	11.10690			1.33933	
N-Nitrosodiphenylamine	Averaged	0.57053	12.02701			0.62250	
Pentachlorophenol	Averaged	0.16653	13.70991			0.18371	
Phenol	Averaged	1.91595	10.64182			2.06486	
2,4,5-Trichlorophenol	Averaged	0.43479	12.72789			0.48548	
2,4,6-Trichlorophenol	Averaged	0.41025	10.27999			0.45514	
2-Fluorophenol (S)	Averaged	1.40033	13.85575			1.56258	
Nitrobenzene-d5 (S)	Averaged	0.43810	9.29083			0.46749	
Phenol-d5 (S)	Averaged	1.85521	10.79211			2.00592	
2,4,6-Tribromophenol (S)	Averaged	0.14720	14.26096			0.16431	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

15262842CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/30/2019 Time: 11:51

Instrument ID: 50MSS8 GC Column: Col 1 Init. Calib. Date(s): 03/31/2019 05/01/2019

Lab File ID: 053019.B\CCV050.D Init. Calib. Time(s): 15:10 10:51

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Benzyl alcohol	Averaged	0.95215	0.85438	0.0500	-10.2677	20.0000
4-Bromophenylphenyl ether	Averaged	0.24431	0.23713	0.0500	-2.9369	20.0000
Butylbenzylphthalate	Averaged	0.56891	0.50892	0.0500	-10.5448	20.0000
4-Chloro-3-methylphenol	Averaged	0.32720	0.29894	0.0500	-8.6369	20.0000
4-Chloroaniline	Averaged	0.46041	0.42882	0.0500	-6.8610	20.0000
bis(2-Chloroethoxy)methane	Averaged	0.44770	0.39608	0.0500	-11.5309	20.0000
bis(2-Chloroethyl) ether	Averaged	1.32427	1.09093	0.0500	-17.6202	20.0000
bis(2chloro1methylethyl) ether	Averaged	2.25457	1.81441	0.0500	-19.5227	20.0000
2-Chloronaphthalene	Averaged	1.19099	1.15741	0.0500	-2.8201	20.0000
2-Chlorophenol	Averaged	1.43092	1.28138	0.0500	-10.4509	20.0000
4-Chlorophenylphenyl ether	Averaged	0.75718	0.70966	0.0500	-6.2760	20.0000
Dibenzofuran	Averaged	1.80823	1.75050	0.0500	-3.1926	20.0000
3,3'-Dichlorobenzidine	Averaged	0.49078	0.51267	0.0500	4.4608	20.0000
2,4-Dichlorophenol	Averaged	0.34478	0.31945	0.0500	-7.3470	20.0000
Diethylphthalate	Averaged	1.60729	1.41464	0.0500	-11.9859	20.0000
2,4-Dimethylphenol	Averaged	0.30271	0.26677	0.0500	-11.8743	20.0000
Dimethylphthalate	Averaged	1.46249	1.40247	0.0500	-4.1041	20.0000
Di-n-butylphthalate	Averaged	1.27359	1.20499	0.0500	-5.3862	20.0000
4,6-Dinitro-2-methylphenol	Averaged	0.13404	0.13687	0.0500	2.1100	20.0000
2,4-Dinitrophenol	Averaged	0.23754	0.22159	0.0500	-6.7136	20.0000
2,4-Dinitrotoluene	Averaged	0.49003	0.45992	0.0500	-6.1435	20.0000
2,6-Dinitrotoluene	Averaged	0.35443	0.33233	0.0500	-6.2356	20.0000
Di-n-octylphthalate	Averaged	1.23041	1.12492	0.0500	-8.5743	20.0000
bis(2-Ethylhexyl)phthalate	Averaged	0.84522	0.74119	0.0500	-12.3084	20.0000
Hexachloro-1,3-butadiene	Averaged	0.23946	0.22365	0.0500	-6.6027	20.0000
Hexachlorobenzene	Averaged	0.28293	0.27811	0.0500	-1.7062	20.0000
Hexachlorocyclopentadiene	Quadratic	50	30.40684	0.0500	-39.1863	20.0000
Hexachloroethane	Averaged	0.62102	0.58407	0.0500	-5.9501	20.0000
Isophorone	Averaged	0.71395	0.57526	0.0500	-19.4262	20.0000
2-Methylphenol(o-Cresol)	Averaged	1.28957	1.20555	0.0500	-6.5154	20.0000
3&4-Methylphenol(m&p Cresol)	Averaged	1.38246	1.28053	0.0500	-7.3728	20.0000
2-Nitroaniline	Wt Linear	50	49.67676	0.0500	-0.6465	20.0000
3-Nitroaniline	Averaged	0.36431	0.34816	0.0500	-4.4339	20.0000
4-Nitroaniline	Averaged	0.38334	0.35950	0.0500	-6.2182	20.0000
Nitrobenzene	Averaged	0.37992	0.25100	0.0500	-33.9326	20.0000
2-Nitrophenol	Averaged	0.20282	0.19849	0.0500	-2.1327	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV FULL SCAN - FORM VII SVOA-2
MSSV FULL SCAN CONTINUING CALIBRATION DATA

15262842CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/30/2019 Time: 11:51

Instrument ID: 50MSS8 GC Column: Col 1 Init. Calib. Date(s): 03/31/2019 05/01/2019

Lab File ID: 053019.B\CCV050.D Init. Calib. Time(s): 15:10 10:51

SDG No.: 50225466

COMPOUND	CURVE	$\overline{RRF}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
4-Nitrophenol	Averaged	0.20644	0.17900	0.0500	-13.2912	20.0000
N-Nitroso-di-n-propylamine	Averaged	1.07308	0.97321	0.0500	-9.3066	20.0000
N-Nitrosodiphenylamine	Averaged	0.59703	0.59129	0.0500	-0.9604	20.0000
Pentachlorophenol	Averaged	0.19226	0.16117	0.0500	-16.1694	20.0000
Phenol	Averaged	1.67078	1.49333	0.0500	-10.6208	20.0000
2,4,5-Trichlorophenol	Averaged	0.47421	0.44241	0.0500	-6.7048	20.0000
2,4,6-Trichlorophenol	Averaged	0.47260	0.42420	0.0500	-10.2413	20.0000
2-Fluorophenol (S)	Averaged	1.25439	1.45931	0.0500	16.3369	20.0000
Nitrobenzene-d5 (S)	Averaged	0.37715	0.26336	0.0500	-30.1711	20.0000
Phenol-d5 (S)	Averaged	1.70143	1.49680	0.0500	-12.0269	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.16031	0.15026	0.0500	-6.2692	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

15253810CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 06/02/2019 Time: 11:33

Instrument ID: 50MSS9 GC Column: Col 1 Init. Calib. Date(s): 05/16/2019 05/16/2019

Lab File ID: 060219A.B\CCV050.D Init. Calib. Time(s): 08:44 10:42

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Benzyl alcohol	Averaged	1.62298	1.89464	0.0500	16.7390	20.0000
4-Bromophenylphenyl ether	Averaged	0.23368	0.22236	0.0500	-4.8448	20.0000
Butylbenzylphthalate	Averaged	0.57547	0.47936	0.0500	-16.7011	20.0000
4-Chloro-3-methylphenol	Averaged	0.38352	0.48769	0.0500	27.1599	20.0000
4-Chloroaniline	Averaged	0.51117	0.51086	0.0500	-0.0605	20.0000
bis(2-Chloroethoxy)methane	Averaged	0.49362	0.54006	0.0500	9.4090	20.0000
bis(2-Chloroethyl) ether	Averaged	1.56048	1.63666	0.0500	4.8820	20.0000
bis(2chloro1methylethyl) ether	Averaged	3.78315	4.69765	0.0500	24.1731	20.0000
2-Chloronaphthalene	Averaged	1.20474	1.07612	0.0500	-10.6760	20.0000
2-Chlorophenol	Averaged	1.59039	1.56502	0.0500	-1.5949	20.0000
4-Chlorophenylphenyl ether	Averaged	0.76774	0.80739	0.0500	5.1648	20.0000
Dibenzofuran	Averaged	1.85784	1.91486	0.0500	3.0693	20.0000
3,3'-Dichlorobenzidine	Averaged	0.55405	0.53868	0.0500	-2.7741	20.0000
2,4-Dichlorophenol	Averaged	0.34694	0.33812	0.0500	-2.5409	20.0000
Diethylphthalate	Averaged	1.48616	1.61489	0.0500	8.6621	20.0000
2,4-Dimethylphenol	Averaged	0.35967	0.32361	0.0500	-10.0261	20.0000
Dimethylphthalate	Averaged	1.42201	1.45662	0.0500	2.4337	20.0000
Di-n-butylphthalate	Averaged	1.31189	1.26314	0.0500	-3.7160	20.0000
4,6-Dinitro-2-methylphenol	Averaged	0.15467	0.15374	0.0500	-0.6058	20.0000
2,4-Dinitrophenol	Averaged	0.23532	0.25378	0.0500	7.8474	20.0000
2,4-Dinitrotoluene	Averaged	0.47422	0.54348	0.0500	14.6041	20.0000
2,6-Dinitrotoluene	Averaged	0.34451	0.35640	0.0500	3.4528	20.0000
Di-n-octylphthalate	Averaged	1.29849	1.16940	0.0500	-9.9419	20.0000
bis(2-Ethylhexyl)phthalate	Averaged	0.89491	0.73773	0.0500	-17.5634	20.0000
Hexachloro-1,3-butadiene	Averaged	0.25542	0.26333	0.0500	3.0941	20.0000
Hexachlorobenzene	Averaged	0.27869	0.27258	0.0500	-2.1933	20.0000
Hexachlorocyclopentadiene	Averaged	0.54740	0.36558	0.0500	-33.2154	20.0000
Hexachloroethane	Averaged	0.69887	0.70771	0.0500	1.2655	20.0000
Isophorone	Averaged	0.83641	0.97155	0.0500	16.1574	20.0000
2-Methylphenol(o-Cresol)	Averaged	1.54845	1.67033	0.0500	7.8712	20.0000
3&4-Methylphenol(m&p Cresol)	Averaged	1.62298	1.89464	0.0500	16.7390	20.0000
2-Nitroaniline	Averaged	0.47747	0.53303	0.0500	11.6367	20.0000
3-Nitroaniline	Averaged	0.35731	0.37317	0.0500	4.4386	20.0000
4-Nitroaniline	Averaged	0.37102	0.40915	0.0500	10.2762	20.0000
Nitrobenzene	Averaged	0.46084	0.48728	0.0500	5.7367	20.0000
2-Nitrophenol	Averaged	0.21282	0.19358	0.0500	-9.0405	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV FULL SCAN - FORM VII SVOA-2
MSSV FULL SCAN CONTINUING CALIBRATION DATA

15253810CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 06/02/2019 Time: 11:33

Instrument ID: 50MSS9 GC Column: Col 1 Init. Calib. Date(s): 05/16/2019 05/16/2019

Lab File ID: 060219A.B\CCV050.D Init. Calib. Time(s): 08:44 10:42

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
4-Nitrophenol	Averaged	0.26086	0.32096	0.0500	23.0376	20.0000
N-Nitroso-di-n-propylamine	Averaged	1.33933	1.65633	0.0500	23.6686	20.0000
N-Nitrosodiphenylamine	Averaged	0.62250	0.52924	0.0500	-14.9818	20.0000
Pentachlorophenol	Averaged	0.18371	0.15028	0.0500	-18.1954	20.0000
Phenol	Averaged	2.06486	2.35892	0.0500	14.2411	20.0000
2,4,5-Trichlorophenol	Averaged	0.48548	0.46224	0.0500	-4.7856	20.0000
2,4,6-Trichlorophenol	Averaged	0.45514	0.43291	0.0500	-4.8852	20.0000
2-Fluorophenol (S)	Averaged	1.56258	1.39339	0.0500	-10.8273	20.0000
Nitrobenzene-d5 (S)	Averaged	0.46749	0.48717	0.0500	4.2085	20.0000
Phenol-d5 (S)	Averaged	2.00592	2.17900	0.0500	8.6285	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.16431	0.13599	0.0500	-17.2368	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

Prep Log Report

Batch Information: OEXT 502967 8270 SCAN (S)

Template Version: EF-IN-Q-388-Rev.03 (23Jun2017)

Prep Method	EPA 3546	Analysis Method	EPA 8270	Instrument	50BALJ	Extracted By	MJT
Extracted Date/Time	05/29/2019 09:29:43:853	Spiked By	KRM	Spiked By Date/Time	05/29/2019 09:25:14:290	Vialed By	KRM
Vialed By Date	05/29/2019 15:54:26:794	Methylene Chloride	208699	Ottawa Sand	199033	Sodium Sulfate	202028
Filter Paper	78278	3:1 Methylene Chloride/Acetone	207860	Reviewed By		Reviewed By Date	
Batch Notes							

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Sample Notes	8270C-SPK (mL)	8270C-SS (mL)
8270SCNS_P	BLANK	**2320954**	30.2	1			177522 (1)
8270SCNS_P	LCS	**2320955**	30	1		194954 (1)	177522 (1)
8270SCNS_P	PS	**50225466001**	30	1			177522 (1)
8270SCNS_P	PS	**50225466002**	30.1	1			177522 (1)
8270SCNS_P	PS	**50225466003**	30.2	1			177522 (1)
8270SCNS_P	PS	**50225466004**	30.3	1			177522 (1)
8270SCNS_P	RQS	**50225466005**	30.3	1			177522 (1)
8270SCNS_P	MS	**2320956**	30.1	1		194954 (1)	177522 (1)
8270SCNS_P	MSD	**2320957**	30	1		194954 (1)	177522 (1)
8270SCNS_P	PS	**50225466006**	30.2	1			177522 (1)
8270SCNS_P	PS	**50225466009**	30.3	1			177522 (1)
8270SCNS_P	PS	**50225466010**	30	1			177522 (1)
8270SCNS_P	PS	**50225466011**	30.4	1			177522 (1)
8270SCNS_P	PS	**50225466015**	30.2	1			177522 (1)
8270SCNS_P	PS	**50225466016**	30.3	1			177522 (1)
8270SCNS_P	PS	**50225466017**	30.3	1			177522 (1)
8270SCNS_P	PS	**50225466018**	30.2	1			177522 (1)
8270SCNS_P	PS	**50225973018**	30	1			177522 (1)
8270SCNS_P	PS	**50225973019**	30	1			177522 (1)
8270SCNS_P	PS	**50225973020**	30.2	1			177522 (1)

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Sample Notes	8270C-SPK (mL)	8270C-SS (mL)
8270SCNS_P	PS	**50225973021**	30.2	5			177522 (1)
8270SCNS_P	PS	**50225973022**	30	1			177522 (1)
8270SCNS_P	PS	**50225973023**	30.1	1			205662 (1)
8270SCNS_P	PS	**50225973024**	30.2	5			205662 (1)

Standard Notes:

177522: Sim/Scan Combo Surr Stock (12) **194954: 8270 combo spike (7)** **205662: Sim/Scan Combo Surr Stock (10) 25 mL**

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss8.i
Column .50um DB-5ms 30m X 0.25mm He
Misc. Prep Info [L]: MeCl2 Lot #173082
Misc. Prep Info [S]: MeCl2 lot #173082
ISTD lot: 202139:1
Lot:
Tune std: _____

Method: Semivolatile REPORT SW-846 Method 8
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/dftpp.d	TUNE,192529:1	L/28669	DFTPP	1	m625tune	5/01/19	09:04 ✓	JCM	good
1/cal4.d	CAL4,199453:1	L/28669	CALIB_4	1	m8270new	5/01/19	09:13	JCM	
1/cal1.d	CAL1,199450:1	L/28669	CALIB_1	1	m8270new	5/01/19	09:30	JCM	
1/cal2.d	CAL2,199451:1	L/28669	SAMPLE	1	m8270new	5/01/19	09:46	JCM	
1/cal3.d	CAL3,199452:1	L/28669	CALIB_3	1	m8270new	5/01/19	10:02	JCM	
1/cal5.d	CAL5,199454:1	L/28669	CALIB_5	1	m8270new	5/01/19	10:19	JCM	
1/cal6.d	CAL6,199455:1	L/28669	CALIB_6	1	m8270new	5/01/19	10:35	JCM	
1/cal7.d	CAL7,199456:1	L/28669	CALIB_7	1	m8270new	5/01/19	10:51	JCM	
1/icv.d	ICV,199588:1	L/28669	~~LCS~~ ICV	1	m8270new	5/01/19	11:08	JCM	
1/2295546.d	2295546	L/28638	BLANK	1	m8270new	5/01/19	12:06	JCM	
1/2295547.d	2295547	L/28638	LCS	1	m8270new	5/01/19	12:22	JCM	
1/50222843001.d	50222843001	S/28638	SAMPLE	1	m8270new	5/01/19	12:38	JCM	
1/2295548.d	2295548	S/28638	MS	1	m8270new	5/01/19	12:55	JCM	
1/50223338001.d	50223338001	S/28638	SAMPLE	1	m8270new	5/01/19	13:11	JCM	
1/50223337001.d	50223337001	S/28638	SAMPLE	1	m8270new	5/01/19	13:27 ✓	JCM	

File Path 1: \\192.168.50.6\chem\50mss8.i\050119caln.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 07:23 05/07/2019

Reviewed By/Date: _____ Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss9.i
Column .50um DB-5ms 30m X 0.25mm He — Method: Semivolatile REPORT SW-846 Method 8
Misc. Prep Info [L]: MeCl2 Lot #173082
Misc. Prep Info [S]: MeCl2 lot #173082
ISTD lot: 202139:1 — Surr. lot:
Lot:
Tune std: _____ — Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/dftpp1.d	TUNE,192529:1	L/28767	DFTPP	1	m625tune	5/16/19	08:01 ✓	JCM	good
1/cal4.d	CAL4,199453:1	L/28767	CALIB_4	1	m8270new	5/16/19	08:44	JCM	
1/cal1.d	CAL1,199450:1	L/28767	CALIB_1	1	m8270new	5/16/19	09:23	JCM	
1/cal2.d	CAL2,199451:1	L/28767	CALIB_2	1	m8270new	5/16/19	09:38	JCM	
1/cal3.d	CAL3,199452:1	L/28767	CALIB_3	1	m8270new	5/16/19	09:54	JCM	
1/cal5.d	CAL5,199454:1	L/28767	CALIB_5	1	m8270new	5/16/19	10:10	JCM	
1/cal6.d	CAL6,199455:1	L/28767	CALIB_6	1	m8270new	5/16/19	10:26	JCM	
1/cal7.d	CAL7,199456:1	L/28767	CALIB_7	1	m8270new	5/16/19	10:42	JCM	
1/icv.d	ICV,199588:1	L/28767	~~LCS~~ ICV	1	m8270new	5/16/19	10:58	JCM	
1/50224097002.d	50224097002	L/28733	SAMPLE	1	m8270new	5/16/19	13:40	JCM	
1/50224097002n.d	50224097002	L/28733	SAMPLE	1	m8270new	5/16/19	14:12	JCM	
1/2303279.d	2303279	S/28725	BLANK	1	m8270new	5/16/19	17:43	JCM	
1/2303280.d	2303280	S/28725	LCS	1	m8270new	5/16/19	17:59	JCM	
1/50223886001.d	50223886001	S/28725	SAMPLE	1	m8270new	5/16/19	18:15 ✓	JCM	
1/2307128.d	2307128	L/28734	BLANK	1	m8270new	5/17/19	03:30 ✓	JCM	6.25 ug
1/2307129.d	2307129	L/28734	LCS	1	m8270new	5/17/19	03:46	JCM	
1/50223836002.d	50223836002	L/28732	SAMPLE	1	m8270new	5/17/19	04:03	JCM	
1/2300647.d	2300647	L/28732	MS	1	m8270new	5/17/19	04:19	JCM	
1/2300648.d	2300648	L/28732	MSD	1	m8270new	5/17/19	04:35	JCM	
1/50224464002.d	50224464002	L/28733	SAMPLE	1	m8270new	5/17/19	04:51	JCM	
1/50224388001.d	50224388001	L/28733	SAMPLE	1	m8270new	5/17/19	05:07	JCM	
1/50224472001.d	50224472001	L/28733	SAMPLE	1	m8270new	5/17/19	05:23	JCM	
1/50223969001x.d	50223969001X5	L/28732	SAMPLE	5	m8270new	5/17/19	05:39	JCM	
1/50223993001.d	50223993001	L/28731	SAMPLE	1	m8270new	5/17/19	05:55	JCM	
1/50223993002.d	50223993002	L/28731	SAMPLE	1	m8270new	5/17/19	06:11	JCM	
1/50224116001.d	50224116001	L/28731	SAMPLE	1	m8270new	5/17/19	06:27	JCM	
1/50224162001.d	50224162001	L/28731	SAMPLE	1	m8270new	5/17/19	06:43	JCM	
1/50224163001.d	50224163001	L/28731	SAMPLE	1	m8270new	5/17/19	06:59	JCM	
1/50224163003.d	50224163003	L/28731	SAMPLE	1	m8270new	5/17/19	07:15	JCM	
1/50224331001.d	50224331001	L/28734	SAMPLE	1	m8270new	5/17/19	07:31	JCM	

File Path 1: \\192.168.50.6\chem\50mss9.i\051619ical.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 07:04 05/29/2019

Reviewed By/Date: _____ Page: 1 of 2

INSTRUMENT RUN LOG

Pace Analytical Services, Inc.

Instrument: 50mss9.i

Column .50um DB-5ms 30m X 0.25mm He Method: Semivolatile REPORT SW-846 Method 8270/EPA 625

Misc. Prep Info [L]: MeCl2 Lot #173082

Misc. Prep Info [S]: MeCl2 lot #173082

ISTD lot: 202139:1 Surr. lot:

Lot:

Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/50224331004.d	50224331004	L/28734	SAMPLE	1	m8270new	5/17/19	07:47 ✓	JCM	625

File Path 1: \\192.168.50.6\chem\50mss9.i\051619ical.b

Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one

Report Date: 07:04 05/29/2019

Reviewed By/Date: _____ Page: 2 of 2

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss8.i
Column 0m X 2mm
Misc. Prep Info [L]: MeCl2 Lot #173082
Misc. Prep Info [S]: MeCl2 lot #173082
ISTD lot: 7540-025
Lot:
Tune std: _____

Method:

Surr. lot: see extract sheet

Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/dftpp.d	TUNE,192529:1	L/	DFTPP	1	m625tune	5/30/19	11:14	JCM	good
1/ccv0501.d	CCV,199457:1	L/	CCALIB_4	1	m8270new	5/30/19	11:23	JCM	(Fail)
1/ccv050.d	CCV,199457:1	L/	CCALIB_4	1	m8270new	5/30/19	11:51	JCM	good
1/2320486.d	2320486	S/28844	BLANK	1	m8270new	5/30/19	12:44	JCM	
1/2320487.d	2320487	S/28844	LCS	1	m8270new	5/30/19	13:01	JCM	
1/50225588001.d	50225588001	S/28844	SAMPLE	1	m8270new	5/30/19	13:17	JCM	
1/50225588002.d	50225588002	S/28844	SAMPLE	1	m8270new	5/30/19	13:33	JCM	
1/50225588003.d	50225588003	S/28844	SAMPLE	1	m8270new	5/30/19	13:50	JCM	
1/50225588004.d	50225588004	S/28844	SAMPLE	1	m8270new	5/30/19	14:06	JCM	
1/50225973001.d	50225973001	S/28844	SAMPLE	1	m8270new	5/30/19	14:22	JCM	
1/50225973002.d	50225973002	S/28844	SAMPLE	1	m8270new	5/30/19	14:39	JCM	
1/2322290.d	2322290	L/28854	BLANK	1	m8270new	5/30/19	14:55	JCM	
1/2322291.d	2322291	L/28854	LCS	1	m8270new	5/30/19	15:11	JCM	
1/50225019001.d	50225019001	L/28854	SAMPLE	1	m8270new	5/30/19	15:28	JCM	
1/50225249001.d	50225249001	S/28854	SAMPLE	1	m8270new	5/30/19	15:44	JCM	
1/50225973003.d	50225973003	S/28844	SAMPLE	1	m8270new	5/30/19	16:01	JCM	
1/50225973004.d	50225973004	S/28844	SAMPLE	1	m8270new	5/30/19	16:17	JCM	
1/50225973005.d	50225973005	S/28844	SAMPLE	1	m8270new	5/30/19	16:33	JCM	
1/50225973006.d	50225973006	S/28844	SAMPLE	1	m8270new	5/30/19	16:49	JCM	
1/50225973007.d	50225973007	S/28844	SAMPLE	1	m8270new	5/30/19	17:06	JCM	
1/50225973008.d	50225973008	S/28844	SAMPLE	1	m8270new	5/30/19	17:22	JCM	
1/50225973009.d	50225973009	S/28844	SAMPLE	1	m8270new	5/30/19	17:39	JCM	
1/50225973010.d	50225973010	S/28844	SAMPLE	1	m8270new	5/30/19	17:55	JCM	
1/50225973011.d	50225973011	S/28844	SAMPLE	1	m8270new	5/30/19	18:11	JCM	
1/2320488.d	2320488	S/28844	MS	1	m8270new	5/30/19	18:28	JCM	
1/2320489.d	2320489	S/28844	MSD	1	m8270new	5/30/19	18:44	JCM	
1/50225973013.d	50225973013	S/28844	SAMPLE	1	m8270new	5/30/19	19:00	JCM	
1/50225973014.d	50225973014	S/28844	SAMPLE	1	m8270new	5/30/19	19:17	JCM	
1/50225973015.d	50225973015	S/28844	SAMPLE	1	m8270new	5/30/19	19:33	JCM	
1/50225973016.d	50225973016	S/28844	SAMPLE	1	m8270new	5/30/19	19:49	JCM	

File Path 1: \\192.168.50.6\chem\50mss8.i\053019.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 12:04 05/31/2019

Reviewed By/Date: _____

INSTRUMENT RUN LOG

Pace Analytical Services, Inc.

Instrument: 50mss8.i
Column 0m X 2mm Method:
Misc. Prep Info [L]: MeCl2 Lot #173082
Misc. Prep Info [S]: MeCl2 lot #173082
ISTD lot: 202139:1 Surr. lot:
Lot:
Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/50225973017.d	50225973017	S/28844	SAMPLE	1	m8270new	5/30/19	20:06	JCM	
1/2320954.d	2320954	S/28857	BLANK	1	m8270new	5/30/19	20:22	JCM	
1/2320955.d	2320955	S/28857	LCS	1	m8270new	5/30/19	20:38	JCM	
1/50225973018.d	50225973018	S/28857	SAMPLE	1	m8270new	5/30/19	20:55	JCM	
1/50225973019.d	50225973019	S/28857	SAMPLE	1	m8270new	5/30/19	21:11	JCM	
1/50225973020.d	50225973020	S/28857	SAMPLE	1	m8270new	5/30/19	21:27	JCM	
1/50225973021.d	50225973021	S/28857	SAMPLE	1	m8270new	5/30/19	21:44	JCM	
1/50225973022.d	50225973022	S/28857	SAMPLE	1	m8270new	5/30/19	22:00	JCM	
1/50225973023.d	50225973023	S/28857	SAMPLE	1	m8270new	5/30/19	22:16	JCM	
1/50225973024.d	50225973024	S/28857	SAMPLE	1	m8270new	5/30/19	22:33	JCM	

File Path 1: \\192.168.50.6\chem\50mss8.i\053019.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 12:04 05/31/2019

Reviewed By/Date: _____

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss9.i
Column 0m X 2mm — Method:
Misc. Prep Info [L]: MeCl2 Lot #173082
Misc. Prep Info [S]: MeCl2 lot #173082
ISTD lot: 7540-025 — Surr. lot: see extract sheet
Lot:
Tune std: _____ — Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/dftpp.d	TUNE,192529:1	L/28767	DFTPP	1	m625tune	6/02/19	11:24 ✓	JCM	good
1/ccv050.d	CCV,199457:1	L/28767	CCALIB_4	1	m8270new	6/02/19	11:33	JCM	
1/2323555.d	2323555	S/28879	BLANK	1	m8270new	6/02/19	12:24	JCM	
1/2323556.d	2323556	S/28879	LCS	1	m8270new	6/02/19	12:40	JCM	
1/50225994001.d	50225994001	S/28879	SAMPLE	1	m8270new	6/02/19	12:56	JCM	
1/50226302001.d	50226302001	S/28879	SAMPLE	1	m8270new	6/02/19	13:12	JCM	
1/50226302002.d	50226302002	S/28879	SAMPLE	1	m8270new	6/02/19	13:28	JCM	
1/50226302003.d	50226302003	S/28879	SAMPLE	1	m8270new	6/02/19	13:44	JCM	
1/50226302004.d	50226302004	S/28879	SAMPLE	1	m8270new	6/02/19	14:00	JCM	
1/50226485001.d	50226485001	S/28879	SAMPLE	1	m8270new	6/02/19	14:16	JCM	
1/50226485002.d	50226485002	S/28879	SAMPLE	1	m8270new	6/02/19	14:32	JCM	
1/50226485003.d	50226485003	S/28879	SAMPLE	1	m8270new	6/02/19	14:48	JCM	
1/50226485004.d	50226485004	S/28879	SAMPLE	1	m8270new	6/02/19	15:04	JCM	
1/50225466001.d	50225466001	S/28857	SAMPLE	1	m8270new	6/02/19	15:20	JCM	
1/50225466002.d	50225466002	S/28857	SAMPLE	1	m8270new	6/02/19	15:36	JCM	
1/50225466003.d	50225466003	S/28857	SAMPLE	1	m8270new	6/02/19	15:52	JCM	
1/50225466004.d	50225466004	S/28857	SAMPLE	1	m8270new	6/02/19	16:08	JCM	
1/50225466005.d	50225466005	S/28857	SAMPLE	1	m8270new	6/02/19	16:24	JCM	
1/2320956.d	2320956	S/28857	MS	1	m8270new	6/02/19	16:40	JCM	
1/2320957.d	2320957	S/28857	MSD	1	m8270new	6/02/19	16:56	JCM	
1/50225466006.d	50225466006	S/28857	SAMPLE	1	m8270new	6/02/19	17:12	JCM	
1/50225466009.d	50225466009	S/28857	SAMPLE	1	m8270new	6/02/19	17:28	JCM	
1/50225466010.d	50225466010	S/28857	SAMPLE	1	m8270new	6/02/19	17:44	JCM	
1/50225466011.d	50225466011	S/28857	SAMPLE	1	m8270new	6/02/19	18:00	JCM	
1/50225466015.d	50225466015	S/28857	SAMPLE	1	m8270new	6/02/19	18:16	JCM	
1/50225466016.d	50225466016	S/28857	SAMPLE	1	m8270new	6/02/19	18:31	JCM	
1/50225466017.d	50225466017	S/28857	SAMPLE	1	m8270new	6/02/19	18:47	JCM	
1/50225466018.d	50225466018	S/28857	SAMPLE	1	m8270new	6/02/19	19:03 ✓	JCM	

File Path 1: \\192.168.50.6\chem\50mss9.i\060219a.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 14:45 06/04/2019

Reviewed By/Date: _____ Page: 1 of 1

✓

MSSV SIM - FORM II SVOA-1
SOLID SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Instrument ID: 50MSS3

LAB SAMPLE ID	SAMPLE NAME	2FBP	TD14
2320950	2320950BLANK	62	89
2320951	2320951LCS	57	82
2320952	2320952MS	61	78
2320953	2320953MSD	64	80
50225466001	SP-1 (3-5)	36	49
50225466002	SP-1 (5-7)	48	60
50225466003	SP-2 (0-2)	67	96
50225466004	SP-2 (2-4)	58	77
50225466005	SP-3 (0-2)	62	80
50225466006	SP-3 (2-4)	59	82
50225466009	SP-4 (6-8)	64	89
50225466010	SP-4 (8-9)	65	90
50225466011	SP-4 (9-10.5)	64	89
50225466015	SP-5 (9-11)	64	93
50225466016	SP-5 (11-13)	59	87
50225466017	SP-5 (11-13) DUP	60	85
50225466018	SP-5 (6-8)	63	86

	QC LIMITS
(2FBP) = 2-Fluorobiphenyl (S)	(23-107)
(TD14) = p-Terphenyl-d14 (S)	(16-117)

* Values outside of QC Limits

MSSV SIM - FORM III SVOA-1

SOLID LABORATORY CONTROL SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana
Lab Sample ID: 2320951LCS
Date Extracted: 05/29/2019
Date Analyzed (1): 05/30/2019
Instrument: 50MSS3
LCS Lot No: 194954
Lab File ID: 053019.B\2320951.D
SDG No.: 50225466

COMPOUND	AMOUNT ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS %REC	QC LIMITS REC.
Acenaphthene	333	211	63	48-109
Acenaphthylene	333	211	63	49-108
Anthracene	333	244	73	44-104
Benzo(a)anthracene	333	242	73	46-122
Benzo(a)pyrene	333	193	58	31-156
Benzo(b)fluoranthene	333	218	65	29-158
Benzo(g,h,i)perylene	333	203	61	35-145
Benzo(k)fluoranthene	333	191	57	33-150
Chrysene	333	277	83	47-120
Dibenz(a,h)anthracene	333	197	59	28-160
Fluoranthene	333	236	71	49-121
Fluorene	333	211	63	47-116
Indeno(1,2,3-cd)pyrene	333	200	60	31-155
1-Methylnaphthalene	333	215	64	44-111
2-Methylnaphthalene	333	218	66	45-111
Naphthalene	333	210	63	47-103
Phenanthrene	333	243	73	50-114
Pyrene	333	277	83	49-114

Spike Recovery: 0 out of 18 outside limits.

MSSV SIM - FORM III SVOA-1

SOLID SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Pace Analytical - Indiana

Matrix Spike - Sample No: 2320952MS

Date Extracted: 05/29/2019

Date Analyzed (1): 06/02/2019

Instrument: 50MSS3

Lab File ID: 060219.B\2320952X.D

Parent Sample ID: SP-3 (0-2)

SDG No.: 50225466

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/kg)	MS CONCENTRATION (ug/kg)	MS %REC	QC LIMITS REC.
1-Methylnaphthalene	396	<12.1	277	70	10-145
2-Methylnaphthalene	396	<12.4	280	71	10-135
Acenaphthene	396	<14.8	272	69	10-138
Acenaphthylene	396	23.9J	282	65	11-133
Anthracene	396	59.3	349	73	10-131
Benzo(a)anthracene	396	380	810	108	10-158
Benzo(a)pyrene	396	400	786	98	10-174
Benzo(b)fluoranthene	396	441	865	107	10-184
Benzo(g,h,i)perylene	396	406	729	81	10-170
Benzo(k)fluoranthene	396	346	708	91	10-183
Chrysene	396	488	979	124	10-147
Dibenz(a,h)anthracene	396	107	351	62	10-166
Fluoranthene	396	724	1270	138	10-158
Fluorene	396	<14.8	268	68	10-142
Indeno(1,2,3-cd)pyrene	396	337	667	83	11-167
Naphthalene	396	<11.8	284	72	13-128
Phenanthrene	396	196	549	89	10-164
Pyrene	396	786	1410	157	10-152

Spike Recovery: 1 out of 18 outside limits.

MSSV SIM - FORM III SVOA-2

SOLID SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Instrument (2): 50MSS3 Matrix Spike Duplicate - Sample No: 2320953MSD

Lab File ID (2): 060219.B\2320953X.D Date Analyzed (2): 06/02/2019

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENTRATION (ug/kg)	MSD %REC	%RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	397	291	73	5	0-20	10-145
2-Methylnaphthalene	397	291	73	4	0-20	10-135
Acenaphthene	397	291	73	7	0-20	10-138
Acenaphthylene	397	300	70	6	0-20	11-133
Anthracene	397	363	76	4	0-20	10-131
Benzo(a)anthracene	397	835	114	3	0-20	10-158
Benzo(a)pyrene	397	907	128	14	0-20	10-174
Benzo(b)fluoranthene	397	947	127	9	0-20	10-184
Benzo(g,h,i)perylene	397	784	95	7	0-20	10-170
Benzo(k)fluoranthene	397	757	103	7	0-20	10-183
Chrysene	397	1010	131	3	0-20	10-147
Dibenz(a,h)anthracene	397	369	66	5	0-20	10-166
Fluoranthene	397	1200	121	5	0-20	10-158
Fluorene	397	284	71	6	0-20	10-142
Indeno(1,2,3-cd)pyrene	397	723	97	8	0-20	11-167
Naphthalene	397	294	74	3	0-20	13-128
Phenanthrene	397	509	79	8	0-20	10-164
Pyrene	397	1320	133	7	0-20	10-152

RPD: 0 out of 18 outside limits.

Spike Recovery: 0 out of 18 outside limits.

SAMPLE NO.

2320950BLANK

MSSV SIM - FORM IV SVOA-1
SEMI-VOLATILE METHOD BLANK SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Instrument ID: 50MSS3 Matrix: Solid Lab Sample ID: 2320950

Lab File ID: 053019.B\2320950.D Date Analyzed: 05/30/2019 Time: 15:26

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	ANALYZED
2320951LCS	2320951	053019.B\2320951.D	05/30/2019 15:42
SP-1 (3-5)	50225466001	060219.B\50225466001X.D	06/02/2019 15:59
SP-1 (5-7)	50225466002	060219.B\50225466002X.D	06/02/2019 16:15
SP-2 (2-4)	50225466004	060219.B\50225466004X.D	06/02/2019 16:48
SP-3 (0-2)	50225466005	060219.B\50225466005X.D	06/02/2019 17:04
2320952MS	2320952	060219.B\2320952X.D	06/02/2019 17:21
2320953MSD	2320953	060219.B\2320953X.D	06/02/2019 17:37
SP-3 (2-4)	50225466006	060219.B\50225466006.D	06/02/2019 17:53
SP-4 (6-8)	50225466009	060219.B\50225466009.D	06/02/2019 18:10
SP-4 (8-9)	50225466010	060219.B\50225466010.D	06/02/2019 18:26
SP-4 (9-10.5)	50225466011	060219.B\50225466011.D	06/02/2019 18:43
SP-5 (9-11)	50225466015	060219.B\50225466015.D	06/02/2019 18:59
SP-5 (11-13)	50225466016	060219.B\50225466016.D	06/02/2019 19:16
SP-5 (11-13) DUP	50225466017	060219.B\50225466017.D	06/02/2019 19:32
SP-5 (6-8)	50225466018	060319.B\50225466018.D	06/03/2019 13:19
SP-2 (0-2)	50225466003	060419.B\50225466003.D	06/04/2019 13:55

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244167CCV Date Analyzed: 05/30/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 12:41

Lab File ID: 053019.B\5PPM.D

		AREA ANT	RT	AREA CRY	RT	AREA NPT	RT	AREA PHN	RT
12 HOUR STD		60568	5.004	109236	9.21	116770	3.571	109587	6.218
UPPER LIMIT		121136	5.504	218472	9.71	233540	4.071	219174	6.718
LOWER LIMIT		30284	4.504	54618	8.71	58385	3.071	54793.5	5.718
LAB SAMPLE ID	SAMPLE NO.								
2320950	2320950BLANK	59022	5.004	95821	9.215	113877	3.571	108722	6.218
2320951	2320951LCS	67073	5.004	110657	9.21	128289	3.568	122849	6.215

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244167CCV Date Analyzed: 05/30/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 12:41

Lab File ID: 053019.B\5PPM.D

		AREA PYL	RT
12 HOUR STD		114475	11.103
UPPER LIMIT		228950	11.603
LOWER LIMIT		57237.5	10.603
LAB SAMPLE ID	SAMPLE NO.		
2320950	2320950BLANK	110465	11.1
2320951	2320951LCS	123102	11.091

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244171CCV Date Analyzed: 06/02/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 07:35

Lab File ID: 060219.B\5PPM.D

		AREA ANT	RT	AREA CRY	RT	AREA NPT	RT	AREA PHN	RT
12 HOUR STD		67424	4.999	119542	9.201	129743	3.566	123366	6.212
UPPER LIMIT		134848	5.499	239084	9.701	259486	4.066	246732	6.712
LOWER LIMIT		33712	4.499	59771	8.701	64871.5	3.066	61683	5.712
LAB SAMPLE ID	SAMPLE NO.								
2320952	2320952MS	70807	4.999	113533	9.201	136983	3.566	129345	6.209
2320953	2320953MSD	68546	4.999	114096	9.201	132363	3.566	126930	6.212
50225466001	SP-1 (3-5)	71990	5	123228	9.201	139754	3.566	133835	6.209
50225466002	SP-1 (5-7)	72265	5	123608	9.201	137282	3.566	136543	6.209
50225466004	SP-2 (2-4)	70988	5	115903	9.201	135717	3.569	130736	6.212
50225466005	SP-3 (0-2)	69635	5	111594	9.201	135602	3.569	126960	6.212
50225466006	SP-3 (2-4)	74110	5	119389	9.201	142708	3.569	136916	6.209
50225466009	SP-4 (6-8)	70323	5	117172	9.201	137902	3.564	130513	6.212
50225466010	SP-4 (8-9)	68283	4.999	111246	9.201	131573	3.566	125873	6.212
50225466011	SP-4 (9-10.5)	66086	4.999	112940	9.204	127096	3.566	123088	6.209
50225466015	SP-5 (9-11)	66241	4.999	106331	9.201	126299	3.566	119392	6.209
50225466016	SP-5 (11-13)	69194	5	111859	9.201	133196	3.566	126857	6.209
50225466017	SP-5 (11-13) DUP	73124	4.999	114178	9.201	140388	3.566	133154	6.209

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244171CCV Date Analyzed: 06/02/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 07:35

Lab File ID: 060219.B\5PPM.D

		AREA PYL	RT
12 HOUR STD		123788	11.091
UPPER LIMIT		247576	11.591
LOWER LIMIT		61894	10.591
LAB SAMPLE ID	SAMPLE NO.		
2320952	2320952MS	128279	11.091
2320953	2320953MSD	128557	11.091
50225466001	SP-1 (3-5)	142867	11.091
50225466002	SP-1 (5-7)	133477	11.091
50225466004	SP-2 (2-4)	133698	11.091
50225466005	SP-3 (0-2)	133010	11.091
50225466006	SP-3 (2-4)	135214	11.091
50225466009	SP-4 (6-8)	136309	11.091
50225466010	SP-4 (8-9)	127887	11.085
50225466011	SP-4 (9-10.5)	128007	11.091
50225466015	SP-5 (9-11)	123436	11.091
50225466016	SP-5 (11-13)	128508	11.091
50225466017	SP-5 (11-13) DUP	133250	11.082

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244173CCV Date Analyzed: 06/03/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 10:58

Lab File ID: 060319.B\5PPM.D

		AREA ANT	RT	AREA CRY	RT	AREA NPT	RT	AREA PHN	RT
12 HOUR STD		65337	4.999	115158	9.201	127674	3.566	118584	6.212
UPPER LIMIT		130674	5.499	230316	9.701	255348	4.066	237168	6.712
LOWER LIMIT		32668.5	4.499	57579	8.701	63837	3.066	59292	5.712
LAB SAMPLE ID	SAMPLE NO.								
50225466018	SP-5 (6-8)	70558	4.999	115938	9.201	135206	3.566	130208	6.212

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244173CCV Date Analyzed: 06/03/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 10:58

Lab File ID: 060319.B\5PPM.D

		AREA PYL	RT
12 HOUR STD		122962	11.091
UPPER LIMIT		245924	11.591
LOWER LIMIT		61481	10.591
LAB SAMPLE ID	SAMPLE NO.		
50225466018	SP-5 (6-8)	136566	11.085

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244172CCV Date Analyzed: 06/04/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 12:00

Lab File ID: 060419.B\5PPM.D

		AREA ANT	RT	AREA CRY	RT	AREA NPT	RT	AREA PHN	RT
12 HOUR STD		66920	4.999	116873	9.204	130149	3.566	121375	6.212
UPPER LIMIT		133840	5.499	233746	9.704	260298	4.066	242750	6.712
LOWER LIMIT		33460	4.499	58436.5	8.704	65074.5	3.066	60687.5	5.712
LAB SAMPLE ID	SAMPLE NO.								
50225466003	SP-2 (0-2)	74807	4.999	118244	9.201	144780	3.566	136749	6.212

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225466 Contract: 216 College / 19-146

Sample ID : 15244172CCV Date Analyzed: 06/04/2019

Instrument ID: 50MSS3 GC Column: FULL Time Analyzed: 12:00

Lab File ID: 060419.B\5PPM.D

		AREA PYL	RT
12 HOUR STD		121468	11.091
UPPER LIMIT		242936	11.591
LOWER LIMIT		60734	10.591
LAB SAMPLE ID	SAMPLE NO.		
50225466003	SP-2 (0-2)	139528	11.091

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VI SVOA-1

MSSV SIM INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS3 GC Column: FULL SDG No.: 50225466

Calibration Date(s): 01/21/2019 01/21/2019 Calibration Time(s): 07:42 09:53

LAB FILE ID

CAL1 = 012119CAL.B\CAL1.D CAL2 = 012119CAL.B\CAL2.D CAL3 = 012119CAL.B\CAL3.D

CAL4 = 012119CAL.B\CAL4.D CAL5 = 012119CAL.B\CAL5.D CAL6 = 012119CAL.B\CAL6.D

CAL7 = 012119CAL.B\CAL7.D CAL8 = 012119CAL.B\CAL8.D CAL9 = 012119CAL.B\CAL9.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
Acenaphthene	Averaged	1.32665	1.31958	1.29756	1.29407	1.27984	1.29679
Acenaphthylene	Averaged	2.80791	2.44100	2.21441	2.19249	2.19053	2.20169
Anthracene	Averaged	1.28336	1.19560	1.16833	1.15798	1.17637	1.19394
Benzo(a)anthracene	Averaged	1.53368	1.43162	1.27265	1.24218	1.27022	1.25941
Benzo(a)pyrene	Averaged	1.38173	1.38204	1.32003	1.32495	1.42480	1.42013
Benzo(b)fluoranthene	Averaged	1.40505	1.47381	1.49101	1.69104	1.56666	1.74309
Benzo(g,h,i)perylene	Averaged	1.42254	1.52024	1.49470	1.53774	1.55931	1.57742
Benzo(k)fluoranthene	Averaged	1.86330	1.75130	1.65547	1.56410	1.66060	1.55129
Chrysene	Averaged	1.27659	1.25664	1.22718	1.21906	1.22871	1.24069
Dibenz(a,h)anthracene	Averaged	1.28029	1.45600	1.45464	1.48939	1.48830	1.49923
Fluoranthene	Averaged	1.37159	1.35988	1.30945	1.29927	1.31924	1.33141
Fluorene	Averaged	1.66330	1.66749	1.59221	1.58795	1.62542	1.60914
Indeno(1,2,3-cd)pyrene	Averaged	1.58812	1.71351	1.75990	1.75456	1.78581	1.79801
1-Methylnaphthalene	Averaged	0.71758	0.73533	0.70956	0.69985	0.70906	0.71466
2-Methylnaphthalene	Averaged	0.74523	0.75660	0.73287	0.73085	0.74266	0.74559
Naphthalene	Averaged	1.13104	1.11593	1.07502	1.06346	1.06595	1.07261
Phenanthrene	Averaged	1.25127	1.24389	1.15815	1.14978	1.14571	1.16104
Pyrene	Averaged	1.37342	1.38339	1.29752	1.28681	1.29172	1.29507
2-Fluorobiphenyl (S)	Averaged	1.72066	1.73167	1.66205	1.66325	1.68437	1.68091
p-Terphenyl-d14 (S)	Averaged	1.01838	1.02882	0.98168	0.96590	0.96981	0.97755

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV SIM - FORM VI SVOA-2

MSSV SIM INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS3 GC Column: FULL SDG No.: 50225466

Calibration Date(s): 01/21/2019 01/21/2019 Calibration Time(s): 07:42 09:53

LAB FILE ID

CAL1 = 012119CAL.B\CAL1.D CAL2 = 012119CAL.B\CAL2.D CAL3 = 012119CAL.B\CAL3.D

CAL4 = 012119CAL.B\CAL4.D CAL5 = 012119CAL.B\CAL5.D CAL6 = 012119CAL.B\CAL6.D

CAL7 = 012119CAL.B\CAL7.D CAL8 = 012119CAL.B\CAL8.D CAL9 = 012119CAL.B\CAL9.D

COMPOUND	CURVE TYPE	CAL7	CAL8	CAL9
Acenaphthene	Averaged	1.31362	1.31100	1.29297
Acenaphthylene	Averaged	2.25269	2.21386	2.23879
Anthracene	Averaged	1.21560	1.21148	1.23776
Benzo(a)anthracene	Averaged	1.27332	1.27274	1.27778
Benzo(a)pyrene	Averaged	1.45870	1.47669	1.49164
Benzo(b)fluoranthene	Averaged	1.78495	1.75380	1.68344
Benzo(g,h,i)perylene	Averaged	1.60108	1.62874	1.58391
Benzo(k)fluoranthene	Averaged	1.58637	1.55630	1.58332
Chrysene	Averaged	1.25432	1.24314	1.25466
Dibenz(a,h)anthracene	Averaged	1.54793	1.55500	1.60920
Fluoranthene	Averaged	1.34886	1.35846	1.37311
Fluorene	Averaged	1.64471	1.62713	1.63783
Indeno(1,2,3-cd)pyrene	Averaged	1.83141	1.86311	1.90655
1-Methylnaphthalene	Averaged	0.72390	0.72606	0.74269
2-Methylnaphthalene	Averaged	0.75572	0.75336	0.76793
Naphthalene	Averaged	1.08131	1.07602	1.08775
Phenanthrene	Averaged	1.17483	1.16538	1.18921
Pyrene	Averaged	1.30417	1.29452	1.30620
2-Fluorobiphenyl (S)	Averaged	1.71251	1.69314	1.71628
p-Terphenyl-d14 (S)	Averaged	0.98339	0.97693	0.97721

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV SIM - FORM VI SVOA-3

MSSV SIM INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS3 GC Column: FULL SDG No.: 50225466

Calibration Date(s): 01/21/2019 01/21/2019 Calibration Time(s): 07:42 09:53

LAB FILE ID

CAL1 = 012119CAL.B\CAL1.D CAL2 = 012119CAL.B\CAL2.D CAL3 = 012119CAL.B\CAL3.D

CAL4 = 012119CAL.B\CAL4.D CAL5 = 012119CAL.B\CAL5.D CAL6 = 012119CAL.B\CAL6.D

CAL7 = 012119CAL.B\CAL7.D CAL8 = 012119CAL.B\CAL8.D CAL9 = 012119CAL.B\CAL9.D

COMPOUND	CURVE TYPE	%RSD	R2	A1	A2	A3
Acenaphthene	Averaged	1.18253			1.30489	
Acenaphthylene	Averaged	9.33046			2.31432	
Anthracene	Averaged	3.25810			1.20033	
Benzo(a)anthracene	Averaged	7.94750			1.31948	
Benzo(a)pyrene	Averaged	4.09980			1.39863	
Benzo(b)fluoranthene	Averaged	9.13322			1.61368	
Benzo(g,h,i)perylene	Averaged	4.02774			1.54730	
Benzo(k)fluoranthene	Averaged	6.71684			1.64859	
Chrysene	Averaged	1.51230			1.24329	
Dibenz(a,h)anthracene	Averaged	5.81669			1.47135	
Fluoranthene	Averaged	1.96834			1.33727	
Fluorene	Averaged	1.84761			1.62717	
Indeno(1,2,3-cd)pyrene	Averaged	4.77560			1.76180	
1-Methylnaphthalene	Averaged	1.56727			0.71700	
2-Methylnaphthalene	Averaged	1.31423			0.74536	
Naphthalene	Averaged	2.27069			1.08517	
Phenanthrene	Averaged	3.55075			1.18126	
Pyrene	Averaged	2.96572			1.31583	
2-Fluorobiphenyl (S)	Averaged	1.53030			1.69357	
p-Terphenyl-d14 (S)	Averaged	2.32764			0.98781	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV SIM - FORM VII SVOA-1
MSSV SIM CONTINUING CALIBRATION DATA

15244167CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/30/2019 Time: 12:41

Instrument ID: 50MSS3 GC Column: FULL Init. Calib. Date(s): 01/21/2019 01/21/2019

Lab File ID: 053019.B\5PPM.D Init. Calib. Time(s): 07:42 09:53

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.30489	1.29240	0.0500	-0.9571	20.0000
Acenaphthylene	Averaged	2.31432	2.17245	0.0500	-6.1302	20.0000
Anthracene	Averaged	1.20033	1.29449	0.0500	7.8441	20.0000
Benzo(a)anthracene	Averaged	1.31948	1.29436	0.0500	-1.9035	20.0000
Benzo(a)pyrene	Averaged	1.39863	1.30757	0.0500	-6.5110	20.0000
Benzo(b)fluoranthene	Averaged	1.61368	1.55907	0.0500	-3.3843	20.0000
Benzo(g,h,i)perylene	Averaged	1.54730	1.40915	0.0500	-8.9280	20.0000
Benzo(k)fluoranthene	Averaged	1.64859	1.44135	0.0500	-12.5711	20.0000
Chrysene	Averaged	1.24329	1.37226	0.0500	10.3731	20.0000
Dibenz(a,h)anthracene	Averaged	1.47135	1.30727	0.0500	-11.1513	20.0000
Fluoranthene	Averaged	1.33727	1.42117	0.0500	6.2742	20.0000
Fluorene	Averaged	1.62717	1.52569	0.0500	-6.2365	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.76180	1.58200	0.0500	-10.2054	20.0000
1-Methylnaphthalene	Averaged	0.71700	0.75595	0.0500	5.4320	20.0000
2-Methylnaphthalene	Averaged	0.74536	0.78565	0.0500	5.4051	20.0000
Naphthalene	Averaged	1.08517	1.17156	0.0500	7.9613	20.0000
Phenanthrene	Averaged	1.18126	1.29192	0.0500	9.3685	20.0000
Pyrene	Averaged	1.31583	1.45246	0.0500	10.3839	20.0000
2-Fluorobiphenyl (S)	Averaged	1.69357	1.62518	0.0500	-4.0381	20.0000
p-Terphenyl-d14 (S)	Averaged	0.98781	1.06951	0.0500	8.2712	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV SIM - FORM VII SVOA-1
MSSV SIM CONTINUING CALIBRATION DATA

15244171CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 06/02/2019 Time: 07:35

Instrument ID: 50MSS3 GC Column: FULL Init. Calib. Date(s): 01/21/2019 01/21/2019

Lab File ID: 060219.B\5PPM.D Init. Calib. Time(s): 07:42 09:53

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.30489	1.33645	0.0500	2.4190	20.0000
Acenaphthylene	Averaged	2.31432	2.27045	0.0500	-1.8957	20.0000
Anthracene	Averaged	1.20033	1.30753	0.0500	8.9308	20.0000
Benzo(a)anthracene	Averaged	1.31948	1.38293	0.0500	4.8087	20.0000
Benzo(a)pyrene	Averaged	1.39863	1.37675	0.0500	-1.5647	20.0000
Benzo(b)fluoranthene	Averaged	1.61368	1.49115	0.0500	-7.5927	20.0000
Benzo(g,h,i)perylene	Averaged	1.54730	1.44612	0.0500	-6.5392	20.0000
Benzo(k)fluoranthene	Averaged	1.64859	1.60093	0.0500	-2.8910	20.0000
Chrysene	Averaged	1.24329	1.38369	0.0500	11.2925	20.0000
Dibenz(a,h)anthracene	Averaged	1.47135	1.41032	0.0500	-4.1475	20.0000
Fluoranthene	Averaged	1.33727	1.43789	0.0500	7.5245	20.0000
Fluorene	Averaged	1.62717	1.61893	0.0500	-0.5061	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.76180	1.68549	0.0500	-4.3314	20.0000
1-Methylnaphthalene	Averaged	0.71700	0.77416	0.0500	7.9723	20.0000
2-Methylnaphthalene	Averaged	0.74536	0.81296	0.0500	9.0697	20.0000
Naphthalene	Averaged	1.08517	1.21163	0.0500	11.6535	20.0000
Phenanthrene	Averaged	1.18126	1.33408	0.0500	12.9372	20.0000
Pyrene	Averaged	1.31583	1.52081	0.0500	15.5785	20.0000
2-Fluorobiphenyl (S)	Averaged	1.69357	1.67753	0.0500	-0.9469	20.0000
p-Terphenyl-d14 (S)	Averaged	0.98781	1.11720	0.0500	13.0988	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV SIM - FORM VII SVOA-1
MSSV SIM CONTINUING CALIBRATION DATA

15244173CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 06/03/2019 Time: 10:58

Instrument ID: 50MSS3 GC Column: FULL Init. Calib. Date(s): 01/21/2019 01/21/2019

Lab File ID: 060319.B\5PPM.D Init. Calib. Time(s): 07:42 09:53

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.30489	1.34290	0.0500	2.9130	20.0000
Acenaphthylene	Averaged	2.31432	2.26143	0.0500	-2.2855	20.0000
Anthracene	Averaged	1.20033	1.29765	0.0500	8.1072	20.0000
Benzo(a)anthracene	Averaged	1.31948	1.35364	0.0500	2.5887	20.0000
Benzo(a)pyrene	Averaged	1.39863	1.32486	0.0500	-5.2744	20.0000
Benzo(b)fluoranthene	Averaged	1.61368	1.40732	0.0500	-12.7879	20.0000
Benzo(g,h,i)perylene	Averaged	1.54730	1.42427	0.0500	-7.9512	20.0000
Benzo(k)fluoranthene	Averaged	1.64859	1.61175	0.0500	-2.2347	20.0000
Chrysene	Averaged	1.24329	1.38524	0.0500	11.4176	20.0000
Dibenz(a,h)anthracene	Averaged	1.47135	1.34602	0.0500	-8.5180	20.0000
Fluoranthene	Averaged	1.33727	1.42910	0.0500	6.8668	20.0000
Fluorene	Averaged	1.62717	1.59821	0.0500	-1.7800	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.76180	1.62747	0.0500	-7.6248	20.0000
1-Methylnaphthalene	Averaged	0.71700	0.77086	0.0500	7.5121	20.0000
2-Methylnaphthalene	Averaged	0.74536	0.80796	0.0500	8.3993	20.0000
Naphthalene	Averaged	1.08517	1.21032	0.0500	11.5336	20.0000
Phenanthrene	Averaged	1.18126	1.34370	0.0500	13.7514	20.0000
Pyrene	Averaged	1.31583	1.49909	0.0500	13.9275	20.0000
2-Fluorobiphenyl (S)	Averaged	1.69357	1.69314	0.0500	-0.0251	20.0000
p-Terphenyl-d14 (S)	Averaged	0.98781	1.10761	0.0500	12.1281	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV SIM - FORM VII SVOA-1
MSSV SIM CONTINUING CALIBRATION DATA

15244172CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 06/04/2019 Time: 12:00

Instrument ID: 50MSS3 GC Column: FULL Init. Calib. Date(s): 01/21/2019 01/21/2019

Lab File ID: 060419.B\5PPM.D Init. Calib. Time(s): 07:42 09:53

SDG No.: 50225466

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.30489	1.33501	0.0500	2.3086	20.0000
Acenaphthylene	Averaged	2.31432	2.23432	0.0500	-3.4567	20.0000
Anthracene	Averaged	1.20033	1.28366	0.0500	6.9419	20.0000
Benzo(a)anthracene	Averaged	1.31948	1.33659	0.0500	1.2967	20.0000
Benzo(a)pyrene	Averaged	1.39863	1.32996	0.0500	-4.9104	20.0000
Benzo(b)fluoranthene	Averaged	1.61368	1.45782	0.0500	-9.6587	20.0000
Benzo(g,h,i)perylene	Averaged	1.54730	1.45987	0.0500	-5.6506	20.0000
Benzo(k)fluoranthene	Averaged	1.64859	1.61522	0.0500	-2.0245	20.0000
Chrysene	Averaged	1.24329	1.39017	0.0500	11.8135	20.0000
Dibenz(a,h)anthracene	Averaged	1.47135	1.33750	0.0500	-9.0966	20.0000
Fluoranthene	Averaged	1.33727	1.42120	0.0500	6.2762	20.0000
Fluorene	Averaged	1.62717	1.60897	0.0500	-1.1187	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.76180	1.64155	0.0500	-6.8256	20.0000
1-Methylnaphthalene	Averaged	0.71700	0.77424	0.0500	7.9827	20.0000
2-Methylnaphthalene	Averaged	0.74536	0.80959	0.0500	8.6171	20.0000
Naphthalene	Averaged	1.08517	1.21302	0.0500	11.7818	20.0000
Phenanthrene	Averaged	1.18126	1.34475	0.0500	13.8405	20.0000
Pyrene	Averaged	1.31583	1.50040	0.0500	14.0270	20.0000
2-Fluorobiphenyl (S)	Averaged	1.69357	1.69248	0.0500	-0.0641	20.0000
p-Terphenyl-d14 (S)	Averaged	0.98781	1.11898	0.0500	13.2797	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

Prep Log Report

Batch Information: OEXT 502966 8270 COMBO (S)

Template Version: EF-IN-Q-388-Rev.03 (23Jun2017)

Prep Method	EPA 3546	Analysis Method	EPA 8270 by SIM	Instrument	50BALJ	Extracted By	MJT
Extracted Date/Time	05/29/2019 09:25:17:519	Spiked By	KRM	Spiked By Date/Time	05/29/2019 09:25:42:191	Vialed By	KRM
Vialed By Date	05/29/2019 15:59:59:894	Methylene Chloride	208699	Ottawa Sand	199033	Sodium Sulfate	202028
Filter Paper	78278	3:1 Methylene Chloride/Acetone	207860	Reviewed By		Reviewed By Date	
Batch Notes							

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Sample Notes	8270C-SPK (mL)	8270C-SS (mL)
8270COMS_P	BLANK	**2320950**	30.2	1			177522 (1)
8270COMS_P	LCS	**2320951**	30	1		194954 (1)	177522 (1)
8270COMS_P	PS	**50225466001**	30	1			177522 (1)
8270COMS_P	PS	**50225466002**	30.1	1			177522 (1)
8270COMS_P	PS	**50225466003**	30.2	1			177522 (1)
8270COMS_P	PS	**50225466004**	30.3	1			177522 (1)
8270COMS_P	RQS	**50225466005**	30.3	1			177522 (1)
8270COMS_P	MS	**2320952**	30.1	1		194954 (1)	177522 (1)
8270COMS_P	MSD	**2320953**	30	1		194954 (1)	177522 (1)
8270COMS_P	PS	**50225466006**	30.2	1			177522 (1)
8270COMS_P	PS	**50225466009**	30.3	1			177522 (1)
8270COMS_P	PS	**50225466010**	30	1			177522 (1)
8270COMS_P	PS	**50225466011**	30.4	1			177522 (1)
8270COMS_P	PS	**50225466015**	30.2	1			177522 (1)
8270COMS_P	PS	**50225466016**	30.3	1			177522 (1)
8270COMS_P	PS	**50225466017**	30.3	1			177522 (1)
8270COMS_P	PS	**50225466018**	30.2	1			177522 (1)
8270COMS_P	PS	**50225973018**	30	1			177522 (1)
8270COMS_P	PS	**50225973019**	30	1			177522 (1)
8270COMS_P	PS	**50225973020**	30.2	1			177522 (1)

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Sample Notes	8270C-SPK (mL)	8270C-SS (mL)
8270COMS_P	PS	**50225973021**	30.2	5			177522 (1)
8270COMS_P	PS	**50225973022**	30	1			177522 (1)
8270COMS_P	PS	**50225973023**	30.1	1			205662 (1)
8270COMS_P	PS	**50225973024**	30.2	5			205662 (1)

Standard Notes:

177522: Sim/Scan Combo Surr Stock (12) **194954: 8270 combo spike (7)** **205662: Sim/Scan Combo Surr Stock (10) 25 mL**

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS3.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [S]: MeCl2 Lot # 133555
ISTD lot: 182042:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/cal5.d	CAL5,192868:1	S/28003	CALIB_5	1	8270csim	1/21/19	07:42	JCM	good
1/cal1.d	CAL1,192864:1	S/28003	CALIB_1	1	8270csim	1/21/19	07:58	JCM	
1/cal2.d	CAL2,192865:1	S/28003	CALIB_2	1	8270csim	1/21/19	08:14	JCM	
1/cal3.d	CAL3,192866:1	S/28003	CALIB_3	1	8270csim	1/21/19	08:31	JCM	
1/cal4.d	CAL4,192867:1	S/28003	CALIB_4	1	8270csim	1/21/19	08:47	JCM	
1/cal6.d	CAL6,192869:1	S/28003	CALIB_6	1	8270csim	1/21/19	09:04	JCM	
1/cal7.d	CAL7,192870:1	S/28003	CALIB_7	1	8270csim	1/21/19	09:20	JCM	
1/cal8.d	CAL8,192871:1	S/28003	CALIB_8	1	8270csim	1/21/19	09:36	JCM	
1/cal9.d	CAL9,192872:1	S/28003	CALIB_9	1	8270csim	1/21/19	09:53	JCM	
1/icv.d	ICV,192873:1	S/28003	ICV	1	8270csim	1/21/19	10:09	JCM	

File Path 1: \\192.168.50.6\chem\50MSS3.i\012119cal.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 15:34 01/29/2019

Reviewed By/Date: _____ Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS3.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [S]: MeCl2 Lot # 133555
ISTD lot: 203727:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/5ppm.d	CCV,201754:1	S/28003	CCALIB_5	1	8270csim	5/30/19	12:41 ✓	JCM	good
1/2320950.d	2320950	S/28856	BLANK	1	8270csim	5/30/19	15:26	JCM	
1/2320951.d	2320951	S/28856	LCS	1	8270csim	5/30/19	15:42	JCM	
1/50225973018x.d	50225973018X5	S/28856	SAMPLE	5	8270csim	5/30/19	15:59	JCM	
1/50225973019x.d	50225973019X5	S/28856	SAMPLE	5	8270csim	5/30/19	16:15	JCM	
1/50225973020x.d	50225973020X5	S/28856	SAMPLE	5	8270csim	5/30/19	16:31	JCM	
1/50225973021x.d	50225973021X5	S/28856	SAMPLE	5	8270csim	5/30/19	16:48	JCM	
1/50225973022x.d	50225973022X5	S/28856	SAMPLE	5	8270csim	5/30/19	17:04	JCM	
1/50225973023x.d	50225973023X5	S/28856	SAMPLE	5	8270csim	5/30/19	17:21	JCM	
1/50225973024x.d	50225973024X5	S/28856	SAMPLE	5	8270csim	5/30/19	17:37	JCM	
1/50225205016.d	50225205016	S/28827	SAMPLE	1	8270csim	5/30/19	19:50	JCM	
1/50225398001.d	50225398001	S/28842	SAMPLE	1	8270csim	5/30/19	20:06	JCM	
1/2320187.d	2320187	S/28842	MS	1	8270csim	5/30/19	20:23	JCM	
1/2320188.d	2320188	S/28842	MSD	1	8270csim	5/30/19	20:39	JCM	
1/50225398002.d	50225398002	S/28842	SAMPLE	1	8270csim	5/30/19	20:55	JCM	
1/50225398003.d	50225398003	S/28842	SAMPLE	1	8270csim	5/30/19	21:12	JCM	
1/50225398004.d	50225398004	S/28842	SAMPLE	1	8270csim	5/30/19	21:28	JCM	
1/50225398005.d	50225398005	S/28842	SAMPLE	1	8270csim	5/30/19	21:45	JCM	
1/50225398006.d	50225398006	S/28842	SAMPLE	1	8270csim	5/30/19	22:01	JCM	
1/50225398007.d	50225398007	S/28842	SAMPLE	1	8270csim	5/30/19	22:18	JCM	
1/50225398008.d	50225398008	S/28842	SAMPLE	1	8270csim	5/30/19	22:34	JCM	
1/50225398009.d	50225398009	S/28842	SAMPLE	1	8270csim	5/30/19	22:51	JCM	
1/50225398010.d	50225398010	S/28842	SAMPLE	1	8270csim	5/30/19	23:07	JCM	
1/50225398011x.d	50225398011X5	S/28842	SAMPLE	5	8270csim	5/30/19	23:24	JCM	
1/50225398012.d	50225398012	S/28842	SAMPLE	1	8270csim	5/30/19	23:40	JCM	
1/50225710001.d	50225710001	S/28842	SAMPLE	1	8270csim	5/30/19	23:56	JCM	
1/50225710002x.d	50225710002X5	S/28842	SAMPLE	5	8270csim	5/31/19	00:13 ✓	JCM	

File Path 1: \\192.168.50.6\chem\50MSS3.i\053019.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 14:44 06/03/2019

Reviewed By/Date: _____ Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS3.i
Column Rtx-5MS 15m X 0.25mm — Method: Low-Level PAH Report by SW-846 Meth
Misc. Prep Info [S]: MeCl2 Lot # 133555
ISTD lot: 203727:1 — Surr. lot:
Lot:
Tune std: _____ — Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/5ppm.d	CCV,201754:1	S/28003	CCALIB_5	1	8270csim	6/02/19	07:35	JCM	good
1/50225634008.d	50225634008	S/28855	SAMPLE	1	8270csim	6/02/19	10:30	JCM	
1/50225634009.d	50225634009	S/28855	SAMPLE	1	8270csim	6/02/19	10:46	JCM	
1/50225634010.d	50225634010	S/28855	SAMPLE	1	8270csim	6/02/19	11:03	JCM	
1/50225634011.d	50225634011	S/28855	SAMPLE	1	8270csim	6/02/19	11:19	JCM	
1/50225634012.d	50225634012	S/28855	SAMPLE	1	8270csim	6/02/19	11:36	JCM	
1/50225634013.d	50225634013	S/28855	SAMPLE	1	8270csim	6/02/19	11:52	JCM	
1/50225653001.d	50225653001	S/28855	SAMPLE	1	8270csim	6/02/19	12:09	JCM	
1/50225653002.d	50225653002	S/28855	SAMPLE	1	8270csim	6/02/19	12:25	JCM	
1/50225653003.d	50225653003	S/28855	SAMPLE	1	8270csim	6/02/19	12:41	JCM	
1/50226254001.d	50226254001	S/28855	SAMPLE	1	8270csim	6/02/19	12:58	JCM	
1/50226254002.d	50226254002	S/28855	SAMPLE	1	8270csim	6/02/19	13:14	JCM	
1/50226254003.d	50226254003	S/28855	SAMPLE	1	8270csim	6/02/19	13:31	JCM	
1/50226254004.d	50226254004	S/28855	SAMPLE	1	8270csim	6/02/19	13:47	JCM	
1/50226254005.d	50226254005	S/28855	SAMPLE	1	8270csim	6/02/19	14:04	JCM	
1/50226254006.d	50226254006	S/28855	SAMPLE	1	8270csim	6/02/19	14:20	JCM	
1/50226254007.d	50226254007	S/28855	SAMPLE	1	8270csim	6/02/19	14:36	JCM	
1/50226254008.d	50226254008	S/28855	SAMPLE	1	8270csim	6/02/19	14:53	JCM	
1/50226254009.d	50226254009	S/28855	SAMPLE	1	8270csim	6/02/19	15:09	JCM	
1/2322273.d	2322273	S/28855	MS	1	8270csim	6/02/19	15:26	JCM	
1/2322274.d	2322274	S/28855	MSD	1	8270csim	6/02/19	15:42	JCM	
1/50225466001x.d	50225466001X5	S/28856	SAMPLE	5	8270csim	6/02/19	15:59	JCM	
1/50225466002x.d	50225466002X5	S/28856	SAMPLE	5	8270csim	6/02/19	16:15	JCM	
1/50225466003x.d	50225466003X5	S/28856	SAMPLE	5	8270csim	6/02/19	16:31	JCM	
1/50225466004x.d	50225466004X5	S/28856	SAMPLE	5	8270csim	6/02/19	16:48	JCM	
1/50225466005x.d	50225466005X10	S/28856	SAMPLE	10	8270csim	6/02/19	17:04	JCM	
1/2320952x.d	2320952X10	S/28856	MS	10	8270csim	6/02/19	17:21	JCM	
1/2320953x.d	2320953X10	S/28856	MSD	10	8270csim	6/02/19	17:37	JCM	
1/50225466006.d	50225466006	S/28856	SAMPLE	1	8270csim	6/02/19	17:53	JCM	
1/50225466009.d	50225466009	S/28856	SAMPLE	1	8270csim	6/02/19	18:10	JCM	
1/50225466010.d	50225466010	S/28856	SAMPLE	1	8270csim	6/02/19	18:26	JCM	

File Path 1: \\192.168.50.6\chem\50MSS3.i\060219.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 14:07 06/04/2019 — Reviewed By/Date: _____ Page: 1 of 2

INSTRUMENT RUN LOG

Pace Analytical Services, Inc.

Instrument: 50MSS3.i

Column Rtx-5MS 15m X 0.25mm Method: Low-Level PAH Report by SW-846 Method 8270 SIM

Misc. Prep Info [S]: MeCl2 Lot # 133555

ISTD lot: 203727:1 Surr. lot:

Lot:

Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/50225466011.d	50225466011	S/28856	SAMPLE	1	8270csim	6/02/19	18:43	JCM	
1/50225466015.d	50225466015	S/28856	SAMPLE	1	8270csim	6/02/19	18:59	JCM	
1/50225466016.d	50225466016	S/28856	SAMPLE	1	8270csim	6/02/19	19:16	JCM	
1/50225466017.d	50225466017	S/28856	SAMPLE	1	8270csim	6/02/19	19:32	JCM	

File Path 1: \\192.168.50.6\chem\50MSS3.i\060219.b

Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one

Report Date: 14:07 06/04/2019

Reviewed By/Date: _____

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS3.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [S]: MeCl2 Lot # 133555
ISTD lot: 203727:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/5ppm.d	CCV,201754:1	S/28003	CCALIB_5	1	8270csim	6/03/19	10:58	JCM	good
1/2325125.d	2325125	S/28880	BLANK	1	8270csim	6/03/19	12:13	JCM	
1/2325126.d	2325126	S/28880	LCS	1	8270csim	6/03/19	12:30	JCM	
1/50226109001.d	50226109001	S/28880	SAMPLE	1	8270csim	6/03/19	12:46	JCM	
1/50226112006.d	50226112006	S/28880	SAMPLE	1	8270csim	6/03/19	13:02	JCM	
1/50225466018.d	50225466018	S/28856	SAMPLE	1	8270csim	6/03/19	13:19	JCM	
1/50225710003x5.d	50225710003X5	S/28878	SAMPLE	5	8270csim	6/03/19	13:35	JCM	
1/50226112006x.d	50226112006X10	S/28880	SAMPLE	10	8270csim	6/03/19	14:25	JCM	
1/50226254010.d	50226254010	S/28878	SAMPLE	1	8270csim	6/03/19	14:41	JCM	
1/50226254011.d	50226254011	S/28878	SAMPLE	1	8270csim	6/03/19	14:57	JCM	
1/50226254012.d	50226254012	S/28878	SAMPLE	1	8270csim	6/03/19	15:14	JCM	
1/2325725.d	2325725	S/28883	BLANK	1	8270csim	6/03/19	19:20	JCM	
1/2325726.d	2325726	S/28883	LCS	1	8270csim	6/03/19	19:36	JCM	
1/50226671001.d	50226671001	S/28883	SAMPLE	1	8270csim	6/03/19	19:52	JCM	
1/2325727.d	2325727	S/28883	MS	1	8270csim	6/03/19	20:09	JCM	
1/2325728.d	2325728	S/28883	MSD	1	8270csim	6/03/19	20:25	JCM	
1/50226671002x.d	50226671002X5	S/28883	SAMPLE	5	8270csim	6/03/19	20:42	JCM	
1/50226671003.d	50226671003	S/28883	SAMPLE	1	8270csim	6/03/19	20:58	JCM	
1/50226671004.d	50226671004	S/28883	SAMPLE	1	8270csim	6/03/19	21:14	JCM	
1/50226671005x.d	50226671005X5	S/28883	SAMPLE	5	8270csim	6/03/19	21:31	JCM	
1/50226671006.d	50226671006	S/28883	SAMPLE	1	8270csim	6/03/19	21:47	JCM	
1/50226671007.d	50226671007	S/28883	SAMPLE	1	8270csim	6/03/19	22:04	JCM	
1/50226671008.d	50226671008	S/28883	SAMPLE	1	8270csim	6/03/19	22:20	JCM	

File Path 1: \\192.168.50.6\chem\50MSS3.i\060319.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 14:43 06/04/2019

Reviewed By/Date: _____ Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS3.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [S]: MeCl2 Lot # 133555
ISTD lot: 203727:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/5ppm.d	CCV,201754:1	S/28003	CCALIB_5	1	8270csim	6/04/19	12:00	JCM	good
1/2323923.d	2323923	S/28885	BLANK	1	8270csim	6/04/19	12:32	JCM	
1/2323924.d	2323924	S/28885	LCS	1	8270csim	6/04/19	12:49	JCM	
1/50226525001.d	50226525001	S/28885	SAMPLE	1	8270csim	6/04/19	13:05	JCM	
1/2323925.d	2323925	S/28885	MS	1	8270csim	6/04/19	13:22	JCM	
1/2323926.d	2323926	S/28885	MSD	1	8270csim	6/04/19	13:38	JCM	
1/50225466003.d	50225466003	S/28856	SAMPLE	1	8270csim	6/04/19	13:55	JCM	
1/50226671002.d	50226671002	S/28883	SAMPLE	1	8270csim	6/04/19	14:11	JCM	
1/50226157013x.d	50226157013X5	S/28878	SAMPLE	5	8270csim	6/04/19	18:33	JCM	
1/50226157014x.d	50226157014X5	S/28878	SAMPLE	5	8270csim	6/04/19	18:49	JCM	
1/50226157015x.d	50226157015X5	S/28878	SAMPLE	5	8270csim	6/04/19	19:05	JCM	
1/50226157016x.d	50226157016X10	S/28878	SAMPLE	10	8270csim	6/04/19	19:22	JCM	
1/50226157017.d	50226157017	S/28878	SAMPLE	1	8270csim	6/04/19	19:38	JCM	
1/50226157018x.d	50226157018X5	S/28878	SAMPLE	5	8270csim	6/04/19	19:55	JCM	
1/50226157019x.d	50226157019X5	S/28878	SAMPLE	5	8270csim	6/04/19	20:11	JCM	
1/50226157020x.d	50226157020X5	S/28878	SAMPLE	5	8270csim	6/04/19	20:28	JCM	
1/50226157021x.d	50226157021X5	S/28878	SAMPLE	5	8270csim	6/04/19	20:44	JCM	
1/50226157022.d	50226157022	S/28878	SAMPLE	1	8270csim	6/04/19	21:00	JCM	
1/50226157023x.d	50226157023X5	S/28878	SAMPLE	5	8270csim	6/04/19	21:17	JCM	
1/2323610.d	2323610	S/28899	BLANK	1	8270csim	6/04/19	21:33	JCM	
1/2323611.d	2323611	S/28899	LCS	1	8270csim	6/04/19	21:50	JCM	
1/50225765001x.d	50225765001X10	S/28899	SAMPLE	10	8270csim	6/04/19	22:06	JCM	
1/2323612x.d	2323612X10	S/28899	MS	1	8270csim	6/04/19	22:23	JCM	
1/2323613x.d	2323613X10	S/28899	MSD	10	8270csim	6/04/19	22:39	JCM	
1/50225765002.d	50225765002	S/28899	SAMPLE	1	8270csim	6/04/19	22:56	JCM	
1/50225765005x.d	50225765005X5	S/28899	SAMPLE	5	8270csim	6/04/19	23:12	JCM	
1/50225765006x.d	50225765006X5	S/28899	SAMPLE	5	8270csim	6/04/19	23:29	JCM	
1/50225765003x.d	50225765003X5	S/28899	SAMPLE	5	8270csim	6/04/19	23:45	JCM	

File Path 1: \\192.168.50.6\chem\50MSS3.i\060419.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 14:57 06/06/2019

Reviewed By/Date: _____ Page: 1 of 1

SAMPLE NO.

SP-1 (3-5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466001 Percent Moisture: 16.2

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.25	U	mg/kg	1	05/28/2019 16:50
7440-38-2	Arsenic	12.0		mg/kg	1	05/28/2019 16:50
7440-39-3	Barium	72.6		mg/kg	1	05/28/2019 16:50
7440-41-7	Beryllium	0.91		mg/kg	1	05/28/2019 16:50
7440-43-9	Cadmium	0.18	J	mg/kg	1	05/28/2019 16:50
7440-47-3	Chromium	13.6		mg/kg	1	05/28/2019 16:50
7440-50-8	Copper	17.8		mg/kg	1	05/28/2019 16:50
7439-92-1	Lead	16.3		mg/kg	1	05/28/2019 16:50
7440-02-0	Nickel	17.0		mg/kg	1	05/28/2019 16:50
7782-49-2	Selenium	0.64	J	mg/kg	1	05/28/2019 16:50
7440-22-4	Silver	<0.30	U	mg/kg	1	05/28/2019 16:50
7440-28-0	Thallium	1.6		mg/kg	1	05/28/2019 16:50
7440-66-6	Zinc	37.0		mg/kg	1	05/28/2019 16:50

SAMPLE NO.

SP-1 (5-7)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466002 Percent Moisture: 19.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.27	U	mg/kg	1	05/28/2019 16:53
7440-38-2	Arsenic	8.2		mg/kg	1	05/28/2019 16:53
7440-39-3	Barium	49.1		mg/kg	1	05/28/2019 16:53
7440-41-7	Beryllium	1.4		mg/kg	1	05/28/2019 16:53
7440-43-9	Cadmium	0.13	J	mg/kg	1	05/28/2019 16:53
7440-47-3	Chromium	8.7		mg/kg	1	05/28/2019 16:53
7440-50-8	Copper	37.2		mg/kg	1	05/28/2019 16:53
7439-92-1	Lead	43.9		mg/kg	1	05/28/2019 16:53
7440-02-0	Nickel	19.1		mg/kg	1	05/28/2019 16:53
7782-49-2	Selenium	1.2		mg/kg	1	05/28/2019 16:53
7440-22-4	Silver	<0.32	U	mg/kg	1	05/28/2019 16:53
7440-28-0	Thallium	0.95	J	mg/kg	1	05/28/2019 16:53
7440-66-6	Zinc	49.9		mg/kg	1	05/28/2019 16:53

SAMPLE NO.

SP-2 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466003 Percent Moisture: 3.4

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.24	U	mg/kg	1	05/28/2019 16:55
7440-38-2	Arsenic	0.97	J	mg/kg	1	05/28/2019 16:55
7440-39-3	Barium	42.2		mg/kg	1	05/28/2019 16:55
7440-41-7	Beryllium	<0.020	U	mg/kg	1	05/28/2019 16:55
7440-43-9	Cadmium	0.37	J	mg/kg	1	05/28/2019 16:55
7440-47-3	Chromium	7.1		mg/kg	1	05/28/2019 16:55
7440-50-8	Copper	2.2		mg/kg	1	05/28/2019 16:55
7439-92-1	Lead	2.1		mg/kg	1	05/28/2019 16:55
7440-02-0	Nickel	8.6		mg/kg	1	05/28/2019 16:55
7782-49-2	Selenium	<0.37	U	mg/kg	1	05/28/2019 16:55
7440-22-4	Silver	0.68		mg/kg	1	05/28/2019 16:55
7440-28-0	Thallium	<0.24	U	mg/kg	1	05/28/2019 16:55
7440-66-6	Zinc	22.0		mg/kg	1	05/28/2019 16:55

SAMPLE NO.

SP-2 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466004 Percent Moisture: 8.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.25	U	mg/kg	1	05/28/2019 16:57
7440-38-2	Arsenic	14.2		mg/kg	1	05/28/2019 16:57
7440-39-3	Barium	75.2		mg/kg	1	05/28/2019 16:57
7440-41-7	Beryllium	0.46	J	mg/kg	1	05/28/2019 16:57
7440-43-9	Cadmium	0.26	J	mg/kg	1	05/28/2019 16:57
7440-47-3	Chromium	15.8		mg/kg	1	05/28/2019 16:57
7440-50-8	Copper	9.1		mg/kg	1	05/28/2019 16:57
7439-92-1	Lead	14.7		mg/kg	1	05/28/2019 16:57
7440-02-0	Nickel	11.2		mg/kg	1	05/28/2019 16:57
7782-49-2	Selenium	<0.38	U	mg/kg	1	05/28/2019 16:57
7440-22-4	Silver	<0.29	U	mg/kg	1	05/28/2019 16:57
7440-28-0	Thallium	0.86	J	mg/kg	1	05/28/2019 16:57
7440-66-6	Zinc	33.1		mg/kg	1	05/28/2019 16:57

SAMPLE NO.

SP-3 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466005 Percent Moisture: 16.2

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.26	U	mg/kg	1	05/28/2019 16:59
7440-38-2	Arsenic	6.3		mg/kg	1	05/28/2019 16:59
7440-39-3	Barium	301		mg/kg	1	05/28/2019 16:59
7440-41-7	Beryllium	0.51	J	mg/kg	1	05/28/2019 16:59
7440-43-9	Cadmium	0.34	J	mg/kg	1	05/28/2019 16:59
7440-47-3	Chromium	13.3		mg/kg	1	05/28/2019 16:59
7440-50-8	Copper	17.6		mg/kg	1	05/28/2019 16:59
7439-92-1	Lead	96.5		mg/kg	1	05/28/2019 16:59
7440-02-0	Nickel	13.2		mg/kg	1	05/28/2019 16:59
7782-49-2	Selenium	<0.40	U	mg/kg	1	05/28/2019 16:59
7440-22-4	Silver	<0.30	U	mg/kg	1	05/28/2019 16:59
7440-28-0	Thallium	0.83	J	mg/kg	1	05/28/2019 16:59
7440-66-6	Zinc	97.4		mg/kg	1	05/28/2019 16:59

SAMPLE NO.

SP-3 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466006 Percent Moisture: 22.2

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.28	U	mg/kg	1	05/28/2019 17:10
7440-38-2	Arsenic	13.6		mg/kg	1	05/28/2019 17:10
7440-39-3	Barium	72.8		mg/kg	1	05/28/2019 17:10
7440-41-7	Beryllium	0.77		mg/kg	1	05/28/2019 17:10
7440-43-9	Cadmium	0.13	J	mg/kg	1	05/28/2019 17:10
7440-47-3	Chromium	19.2		mg/kg	1	05/28/2019 17:10
7440-50-8	Copper	22.1		mg/kg	1	05/28/2019 17:10
7439-92-1	Lead	20.0		mg/kg	1	05/28/2019 17:10
7440-02-0	Nickel	15.8		mg/kg	1	05/28/2019 17:10
7782-49-2	Selenium	<0.44	U	mg/kg	1	05/28/2019 17:10
7440-22-4	Silver	<0.33	U	mg/kg	1	05/28/2019 17:10
7440-28-0	Thallium	1.1	J	mg/kg	1	05/28/2019 17:10
7440-66-6	Zinc	49.8		mg/kg	1	05/28/2019 17:10

SAMPLE NO.

SP-4 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466007 Percent Moisture: 18.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.26	U	mg/kg	1	05/28/2019 17:17
7440-38-2	Arsenic	7.7		mg/kg	1	05/28/2019 17:17
7440-39-3	Barium	187		mg/kg	1	05/28/2019 17:17
7440-41-7	Beryllium	0.60		mg/kg	1	05/28/2019 17:17
7440-43-9	Cadmium	0.63		mg/kg	1	05/28/2019 17:17
7440-47-3	Chromium	17.3		mg/kg	1	05/28/2019 17:17
7440-50-8	Copper	16.3		mg/kg	1	05/28/2019 17:17
7439-92-1	Lead	44.7		mg/kg	1	05/28/2019 17:17
7440-02-0	Nickel	12.8		mg/kg	1	05/28/2019 17:17
7782-49-2	Selenium	0.50	J	mg/kg	1	05/28/2019 17:17
7440-22-4	Silver	<0.31	U	mg/kg	1	05/28/2019 17:17
7440-28-0	Thallium	0.72	J	mg/kg	1	05/28/2019 17:17
7440-66-6	Zinc	111		mg/kg	1	05/28/2019 17:17

SAMPLE NO.

SP-4 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466008 Percent Moisture: 21.9

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.28	U	mg/kg	1	05/28/2019 17:19
7440-38-2	Arsenic	18.5		mg/kg	1	05/28/2019 17:19
7440-39-3	Barium	98.4		mg/kg	1	05/28/2019 17:19
7440-41-7	Beryllium	0.91		mg/kg	1	05/28/2019 17:19
7440-43-9	Cadmium	0.18	J	mg/kg	1	05/28/2019 17:19
7440-47-3	Chromium	22.5		mg/kg	1	05/28/2019 17:19
7440-50-8	Copper	26.4		mg/kg	1	05/28/2019 17:19
7439-92-1	Lead	15.1		mg/kg	1	05/28/2019 17:19
7440-02-0	Nickel	15.9		mg/kg	1	05/28/2019 17:19
7782-49-2	Selenium	<0.44	U	mg/kg	1	05/28/2019 17:19
7440-22-4	Silver	<0.33	U	mg/kg	1	05/28/2019 17:19
7440-28-0	Thallium	0.84	J	mg/kg	1	05/28/2019 17:19
7440-66-6	Zinc	57.4		mg/kg	1	05/28/2019 17:19

SAMPLE NO.

SP-5 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466012 Percent Moisture: 12.3

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	0.23	J	mg/kg	1	05/28/2019 17:21
7440-38-2	Arsenic	6.1		mg/kg	1	05/28/2019 17:21
7440-39-3	Barium	147		mg/kg	1	05/28/2019 17:21
7440-41-7	Beryllium	0.54		mg/kg	1	05/28/2019 17:21
7440-43-9	Cadmium	0.20	J	mg/kg	1	05/28/2019 17:21
7440-47-3	Chromium	14.9		mg/kg	1	05/28/2019 17:21
7440-50-8	Copper	12.1		mg/kg	1	05/28/2019 17:21
7439-92-1	Lead	107		mg/kg	1	05/28/2019 17:21
7440-02-0	Nickel	9.3		mg/kg	1	05/28/2019 17:21
7782-49-2	Selenium	<0.35	U	mg/kg	1	05/28/2019 17:21
7440-22-4	Silver	<0.27	U	mg/kg	1	05/28/2019 17:21
7440-28-0	Thallium	0.59	J	mg/kg	1	05/28/2019 17:21
7440-66-6	Zinc	57.5		mg/kg	1	05/28/2019 17:21

SAMPLE NO.

SP-5 (0-2) DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466013 Percent Moisture: 12.1

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.23	U	mg/kg	1	05/28/2019 17:23
7440-38-2	Arsenic	7.5		mg/kg	1	05/28/2019 17:23
7440-39-3	Barium	136		mg/kg	1	05/28/2019 17:23
7440-41-7	Beryllium	0.66		mg/kg	1	05/28/2019 17:23
7440-43-9	Cadmium	0.14	J	mg/kg	1	05/28/2019 17:23
7440-47-3	Chromium	13.9		mg/kg	1	05/28/2019 17:23
7440-50-8	Copper	116		mg/kg	1	05/28/2019 17:23
7439-92-1	Lead	95.3		mg/kg	1	05/28/2019 17:23
7440-02-0	Nickel	10.5		mg/kg	1	05/28/2019 17:23
7782-49-2	Selenium	<0.36	U	mg/kg	1	05/28/2019 17:23
7440-22-4	Silver	<0.27	U	mg/kg	1	05/28/2019 17:23
7440-28-0	Thallium	0.60	J	mg/kg	1	05/28/2019 17:23
7440-66-6	Zinc	74.1		mg/kg	1	05/28/2019 17:23

SAMPLE NO.

SP-5 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466014 Percent Moisture: 17.8

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.27	U	mg/kg	1	05/28/2019 17:25
7440-38-2	Arsenic	7.7		mg/kg	1	05/28/2019 17:25
7440-39-3	Barium	91.6		mg/kg	1	05/28/2019 17:25
7440-41-7	Beryllium	0.67		mg/kg	1	05/28/2019 17:25
7440-43-9	Cadmium	0.099	J	mg/kg	1	05/28/2019 17:25
7440-47-3	Chromium	15.1		mg/kg	1	05/28/2019 17:25
7440-50-8	Copper	11.8		mg/kg	1	05/28/2019 17:25
7439-92-1	Lead	17.8		mg/kg	1	05/28/2019 17:25
7440-02-0	Nickel	11.4		mg/kg	1	05/28/2019 17:25
7782-49-2	Selenium	<0.42	U	mg/kg	1	05/28/2019 17:25
7440-22-4	Silver	<0.32	U	mg/kg	1	05/28/2019 17:25
7440-28-0	Thallium	0.54	J	mg/kg	1	05/28/2019 17:25
7440-66-6	Zinc	49.4		mg/kg	1	05/28/2019 17:25

SAMPLE NO.

SP-5 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466018 Percent Moisture: 19.0

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<0.27	U	mg/kg	1	05/28/2019 17:28
7440-38-2	Arsenic	6.6		mg/kg	1	05/28/2019 17:28
7440-39-3	Barium	118		mg/kg	1	05/28/2019 17:28
7440-41-7	Beryllium	1.1		mg/kg	1	05/28/2019 17:28
7440-43-9	Cadmium	0.16	J	mg/kg	1	05/28/2019 17:28
7440-47-3	Chromium	32.3		mg/kg	1	05/28/2019 17:28
7440-50-8	Copper	13.5		mg/kg	1	05/28/2019 17:28
7439-92-1	Lead	14.0		mg/kg	1	05/28/2019 17:28
7440-02-0	Nickel	15.0		mg/kg	1	05/28/2019 17:28
7782-49-2	Selenium	<0.41	U	mg/kg	1	05/28/2019 17:28
7440-22-4	Silver	<0.31	U	mg/kg	1	05/28/2019 17:28
7440-28-0	Thallium	0.50	J	mg/kg	1	05/28/2019 17:28
7440-66-6	Zinc	57.3		mg/kg	1	05/28/2019 17:28

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210196

Continuing Calibration Verification Source: 210197

Concentration Units: ug/L Instrument ID: 50ICP4

	Initial Calibration Verification				Continuing Calibration Verification						
	05/28/2019 11:19				05/28/2019 11:52			05/28/2019 16:18			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Antimony	1000	986	98.6	90-110	1000	962	96.2	1000	958	95.8	90-110
Arsenic	1000	981	98.1	90-110	1000	968	96.8	1000	952	95.2	90-110
Barium	1000	996	99.6	90-110	1000	993	99.3	1000	986	98.6	90-110
Beryllium	1000	999	99.9	90-110	1000	985	98.5	1000	950	95.0	90-110
Cadmium	1000	973	97.3	90-110	1000	965	96.5	1000	944	94.4	90-110
Chromium	1000	973	97.3	90-110	1000	963	96.3	1000	938	93.8	90-110
Copper	1000	971	97.1	90-110	1000	965	96.5	1000	942	94.2	90-110
Lead	1000	940	94.0	90-110	1000	933	93.3	1000	910	91.0	90-110
Nickel	1000	968	96.8	90-110	1000	969	96.9	1000	940	94.0	90-110
Selenium	1000	981	98.1	90-110	1000	975	97.5	1000	957	95.7	90-110
Silver	500	481	96.2	90-110	500	477	95.4	500	476	95.3	90-110
Thallium	1000	978	97.8	90-110	1000	960	96.0	1000	952	95.2	90-110
Zinc	1000	992	99.2	90-110	1000	987	98.7	1000	944	94.4	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210197

Concentration Units: ug/L Instrument ID: 50ICP4

	Continuing Calibration Verification									
	05/28/2019 16:46			05/28/2019 17:12			05/28/2019 17:39			Control Limit
Analyte	True	Found	%R	True	Found	%R	True	Found	%R	
Antimony	1000	964	96.4	1000	970	97.0	1000	958	95.8	90-110
Arsenic	1000	955	95.5	1000	964	96.4	1000	958	95.8	90-110
Barium	1000	985	98.5	1000	992	99.2	1000	991	99.1	90-110
Beryllium	1000	949	94.9	1000	955	95.5	1000	961	96.1	90-110
Cadmium	1000	946	94.6	1000	946	94.6	1000	946	94.6	90-110
Chromium	1000	949	94.9	1000	941	94.1	1000	941	94.1	90-110
Copper	1000	948	94.8	1000	943	94.3	1000	938	93.8	90-110
Lead	1000	914	91.4	1000	914	91.4	1000	913	91.3	90-110
Nickel	1000	938	93.8	1000	937	93.7	1000	936	93.6	90-110
Selenium	1000	954	95.4	1000	958	95.8	1000	950	95.0	90-110
Silver	500	482	96.4	500	481	96.2	500	476	95.3	90-110
Thallium	1000	957	95.7	1000	960	96.0	1000	956	95.6	90-110
Zinc	1000	949	94.9	1000	947	94.7	1000	949	94.9	90-110

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

CRDL Check Standard Source: 210076 Analysis Date/Time: 05/28/2019 11:23

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Antimony	6.0	4.6	76.2	50-150
Arsenic	10.0	9.0	89.9	50-150
Barium	10.0	10.2	101.7	50-150
Beryllium	4.0	4.0	100.6	50-150
Cadmium	2.0	1.8	88.2	50-150
Chromium	10.0	9.1	91.4	50-150
Copper	10.0	10.6	106.4	50-150
Lead	10.0	8.8	88.1	50-150
Nickel	10.0	10.6	105.7	50-150
Selenium	10.0	10.3	102.6	50-150
Silver	10.0	9.0	90.0	50-150
Thallium	10.0	10.7	106.6	50-150
Zinc	20	20.6	102.8	50-150

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract : 216 College / 19-146

Method Blank Matrix: Solid Instrument ID: 50ICP4

Method Blank Concentration Units: mg/kg

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	05/28/2019 11:21	C	05/28/2019 11:54	C	05/28/2019 16:20	C	05/28/2019 16:48	C	2317323	C
Antimony	4.0	U	4.0	U	4.0	U	4.0	U	<0.24	U
Arsenic	5.0	U	5.0	U	5.0	U	5.0	U	<0.14	U
Barium	5.0	U	5.0	U	5.0	U	5.0	U	<0.030	U
Beryllium	2.0	U	2.0	U	2.0	U	2.0	U	<0.020	U
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	<0.020	U
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	<0.29	U
Copper	5.0	U	5.0	U	5.0	U	5.0	U	0.18	J
Lead	4.0	U	4.0	U	4.0	U	4.0	U	<0.15	U
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	<0.11	U
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	<0.37	U
Silver	5.0	U	5.0	U	5.0	U	5.0	U	<0.28	U
Thallium	5.0	U	5.0	U	5.0	U	5.0	U	<0.24	U
Zinc	10.0	U	10.0	U	10.0	U	10.0	U	<0.35	U

FORM III INORGANIC-2

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50ICP4

Method Blank Concentration Units:

Analyte	Initial Calibration Blank		Continuing Calibration Blank (ug/L)					
		C	05/28/2019 17:14	C	05/28/2019 17:41	C		C
Antimony			4.0	U	4.0	U		
Arsenic			5.0	U	5.0	U		
Barium			5.0	U	5.0	U		
Beryllium			2.0	U	2.0	U		
Cadmium			1.0	U	1.0	U		
Chromium			5.0	U	5.0	U		
Copper			5.0	U	5.0	U		
Lead			4.0	U	4.0	U		
Nickel			5.0	U	5.0	U		
Selenium			5.0	U	5.0	U		
Silver			5.0	U	5.0	U		
Thallium			5.0	U	5.0	U		
Zinc			10.0	U	10.0	U		

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Instrument ID: 50ICP4 Solution A Run Date: 05/28/2019 11:25

ICS Source: 210150,210151 Solution AB Run Date: 05/28/2019 11:28

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	468900	93.8	461800	92.4	80-120
Antimony		500	-1.401		485.2	97	80-120
Arsenic		500	5.386		496.8	99.4	80-120
Barium		500	0.6447		487	97.4	80-120
Beryllium		500	-0.326		481.7	96.3	80-120
Cadmium		500	0.8728		495	99	80-120
Calcium	500000	500000	437500	87.5	433200	86.6	80-120
Chromium		500	0.9225		456.1	91.2	80-120
Copper		500	3.217		503.1	100.6	80-120
Iron	200000	200000	180600	90.3	179400	89.7	80-120
Lead		500	-6.685		411.2	82.2	80-120
Magnesium	500000	500000	489700	97.9	485600	97.1	80-120
Nickel		500	2.658		430.8	86.2	80-120
Selenium		500	0.3039		488.1	97.6	80-120
Silver		250	-0.2299		255.7	102.3	80-120
Thallium		500	8.319		410.9	82.2	80-120
Zinc		500	-3.717		446.7	89.3	80-120

SAMPLE NO.

2317325MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Basis: Dry Parent Sample ID: SP-3 (0-2)

Percent Moisture: 16.2

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	mg/kg	75-125	17.1	<0.26	51.9	33*
Arsenic	mg/kg	75-125	50.6	6.3	51.9	85
Barium	mg/kg	75-125	408	301	51.9	206*
Beryllium	mg/kg	75-125	44.9	0.51J	51.9	86
Cadmium	mg/kg	75-125	45.9	0.34J	51.9	88
Chromium	mg/kg	75-125	59.9	13.3	51.9	90
Copper	mg/kg	75-125	67.1	17.6	51.9	95
Lead	mg/kg	75-125	150	96.5	51.9	102
Nickel	mg/kg	75-125	54.3	13.2	51.9	79
Selenium	mg/kg	75-125	44.4	<0.40	51.9	85
Silver	mg/kg	75-125	24.2	<0.30	25.9	93
Thallium	mg/kg	75-125	37.7	0.83J	51.9	71*
Zinc	mg/kg	75-125	142	97.4	51.9	87

* Spike Recovery outside QC Limits

SAMPLE NO.

2317326MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Basis: Dry Parent Sample ID: SP-3 (0-2)

Percent Moisture: 16.2

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	mg/kg	75-125	22.6	<0.26	58.9	38*
Arsenic	mg/kg	75-125	59.2	6.3	58.9	90
Barium	mg/kg	75-125	345	301	58.9	74*
Beryllium	mg/kg	75-125	52.1	0.51J	58.9	88
Cadmium	mg/kg	75-125	54.2	0.34J	58.9	92
Chromium	mg/kg	75-125	65.7	13.3	58.9	89
Copper	mg/kg	75-125	74.1	17.6	58.9	96
Lead	mg/kg	75-125	162	96.5	58.9	111
Nickel	mg/kg	75-125	60.9	13.2	58.9	81
Selenium	mg/kg	75-125	52.9	<0.40	58.9	89
Silver	mg/kg	75-125	28.9	<0.30	29.5	97
Thallium	mg/kg	75-125	42.6	0.83J	58.9	71*
Zinc	mg/kg	75-125	159	97.4	58.9	104

* Spike Recovery outside QC Limits

SAMPLE NO.

2320825PDS

FORM V INORGANIC-1

POST-DIGESTION SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Parent Sample ID: SP-3 (0-2)

Analyte	Units	Control Limit %R	DF	Spiked Sample Result (SSR)	DF	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	1	912	1	4.8U	1000	91.2
Arsenic	ug/L	75-125	1	1020	1	118	1000	89.8
Barium	ug/L	75-125	1	6450	1	5630	1000	81.7
Beryllium	ug/L	75-125	1	890	1	9.5J	1000	88.0
Cadmium	ug/L	75-125	1	910	1	6.3J	1000	90.4
Chromium	ug/L	75-125	1	1090	1	248	1000	83.8
Copper	ug/L	75-125	1	1230	1	329	1000	89.7
Lead	ug/L	75-125	1	2530	1	1800	1000	72.3*
Nickel	ug/L	75-125	1	1020	1	246	1000	77.8
Selenium	ug/L	75-125	1	910	1	7.4U	1000	91.0
Silver	ug/L	75-125	1	482	1	5.6U	500	96.4
Thallium	ug/L	75-125	1	744	1	15.6J	1000	72.8*
Zinc	ug/L	75-125	1	2570	1	1820	1000	74.8*

SAMPLE NO.

2317326MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Concentration Units: mg/kg

Percent Moisture: 16.2 Basis: Dry

Analyte	Control Limit	Sample	Duplicate	RPD
Antimony	20	17.1	22.6	28*
Arsenic	20	50.6	59.2	16
Barium	20	408	345	17
Beryllium	20	44.9	52.1	15
Cadmium	20	45.9	54.2	17
Chromium	20	59.9	65.7	9
Copper	20	67.1	74.1	10
Lead	20	150	162	8
Nickel	20	54.3	60.9	12
Selenium	20	44.4	52.9	18
Silver	20	24.2	28.9	17
Thallium	20	37.7	42.6	12
Zinc	20	142	159	11

* RPD outside QC Limits

SAMPLE NO.

2317324LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid

Analyte	Units	True	Found	%R	Limits	
Antimony	mg/kg	50.0	49.9	100	80	120
Arsenic	mg/kg	50.0	48.2	96	80	120
Barium	mg/kg	50.0	51.2	102	80	120
Beryllium	mg/kg	50.0	49.6	99	80	120
Cadmium	mg/kg	50.0	48.7	97	80	120
Chromium	mg/kg	50.0	49.1	98	80	120
Copper	mg/kg	50.0	49.3	99	80	120
Lead	mg/kg	50.0	46.9	94	80	120
Nickel	mg/kg	50.0	48.5	97	80	120
Selenium	mg/kg	50.0	49.1	98	80	120
Silver	mg/kg	25.0	24.9	100	80	120
Thallium	mg/kg	50.0	47.5	95	80	120
Zinc	mg/kg	50.0	47.9	96	80	120

SAMPLE NO.

2320826SD

FORM VIII INORGANIC-1
SERIAL DILUTIONS

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Parent Sample ID: SP-3 (0-2)

Analyte	Units	Initial Sample Result	Serial Dilution Result	% Difference	Control Limit %D
Antimony	ug/L	4.8U	24.0U		10
Arsenic	ug/L	118	128	7.8	10
Barium	ug/L	5630	5970	6.0	10
Beryllium	ug/L	9.5J	10.3J	8.7	10
Cadmium	ug/L	6.3J	5.6J	10.1*	10
Chromium	ug/L	248	265	6.7	10
Copper	ug/L	329	348	5.7	10
Lead	ug/L	1800	2060	14.1*	10
Nickel	ug/L	246	284	15.4*	10
Selenium	ug/L	7.4U	37.0U		10
Silver	ug/L	5.6U	28.0U		10
Thallium	ug/L	15.6J	25.8J	65.8*	10
Zinc	ug/L	1820	2060	13.0*	10

* Indicates that the % Difference exceeds the control limit.
No difference is calculated if either result is a non-detect.

FORM XI - INORGANIC-1
LINEAR DYNAMIC RANGES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract : 216 College / 19-146

Instrument ID: 50ICP4 Effective Date:09/29/2016

Analyte	Concentration (ug/L)
Antimony	40000
Arsenic	35000
Barium	25000
Beryllium	10000
Cadmium	20000
Chromium	25000
Copper	100000
Lead	100000
Nickel	100000
Selenium	50000
Silver	10000
Thallium	50000
Zinc	50000

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Preparation Method: EPA 3050 Batch: MPRP 35886

Lab Sample ID	Sample Name	Preparation Date	Initial Weight (g)	Final Volume (mL)
2317323	2317323BLANK	05/28/2019	1	50
2317324	2317324LCS	05/28/2019	1	50
2317325	2317325MS	05/28/2019	1.15	50
2317326	2317326MSD	05/28/2019	1.013	50
50225466001	SP-1 (3-5)	05/28/2019	1.124	50
50225466002	SP-1 (5-7)	05/28/2019	1.086	50
50225466003	SP-2 (0-2)	05/28/2019	1.031	50
50225466004	SP-2 (2-4)	05/28/2019	1.068	50
50225466005	SP-3 (0-2)	05/28/2019	1.115	50
50225466006	SP-3 (2-4)	05/28/2019	1.091	50
50225466007	SP-4 (0-2)	05/28/2019	1.113	50
50225466008	SP-4 (2-4)	05/28/2019	1.086	50
50225466012	SP-5 (0-2)	05/28/2019	1.195	50
50225466013	SP-5 (0-2) DUP	05/28/2019	1.166	50
50225466014	SP-5 (2-4)	05/28/2019	1.065	50
50225466018	SP-5 (6-8)	05/28/2019	1.11	50

FORM XIII INORGANIC-1

ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Instrument ID: 50ICP4 Analysis Method: EPA 6010

Start Date: 05/28/2019 11:01 End Date: 05/28/2019 17:41

Sample Name	Lab Sample ID	D/F	Date	Time	Ag	As	Ba	Be	Cd	Cr	Cu	Ni	Pb	Sb	Se	Tl	Zn
15136100CAL0	15136100CAL0	1	05/28/2019	11:01	X	X	X	X	X	X	X	X	X	X	X	X	X
15136101CAL1	15136101CAL1	1	05/28/2019	11:04				X	X				X		X		X
15136102CAL2	15136102CAL2	1	05/28/2019	11:06			X				X						
15136103CAL3	15136103CAL3	1	05/28/2019	11:08		X											
15136104CAL4	15136104CAL4	1	05/28/2019	11:10						X		X					
15136105CAL5	15136105CAL5	1	05/28/2019	11:12										X		X	
15136107CAL7	15136107CAL7	1	05/28/2019	11:17	X												
15136108ICV	15136108ICV	1	05/28/2019	11:19	X	X	X	X	X	X	X	X	X	X	X	X	X
15136109ICB	15136109ICB	1	05/28/2019	11:21	X	X	X	X	X	X	X	X	X	X	X	X	X
15136110CRDL	15136110CRDL	1	05/28/2019	11:23	X	X	X	X	X	X	X	X	X	X	X	X	X
15136111ICSA	15136111ICSA	1	05/28/2019	11:25	X	X	X	X	X	X	X	X	X	X	X	X	X
15136112ICSAB	15136112ICSAB	1	05/28/2019	11:28	X	X	X	X	X	X	X	X	X	X	X	X	X
15136113CCV	15136113CCV	1	05/28/2019	11:52	X	X	X	X	X	X	X	X	X	X	X	X	X
15136114CCB	15136114CCB	1	05/28/2019	11:54	X	X	X	X	X	X	X	X	X	X	X	X	X
15136137CCV	15136137CCV	1	05/28/2019	16:18	X	X	X	X	X	X	X	X	X	X	X	X	X
15136138CCB	15136138CCB	1	05/28/2019	16:20	X	X	X	X	X	X	X	X	X	X	X	X	X
2317323BLANK	2317323	1	05/28/2019	16:42	X	X	X	X	X	X	X	X	X	X	X	X	X
2317324LCS	2317324	1	05/28/2019	16:44	X	X	X	X	X	X	X	X	X	X	X	X	X
15136140CCV	15136140CCV	1	05/28/2019	16:46	X	X	X	X	X	X	X	X	X	X	X	X	X
15136141CCB	15136141CCB	1	05/28/2019	16:48	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-1 (3-5)	50225466001	1	05/28/2019	16:50	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-1 (5-7)	50225466002	1	05/28/2019	16:53	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-2 (0-2)	50225466003	1	05/28/2019	16:55	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-2 (2-4)	50225466004	1	05/28/2019	16:57	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-3 (0-2)	50225466005	1	05/28/2019	16:59	X	X	X	X	X	X	X	X	X	X	X	X	X
2317325MS	2317325	1	05/28/2019	17:02	X	X	X	X	X	X	X	X	X	X	X	X	X
2317326MSD	2317326	1	05/28/2019	17:04	X	X	X	X	X	X	X	X	X	X	X	X	X
2320825PDS	2320825	1	05/28/2019	17:06	X	X	X	X	X	X	X	X	X	X	X	X	X
2320826SD	2320826	1	05/28/2019	17:08	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-3 (2-4)	50225466006	1	05/28/2019	17:10	X	X	X	X	X	X	X	X	X	X	X	X	X
15136142CCV	15136142CCV	1	05/28/2019	17:12	X	X	X	X	X	X	X	X	X	X	X	X	X
15136143CCB	15136143CCB	1	05/28/2019	17:14	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-4 (0-2)	50225466007	1	05/28/2019	17:17	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-4 (2-4)	50225466008	1	05/28/2019	17:19	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-5 (0-2)	50225466012	1	05/28/2019	17:21	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-5 (0-2) DUP	50225466013	1	05/28/2019	17:23	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-5 (2-4)	50225466014	1	05/28/2019	17:25	X	X	X	X	X	X	X	X	X	X	X	X	X
SP-5 (6-8)	50225466018	1	05/28/2019	17:28	X	X	X	X	X	X	X	X	X	X	X	X	X
15136144CCV	15136144CCV	1	05/28/2019	17:39	X	X	X	X	X	X	X	X	X	X	X	X	X
15136145CCB	15136145CCB	1	05/28/2019	17:41	X	X	X	X	X	X	X	X	X	X	X	X	X

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Instrument ID: 50ICP4 Start Date: 05/28/2019 11:01 End Date: 05/28/2019 17:41

Sample Name	Time	Y1	Y2	Y3
15136100CAL0	11:01	100.0	100.0	100.0
15136101CAL1	11:04	100.3	100.5	101.6
15136102CAL2	11:06	100.1	100.1	101.5
15136103CAL3	11:08	101.5	101.7	
15136104CAL4	11:10	99.7	99.4	101.1
15136105CAL5	11:12	100.5	100.8	
15136106CAL6	11:15	99.9	99.5	100.9
15136107CAL7	11:17	99.8		
15136108ICV	11:19	100.2	99.5	100.6
15136109ICB	11:21	100.1	101.2	100.8
15136110CRDL	11:23	100.6	100.8	101.3
15136111ICSA	11:25	91.4	89.0	99.5
15136112ICSAB	11:28	91.4	90.0	100.3
15136113CCV	11:52	100.8	100.8	102.0
15136114CCB	11:54	101.2	101.4	101.8
15136137CCV	16:18	103.8	104.3	106.5
15136138CCB	16:20	104.0	105.5	105.9
15136140CCV	16:46	103.7	104.1	105.6
15136141CCB	16:48	103.7	104.2	104.2
2320825PDS	17:06	99.3	97.4	109.5
2320826SD	17:08	102.2	101.3	105.3
15136142CCV	17:12	103.5	103.5	105.0
15136143CCB	17:14	103.9	104.5	104.3
15136144CCV	17:39	102.3	102.2	101.3
15136145CCB	17:41	102.6	103.5	102.0

Prep Log Report

Batch Information: MPRP 35886

Template Version: EF-IN-I-318-Rev.01 (08Aug2017)

Prep Method	EPA 3050	Analysis Method	EPA 6010	Extracted By	phb	Extracted Date/Time	05/28/2019 07:10:32:900
Solid Matrix Lot	201780	Instrument	50BALL	Block ID	4	Block Temp (C)	96
Correction Factor (C)	-1.4	Corrected Temp. (C)	94.6	Acceptance Range:	95 +/- 3 C	Thermometer ID	PT-236
Digestion Vessel Lot	204633/174134 antifoam	Batch Notes	207422 filtermate	Reviewed By	KJE	Reviewed By Date	05/28/2019 15:35

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Weight (g)	Conc. HNO3 (mL)	H2O2 (mL)	Conc. HCL (mL)	Final Volume (mL)	Due Date	Sample Notes	6010-SPK (mL)
6010 S_P	BLANK	**2317323**	Solid	1	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	LCS	**2317324**	Solid	1	200224 (5)	209940 (4)	206319 (5)	50		2*	210095 (1)
6010 S_P	PS	**50225466001**	Solid	1.124	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466002**	Solid	1.086	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466003**	Solid	1.031	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466004**	Solid	1.068	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	RQS	**50225466005**	Solid	1.115	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	MS	**2317325**	Solid	1.15	200224 (5)	209940 (4)	206319 (5)	50		2*	210095 (1)
6010 S_P	MSD	**2317326**	Solid	1.013	200224 (5)	209940 (4)	206319 (5)	50		2*	210095 (1)
6010 S_P	PS	**50225466006**	Solid	1.091	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466007**	Solid	1.113	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466008**	Solid	1.086	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466012**	Solid	1.195	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466013**	Solid	1.166	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466018**	Solid	1.11	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225466014**	Solid	1.065	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225732001**	Solid	1.126	200224 (5)	209940 (4)	206319 (5)	50		1*	
6010 S_P	PS	**50225732002**	Solid	1.099	200224 (5)	209940 (4)	206319 (5)	50		1*	
6010 S_P	PS	**50225732003**	Solid	1.2	200224 (5)	209940 (4)	206319 (5)	50		1*	
6010 S_P	PS	**50225812001**	Solid	1.052	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225812002**	Solid	1.087	200224 (5)	209940 (4)	206319 (5)	50		2*	

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Weight (g)	Conc. HNO3 (mL)	H2O2 (mL)	Conc. HCL (mL)	Final Volume (mL)	Due Date	Sample Notes	6010-SPK (mL)
6010 S_P	PS	**50225812003**	Solid	1.11	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225812004**	Solid	1.052	200224 (5)	209940 (4)	206319 (5)	50		2*	
6010 S_P	PS	**50225812005**	Solid	1.074	200224 (5)	209940 (4)	206319 (5)	50		2*	

Sample Notes:

1*: large gravel; w/b cel 052419

2*: w/b cel 052419

Standard Notes:

210095: ICP-SPK

SAMPLE NO.

SP-1 (3-5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466001 Percent Moisture: 16.2

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	0.11	J	mg/kg	1	05/30/2019 20:16

SAMPLE NO.

SP-1 (5-7)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466002 Percent Moisture: 19.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	0.13	J	mg/kg	1	05/30/2019 20:18

SAMPLE NO.

SP-2 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466003 Percent Moisture: 3.4

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.10	U	mg/kg	1	05/30/2019 20:20

SAMPLE NO.

SP-2 (2-4)

FORM I INORGANIC-1
INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146
Lab Sample ID: 50225466004 Percent Moisture: 8.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.11	U	mg/kg	1	05/30/2019 20:22

SAMPLE NO.

SP-3 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466005 Percent Moisture: 16.2

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	0.59		mg/kg	1	05/30/2019 20:29

SAMPLE NO.

SP-3 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466006 Percent Moisture: 22.2

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.12	U	mg/kg	1	05/30/2019 20:35

SAMPLE NO.

SP-4 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466007 Percent Moisture: 18.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	0.15	J	mg/kg	1	05/30/2019 20:37

SAMPLE NO.

SP-4 (2-4)

FORM I INORGANIC-1
INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146
Lab Sample ID: 50225466008 Percent Moisture: 21.9

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.12	U	mg/kg	1	05/30/2019 20:39

SAMPLE NO.

SP-5 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466012 Percent Moisture: 12.3

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	0.85		mg/kg	1	05/30/2019 20:42

SAMPLE NO.

SP-5 (0-2) DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466013 Percent Moisture: 12.1

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	1.0		mg/kg	1	05/30/2019 20:44

SAMPLE NO.

SP-5 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466014 Percent Moisture: 17.8

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	0.42		mg/kg	1	05/30/2019 20:46

SAMPLE NO.

SP-5 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466018 Percent Moisture: 19.0

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.11	U	mg/kg	1	05/30/2019 20:48

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210657

Continuing Calibration Verification Source: 210654

Concentration Units: ug/L Instrument ID: 50HG03

	Initial Calibration Verification				Continuing Calibration Verification						
	05/30/2019 19:04				05/30/2019 19:32			05/30/2019 19:57			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Mercury	5.0	5.1	101.2	90-110	5.0	5.1	102.0	5.0	5.2	103.4	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210654

Concentration Units: ug/L Instrument ID: 50HG03

	Continuing Calibration Verification									
	05/30/2019 20:25			05/30/2019 20:50			05/30/2019 21:22			Control Limit
Analyte	True	Found	%R	True	Found	%R	True	Found	%R	
Mercury	5.0	5.2	103.8	5.0	5.2	105.0	5.0	5.0	100.0	90-110

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

CRDL Check Standard Source: 210651 Analysis Date/Time: 05/30/2019 19:08

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.20	101.5	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

CRDL Check Standard Source: 210651 Analysis Date/Time: 05/30/2019 20:01

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.21	105.0	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

CRDL Check Standard Source: 210651 Analysis Date/Time: 05/30/2019 20:54

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.22	107.5	50-150

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract : 216 College / 19-146

Method Blank Matrix: Solid Instrument ID: 50HG03

Method Blank Concentration Units: mg/kg

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	05/30/2019 19:06	C	05/30/2019 19:34	C	05/30/2019 19:59	C	05/30/2019 20:27	C	2321759	C
Mercury	0.20	U	0.20	U	0.20	U	0.20	U	<0.091	U

FORM III INORGANIC-2

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50HG03

Method Blank Concentration Units:

Analyte	Initial Calibration Blank		Continuing Calibration Blank (ug/L)					
		C	05/30/2019 20:52	C	05/30/2019 21:24	C		C
Mercury			0.20	U	0.20	U		

SAMPLE NO.

2321761MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Basis: Dry Parent Sample ID: SP-3 (0-2)

Percent Moisture: 16.2

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	mg/kg	75-125	1.6	0.59	0.54	184*

* Spike Recovery outside QC Limits

SAMPLE NO.

2321762MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Basis: Dry Parent Sample ID: SP-3 (0-2)

Percent Moisture: 16.2

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	mg/kg	75-125	0.96	0.59	0.55	67*

* Spike Recovery outside QC Limits

SAMPLE NO.

2321762MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Concentration Units: mg/kg

Percent Moisture: 16.2 Basis: Dry

Analyte	Control Limit	Sample	Duplicate	RPD
Mercury	20	1.6	0.96	49*

* RPD outside QC Limits

SAMPLE NO.

2321760LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid

Analyte	Units	True	Found	%R	Limits	
Mercury	mg/kg	0.49	0.52	105	80	120

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Preparation Method: EPA 7471 Batch: MERP 11846

Lab Sample ID	Sample Name	Preparation Date	Initial Weight (g)	Final Volume (mL)
2321759	2321759BLANK	05/30/2019	0.319	50
2321760	2321760LCS	05/30/2019	0.304	50
2321761	2321761MS	05/30/2019	0.332	50
2321762	2321762MSD	05/30/2019	0.325	50
50225466001	SP-1 (3-5)	05/30/2019	0.319	50
50225466002	SP-1 (5-7)	05/30/2019	0.312	50
50225466003	SP-2 (0-2)	05/30/2019	0.288	50
50225466004	SP-2 (2-4)	05/30/2019	0.293	50
50225466005	SP-3 (0-2)	05/30/2019	0.323	50
50225466006	SP-3 (2-4)	05/30/2019	0.324	50
50225466007	SP-4 (0-2)	05/30/2019	0.297	50
50225466008	SP-4 (2-4)	05/30/2019	0.303	50
50225466012	SP-5 (0-2)	05/30/2019	0.322	50
50225466013	SP-5 (0-2) DUP	05/30/2019	0.328	50
50225466014	SP-5 (2-4)	05/30/2019	0.307	50
50225466018	SP-5 (6-8)	05/30/2019	0.324	50

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Instrument ID: 50HG03 Analysis Method: EPA 7471

Start Date: 05/30/2019 18:49 End Date: 05/30/2019 21:24

Sample Name	Lab Sample ID	D/F	Date	Time	Hg
15156213CAL0	15156213CAL0	1	05/30/2019	18:49	X
15156214CAL1	15156214CAL1	1	05/30/2019	18:51	X
15156215CAL2	15156215CAL2	1	05/30/2019	18:53	X
15156216CAL3	15156216CAL3	1	05/30/2019	18:55	X
15156217CAL4	15156217CAL4	1	05/30/2019	18:58	X
15156218CAL5	15156218CAL5	1	05/30/2019	19:00	X
15156219CAL6	15156219CAL6	1	05/30/2019	19:02	X
15156220ICV	15156220ICV	1	05/30/2019	19:04	X
15156221ICB	15156221ICB	1	05/30/2019	19:06	X
15156222CRDL	15156222CRDL	1	05/30/2019	19:08	X
15156223CCV	15156223CCV	1	05/30/2019	19:32	X
15156224CCB	15156224CCB	1	05/30/2019	19:34	X
15156225CCV	15156225CCV	1	05/30/2019	19:57	X
15156226CCB	15156226CCB	1	05/30/2019	19:59	X
15156227CRDL	15156227CRDL	1	05/30/2019	20:01	X
2321759BLANK	2321759	1	05/30/2019	20:12	X
2321760LCS	2321760	1	05/30/2019	20:14	X
SP-1 (3-5)	50225466001	1	05/30/2019	20:16	X
SP-1 (5-7)	50225466002	1	05/30/2019	20:18	X
SP-2 (0-2)	50225466003	1	05/30/2019	20:20	X
SP-2 (2-4)	50225466004	1	05/30/2019	20:22	X
15156228CCV	15156228CCV	1	05/30/2019	20:25	X
15156229CCB	15156229CCB	1	05/30/2019	20:27	X
SP-3 (0-2)	50225466005	1	05/30/2019	20:29	X
2321761MS	2321761	1	05/30/2019	20:31	X
2321762MSD	2321762	1	05/30/2019	20:33	X
SP-3 (2-4)	50225466006	1	05/30/2019	20:35	X
SP-4 (0-2)	50225466007	1	05/30/2019	20:37	X
SP-4 (2-4)	50225466008	1	05/30/2019	20:39	X
SP-5 (0-2)	50225466012	1	05/30/2019	20:42	X
SP-5 (0-2) DUP	50225466013	1	05/30/2019	20:44	X
SP-5 (2-4)	50225466014	1	05/30/2019	20:46	X
SP-5 (6-8)	50225466018	1	05/30/2019	20:48	X
15156230CCV	15156230CCV	1	05/30/2019	20:50	X
15156231CCB	15156231CCB	1	05/30/2019	20:52	X
15156232CRDL	15156232CRDL	1	05/30/2019	20:54	X
15156233CCV	15156233CCV	1	05/30/2019	21:22	X
15156234CCB	15156234CCB	1	05/30/2019	21:24	X

Prep Log Report

Batch Information: MERP 11846

Template Version: EF-IN-I-323 (rev.01, 19Nov2013)

Prep Method	EPA 7471	Analysis Method	EPA 7471	Extracted By	ILP	Extracted Date/Time	05/30/2019 12:54:39:568
Instrument	50BAL7	Block ID	8	Thermometer ID	PT-289	Block Temp (C)	93
Correction Factor (C)	0.0	Corrected Temp. (C)	93.00	Digestion Vessel Lot	204633	Batch Notes	RGNT070#210592
Reviewed By	LBT	Reviewed By Date	05/30/2019 22:42				

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Weight (g)	Conc. HNO3 (mL)	Conc. HCL (mL)	5% KMnO4 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MDL / EQL	MERCURY-SPK (mL)
7471 S_P	BLANK	**2321759**	Solid	0.319	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	LCS	**2321760**	Solid	0.304	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			210573 (1.5)
7471 S_P	PS	**50225466001**	Solid	0.319	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466002**	Solid	0.312	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466003**	Solid	0.288	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466004**	Solid	0.293	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	RQS	**50225466005**	Solid	0.323	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	MS	**2321761**	Solid	0.332	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			210573 (1.5)
7471 S_P	MSD	**2321762**	Solid	0.325	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			210573 (1.5)
7471 S_P	PS	**50225466006**	Solid	0.324	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466007**	Solid	0.297	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466008**	Solid	0.303	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466012**	Solid	0.322	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466013**	Solid	0.328	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466014**	Solid	0.307	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225466018**	Solid	0.324	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225469001**	Solid	0.308	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Weight (g)	Conc. HNO3 (mL)	Conc. HCL (mL)	5% KMnO4 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MDL / EQL	MERCURY-SPK (mL)
7471 S_P	PS	**50225732001**	Solid	0.306	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225732002**	Solid	0.29	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			
7471 S_P	PS	**50225732003**	Solid	0.303	200224 (0.625)	206319 (1.875)	203545 (7.5)	210332 (3)	50			

Standard Notes:

210573: prepared fresh daily

Prep Log Report

Batch Information: MERC 15066

Template Version: EF-IN-I-323 (rev.01, 19Nov2013)

Prep Method		Analysis Method	EPA 7470/7471/245.1	Extracted By	LBT	Extracted Date/Time	05/31/2019 12:51:32:088
Instrument	50BAL7	Block ID	8	Thermometer ID	PT-289	Block Temp (C)	93
Correction Factor (C)	0	Corrected Temp. (C)	93.00	Digestion Vessel Lot	204633	Batch Notes	RGNT070#210592
Reviewed By		Reviewed By Date					

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Weight (g)	Conc. HNO3 (mL)	Conc. HCL (mL)	5% KMnO4 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MDL / EQL
7471_Q	CAL0	**CAL0**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	CAL1	**CAL1**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	CAL2	**CAL2**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	CAL3	**CAL3**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	CAL4	**CAL4**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	CAL5	**CAL5**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	CAL6	**CAL6**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		
7471_Q	ICV	**ICV**	WT	1	200224 (0.625)	206319 (1.875)	203545 (7.5)	210666 (3)	50		

SAMPLE NO.

SP-1 (3-5)

FORM I INORGANIC-1
INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146
Lab Sample ID: 50225466001 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	16.2		%	1	05/28/2019 11:52

SAMPLE NO.

SP-1 (5-7)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466002 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	19.5		%	1	05/28/2019 11:52

SAMPLE NO.

SP-2 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466003 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	3.4		%	1	05/28/2019 11:52

SAMPLE NO.

SP-2 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466004 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	8.5		%	1	05/28/2019 11:52

SAMPLE NO.

SP-3 (0-2)

FORM I INORGANIC-1
INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146
Lab Sample ID: 50225466005 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	16.2		%	1	05/28/2019 11:53

SAMPLE NO.

SP-3 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466006 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	22.2		%	1	05/28/2019 12:39

SAMPLE NO.

SP-4 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466007 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	18.5		%	1	05/28/2019 12:39

SAMPLE NO.

SP-4 (2-4)

FORM I INORGANIC-1
INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146
Lab Sample ID: 50225466008 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	21.9		%	1	05/28/2019 12:40

SAMPLE NO.

SP-4 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466009 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	20.7		%	1	05/28/2019 12:40

SAMPLE NO.

SP-4 (8-9)

FORM I INORGANIC-1
INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146
Lab Sample ID: 50225466010 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	19.3		%	1	05/28/2019 12:40

SAMPLE NO.

SP-4 (9-10.5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466011 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	20.3		%	1	05/28/2019 12:40

SAMPLE NO.

SP-5 (0-2)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466012 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	12.3		%	1	05/28/2019 12:41

SAMPLE NO.

SP-5 (0-2) DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466013 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	12.1		%	1	05/28/2019 12:41

SAMPLE NO.

SP-5 (2-4)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466014 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	17.8		%	1	05/28/2019 12:41

SAMPLE NO.

SP-5 (9-11)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466015 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	24.8		%	1	05/28/2019 12:41

SAMPLE NO.

SP-5 (11-13)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466016 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	32.6		%	1	05/28/2019 12:42

SAMPLE NO.

SP-5 (11-13) DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466017 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	23.7		%	1	05/28/2019 12:42

SAMPLE NO.

SP-5 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Lab Sample ID: 50225466018 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	19.0		%	1	05/28/2019 12:42

SAMPLE NO.

2320587DUP

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Concentration Units: %

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Percent Moisture	5	9.0	9.5	5

SAMPLE NO.

2320588DUP

FORM VI INORGANIC-2
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Concentration Units: %

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Percent Moisture	5	16.2	16.5	2

SAMPLE NO.

2320625DUP

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Concentration Units: %

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Percent Moisture	5	17.6	18.2	3

SAMPLE NO.

2320626DUP

FORM VI INORGANIC-2
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Matrix: Solid Concentration Units: %

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Percent Moisture	5	32.6	32.0	2

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Preparation Method: SM 2540G Batch: PMST 16120

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2320587	2320587DUP	05/28/2019	1	1
2320588	2320588DUP	05/28/2019	1	1
50225466001	SP-1 (3-5)	05/28/2019	1	1
50225466002	SP-1 (5-7)	05/28/2019	1	1
50225466003	SP-2 (0-2)	05/28/2019	1	1
50225466004	SP-2 (2-4)	05/28/2019	1	1
50225466005	SP-3 (0-2)	05/28/2019	1	1

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Preparation Method: SM 2540G Batch: PMST 16121

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2320625	2320625DUP	05/28/2019	1	1
2320626	2320626DUP	05/28/2019	1	1
50225466006	SP-3 (2-4)	05/28/2019	1	1
50225466007	SP-4 (0-2)	05/28/2019	1	1
50225466008	SP-4 (2-4)	05/28/2019	1	1
50225466009	SP-4 (6-8)	05/28/2019	1	1
50225466010	SP-4 (8-9)	05/28/2019	1	1
50225466011	SP-4 (9-10.5)	05/28/2019	1	1
50225466012	SP-5 (0-2)	05/28/2019	1	1
50225466013	SP-5 (0-2) DUP	05/28/2019	1	1
50225466014	SP-5 (2-4)	05/28/2019	1	1
50225466015	SP-5 (9-11)	05/28/2019	1	1
50225466016	SP-5 (11-13)	05/28/2019	1	1
50225466017	SP-5 (11-13) DUP	05/28/2019	1	1
50225466018	SP-5 (6-8)	05/28/2019	1	1

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225466 Contract: 216 College / 19-146

Instrument ID: 50BALH Analysis Method: SM 2540G

Start Date: 05/28/2019 11:48 End Date: 05/28/2019 12:42

Sample Name	Lab Sample ID	D/F	Date	Time	MOIST
50225398001	50225398001	1	05/28/2019	11:48	X
2320587DUP	2320587	1	05/28/2019	11:49	X
SP-1 (3-5)	50225466001	1	05/28/2019	11:52	X
SP-1 (5-7)	50225466002	1	05/28/2019	11:52	X
SP-2 (0-2)	50225466003	1	05/28/2019	11:52	X
SP-2 (2-4)	50225466004	1	05/28/2019	11:52	X
SP-3 (0-2)	50225466005	1	05/28/2019	11:53	X
2320588DUP	2320588	1	05/28/2019	11:53	X
50225404004	50225404004	1	05/28/2019	12:38	X
2320625DUP	2320625	1	05/28/2019	12:38	X
SP-3 (2-4)	50225466006	1	05/28/2019	12:39	X
SP-4 (0-2)	50225466007	1	05/28/2019	12:39	X
SP-4 (2-4)	50225466008	1	05/28/2019	12:40	X
SP-4 (6-8)	50225466009	1	05/28/2019	12:40	X
SP-4 (8-9)	50225466010	1	05/28/2019	12:40	X
SP-4 (9-10.5)	50225466011	1	05/28/2019	12:40	X
SP-5 (0-2)	50225466012	1	05/28/2019	12:41	X
SP-5 (0-2) DUP	50225466013	1	05/28/2019	12:41	X
SP-5 (2-4)	50225466014	1	05/28/2019	12:41	X
SP-5 (9-11)	50225466015	1	05/28/2019	12:41	X
SP-5 (11-13)	50225466016	1	05/28/2019	12:42	X
2320626DUP	2320626	1	05/28/2019	12:42	X
SP-5 (11-13) DUP	50225466017	1	05/28/2019	12:42	X
SP-5 (6-8)	50225466018	1	05/28/2019	12:42	X

Prep Log Report

Batch Information: PMST 16120

Template Version: EF-IN-Q-337-Rev.03 (06Feb2017)

Analysis Method	SM 2540G	Analyzed By	RM1	Instrument	50BALH	Oven ID	50WETZ
Thermometer ID	PT-112	Oven Temp Correction Factor	0	Oven Temp In1 | Corr | Date/Time | Init	104.5 | 104.5 | 05/28/2019 12:29 | RM1	Oven Temp Out1 | Corr | Date/Time | Init	103.5 | 103.5 | 05/29/2019 06:45 | RM1
Reviewed By	SEP	Reviewed By Date	05/30/2019 11:36	Batch Notes			

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Select	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	ID	Sample Notes
DRY WEIGHT	PS	**50225367001**	Y	99.96	0.04492	05/28/2019 11:48:49	12.179	1.053	12.184	12.179	M	150	
DRY WEIGHT	RQS	**50225398001**	Y	90.95	9.047	05/28/2019 11:48:57	16.463	1.091	17.992	16.463	M	151	
DRY WEIGHT	DUP	**2320587**	Y	90.46	9.543	05/28/2019 11:49:08	14.92	1.091	16.379	14.92	M	152	
DRY WEIGHT	PS	**50225398002**	Y	89.68	10.32	05/28/2019 11:49:15	13.27	1.115	14.668	13.27	M	153	
DRY WEIGHT	PS	**50225398003**	Y	88.81	11.19	05/28/2019 11:49:25	12.825	1.099	14.302	12.825	M	154	
DRY WEIGHT	PS	**50225398004**	Y	90.36	9.645	05/28/2019 11:49:34	13.541	1.082	14.871	13.541	M	155	
DRY WEIGHT	PS	**50225398005**	Y	88.59	11.41	05/28/2019 11:49:53	12.037	1.067	13.45	12.037	M	156	
DRY WEIGHT	PS	**50225398006**	Y	88.89	11.11	05/28/2019 11:50:03	11.467	1.197	12.75	11.467	M	157	
DRY WEIGHT	PS	**50225398007**	Y	87.29	12.71	05/28/2019 11:50:16	11.201	1.088	12.674	11.201	M	158	
DRY WEIGHT	PS	**50225398008**	Y	86.84	13.16	05/28/2019 11:50:33	10.948	1.034	12.45	10.948	M	159	
DRY WEIGHT	PS	**50225398009**	Y	85.40	14.60	05/28/2019 11:50:46	12.429	1.079	14.369	12.429	M	160	
DRY WEIGHT	PS	**50225398010**	Y	85.93	14.07	05/28/2019 11:50:58	12.056	1.12	13.846	12.056	M	161	
DRY WEIGHT	PS	**50225398011**	Y	93.10	6.899	05/28/2019 11:51:12	19.088	1.113	20.42	19.088	M	162	
DRY WEIGHT	PS	**50225398012**	Y	85.67	14.33	05/28/2019 11:51:34	10.95	1.184	12.584	10.95	M	163	
DRY WEIGHT	PS	**50225404002**	Y	82.49	17.51	05/28/2019 11:51:45	11.847	1.092	14.13	11.847	M	164	
DRY WEIGHT	PS	**50225404003**	Y	86.04	13.96	05/28/2019 11:52:00	18.055	1.086	20.809	18.055	M	165	
DRY WEIGHT	PS	**50225466001**	Y	83.78	16.22	05/28/2019 11:52:11	12.58	1.163	14.791	12.58	M	166	
DRY WEIGHT	PS	**50225466002**	Y	80.55	19.45	05/28/2019 11:52:22	10.769	1.154	13.091	10.769	M	167	

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Select	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	ID	Sample Notes
DRY WEIGHT	PS	**50225466003**	Y	96.61	3.390	05/28/2019 11:52:31	12.309	1.139	12.701	12.309	M	168	
DRY WEIGHT	PS	**50225466004**	Y	91.54	8.464	05/28/2019 11:52:44	14.923	1.08	16.203	14.923	M	169	
DRY WEIGHT	RQS	**50225466005**	Y	83.83	16.17	05/28/2019 11:53:02	11.994	1.094	14.097	11.994	M	170	
DRY WEIGHT	DUP	**2320588**	Y	83.47	16.53	05/28/2019 11:53:15	10.583	1.037	12.474	10.583	M	171	

Prep Log Report

Batch Information: PMST 16121

Template Version: EF-IN-Q-337-Rev.03 (06Feb2017)

Analysis Method	SM 2540G	Analyzed By	RM1	Instrument	50BALH	Oven ID	50WETZ
Thermometer ID	PT-112	Oven Temp Correction Factor	0	Oven Temp In1 | Corr | Date/Time | Init	104.5 | 104.5 | 05/28/2019 13:16 | RM1	Oven Temp Out1 | Corr | Date/Time | Init	103.5 | 103.5 | 05/29/2019 06:45 | RM1
Reviewed By	SEP	Reviewed By Date	05/30/2019 11:34	Batch Notes			

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Select	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	ID	Sample Notes
DRY WEIGHT	PS	**50225404004**	Y	82.38	17.62	05/28/2019 12:38:41	11.557	1.194	13.773	11.557	M	251	
DRY WEIGHT	DUP	**2320625**	Y	81.83	18.17	05/28/2019 12:38:54	10.742	1.165	12.868	10.742	M	252	
DRY WEIGHT	PS	**50225466006**	Y	77.77	22.23	05/28/2019 12:39:06	11.938	1.044	15.052	11.938	M	253	
DRY WEIGHT	PS	**50225466007**	Y	81.54	18.46	05/28/2019 12:39:56	12.28	1.039	14.825	12.28	M	254	
DRY WEIGHT	PS	**50225466008**	Y	78.11	21.89	05/28/2019 12:40:17	10.355	1.017	12.972	10.355	M	255	
DRY WEIGHT	PS	**50225466009**	Y	79.35	20.65	05/28/2019 12:40:38	12.314	1.048	15.246	12.314	M	256	
DRY WEIGHT	PS	**50225466010**	Y	80.69	19.31	05/28/2019 12:40:48	10.567	1.056	12.843	10.567	M	257	
DRY WEIGHT	PS	**50225466011**	Y	79.74	20.26	05/28/2019 12:40:59	10.711	1.052	13.165	10.711	M	258	
DRY WEIGHT	PS	**50225466012**	Y	87.73	12.27	05/28/2019 12:41:08	11.152	1.026	12.568	11.152	M	259	
DRY WEIGHT	PS	**50225466013**	Y	87.94	12.06	05/28/2019 12:41:16	13.791	1.022	15.542	13.791	M	260	
DRY WEIGHT	PS	**50225466014**	Y	82.23	17.77	05/28/2019 12:41:26	12.755	1.079	15.279	12.755	M	261	
DRY WEIGHT	PS	**50225466015**	Y	75.24	24.76	05/28/2019 12:41:41	10.473	1.035	13.579	10.473	M	262	
DRY WEIGHT	PS	**50225466016**	Y	67.44	32.56	05/28/2019 12:42:00	9.745	1.042	13.946	9.745	M	263	
DRY WEIGHT	DUP	**2320626**	Y	67.97	32.03	05/28/2019 12:42:10	8.97	1.047	12.703	8.97	M	264	
DRY WEIGHT	PS	**50225466017**	Y	76.35	23.65	05/28/2019 12:42:22	12.151	1.066	15.585	12.151	M	265	
DRY WEIGHT	PS	**50225466018**	Y	81.03	18.97	05/28/2019 12:42:36	14.056	1.103	17.088	14.056	M	266	
DRY WEIGHT	PS	**50225469001**	Y	90.74	9.258	05/28/2019 12:42:52	13.359	1.097	14.61	13.359	M	267	
DRY WEIGHT	PS	**50225732001**	Y	95.66	4.342	05/28/2019 12:43:03	17.863	1.054	18.626	17.863	M	268	Rocks

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Select	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	ID	Sample Notes
DRY WEIGHT	PS	**50225732002**	Y	97.13	2.871	05/28/2019 12:43:16	18.308	1.057	18.818	18.308	M	269	Rocks
DRY WEIGHT	PS	**50225732003**	Y	97.99	2.012	05/28/2019 12:43:30	13.95	1.045	14.215	13.95	M	270	Rocks
DRY WEIGHT	PS	**10476078001**	Y	86.64	13.36	05/28/2019 12:43:45	11.686	1.024	13.33	11.686	M	271	
DRY WEIGHT	PS	**10476078002**	Y	94.30	5.700	05/28/2019 12:43:56	14.343	1.042	15.147	14.343	M	272	

Analytical Data Package

Prepared by:

Pace Analytical Services

Pace Project No.: 50225468

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 11, 2019

Mr. Jacob Teuschler
BCA Environmental Consultants, LLC
7202 E. 87th St.
Suite 110
Indianapolis, IN 46256

RE: Project: 216 College / 19-146
Pace Project No.: 50225468

Dear Mr. Teuschler:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

Revised Report: This revision replaces previous report dated June 4, 2019. Field filtered metals were added per client request. 6/7/19 RRB

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Bedel
regina.bedel@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. John Kilmer, BCA Environmental Consultants, LLC Rod Manny, BCA Environmental Consultants

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

cc: Mr. Dan Rust, BCA Environmental Consultants, LLC

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Indianapolis, IN 46268
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CERTIFICATIONS

Project: 216 College / 19-146
Pace Project No.: 50225468

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50225468001	**SP-1**	Water	05/17/19 11:45	05/17/19 18:01
50225468002	**SP-3**	Water	05/17/19 13:10	05/17/19 18:01
50225468003	**SP-4**	Water	05/17/19 13:45	05/17/19 18:01
50225468004	**SP-5**	Water	05/17/19 10:23	05/17/19 18:01
50225468005	**SP-5 DUP**	Water	05/17/19 10:23	05/17/19 18:01
50225468006	**EQ Blank**	Water	05/17/19 14:50	05/17/19 18:01
50225468007	**SP-1 FIELD FILTERED**	Water	05/17/19 11:45	05/17/19 18:01
50225468008	**SP-4 FIELD FILTERED**	Water	05/17/19 13:45	05/17/19 18:01
50225468009	**SP-5 FIELD FILTERED**	Water	05/17/19 10:23	05/17/19 18:01

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SAMPLE ANALYTE COUNT

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50225468001	**SP-1**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468002	**SP-3**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468003	**SP-4**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468004	**SP-5**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468005	**SP-5 DUP**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	LBT	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468006	**EQ Blank**	EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	FRW	1	PASI-I
		EPA 8270 by SIM	GRM	20	PASI-I
		EPA 8270	GRM	47	PASI-I
50225468008	**SP-4 FIELD FILTERED**	EPA 6010	RAM	2	PASI-I
50225468009	**SP-5 FIELD FILTERED**	EPA 6010	RAM	1	PASI-I

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225468001	**SP-1**					
EPA 6010	Arsenic	8.2J	ug/L	10.0	05/21/19 23:33	
EPA 6010	Barium	276	ug/L	10.0	05/21/19 23:33	
EPA 6010	Nickel	3.7J	ug/L	10.0	05/21/19 23:33	
EPA 6010	Zinc	3.5J	ug/L	20.0	05/21/19 23:33	
50225468002	**SP-3**					
EPA 6010	Antimony	3.9J	ug/L	6.0	05/21/19 23:45	
EPA 6010	Arsenic	10J	ug/L	10.0	05/21/19 23:45	
EPA 6010	Barium	203	ug/L	10.0	05/21/19 23:45	
EPA 6010	Beryllium	1.6J	ug/L	4.0	05/21/19 23:45	
EPA 6010	Cadmium	1.3J	ug/L	2.0	05/21/19 23:45	
EPA 6010	Chromium	44.6	ug/L	10.0	05/21/19 23:45	
EPA 6010	Copper	18.1	ug/L	10.0	05/21/19 23:45	
EPA 6010	Lead	33.2	ug/L	10.0	05/21/19 23:45	
EPA 6010	Nickel	29.4	ug/L	10.0	05/21/19 23:45	
EPA 6010	Zinc	69.2	ug/L	20.0	05/21/19 23:45	
EPA 6020	Thallium	0.18J	ug/L	1.0	06/01/19 14:17	
EPA 8270 by SIM	1-Methylnaphthalene	0.065J	ug/L	1.0	05/28/19 17:16	
EPA 8270 by SIM	2-Methylnaphthalene	0.071J	ug/L	1.0	05/28/19 17:16	
50225468003	**SP-4**					
EPA 6010	Arsenic	14.9	ug/L	10.0	05/21/19 23:47	
EPA 6010	Barium	607	ug/L	10.0	05/21/19 23:47	
EPA 6010	Beryllium	1.2J	ug/L	4.0	05/21/19 23:47	
EPA 6010	Cadmium	0.73J	ug/L	2.0	05/21/19 23:47	
EPA 6010	Chromium	22.7	ug/L	10.0	05/21/19 23:47	
EPA 6010	Copper	24.3	ug/L	10.0	05/21/19 23:47	
EPA 6010	Lead	26.4	ug/L	10.0	05/21/19 23:47	
EPA 6010	Nickel	18.0	ug/L	10.0	05/21/19 23:47	
EPA 6010	Zinc	68.1	ug/L	20.0	05/21/19 23:47	
EPA 6020	Thallium	0.22J	ug/L	1.0	06/01/19 14:22	
EPA 8270 by SIM	Fluorene	0.080J	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	1-Methylnaphthalene	10.6	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	2-Methylnaphthalene	18.1	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	Naphthalene	8.0	ug/L	1.0	05/28/19 17:27	
EPA 8270 by SIM	Phenanthrene	0.11J	ug/L	1.0	05/28/19 17:27	
50225468004	**SP-5**					
EPA 6010	Arsenic	12.4	ug/L	10.0	05/21/19 23:50	
EPA 6010	Barium	459	ug/L	10.0	05/21/19 23:50	
EPA 6010	Cadmium	0.58J	ug/L	2.0	05/21/19 23:50	
EPA 6010	Chromium	2.8J	ug/L	10.0	05/21/19 23:50	
EPA 6010	Nickel	5.8J	ug/L	10.0	05/21/19 23:50	
EPA 6010	Zinc	12.7J	ug/L	20.0	05/21/19 23:50	
EPA 8270 by SIM	Acenaphthene	0.066J	ug/L	1.0	05/28/19 17:39	
EPA 8270 by SIM	1-Methylnaphthalene	0.38J	ug/L	1.0	05/28/19 17:39	
EPA 8270 by SIM	2-Methylnaphthalene	0.31J	ug/L	1.0	05/28/19 17:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50225468005	**SP-5 DUP**					
EPA 6010	Arsenic	12.1	ug/L	10.0	05/21/19 23:52	
EPA 6010	Barium	460	ug/L	10.0	05/21/19 23:52	
EPA 6010	Cadmium	0.59J	ug/L	2.0	05/21/19 23:52	
EPA 6010	Chromium	3.4J	ug/L	10.0	05/21/19 23:52	
EPA 6010	Nickel	6.8J	ug/L	10.0	05/21/19 23:52	
EPA 6010	Zinc	15.7J	ug/L	20.0	05/21/19 23:52	
EPA 8270 by SIM	1-Methylnaphthalene	0.47J	ug/L	1.0	05/28/19 17:50	
EPA 8270 by SIM	2-Methylnaphthalene	0.39J	ug/L	1.0	05/28/19 17:50	
EPA 8270 by SIM	Phenanthrene	0.053J	ug/L	1.0	05/28/19 17:50	
50225468006	**EQ Blank**					
EPA 6010	Zinc	1.6J	ug/L	20.0	05/24/19 22:58	
EPA 8270 by SIM	Naphthalene	0.096J	ug/L	1.0	05/28/19 18:01	
50225468008	**SP-4 FIELD FILTERED**					
EPA 6010	Arsenic	4.7J	ug/L	10.0	06/10/19 13:44	
EPA 6010	Lead	3.7J	ug/L	10.0	06/10/19 13:44	
50225468009	**SP-5 FIELD FILTERED**					
EPA 6010	Arsenic	10.2	ug/L	10.0	06/10/19 13:46	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-1 **Lab ID: 50225468001** Collected: 05/17/19 11:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:33	7440-36-0	
Arsenic	**8.2J**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:33	7440-38-2	
Barium	**276**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:33	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:33	7440-41-7	
Cadmium	**<0.44**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:33	7440-43-9	
Chromium	**<1.1**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:33	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:33	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:33	7439-92-1	
Nickel	**3.7J**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:33	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:33	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:33	7440-22-4	
Zinc	**3.5J**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:33	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 12:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 19:45	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 16:41	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 16:41	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 16:41	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 16:41	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 16:41	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 16:41	205-99-2	R1
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 16:41	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 16:41	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 16:41	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 16:41	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 16:41	206-44-0	R1
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 16:41	86-73-7	R1
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 16:41	193-39-5	
1-Methylnaphthalene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 16:41	90-12-0	
2-Methylnaphthalene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 16:41	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 16:41	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 16:41	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 16:41	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	50	%.	10-83		1	05/22/19 09:23	05/28/19 16:41	321-60-8	
p-Terphenyl-d14 (S)	89	%.	28-125		1	05/22/19 09:23	05/28/19 16:41	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-1 **Lab ID: 50225468001** Collected: 05/17/19 11:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 20:11	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 20:11	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 20:11	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 20:11	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 20:11	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 20:11	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 20:11	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 20:11	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 20:11	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 20:11	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 20:11	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 20:11	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 20:11	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 20:11	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 20:11	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 20:11	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 20:11	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 20:11	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 20:11	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 20:11	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 20:11	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 20:11	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 20:11	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 20:11	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 20:11	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 20:11	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 20:11	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 20:11	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 20:11	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 20:11	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 20:11	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 20:11	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 20:11	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 20:11	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 20:11	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 20:11	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	85	%.	15-115		1	05/22/19 09:23	05/24/19 20:11	4165-60-0	

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-1 **Lab ID: 50225468001** Collected: 05/17/19 11:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	40	%.	10-65		1	05/22/19 09:23	05/24/19 20:11	4165-62-2	
2-Fluorophenol (S)	58	%.	10-82		1	05/22/19 09:23	05/24/19 20:11	367-12-4	
2,4,6-Tribromophenol (S)	93	%.	29-134		1	05/22/19 09:23	05/24/19 20:11	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-3 **Lab ID: 50225468002** Collected: 05/17/19 13:10 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**3.9J**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:45	7440-36-0	
Arsenic	**10J**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:45	7440-38-2	
Barium	**203**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:45	7440-39-3	
Beryllium	**1.6J**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:45	7440-41-7	
Cadmium	**1.3J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:45	7440-43-9	
Chromium	**44.6**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:45	7440-47-3	
Copper	**18.1**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:45	7440-50-8	
Lead	**33.2**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:45	7439-92-1	
Nickel	**29.4**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:45	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:45	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:45	7440-22-4	
Zinc	**69.2**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:45	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**0.18J**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 19:58	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:16	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:16	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:16	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:16	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:16	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:16	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:16	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:16	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:16	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:16	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:16	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:16	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:16	193-39-5	
1-Methylnaphthalene	**0.065J**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:16	90-12-0	
2-Methylnaphthalene	**0.071J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:16	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:16	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:16	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:16	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	43	%.	10-83		1	05/22/19 09:23	05/28/19 17:16	321-60-8	
p-Terphenyl-d14 (S)	66	%.	28-125		1	05/22/19 09:23	05/28/19 17:16	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-3 **Lab ID: 50225468002** Collected: 05/17/19 13:10 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:00	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:00	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:00	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:00	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:00	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:00	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:00	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:00	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:00	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:00	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:00	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:00	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:00	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:00	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:00	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:00	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:00	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:00	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:00	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:00	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:00	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:00	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:00	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:00	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:00	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:00	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:00	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:00	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:00	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:00	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:00	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:00	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:00	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:00	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:00	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	81	%.	15-115		1	05/22/19 09:23	05/24/19 21:00	4165-60-0	

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-3 **Lab ID: 50225468002** Collected: 05/17/19 13:10 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	45	%.	10-65		1	05/22/19 09:23	05/24/19 21:00	4165-62-2	
2-Fluorophenol (S)	59	%.	10-82		1	05/22/19 09:23	05/24/19 21:00	367-12-4	
2,4,6-Tribromophenol (S)	88	%.	29-134		1	05/22/19 09:23	05/24/19 21:00	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 **Lab ID: 50225468003** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:47	7440-36-0	
Arsenic	**14.9**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:47	7440-38-2	
Barium	**607**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:47	7440-39-3	
Beryllium	**1.2J**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:47	7440-41-7	
Cadmium	**0.73J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:47	7440-43-9	
Chromium	**22.7**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:47	7440-47-3	
Copper	**24.3**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:47	7440-50-8	
Lead	**26.4**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:47	7439-92-1	
Nickel	**18.0**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:47	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:47	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:47	7440-22-4	
Zinc	**68.1**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:47	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**0.22J**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 20:00	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:27	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:27	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:27	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:27	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:27	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:27	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:27	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:27	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:27	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:27	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:27	206-44-0	
Fluorene	**0.080J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:27	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:27	193-39-5	
1-Methylnaphthalene	**10.6**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:27	90-12-0	
2-Methylnaphthalene	**18.1**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:27	91-57-6	
Naphthalene	**8.0**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:27	91-20-3	
Phenanthrene	**0.11J**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:27	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	44	%.	10-83		1	05/22/19 09:23	05/28/19 17:27	321-60-8	
p-Terphenyl-d14 (S)	76	%.	28-125		1	05/22/19 09:23	05/28/19 17:27	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 **Lab ID: 50225468003** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:17	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:17	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:17	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:17	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:17	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:17	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:17	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:17	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:17	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:17	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:17	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:17	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:17	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:17	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:17	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:17	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:17	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:17	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:17	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:17	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:17	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:17	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:17	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:17	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:17	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:17	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:17	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:17	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:17	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:17	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:17	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:17	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:17	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:17	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:17	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	101	%.	15-115		1	05/22/19 09:23	05/24/19 21:17	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 **Lab ID: 50225468003** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	51	%.	10-65		1	05/22/19 09:23	05/24/19 21:17	4165-62-2	
2-Fluorophenol (S)	71	%.	10-82		1	05/22/19 09:23	05/24/19 21:17	367-12-4	
2,4,6-Tribromophenol (S)	119	%.	29-134		1	05/22/19 09:23	05/24/19 21:17	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 **Lab ID: 50225468004** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:50	7440-36-0	
Arsenic	**12.4**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:50	7440-38-2	
Barium	**459**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:50	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:50	7440-41-7	
Cadmium	**0.58J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:50	7440-43-9	
Chromium	**2.8J**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:50	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:50	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:50	7439-92-1	
Nickel	**5.8J**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:50	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:50	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:50	7440-22-4	
Zinc	**12.7J**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:50	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 20:02	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**0.066J**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:39	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:39	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:39	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:39	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:39	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:39	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:39	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:39	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:39	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:39	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:39	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:39	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:39	193-39-5	
1-Methylnaphthalene	**0.38J**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:39	90-12-0	
2-Methylnaphthalene	**0.31J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:39	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:39	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:39	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:39	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	46	%.	10-83		1	05/22/19 09:23	05/28/19 17:39	321-60-8	
p-Terphenyl-d14 (S)	87	%.	28-125		1	05/22/19 09:23	05/28/19 17:39	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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(317)228-3100

ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 **Lab ID: 50225468004** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:33	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:33	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:33	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:33	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:33	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:33	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:33	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:33	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:33	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:33	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:33	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:33	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:33	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:33	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:33	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:33	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:33	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:33	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:33	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:33	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:33	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:33	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:33	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:33	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:33	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:33	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:33	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:33	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:33	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:33	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:33	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:33	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:33	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:33	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:33	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:33	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	88	%.	15-115		1	05/22/19 09:23	05/24/19 21:33	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 **Lab ID: 50225468004** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	48	%.	10-65		1	05/22/19 09:23	05/24/19 21:33	4165-62-2	
2-Fluorophenol (S)	64	%.	10-82		1	05/22/19 09:23	05/24/19 21:33	367-12-4	
2,4,6-Tribromophenol (S)	102	%.	29-134		1	05/22/19 09:23	05/24/19 21:33	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 DUP **Lab ID: 50225468005** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/21/19 13:28	05/21/19 23:52	7440-36-0	
Arsenic	**12.1**	ug/L	10.0	4.3	1	05/21/19 13:28	05/21/19 23:52	7440-38-2	
Barium	**460**	ug/L	10.0	0.66	1	05/21/19 13:28	05/21/19 23:52	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/21/19 13:28	05/21/19 23:52	7440-41-7	
Cadmium	**0.59J**	ug/L	2.0	0.44	1	05/21/19 13:28	05/21/19 23:52	7440-43-9	
Chromium	**3.4J**	ug/L	10.0	1.1	1	05/21/19 13:28	05/21/19 23:52	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/21/19 13:28	05/21/19 23:52	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/21/19 13:28	05/21/19 23:52	7439-92-1	
Nickel	**6.8J**	ug/L	10.0	1.0	1	05/21/19 13:28	05/21/19 23:52	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/21/19 13:28	05/21/19 23:52	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/21/19 13:28	05/21/19 23:52	7440-22-4	
Zinc	**15.7J**	ug/L	20.0	1.1	1	05/21/19 13:28	05/21/19 23:52	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/28/19 01:09	05/28/19 20:04	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 17:50	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:50	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 17:50	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:50	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 17:50	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 17:50	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 17:50	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 17:50	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 17:50	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 17:50	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 17:50	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:50	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 17:50	193-39-5	
1-Methylnaphthalene	**0.47J**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 17:50	90-12-0	
2-Methylnaphthalene	**0.39J**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 17:50	91-57-6	
Naphthalene	**<0.053**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 17:50	91-20-3	
Phenanthrene	**0.053J**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 17:50	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 17:50	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	39	%.	10-83		1	05/22/19 09:23	05/28/19 17:50	321-60-8	
p-Terphenyl-d14 (S)	72	%.	28-125		1	05/22/19 09:23	05/28/19 17:50	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 DUP **Lab ID: 50225468005** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:50	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:50	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 21:50	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:50	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:50	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:50	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:50	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 21:50	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:50	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 21:50	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 21:50	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 21:50	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 21:50	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 21:50	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 21:50	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 21:50	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:50	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 21:50	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 21:50	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 21:50	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:50	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:50	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 21:50	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 21:50	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 21:50	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 21:50	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:50	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 21:50	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 21:50	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 21:50	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 21:50	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 21:50	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 21:50	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 21:50	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 21:50	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 21:50	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	92	%.	15-115		1	05/22/19 09:23	05/24/19 21:50	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 DUP **Lab ID: 50225468005** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	47	%.	10-65		1	05/22/19 09:23	05/24/19 21:50	4165-62-2	
2-Fluorophenol (S)	62	%.	10-82		1	05/22/19 09:23	05/24/19 21:50	367-12-4	
2,4,6-Tribromophenol (S)	100	%.	29-134		1	05/22/19 09:23	05/24/19 21:50	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: EQ Blank **Lab ID: 50225468006** Collected: 05/17/19 14:50 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Antimony	**<3.3**	ug/L	6.0	3.3	1	05/24/19 13:15	05/24/19 22:58	7440-36-0	
Arsenic	**<4.3**	ug/L	10.0	4.3	1	05/24/19 13:15	05/24/19 22:58	7440-38-2	
Barium	**<0.66**	ug/L	10.0	0.66	1	05/24/19 13:15	05/24/19 22:58	7440-39-3	
Beryllium	**<0.24**	ug/L	4.0	0.24	1	05/24/19 13:15	05/24/19 22:58	7440-41-7	
Cadmium	**<0.44**	ug/L	2.0	0.44	1	05/24/19 13:15	05/24/19 22:58	7440-43-9	
Chromium	**<1.1**	ug/L	10.0	1.1	1	05/24/19 13:15	05/24/19 22:58	7440-47-3	
Copper	**<2.7**	ug/L	10.0	2.7	1	05/24/19 13:15	05/24/19 22:58	7440-50-8	
Lead	**<3.5**	ug/L	10.0	3.5	1	05/24/19 13:15	05/24/19 22:58	7439-92-1	
Nickel	**<1.0**	ug/L	10.0	1.0	1	05/24/19 13:15	05/24/19 22:58	7440-02-0	
Selenium	**<5.2**	ug/L	10.0	5.2	1	05/24/19 13:15	05/24/19 22:58	7782-49-2	
Silver	**<1.2**	ug/L	10.0	1.2	1	05/24/19 13:15	05/24/19 22:58	7440-22-4	
Zinc	**1.6J**	ug/L	20.0	1.1	1	05/24/19 13:15	05/24/19 22:58	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Thallium	**<0.040**	ug/L	1.0	0.040	1	05/30/19 08:09	06/01/19 14:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Initial Volume/Weight: 30 mL Final Volume/Weight: 30 mL								
Mercury	**<0.069**	ug/L	2.0	0.069	1	05/23/19 22:50	05/24/19 09:28	7439-97-6	
8270 100mL Combo RV	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Acenaphthene	**<0.032**	ug/L	1.0	0.032	1	05/22/19 09:23	05/28/19 18:01	83-32-9	
Acenaphthylene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 18:01	208-96-8	
Anthracene	**<0.040**	ug/L	0.10	0.040	1	05/22/19 09:23	05/28/19 18:01	120-12-7	
Benzo(a)anthracene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 18:01	56-55-3	
Benzo(a)pyrene	**<0.043**	ug/L	0.10	0.043	1	05/22/19 09:23	05/28/19 18:01	50-32-8	
Benzo(b)fluoranthene	**<0.038**	ug/L	0.10	0.038	1	05/22/19 09:23	05/28/19 18:01	205-99-2	
Benzo(g,h,i)perylene	**<0.029**	ug/L	0.10	0.029	1	05/22/19 09:23	05/28/19 18:01	191-24-2	
Benzo(k)fluoranthene	**<0.042**	ug/L	0.10	0.042	1	05/22/19 09:23	05/28/19 18:01	207-08-9	
Chrysene	**<0.056**	ug/L	0.50	0.056	1	05/22/19 09:23	05/28/19 18:01	218-01-9	
Dibenz(a,h)anthracene	**<0.032**	ug/L	0.10	0.032	1	05/22/19 09:23	05/28/19 18:01	53-70-3	
Fluoranthene	**<0.029**	ug/L	1.0	0.029	1	05/22/19 09:23	05/28/19 18:01	206-44-0	
Fluorene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 18:01	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.031**	ug/L	0.10	0.031	1	05/22/19 09:23	05/28/19 18:01	193-39-5	
1-Methylnaphthalene	**<0.045**	ug/L	1.0	0.045	1	05/22/19 09:23	05/28/19 18:01	90-12-0	
2-Methylnaphthalene	**<0.044**	ug/L	1.0	0.044	1	05/22/19 09:23	05/28/19 18:01	91-57-6	
Naphthalene	**0.096J**	ug/L	1.0	0.053	1	05/22/19 09:23	05/28/19 18:01	91-20-3	
Phenanthrene	**<0.052**	ug/L	1.0	0.052	1	05/22/19 09:23	05/28/19 18:01	85-01-8	
Pyrene	**<0.034**	ug/L	1.0	0.034	1	05/22/19 09:23	05/28/19 18:01	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	42	%.	10-83		1	05/22/19 09:23	05/28/19 18:01	321-60-8	
p-Terphenyl-d14 (S)	60	%.	28-125		1	05/22/19 09:23	05/28/19 18:01	1718-51-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: EQ Blank **Lab ID: 50225468006** Collected: 05/17/19 14:50 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Benzyl alcohol	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 22:06	100-51-6	
4-Bromophenylphenyl ether	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 22:06	101-55-3	
Butylbenzylphthalate	**<4.2**	ug/L	10.0	4.2	1	05/22/19 09:23	05/24/19 22:06	85-68-7	
4-Chloro-3-methylphenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 22:06	59-50-7	
4-Chloroaniline	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 22:06	106-47-8	
bis(2-Chloroethoxy)methane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 22:06	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 22:06	111-44-4	
bis(2chloro1methylethyl) ether	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	108-60-1	
2-Chloronaphthalene	**<4.1**	ug/L	10.0	4.1	1	05/22/19 09:23	05/24/19 22:06	91-58-7	
2-Chlorophenol	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 22:06	95-57-8	
4-Chlorophenylphenyl ether	**<3.8**	ug/L	10.0	3.8	1	05/22/19 09:23	05/24/19 22:06	7005-72-3	
Dibenzofuran	**<3.6**	ug/L	10.0	3.6	1	05/22/19 09:23	05/24/19 22:06	132-64-9	
3,3'-Dichlorobenzidine	**<3.5**	ug/L	20.0	3.5	1	05/22/19 09:23	05/24/19 22:06	91-94-1	
2,4-Dichlorophenol	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	120-83-2	
Diethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	84-66-2	
2,4-Dimethylphenol	**<3.9**	ug/L	10.0	3.9	1	05/22/19 09:23	05/24/19 22:06	105-67-9	
Dimethylphthalate	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	131-11-3	
Di-n-butylphthalate	**<3.1**	ug/L	10.0	3.1	1	05/22/19 09:23	05/24/19 22:06	84-74-2	
4,6-Dinitro-2-methylphenol	**<4.9**	ug/L	20.0	4.9	1	05/22/19 09:23	05/24/19 22:06	534-52-1	
2,4-Dinitrophenol	**<3.8**	ug/L	50.0	3.8	1	05/22/19 09:23	05/24/19 22:06	51-28-5	
2,4-Dinitrotoluene	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 22:06	121-14-2	
2,6-Dinitrotoluene	**<3.4**	ug/L	10.0	3.4	1	05/22/19 09:23	05/24/19 22:06	606-20-2	
Di-n-octylphthalate	**<6.2**	ug/L	10.0	6.2	1	05/22/19 09:23	05/24/19 22:06	117-84-0	
bis(2-Ethylhexyl)phthalate	**<4.4**	ug/L	10.0	4.4	1	05/22/19 09:23	05/24/19 22:06	117-81-7	
Hexachloro-1,3-butadiene	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 22:06	87-68-3	
Hexachlorobenzene	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 22:06	118-74-1	
Hexachlorocyclopentadiene	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	77-47-4	
Hexachloroethane	**<2.6**	ug/L	10.0	2.6	1	05/22/19 09:23	05/24/19 22:06	67-72-1	
Isophorone	**<2.2**	ug/L	10.0	2.2	1	05/22/19 09:23	05/24/19 22:06	78-59-1	
2-Methylphenol(o-Cresol)	**<2.7**	ug/L	10.0	2.7	1	05/22/19 09:23	05/24/19 22:06	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06		
2-Nitroaniline	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	88-74-4	
3-Nitroaniline	**<3.0**	ug/L	10.0	3.0	1	05/22/19 09:23	05/24/19 22:06	99-09-2	
4-Nitroaniline	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 22:06	100-01-6	
Nitrobenzene	**<2.4**	ug/L	10.0	2.4	1	05/22/19 09:23	05/24/19 22:06	98-95-3	
2-Nitrophenol	**<2.8**	ug/L	10.0	2.8	1	05/22/19 09:23	05/24/19 22:06	88-75-5	
4-Nitrophenol	**<2.5**	ug/L	50.0	2.5	1	05/22/19 09:23	05/24/19 22:06	100-02-7	
N-Nitroso-di-n-propylamine	**<2.6**	ug/L	50.0	2.6	1	05/22/19 09:23	05/24/19 22:06	621-64-7	
N-Nitrosodiphenylamine	**<2.5**	ug/L	10.0	2.5	1	05/22/19 09:23	05/24/19 22:06	86-30-6	
Pentachlorophenol	**<1.9**	ug/L	50.0	1.9	1	05/22/19 09:23	05/24/19 22:06	87-86-5	
Phenol	**<1.7**	ug/L	10.0	1.7	1	05/22/19 09:23	05/24/19 22:06	108-95-2	
2,4,5-Trichlorophenol	**<2.9**	ug/L	10.0	2.9	1	05/22/19 09:23	05/24/19 22:06	95-95-4	
2,4,6-Trichlorophenol	**<3.2**	ug/L	10.0	3.2	1	05/22/19 09:23	05/24/19 22:06	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	59	%.	15-115		1	05/22/19 09:23	05/24/19 22:06	4165-60-0	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: EQ Blank **Lab ID: 50225468006** Collected: 05/17/19 14:50 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 SVOC Combo Water	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Initial Volume/Weight: 100 mL Final Volume/Weight: 1 mL								
Surrogates									
Phenol-d5 (S)	29	%.	10-65		1	05/22/19 09:23	05/24/19 22:06	4165-62-2	
2-Fluorophenol (S)	39	%.	10-82		1	05/22/19 09:23	05/24/19 22:06	367-12-4	
2,4,6-Tribromophenol (S)	70	%.	29-134		1	05/22/19 09:23	05/24/19 22:06	118-79-6	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-4 FIELD FILTERED **Lab ID: 50225468008** Collected: 05/17/19 13:45 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Arsenic	**4.7J**	ug/L	10.0	3.8	1	06/10/19 06:21	06/10/19 13:44	7440-38-2	
Lead	**3.7J**	ug/L	10.0	2.7	1	06/10/19 06:21	06/10/19 13:44	7439-92-1	

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ANALYTICAL RESULTS

Project: 216 College / 19-146
Pace Project No.: 50225468

Sample: SP-5 FIELD FILTERED **Lab ID: 50225468009** Collected: 05/17/19 10:23 Received: 05/17/19 18:01 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL								
Arsenic	**10.2**	ug/L	10.0	3.8	1	06/10/19 06:21	06/10/19 13:46	7440-38-2	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 501889 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

METHOD BLANK: 2315928 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.069	2.0	0.069	05/28/19 19:05	

LABORATORY CONTROL SAMPLE: 2315929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2315930 2315931

Parameter	Units	50225442011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.7	4.3	93	86	75-125	8	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2315932 2315933

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.069	5	5	5.3	5.0	105	100	75-125	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502148
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 50225468006

METHOD BLANK: 2317087
Matrix: Water
Associated Lab Samples: 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.069	2.0	0.069	05/24/19 09:22	

LABORATORY CONTROL SAMPLE: 2317088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2317089 2317090

Parameter	Units	50225773003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.0	4.9	97	95	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 501305 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

METHOD BLANK: 2313609 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<3.3	6.0	3.3	05/21/19 22:45	
Arsenic	ug/L	<4.3	10.0	4.3	05/21/19 22:45	
Barium	ug/L	<0.66	10.0	0.66	05/21/19 22:45	
Beryllium	ug/L	<0.24	4.0	0.24	05/21/19 22:45	
Cadmium	ug/L	<0.44	2.0	0.44	05/21/19 22:45	
Chromium	ug/L	<1.1	10.0	1.1	05/21/19 22:45	
Copper	ug/L	<2.7	10.0	2.7	05/21/19 22:45	
Lead	ug/L	<3.5	10.0	3.5	05/21/19 22:45	
Nickel	ug/L	<1.0	10.0	1.0	05/21/19 22:45	
Selenium	ug/L	<5.2	10.0	5.2	05/21/19 22:45	
Silver	ug/L	<1.2	10.0	1.2	05/21/19 22:45	
Zinc	ug/L	1.5J	20.0	1.1	05/21/19 22:45	

LABORATORY CONTROL SAMPLE: 2313610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	1000	996	100	80-120	
Arsenic	ug/L	1000	971	97	80-120	
Barium	ug/L	1000	969	97	80-120	
Beryllium	ug/L	1000	986	99	80-120	
Cadmium	ug/L	1000	978	98	80-120	
Chromium	ug/L	1000	977	98	80-120	
Copper	ug/L	1000	958	96	80-120	
Lead	ug/L	1000	925	93	80-120	
Nickel	ug/L	1000	985	99	80-120	
Selenium	ug/L	1000	979	98	80-120	
Silver	ug/L	500	473	95	80-120	
Zinc	ug/L	1000	976	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313611 2313612

Parameter	Units	50225400001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	1000	1000	972	972	97	97	75-125	0	20	
Arsenic	ug/L	15.4	1000	1000	1010	1010	99	99	75-125	0	20	
Barium	ug/L	202	1000	1000	1160	1160	95	96	75-125	0	20	
Beryllium	ug/L	ND	1000	1000	955	960	95	96	75-125	0	20	
Cadmium	ug/L	2.1	1000	1000	981	987	98	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313611 2313612

Parameter	Units	50225400001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	57.8	1000	1000	967	976	91	92	75-125	1	20	
Copper	ug/L	95.5	1000	1000	1040	1040	94	95	75-125	0	20	
Lead	ug/L	137	1000	1000	956	961	82	82	75-125	1	20	
Nickel	ug/L	109	1000	1000	982	989	87	88	75-125	1	20	
Selenium	ug/L	ND	1000	1000	986	986	99	99	75-125	0	20	
Silver	ug/L	ND	500	500	486	488	97	98	75-125	1	20	
Zinc	ug/L	401	1000	1000	1280	1290	88	89	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313613 2313614

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<3.3	1000	1000	1010	1010	101	101	75-125	0	20	
Arsenic	ug/L	8.2J	1000	1000	1020	1010	101	100	75-125	1	20	
Barium	ug/L	276	1000	1000	1250	1250	97	97	75-125	0	20	
Beryllium	ug/L	<0.24	1000	1000	981	988	98	99	75-125	1	20	
Cadmium	ug/L	<0.44	1000	1000	990	994	99	99	75-125	0	20	
Chromium	ug/L	<1.1	1000	1000	941	946	94	95	75-125	0	20	
Copper	ug/L	<2.7	1000	1000	956	952	95	95	75-125	0	20	
Lead	ug/L	<3.5	1000	1000	846	845	85	84	75-125	0	20	
Nickel	ug/L	3.7J	1000	1000	909	914	91	91	75-125	1	20	
Selenium	ug/L	<5.2	1000	1000	1000	1000	100	100	75-125	0	20	
Silver	ug/L	<1.2	500	500	488	488	98	98	75-125	0	20	
Zinc	ug/L	3.5J	1000	1000	942	944	94	94	75-125	0	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502070
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 50225468006

METHOD BLANK: 2316804 Matrix: Water
Associated Lab Samples: 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<3.3	6.0	3.3	05/24/19 22:35	
Arsenic	ug/L	<4.3	10.0	4.3	05/24/19 22:35	
Barium	ug/L	<0.66	10.0	0.66	05/24/19 22:35	
Beryllium	ug/L	<0.24	4.0	0.24	05/24/19 22:35	
Cadmium	ug/L	<0.44	2.0	0.44	05/24/19 22:35	
Chromium	ug/L	<1.1	10.0	1.1	05/24/19 22:35	
Copper	ug/L	<2.7	10.0	2.7	05/24/19 22:35	
Lead	ug/L	<3.5	10.0	3.5	05/24/19 22:35	
Nickel	ug/L	<1.0	10.0	1.0	05/24/19 22:35	
Selenium	ug/L	<5.2	10.0	5.2	05/24/19 22:35	
Silver	ug/L	<1.2	10.0	1.2	05/24/19 22:35	
Zinc	ug/L	2.2J	20.0	1.1	05/24/19 22:35	

LABORATORY CONTROL SAMPLE: 2316805

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	1000	996	100	80-120	
Arsenic	ug/L	1000	953	95	80-120	
Barium	ug/L	1000	977	98	80-120	
Beryllium	ug/L	1000	1010	101	80-120	
Cadmium	ug/L	1000	986	99	80-120	
Chromium	ug/L	1000	957	96	80-120	
Copper	ug/L	1000	957	96	80-120	
Lead	ug/L	1000	933	93	80-120	
Nickel	ug/L	1000	976	98	80-120	
Selenium	ug/L	1000	968	97	80-120	
Silver	ug/L	500	475	95	80-120	
Zinc	ug/L	1000	988	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2316806 2316807

Parameter	Units	50225740008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	30.5	5000	5000	3290	3250	65	64	75-125	1	20	M3
Arsenic	ug/L	789	5000	5000	5330	5250	91	89	75-125	2	20	
Barium	ug/L	1940	5000	5000	6540	6500	92	91	75-125	1	20	
Beryllium	ug/L	21.5	5000	5000	4680	4670	93	93	75-125	0	20	
Cadmium	ug/L	13.8	5000	5000	4720	4670	94	93	75-125	1	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2316806 2316807

Parameter	Units	50225740008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	752	5000	5000	5080	5020	87	85	75-125	1	20	
Copper	ug/L	1450	5000	5000	6080	5960	93	90	75-125	2	20	
Lead	ug/L	637	5000	5000	4490	4450	77	76	75-125	1	20	
Nickel	ug/L	766	5000	5000	4820	4780	81	80	75-125	1	20	
Selenium	ug/L	ND	5000	5000	4490	4500	90	90	75-125	0	20	
Silver	ug/L	ND	2500	2500	2370	2350	95	94	75-125	1	20	
Zinc	ug/L	2860	5000	5000	6990	6760	83	78	75-125	3	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 505173 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 50225468008, 50225468009

METHOD BLANK: 2331106 Matrix: Water
Associated Lab Samples: 50225468008, 50225468009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<3.8	10.0	3.8	06/11/19 10:35	
Lead	ug/L	<2.7	10.0	2.7	06/11/19 10:35	

LABORATORY CONTROL SAMPLE: 2331107

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1010	101	80-120	
Lead	ug/L	1000	1020	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2332014 2332015

Parameter	Units	50227311002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	220	1000	1000	1090	1080	87	86	75-125	1	20	
Lead	ug/L	246	1000	1000	914	911	67	66	75-125	0	20	M3

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 503006 Analysis Method: EPA 6020
QC Batch Method: EPA 200.2 Analysis Description: 6020 MET
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

METHOD BLANK: 2321049 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Thallium	ug/L	<0.040	1.0	0.040	06/01/19 11:52	

LABORATORY CONTROL SAMPLE: 2321050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	40	40.2	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2321051 2321052

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Thallium	ug/L	<0.040	40	40	40.5	41.5	101	104	75-125	2	20	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502357 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH Low Volume
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

METHOD BLANK: 2318323 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.045	1.0	0.045	05/24/19 18:56	
2-Methylnaphthalene	ug/L	<0.044	1.0	0.044	05/24/19 18:56	
Acenaphthene	ug/L	<0.032	1.0	0.032	05/24/19 18:56	
Acenaphthylene	ug/L	<0.045	1.0	0.045	05/24/19 18:56	
Anthracene	ug/L	<0.040	0.10	0.040	05/24/19 18:56	
Benzo(a)anthracene	ug/L	<0.042	0.10	0.042	05/24/19 18:56	
Benzo(a)pyrene	ug/L	<0.043	0.10	0.043	05/24/19 18:56	
Benzo(b)fluoranthene	ug/L	<0.038	0.10	0.038	05/24/19 18:56	
Benzo(g,h,i)perylene	ug/L	<0.029	0.10	0.029	05/24/19 18:56	
Benzo(k)fluoranthene	ug/L	<0.042	0.10	0.042	05/24/19 18:56	
Chrysene	ug/L	<0.056	0.50	0.056	05/24/19 18:56	
Dibenz(a,h)anthracene	ug/L	<0.032	0.10	0.032	05/24/19 18:56	
Fluoranthene	ug/L	<0.029	1.0	0.029	05/24/19 18:56	
Fluorene	ug/L	<0.044	1.0	0.044	05/24/19 18:56	
Indeno(1,2,3-cd)pyrene	ug/L	<0.031	0.10	0.031	05/24/19 18:56	
Naphthalene	ug/L	<0.053	1.0	0.053	05/24/19 18:56	
Phenanthrene	ug/L	<0.052	1.0	0.052	05/24/19 18:56	
Pyrene	ug/L	<0.034	1.0	0.034	05/24/19 18:56	
2-Fluorobiphenyl (S)	%.	54	10-83		05/24/19 18:56	
p-Terphenyl-d14 (S)	%.	72	28-125		05/24/19 18:56	

LABORATORY CONTROL SAMPLE: 2318324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	10	5.4	54	20-92	
2-Methylnaphthalene	ug/L	10	5.3	53	18-98	
Acenaphthene	ug/L	10	5.8	58	21-102	
Acenaphthylene	ug/L	10	6.3	63	23-118	
Anthracene	ug/L	10	6.1	61	29-119	
Benzo(a)anthracene	ug/L	10	6.4	64	36-131	
Benzo(a)pyrene	ug/L	10	5.2	52	31-121	
Benzo(b)fluoranthene	ug/L	10	6.8	68	32-130	
Benzo(g,h,i)perylene	ug/L	10	4.5	45	23-118	
Benzo(k)fluoranthene	ug/L	10	5.4	54	33-127	
Chrysene	ug/L	10	6.0	60	41-118	
Dibenz(a,h)anthracene	ug/L	10	4.9	49	25-121	
Fluoranthene	ug/L	10	6.8	68	36-128	
Fluorene	ug/L	10	6.4	64	26-114	
Indeno(1,2,3-cd)pyrene	ug/L	10	5.1	51	26-119	
Naphthalene	ug/L	10	5.3	53	19-97	

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

LABORATORY CONTROL SAMPLE: 2318324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/L	10	6.4	64	32-115	
Pyrene	ug/L	10	6.7	67	36-123	
2-Fluorobiphenyl (S)	%.			56	10-83	
p-Terphenyl-d14 (S)	%.			63	28-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2318325 2318326

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/L	<0.045	10	10	6.3	6.1	63	61	15-88	2	20	
2-Methylnaphthalene	ug/L	<0.044	10	10	6.1	6.0	61	60	19-92	3	20	
Acenaphthene	ug/L	<0.032	10	10	6.4	6.2	64	62	13-91	3	20	
Acenaphthylene	ug/L	<0.045	10	10	6.1	7.2	61	72	10-110	16	20	
Anthracene	ug/L	<0.040	10	10	6.9	7.1	69	71	18-111	3	20	
Benzo(a)anthracene	ug/L	<0.042	10	10	7.4	7.2	74	72	36-113	3	20	
Benzo(a)pyrene	ug/L	<0.043	10	10	6.1	6.7	61	67	22-92	9	20	
Benzo(b)fluoranthene	ug/L	<0.038	10	10	6.8	8.6	68	86	28-104	23	20	R1
Benzo(g,h,i)perylene	ug/L	<0.029	10	10	5.0	5.7	50	57	10-83	13	20	
Benzo(k)fluoranthene	ug/L	<0.042	10	10	6.3	5.7	63	57	19-98	9	20	
Chrysene	ug/L	<0.056	10	10	7.1	7.5	71	75	36-100	6	20	
Dibenz(a,h)anthracene	ug/L	<0.032	10	10	5.5	6.3	55	63	12-88	14	20	
Fluoranthene	ug/L	<0.029	10	10	5.2	11.2	52	112	41-114	74	20	R1
Fluorene	ug/L	<0.044	10	10	6.8	4.8	68	48	21-104	36	20	R1
Indeno(1,2,3-cd)pyrene	ug/L	<0.031	10	10	5.5	6.2	55	62	13-88	11	20	
Naphthalene	ug/L	<0.053	10	10	6.2	6.2	62	62	14-92	0	20	
Phenanthrene	ug/L	<0.052	10	10	6.6	6.5	66	65	29-105	1	20	
Pyrene	ug/L	<0.034	10	10	7.9	8.3	79	83	29-112	4	20	
2-Fluorobiphenyl (S)	%.						37	41	10-83			
p-Terphenyl-d14 (S)	%.						65	79	28-125			

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QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

QC Batch: 502356 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water Scan LV
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

METHOD BLANK: 2318319 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-Trichlorophenol	ug/L	<2.9	10.0	2.9	05/24/19 17:43	
2,4,6-Trichlorophenol	ug/L	<3.2	10.0	3.2	05/24/19 17:43	
2,4-Dichlorophenol	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
2,4-Dimethylphenol	ug/L	<3.9	10.0	3.9	05/24/19 17:43	
2,4-Dinitrophenol	ug/L	<3.8	50.0	3.8	05/24/19 17:43	
2,4-Dinitrotoluene	ug/L	<2.6	10.0	2.6	05/24/19 17:43	
2,6-Dinitrotoluene	ug/L	<3.4	10.0	3.4	05/24/19 17:43	
2-Chloronaphthalene	ug/L	<4.1	10.0	4.1	05/24/19 17:43	
2-Chlorophenol	ug/L	<2.7	10.0	2.7	05/24/19 17:43	
2-Methylphenol(o-Cresol)	ug/L	<2.7	10.0	2.7	05/24/19 17:43	
2-Nitroaniline	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
2-Nitrophenol	ug/L	<2.8	10.0	2.8	05/24/19 17:43	
3&4-Methylphenol(m&p Cresol)	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
3,3'-Dichlorobenzidine	ug/L	<3.5	20.0	3.5	05/24/19 17:43	
3-Nitroaniline	ug/L	<3.0	10.0	3.0	05/24/19 17:43	
4,6-Dinitro-2-methylphenol	ug/L	<4.9	20.0	4.9	05/24/19 17:43	
4-Bromophenylphenyl ether	ug/L	<3.0	10.0	3.0	05/24/19 17:43	
4-Chloro-3-methylphenol	ug/L	<2.9	10.0	2.9	05/24/19 17:43	
4-Chloroaniline	ug/L	<2.2	10.0	2.2	05/24/19 17:43	
4-Chlorophenylphenyl ether	ug/L	<3.8	10.0	3.8	05/24/19 17:43	
4-Nitroaniline	ug/L	<2.8	10.0	2.8	05/24/19 17:43	
4-Nitrophenol	ug/L	<2.5	50.0	2.5	05/24/19 17:43	
Benzyl alcohol	ug/L	<2.4	10.0	2.4	05/24/19 17:43	
bis(2-Chloroethoxy)methane	ug/L	<2.6	10.0	2.6	05/24/19 17:43	
bis(2-Chloroethyl) ether	ug/L	<2.2	10.0	2.2	05/24/19 17:43	
bis(2-Ethylhexyl)phthalate	ug/L	<4.4	10.0	4.4	05/24/19 17:43	
bis(2chloro1methylethyl) ether	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Butylbenzylphthalate	ug/L	<4.2	10.0	4.2	05/24/19 17:43	
Di-n-butylphthalate	ug/L	<3.1	10.0	3.1	05/24/19 17:43	
Di-n-octylphthalate	ug/L	<6.2	10.0	6.2	05/24/19 17:43	
Dibenzofuran	ug/L	<3.6	10.0	3.6	05/24/19 17:43	
Diethylphthalate	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Dimethylphthalate	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Hexachloro-1,3-butadiene	ug/L	<3.0	10.0	3.0	05/24/19 17:43	
Hexachlorobenzene	ug/L	<2.7	10.0	2.7	05/24/19 17:43	
Hexachlorocyclopentadiene	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Hexachloroethane	ug/L	<2.6	10.0	2.6	05/24/19 17:43	
Isophorone	ug/L	<2.2	10.0	2.2	05/24/19 17:43	
N-Nitroso-di-n-propylamine	ug/L	<2.6	50.0	2.6	05/24/19 17:43	
N-Nitrosodiphenylamine	ug/L	<2.5	10.0	2.5	05/24/19 17:43	
Nitrobenzene	ug/L	<2.4	10.0	2.4	05/24/19 17:43	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: 216 College / 19-146
Pace Project No.: 50225468

METHOD BLANK: 2318319 Matrix: Water
Associated Lab Samples: 50225468001, 50225468002, 50225468003, 50225468004, 50225468005, 50225468006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Pentachlorophenol	ug/L	<1.9	50.0	1.9	05/24/19 17:43	
Phenol	ug/L	<1.7	10.0	1.7	05/24/19 17:43	
2,4,6-Tribromophenol (S)	%.	98	29-134		05/24/19 17:43	
2-Fluorophenol (S)	%.	47	10-82		05/24/19 17:43	
Nitrobenzene-d5 (S)	%.	94	15-115		05/24/19 17:43	
Phenol-d5 (S)	%.	37	10-65		05/24/19 17:43	

LABORATORY CONTROL SAMPLE: 2318320

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	100	88.4	88	10-142	
2-Chlorophenol	ug/L	100	60.1	60	18-105	
4-Chloro-3-methylphenol	ug/L	100	77.7	78	18-127	
4-Nitrophenol	ug/L	100	43.8J	44	10-87	
N-Nitroso-di-n-propylamine	ug/L	100	90.4	90	20-120	
Pentachlorophenol	ug/L	100	97.8	98	21-141	
Phenol	ug/L	100	32.3	32	10-62	
2,4,6-Tribromophenol (S)	%.			87	29-134	
2-Fluorophenol (S)	%.			46	10-82	
Nitrobenzene-d5 (S)	%.			90	15-115	
Phenol-d5 (S)	%.			36	10-65	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2318321 2318322

Parameter	Units	50225468001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4-Dinitrotoluene	ug/L	<2.6	100	100	96.1	93.5	96	93	10-134	3	20	
2-Chlorophenol	ug/L	<2.7	100	100	85.1	84.1	85	84	13-95	1	20	
4-Chloro-3-methylphenol	ug/L	<2.9	100	100	110	108	110	108	15-119	2	20	
4-Nitrophenol	ug/L	<2.5	100	100	58.8	57.3	59	57	10-76	3	20	
N-Nitroso-di-n-propylamine	ug/L	<2.6	100	100	95.3	92.3	95	92	12-111	3	20	
Pentachlorophenol	ug/L	<1.9	100	100	119	114	119	114	21-132	4	20	
Phenol	ug/L	<1.7	100	100	41.1	41.0	41	41	10-52	0	20	
2,4,6-Tribromophenol (S)	%.						92	95	29-134			
2-Fluorophenol (S)	%.						59	58	10-82			
Nitrobenzene-d5 (S)	%.						88	91	15-115			
Phenol-d5 (S)	%.						41	41	10-65			

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REPORT OF LABORATORY ANALYSIS

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Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: 216 College / 19-146
Pace Project No.: 50225468

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1	RPD value was outside control limits.

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

METHOD CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225468

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Water	SW-846 6010B	SW-846 3010A
6020 MET ICPMS	Water	SW-846 6020	SW-846 3010A
7470 Mercury	Water	SW-846 7470A	SW-846 7470A
8270 100mL Combo RV	Water	SW-846 8270C	SW-846 3510C
8270 SVOC Combo Water	Water	SW-846 8270C	SW-846 3510C

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 College / 19-146
Pace Project No.: 50225468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50225468001	**SP-1**	EPA 3010	501305	EPA 6010	501704
50225468002	**SP-3**	EPA 3010	501305	EPA 6010	501704
50225468003	**SP-4**	EPA 3010	501305	EPA 6010	501704
50225468004	**SP-5**	EPA 3010	501305	EPA 6010	501704
50225468005	**SP-5 DUP**	EPA 3010	501305	EPA 6010	501704
50225468006	**EQ Blank**	EPA 3010	502070	EPA 6010	502565
50225468008	**SP-4 FIELD FILTERED**	EPA 3010	505173	EPA 6010	505441
50225468009	**SP-5 FIELD FILTERED**	EPA 3010	505173	EPA 6010	505441
50225468001	**SP-1**	EPA 200.2	503006	EPA 6020	503481
50225468002	**SP-3**	EPA 200.2	503006	EPA 6020	503481
50225468003	**SP-4**	EPA 200.2	503006	EPA 6020	503481
50225468004	**SP-5**	EPA 200.2	503006	EPA 6020	503481
50225468005	**SP-5 DUP**	EPA 200.2	503006	EPA 6020	503481
50225468006	**EQ Blank**	EPA 200.2	503006	EPA 6020	503481
50225468001	**SP-1**	EPA 7470	501889	EPA 7470	502925
50225468002	**SP-3**	EPA 7470	501889	EPA 7470	502925
50225468003	**SP-4**	EPA 7470	501889	EPA 7470	502925
50225468004	**SP-5**	EPA 7470	501889	EPA 7470	502925
50225468005	**SP-5 DUP**	EPA 7470	501889	EPA 7470	502925
50225468006	**EQ Blank**	EPA 7470	502148	EPA 7470	502319
50225468001	**SP-1**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468002	**SP-3**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468003	**SP-4**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468004	**SP-5**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468005	**SP-5 DUP**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468006	**EQ Blank**	EPA 3510	502357	EPA 8270 by SIM	502532
50225468001	**SP-1**	EPA 3510	502356	EPA 8270	502531
50225468002	**SP-3**	EPA 3510	502356	EPA 8270	502531
50225468003	**SP-4**	EPA 3510	502356	EPA 8270	502531
50225468004	**SP-5**	EPA 3510	502356	EPA 8270	502531
50225468005	**SP-5 DUP**	EPA 3510	502356	EPA 8270	502531
50225468006	**EQ Blank**	EPA 3510	502356	EPA 8270	502531

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CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

50225468

ALL SHADED AREAS are for LAB USE ONLY

Company: BLA Environmental	Billing Information:
Address: 12026 87th St.	
Report To: JTerschler	Email To: JTerschler
Copy To: RManny@BLAConsultants.com	Site Collection Info/Address: 216 S College
Customer Project Name/Number: 19-146	State: IN County/City: Monroe Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [✓] No
Collected By (print): Rod Manny	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature): Rod Manny	Turnaround Date Required: STD Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: [✓] Hold: Filtered metals	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Field Filtered (if applicable): [✓] Yes [ ] No Analysis: 14 Metals

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	SVOCs + PAHs 8270 + SIM	14 Metals	14 Metals (Field Filtered *)	CrVI 7199	Lab Sample # / Comments
** SP-1	GW	G	5.17.19	1145				14	X	X	X	X	001 007
SP-3	"	"	"	1310				5	X	X		X	002
SP-4	"	"	"	1345				5	X	X	X	X	003 008
SP-5	"	"	"	1023				5	X	X	X	X	004 009
SP-5 DUP	"	"	"	1023				4	X	X		X	005
Equipment Blank 5/21/19 RMB									X	X		X	006

Container Preservative Type **: U | 1 | 1 | B

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist: See Scan

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
* Hold Filtered until Analysis Pending
** MS/MSD

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2397500

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: E
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: 0.0 oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Rod Manny/BLA	5/17/19 1801		5/17/19 1801
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Lucas Dayton LMC	5/17/19		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

Pace Analytical

SAMPLE CONDITION UPON RECEIPT FORM

Project #: 50225468

Date/Time and Initials of person examining contents: LWG 1830 5/17/19

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer: 1 2 3 4 5 6 A B C D (E) F Ice Type: ☑ Wet ☐ Blue ☐ None | Samples collected today and on ice: ☑ Yes ☐ No ☐ N/A

Cooler Temperature: 1.5/1.5 Ice Visible in Sample Containers?: ☐ Yes ☑ No ☐ N/A

(Initial/Corrected) Temp should be above freezing to 6°C If temp. is Over 6°C or under 0°C, was the PM Notified?: ☐ Yes ☐ No ☑ N/A

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been checked?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.			+ LWG
USDA Regulated Soils? (ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Chain of Custody Present:	✓		Circle: (HNO3) H2SO4 NaOH NaOH/ZnAc	✓		
Chain of Custody Filled Out:	✓		Dissolved Metals field filtered?:	✓		+ LWG
Short Hold Time Analysis (<72hr)?: Analysis:		✓	Headspace Wisconsin Sulfide			✓
Time 5035A TC placed in Freezer or Short Holds To Lab:		✓		Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
			Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested:			Headspace in VOA Vials (>6mm):			
Containers Intact?:	✓		Trip Blank Present?:		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		✓	Trip Blank Custody Seals?:		✓	

Comments: Missing SP-3 Cr VI Sample. - LWG 5/17/19 EQ blank not on COC - LWG 5/17/19
This ↑ is correct - ~~not~~ no SP-3 CrVI 5/20/19 RRB
Analyze CrVI groundwater, per Rob Manny 5/21/19 RRB
Analyze equipment blank for all parameters 5/21/19 RRB

Analyze field filtered SP-4 As & Pb and SP-5 As per Jacob T. 6/7/19 RRB

Sample Container Count

WO# : 50225468

50225468

CLIENT: BCA

COC PAGE 1 of 1

COC ID# 2397500

Project # 50225468

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	R	Bulk Kit SRS	GNX	Date	Time	Matrix SI/ (Soil/Wate Aqueous	pH <2	pH >9	pH>12
1		6												4					3			WT	✓		
2		2												1					0						
3		2												2					1						
4		|												2					1						
5		|												1					1						
6		|												1					1	5/17	1450	|	|		
7																									
8																									
9																									
10																									
11																									
12																									

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpreserved amber glass
DG9H	40mL HCL amber voa vial	AG1H	1 liter HCL amber glass
DG9M	40mL MeOH clear vial	AG1S	1 liter H2SO4 amber glass
DG9P	40mL TSP amber vial	AG1T	1 liter Na Thiosulfate amber glass
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpreserved amber glass
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass
DG9U	40mL unpreserved amber vial	AG2S	500mL H2SO4 amber glass
VG9H	40mL HCL clear vial	AG2U	500mL unpreserved amber glass
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 glass amber
VG9U	40mL unpreserved clear vial	AG3U	250mL unpreserved amber glass
VGFX	40mL w/hexane wipe vial	BG1H	1 liter HCL clear glass
VSG	Headspace septa vial & HCL	BG1S	1 liter H2SO4 clear glass
WGKU	8oz unpreserved clear jar	BG1T	1 liter Na Thiosulfate clear glass
WGFU	4oz clear soil jar	BG1U	1 liter unpreserved glass
JGFU	4oz unpreserved amber wide	BG3H	250mL HCl Clear Glass
		BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic
BP1N	1 liter HNO3 plastic
BP1S	1 liter H2SO4 plastic
BP1U	1 liter unpreserved plastic
BP1Z	1 liter NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3S	250mL H2SO4 plastic
BP3U	250mL unpreserved plastic
BP3Z	250mL NaOH, Zn Ac plastic

AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

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National Center for Testing & Innovation

ANALYTICAL REPORT

May 30, 2019

Pace Analytical - Indianapolis, IN

Sample Delivery Group:	L1101712
Samples Received:	05/23/2019
Project Number:	50225468
Description:	216 College / 19-146

Report To: Regina Bedel
7726 Moller Rd.
Indianapolis, IN 46268

Entire Report Reviewed By: Nancy F. McLain

Nancy McLain
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 4

Sr: Sample Results 5

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SP-4 L1101712-02 6

SP-5 L1101712-03 7

SP-5 DUP L1101712-04 8

EQ BLANK L1101712-05 9

Qc: Quality Control Summary 10

Wet Chemistry by Method 7199 10

Gl: Glossary of Terms 11

Al: Accreditations & Locations 12

Sc: Sample Chain of Custody 13

SP-1 L1101712-01 GW

			Collected by	Collected date/time	Received date/time	
				05/17/19 11:45	05/23/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 18:29	05/29/19 18:29	GB	Mt. Juliet, TN

SP-4 L1101712-02 GW

			Collected by	Collected date/time	Received date/time	
				05/17/19 13:45	05/23/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 21:04	05/29/19 21:04	GB	Mt. Juliet, TN

SP-5 L1101712-03 GW

			Collected by	Collected date/time	Received date/time	
				05/17/19 10:23	05/23/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:08	05/29/19 19:08	GB	Mt. Juliet, TN

SP-5 DUP L1101712-04 GW

			Collected by	Collected date/time	Received date/time	
				05/17/19 10:23	05/23/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:23	05/29/19 19:23	GB	Mt. Juliet, TN

EQ BLANK L1101712-05 GW

			Collected by	Collected date/time	Received date/time	
				05/17/19 14:50	05/23/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:32	05/29/19 19:32	GB	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Nancy F. McLain

Nancy McLain
Project Manager

Sample Handling and Receiving

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1101712-01	SP-1	7199
L1101712-02	SP-4	7199
L1101712-03	SP-5	7199
L1101712-04	SP-5 DUP	7199
L1101712-05	EQ BLANK	7199

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.224	J6	0.0200	0.0600	1	05/29/2019 18:29	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.0539	J P1	0.0200	0.0600	1	05/29/2019 21:04	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.124		0.0200	0.0600	1	05/29/2019 19:08	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.0999		0.0200	0.0600	1	05/29/2019 19:23	WG1287501

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexavalent Chromium-Low Level	0.135		0.0200	0.0600	1	05/29/2019 19:32	WG1287501

Method Blank (MB)

(MB) R3416028-1 05/29/19 17:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexavalent Chromium-Low Level	U		0.0200	0.0600

L1101712-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1101712-02 05/29/19 21:04 • (DUP) R3416028-7 05/29/19 21:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium-Low Level	0.0539	0.0266	1	67.8	J P1	20

Laboratory Control Sample (LCS)

(LCS) R3416028-2 05/29/19 18:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium-Low Level	0.500	0.499	99.8	90.0-110	

L1101712-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1101712-01 05/29/19 18:29 • (MS) R3416028-3 05/29/19 18:38 • (MSD) R3416028-4 05/29/19 18:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium-Low Level	1.00	0.224	1.04	1.03	81.1	80.9	1	90.0-110	J6	J6	0.222	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

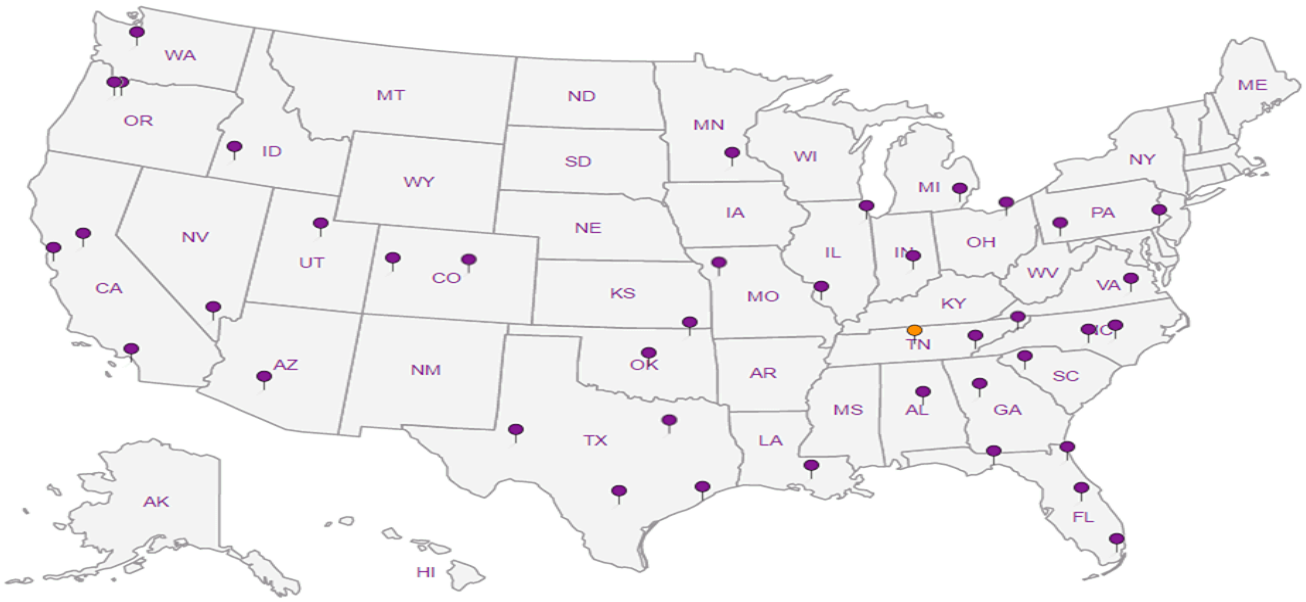
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Chain of Custody

Pace Analytical®
www.pacelabs.com

A116

Workorder: 50225468 **Workorder Name:** 216 College / 19-146 **Results Requested By:** 6/4/2019

Report / Invoice To	Subcontract To
Regina Bedel Pace Analytical Indianapolis 7726 Moller Road Indianapolis, IN 46268 Phone (317)228-3100 Email: regina.bedel@pacelabs.com	Pace National 12065 Lebanon Rd Mt Juliet, TN 37122 P.O. 50225468

State of Sample Origin: IN

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: General	7199 CR6 LLFFP + MS/MSD	7199 CR6 LLFFP	LAB USE ONLY
1	SP-1	5/17/2019 11:45	50225468001	Water	3	X		-01
2	SP-4	5/17/2019 13:45	50225468003	Water	1		X	-02
3	SP-5	5/17/2019 10:23	50225468004	Water	1		X	-03
4	SP-5 DUP	5/17/2019 10:23	50225468005	Water	1		X	-04
5	EQ Blank	5/17/2019 14:50	50225468006	Water	1		X	-05

L1101712

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	5-22-19 1649	[signature]	5-23-19 8:45
2				
3				

Comments: OK

Cooler Temperature on Receipt 3.4±0 °C (3.4 A3DF) **Custody Seal** Y or N **Received on Ice** (Y) or N **Samples Intact** (Y) or N

4893 0206 3376

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACEEEN	SDG#:	L1101712	
Cooler Received/Opened On: 5/23/19	Temperature:	3.4	
Received By: Lexxi Romero			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

MSSV FULL SCAN - FORM II SVOA-1
WATER SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Instrument ID: 50MSS2

LAB SAMPLE ID	SAMPLE NAME	24B6	2FPH	NIT5	PHD5
2318319	2318319BLANK	98	47	94	37
2318320	2318320LCS	87	46	90	36
2318321	2318321MS	92	59	88	41
2318322	2318322MSD	95	58	91	41
50225468001	SP-1	93	58	85	40
50225468002	SP-3	88	59	81	45
50225468003	SP-4	119	71	101	51
50225468004	SP-5	102	64	88	48
50225468005	SP-5 DUP	100	62	92	47
50225468006	EQ Blank	70	39	59	29

	QC LIMITS
(24B6) = 2,4,6-Tribromophenol (S)	(29-134)
(2FPH) = 2-Fluorophenol (S)	(10-82)
(NIT5) = Nitrobenzene-d5 (S)	(15-115)
(PHD5) = Phenol-d5 (S)	(10-65)

* Values outside of QC Limits

MSSV FULL SCAN - FORM III SVOA-1
WATER LABORATORY CONTROL SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana
Lab Sample ID: 2318320LCS
Date Extracted: 05/22/2019
Date Analyzed (1): 05/24/2019
Instrument: 50MSS2
LCS Lot No: 205376
Lab File ID: 052419.B\2318320L.D
SDG No.: 50225468

COMPOUND	AMOUNT ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS %REC	QC LIMITS REC.
4-Chloro-3-methylphenol	100	77.7	78	18-127
2-Chlorophenol	100	60.1	60	18-105
2,4-Dinitrotoluene	100	88.4	88	10-142
4-Nitrophenol	100	43.8J	44	10-87
N-Nitroso-di-n-propylamine	100	90.4	90	20-120
Pentachlorophenol	100	97.8	98	21-141
Phenol	100	32.3	32	10-62

Spike Recovery: 0 out of 7 outside limits.

MSSV FULL SCAN - FORM III SVOA-1

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Pace Analytical - Indiana

Matrix Spike - Sample No: 2318321MS

Date Extracted: 05/22/2019

Date Analyzed (1): 05/24/2019

Instrument: 50MSS2

Lab File ID: 052419.B\2318321M.D

Parent Sample ID: SP-1

SDG No.: 50225468

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS %REC	QC LIMITS REC.
2,4-Dinitrotoluene	100	<2.6	96.1	96	10-134
2-Chlorophenol	100	<2.7	85.1	85	13-95
4-Chloro-3-methylphenol	100	<2.9	110	110	15-119
4-Nitrophenol	100	<2.5	58.8	59	10-76
N-Nitroso-di-n-propylamine	100	<2.6	95.3	95	12-111
Pentachlorophenol	100	<1.9	119	119	21-132
Phenol	100	<1.7	41.1	41	10-52

Spike Recovery: 0 out of 7 outside limits.

MSSV FULL SCAN - FORM III SVOA-2

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Instrument (2): 50MSS2 Matrix Spike Duplicate - Sample No: 2318322MSD

Lab File ID (2): 052419.B\2318322D.D Date Analyzed (2): 05/24/2019

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %REC	%RPD	QC LIMITS	
					RPD	REC.
2,4-Dinitrotoluene	100	93.5	93	3	0-20	10-134
2-Chlorophenol	100	84.1	84	1	0-20	13-95
4-Chloro-3-methylphenol	100	108	108	2	0-20	15-119
4-Nitrophenol	100	57.3	57	3	0-20	10-76
N-Nitroso-di-n-propylamine	100	92.3	92	3	0-20	12-111
Pentachlorophenol	100	114	114	4	0-20	21-132
Phenol	100	41.0	41	0	0-20	10-52

RPD: 0 out of 7 outside limits.

Spike Recovery: 0 out of 7 outside limits.

SAMPLE NO.

2318319BLANK

MSSV FULL SCAN - FORM IV SVOA-1
SEMI-VOLATILE METHOD BLANK SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Instrument ID: 50MSS2 Matrix: Water Lab Sample ID: 2318319

Lab File ID: 052419.B\2318319B.D Date Analyzed: 05/24/2019 Time: 17:43

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	ANALYZED
2318320LCS	2318320	052419.B\2318320L.D	05/24/2019 17:59
SP-1	50225468001	052419.B\50225468001.D	05/24/2019 20:11
2318321MS	2318321	052419.B\2318321M.D	05/24/2019 20:27
2318322MSD	2318322	052419.B\2318322D.D	05/24/2019 20:44
SP-3	50225468002	052419.B\50225468002.D	05/24/2019 21:00
SP-4	50225468003	052419.B\50225468003.D	05/24/2019 21:17
SP-5	50225468004	052419.B\50225468004.D	05/24/2019 21:33
SP-5 DUP	50225468005	052419.B\50225468005.D	05/24/2019 21:50
EQ Blank	50225468006	052419.B\50225468006.D	05/24/2019 22:06

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146
Lab File ID: 043019CAL.B\DFTPP.D DFTPP Injection Date: 04/30/2019
Instrument ID: 50MSS2 DFTPP Injection Time: 14:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	34.90	
68	Less than 2.00% of mass 69	0.63	(1.77)[1]
69	Mass 69 relative abundance	35.64	
70	Less than 2.00% of mass 69	0.14	(0.41)[1]
127	40.00 - 60.00% of mass 198	42.48	
197	Less than 1.00% of mass 198	0.30	
198	Base Peak, 100.00% relative	100.00	
199	5.00 - 9.00% of mass 198	6.78	
275	10.00 - 30.00% of mass 198	24.60	
365	Greater than 1.00% of mass 198	3.03	
441	Present, but less than mass 443	14.63	
442	Greater than 40.00% of mass 198	96.13	
443	17.00 - 23.00% of mass 442	19.62	(20.41)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
14956453CAL4	14956453CAL4	043019CAL.B\CAL4.D	04/30/2019	14:48
14956433CAL1	14956433CAL1	043019CAL.B\CAL1.D	04/30/2019	15:05
14956451CAL2	14956451CAL2	043019CAL.B\CAL2.D	04/30/2019	15:22
14956452CAL3	14956452CAL3	043019CAL.B\CAL3.D	04/30/2019	15:40
14956454CAL5	14956454CAL5	043019CAL.B\CAL5.D	04/30/2019	15:57
14956455CAL6	14956455CAL6	043019CAL.B\CAL6.D	04/30/2019	16:14
14956456CAL7	14956456CAL7	043019CAL.B\CAL7.D	04/30/2019	16:31
14956458ICV	14956458ICV	043019CAL.B\ICV.D	04/30/2019	18:32

MSSV Full Scan - FORM V SVOA-1
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146
Lab File ID: 052419.B\DFTPP.D DFTPP Injection Date: 05/24/2019
Instrument ID: 50MSS2 DFTPP Injection Time: 15:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.00 - 60.00% of mass 198	36.76	
68	Less than 2.00% of mass 69	0.61	(1.65)[1]
69	Mass 69 relative abundance	37.29	
70	Less than 2.00% of mass 69	0.10	(0.25)[1]
127	40.00 - 60.00% of mass 198	41.90	
197	Less than 1.00% of mass 198	0.40	
198	Base Peak, 100.00% relative	100.00	
199	5.00 - 9.00% of mass 198	6.90	
275	10.00 - 30.00% of mass 198	25.07	
365	Greater than 1.00% of mass 198	2.91	
441	Present, but less than mass 443	14.18	
442	Greater than 40.00% of mass 198	96.09	
443	17.00 - 23.00% of mass 442	19.43	(20.22)[2]

1 - Value is % mass 69 2 - Value is % mass 442

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
15123996CCV	15123996CCV	052419.B\CCV050.D	05/24/2019	15:43
2318319BLANK	2318319BLANK	052419.B\2318319B.D	05/24/2019	17:43
2318320LCS	2318320LCS	052419.B\2318320L.D	05/24/2019	17:59
SP-1	50225468001	052419.B\50225468001.D	05/24/2019	20:11
2318321MS	2318321MS	052419.B\2318321M.D	05/24/2019	20:27
2318322MSD	2318322MSD	052419.B\2318322D.D	05/24/2019	20:44
SP-3	50225468002	052419.B\50225468002.D	05/24/2019	21:00
SP-4	50225468003	052419.B\50225468003.D	05/24/2019	21:17
SP-5	50225468004	052419.B\50225468004.D	05/24/2019	21:33
SP-5 DUP	50225468005	052419.B\50225468005.D	05/24/2019	21:50
EQ Blank	50225468006	052419.B\50225468006.D	05/24/2019	22:06

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15123996CCV Date Analyzed: 05/24/2019

Instrument ID: 50MSS2 GC Column: Col 1 Time Analyzed: 15:43

Lab File ID: 052419.B\CCV050.D

		AREA ANT	RT	AREA ANTSIM	RT	AREA CRY	RT	AREA DCB	RT
12 HOUR STD		249054	6.38	286086	6.383	598527	10.483	87769	2.753
UPPER LIMIT		498108	6.88	572172	6.883	1197054	10.983	175538	3.253
LOWER LIMIT		124527	5.88	143043	5.883	299263.5	9.983	43884.5	2.253
LAB SAMPLE ID	SAMPLE NO.								
2318319	2318319BLANK	152256	6.38	166662	6.374	348720	10.474	55765	2.753
2318320	2318320LCS	170575	6.38	194031	6.382	382937	10.475	64206	2.753
2318321	2318321MS	189347	6.38	209576	6.383	421618	10.474	69686	2.76
2318322	2318322MSD	184197	6.38	203182	6.374	410697	10.474	68855	2.753
50225468001	SP-1	172574	6.38	195112	6.374	393608	10.474	66525	2.76
50225468002	SP-3	190008	6.38	211769	6.374	444959	10.475	64455	2.745
50225468003	SP-4	194581	6.38	216669	6.374	454085	10.474	65998	2.745
50225468004	SP-5	203707	6.38	235648	6.374	481662	10.474	75795	2.753
50225468005	SP-5 DUP	192548	6.38	218696	6.383	446552	10.474	72010	2.753
50225468006	EQ Blank	210066	6.38	245351	6.382	481357	10.474	78671	2.753

ANT = Acenaphthene-d10 (IS)
ANTSIM = Acenaphthene-d10 (IS)(SIM)
CRY = Chrysene-d12 (IS)
DCB = 1,4-Dichlorobenzene-d4 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15123996CCV Date Analyzed: 05/24/2019

Instrument ID: 50MSS2 GC Column: Col 1 Time Analyzed: 15:43

Lab File ID: 052419.B\CCV050.D

		AREA DCBSIM	RT	AREA NPT	RT	AREA PHN	RT	AREA PHNSIM	RT
12 HOUR STD		109082	2.755	382585	4.365	560047	7.875	611643	7.878
UPPER LIMIT		218164	3.255	765170	4.865	1120094	8.375	1223286	8.378
LOWER LIMIT		54541	2.255	191292.5	3.865	280023.5	7.375	305821.5	7.378
LAB SAMPLE ID	SAMPLE NO.								
2318319	2318319BLANK	69045	2.756	222078	4.374	325461	7.876	365388	7.872
2318320	2318320LCS	78128	2.755	260876	4.374	371356	7.875	427574	7.878
2318321	2318321MS	84908	2.763	278806	4.374	411802	7.876	465753	7.872
2318322	2318322MSD	83970	2.756	270829	4.374	405301	7.876	455625	7.878
50225468001	SP-1	79999	2.763	257628	4.374	381474	7.876	436694	7.878
50225468002	SP-3	82422	2.748	276737	4.365	414658	7.875	477239	7.872
50225468003	SP-4	82082	2.748	277089	4.365	415426	7.876	473287	7.872
50225468004	SP-5	92174	2.748	309376	4.365	447146	7.876	521271	7.878
50225468005	SP-5 DUP	86163	2.755	289763	4.374	428027	7.875	480296	7.872
50225468006	EQ Blank	97429	2.755	320701	4.374	455081	7.875	537116	7.878

DCBSIM = 1,4-Dichlorobenzene (IS)(SIM)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)
PHNSIM = Phenanthrene-d10 (IS)(SIM)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VIII SVOA-1
MSSV FULL SCAN INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15123996CCV Date Analyzed: 05/24/2019

Instrument ID: 50MSS2 GC Column: Col 1 Time Analyzed: 15:43

Lab File ID: 052419.B\CCV050.D

		AREA PYL	RT
12 HOUR STD		572926	11.869
UPPER LIMIT		1145852	12.369
LOWER LIMIT		286463	11.369
LAB SAMPLE ID	SAMPLE NO.		
2318319	2318319BLANK	422562	11.86
2318320	2318320LCS	446928	11.861
2318321	2318321MS	464983	11.86
2318322	2318322MSD	468880	11.86
50225468001	SP-1	443869	11.86
50225468002	SP-3	509590	11.861
50225468003	SP-4	508743	11.86
50225468004	SP-5	557039	11.864
50225468005	SP-5 DUP	506193	11.86
50225468006	EQ Blank	549484	11.86

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV FULL SCAN - FORM VI SVOA-1

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS2 GC Column: Col 1 SDG No.: 50225468

Calibration Date(s): 04/30/2019 04/30/2019 Calibration Time(s): 14:48 16:31

LAB FILE ID

CAL1 = 043019CAL.B\CAL1.D CAL2 = 043019CAL.B\CAL2.D CAL3 = 043019CAL.B\CAL3.D

CAL4 = 043019CAL.B\CAL4.D CAL5 = 043019CAL.B\CAL5.D CAL6 = 043019CAL.B\CAL6.D

CAL7 = 043019CAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
Benzyl alcohol	Averaged	0.77063	0.81371	0.75479	0.85828	0.89644	0.90667
4-Bromophenylphenyl ether	Averaged	0.17858	0.18723	0.20833	0.19415	0.20935	0.20003
Butylbenzylphthalate	Wt Linear	0.30070	0.38786	0.43484	0.47923	0.51057	0.51469
4-Chloro-3-methylphenol	Averaged	0.21701	0.26711	0.29413	0.30918	0.31427	0.32541
4-Chloroaniline	Averaged	0.37464	0.39598	0.39291	0.45674	0.43682	0.44338
bis(2-Chloroethoxy)methane	Averaged	0.34913	0.38106	0.41613	0.40369	0.40618	0.40467
bis(2-Chloroethyl) ether	Averaged	1.27655	1.27817	1.26967	1.23060	1.27561	1.26829
bis(2chloro1methylethyl) ether	Averaged	2.62868	2.54109	2.53836	2.36683	2.47467	2.64420
2-Chloronaphthalene	Averaged	0.95245	1.12287	1.13283	1.05778	1.11357	1.04806
2-Chlorophenol	Averaged	1.31492	1.32565	1.34182	1.37289	1.36819	1.41492
4-Chlorophenylphenyl ether	Averaged	0.68786	0.71801	0.76347	0.72220	0.75747	0.71162
Dibenzofuran	Averaged	1.64265	1.76377	1.77622	1.73874	1.78770	1.74892
3,3'-Dichlorobenzidine	Wt Linear	0.29537	0.35819	0.39755	0.45800	0.46133	0.46990
2,4-Dichlorophenol	Averaged	0.21569	0.25875	0.29202	0.30640	0.30341	0.30595
Diethylphthalate	Wt Linear	1.23762	1.33923	1.72603	1.72908	1.91894	1.95211
2,4-Dimethylphenol	Averaged	0.23853	0.27629	0.29063	0.29360	0.29389	0.30362
Dimethylphthalate	Averaged	1.24897	1.42541	1.42877	1.37620	1.41276	1.35962
Di-n-butylphthalate	Wt Linear	0.94031	1.12231	1.37743	1.28210	1.52562	1.40617
4,6-Dinitro-2-methylphenol	Wt Linear	0.04254	0.06939	0.08980	0.12440	0.12234	0.12506
2,4-Dinitrophenol	Wt Linear	0.06715	0.09716	0.12882	0.20531	0.21428	0.22093
2,4-Dinitrotoluene	Wt Linear	0.24304	0.34193	0.39050	0.44244	0.45326	0.42930
2,6-Dinitrotoluene	Averaged	0.22314	0.27010	0.30399	0.32085	0.31649	0.32677
Di-n-octylphthalate	Wt Linear	0.58647	0.81659	0.97976	1.27018	1.23251	1.23007
bis(2-Ethylhexyl)phthalate	Wt Linear	0.43208	0.58157	0.66842	0.72631	0.76144	0.75495
Hexachloro-1,3-butadiene	Averaged	0.21660	0.22197	0.22927	0.22055	0.21399	0.20764
Hexachlorobenzene	Averaged	0.22099	0.23036	0.22770	0.22794	0.22499	0.22149
Hexachlorocyclopentadiene	Averaged	0.25011	0.29991	0.33332	0.35396	0.38817	0.38473
Hexachloroethane	Averaged	0.57431	0.62671	0.66924	0.65802	0.57783	0.66826
Isophorone	Averaged	0.57039	0.60837	0.68086	0.68076	0.66448	0.71801
2-Methylphenol(o-Cresol)	Averaged	1.08955	1.12223	1.28212	1.25701	1.24263	1.33003
3&4-Methylphenol(m&p Cresol)	Averaged	1.08120	1.21881	1.31025	1.33762	1.31192	1.46045
2-Nitroaniline	Wt Linear	0.18233	0.23311	0.32629	0.34293	0.38434	0.37138
3-Nitroaniline	Wt Linear	0.18864	0.21988	0.28671	0.32338	0.33002	0.32014
4-Nitroaniline	Wt Linear	0.12324	0.18413	0.25462	0.30579	0.34691	0.33849
Nitrobenzene	Averaged	0.29841	0.33127	0.36950	0.35826	0.34636	0.37192

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-2

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS2 GC Column: Col 1 SDG No.: 50225468

Calibration Date(s): 04/30/2019 04/30/2019 Calibration Time(s): 14:48 16:31

LAB FILE ID

CAL1 = 043019CAL.B\CAL1.D CAL2 = 043019CAL.B\CAL2.D CAL3 = 043019CAL.B\CAL3.D

CAL4 = 043019CAL.B\CAL4.D CAL5 = 043019CAL.B\CAL5.D CAL6 = 043019CAL.B\CAL6.D

CAL7 = 043019CAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
2-Nitrophenol	Wt Linear	0.10562	0.12942	0.15295	0.17187	0.16642	0.17953
4-Nitrophenol	Wt Linear		0.09878	0.13580	0.18282	0.18694	0.18713
N-Nitroso-di-n-propylamine	Averaged	0.82717	0.91034	1.02748	1.05890	0.99223	1.16250
N-Nitrosodiphenylamine	Averaged	0.52015	0.57771	0.58235	0.57015	0.57034	0.57365
Pentachlorophenol	Averaged		0.11365	0.12998	0.15891	0.16329	0.16150
Phenol	Averaged	1.53942	1.61524	1.67231	1.78423	1.76496	1.82024
2,4,5-Trichlorophenol	Averaged	0.36888	0.36429	0.42272	0.40056	0.43356	0.42058
2,4,6-Trichlorophenol	Averaged	0.28545	0.35696	0.34320	0.37952	0.39514	0.38143
2-Fluorophenol (S)	Averaged	1.08130	1.21607	1.22695	1.23338	1.21540	1.24501
Nitrobenzene-d5 (S)	Averaged	0.33167	0.33904	0.36267	0.35514	0.34521	0.38262
Phenol-d5 (S)	Averaged	1.35990	1.52511	1.52612	1.62963	1.63245	1.63105
2,4,6-Tribromophenol (S)	Averaged	0.08472	0.09381	0.10159	0.10434	0.10715	0.10781

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-3

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS2 GC Column: Col 1 SDG No.: 50225468

Calibration Date(s): 04/30/2019 04/30/2019 Calibration Time(s): 14:48 16:31

LAB FILE ID

CAL1 = 043019CAL.B\CAL1.D CAL2 = 043019CAL.B\CAL2.D CAL3 = 043019CAL.B\CAL3.D

CAL4 = 043019CAL.B\CAL4.D CAL5 = 043019CAL.B\CAL5.D CAL6 = 043019CAL.B\CAL6.D

CAL7 = 043019CAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
Benzyl alcohol	Averaged	0.93651	8.27803			0.84815	
4-Bromophenylphenyl ether	Averaged	0.19762	5.62017			0.19647	
Butylbenzylphthalate	Wt Linear	0.50883		0.99953	-0.0310781	0.51899	
4-Chloro-3-methylphenol	Averaged	0.33463	13.81029			0.29453	
4-Chloroaniline	Averaged	0.44474	7.61318			0.42074	
bis(2-Chloroethoxy)methane	Averaged	0.40915	5.86817			0.39572	
bis(2-Chloroethyl) ether	Averaged	1.29077	1.48308			1.26995	
bis(2chloro1methylethyl) ether	Averaged	2.37149	4.44944			2.50933	
2-Chloronaphthalene	Averaged	1.02314	6.07233			1.06439	
2-Chlorophenol	Averaged	1.41915	3.00334			1.36536	
4-Chlorophenylphenyl ether	Averaged	0.68127	4.35553			0.72027	
Dibenzofuran	Averaged	1.62158	3.83603			1.72566	
3,3'-Dichlorobenzidine	Wt Linear	0.47648		0.99960	-0.0275316	0.47949	
2,4-Dichlorophenol	Averaged	0.30474	12.16905			0.28385	
Diethylphthalate	Wt Linear	1.81906		0.99770	-0.1007934	1.90449	
2,4-Dimethylphenol	Averaged	0.29370	7.65047			0.28432	
Dimethylphthalate	Averaged	1.32205	4.75806			1.36768	
Di-n-butylphthalate	Wt Linear	1.46305		0.99722	-0.0738003	1.47076	
4,6-Dinitro-2-methylphenol	Wt Linear	0.13023		0.99825	-0.0135429	0.13143	
2,4-Dinitrophenol	Wt Linear	0.23210		0.99509	-0.0286337	0.23185	
2,4-Dinitrotoluene	Wt Linear	0.42804		0.99881	-0.0243041	0.44522	
2,6-Dinitrotoluene	Averaged	0.31086	12.52492			0.29603	
Di-n-octylphthalate	Wt Linear	1.29284		0.99864	-0.1057954	1.29966	
bis(2-Ethylhexyl)phthalate	Wt Linear	0.76274		0.99987	-0.0458732	0.77428	
Hexachloro-1,3-butadiene	Averaged	0.21677	3.10914			0.21811	
Hexachlorobenzene	Averaged	0.22274	1.60085			0.22517	
Hexachlorocyclopentadiene	Averaged	0.37516	14.90602			0.34077	
Hexachloroethane	Averaged	0.61921	6.40637			0.62765	
Isophorone	Averaged	0.69025	7.80024			0.65902	
2-Methylphenol(o-Cresol)	Averaged	1.27891	7.22747			1.22892	
3&4-Methylphenol(m&p Cresol)	Averaged	1.42204	9.71078			1.30604	
2-Nitroaniline	Wt Linear	0.37001		0.99873	-0.0288887	0.38166	
3-Nitroaniline	Wt Linear	0.32365		0.99930	-0.0208309	0.33215	
4-Nitroaniline	Wt Linear	0.33744		0.99817	-0.0344595	0.34869	
Nitrobenzene	Averaged	0.35523	7.36955			0.34728	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV FULL SCAN - FORM VI SVOA-4

MSSV FULL SCAN INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS2 GC Column: Col 1 SDG No.: 50225468

Calibration Date(s): 04/30/2019 04/30/2019 Calibration Time(s): 14:48 16:31

LAB FILE ID

CAL1 = 043019CAL.B\CAL1.D CAL2 = 043019CAL.B\CAL2.D CAL3 = 043019CAL.B\CAL3.D

CAL4 = 043019CAL.B\CAL4.D CAL5 = 043019CAL.B\CAL5.D CAL6 = 043019CAL.B\CAL6.D

CAL7 = 043019CAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
2-Nitrophenol	Wt Linear	0.17963		0.99899	-0.0110036	0.18016	
4-Nitrophenol	Wt Linear	0.19234		0.99957	-0.0267343	0.19946	
N-Nitroso-di-n-propylamine	Averaged	1.11706	11.46186			1.01367	
N-Nitrosodiphenylamine	Averaged	0.55906	3.71315			0.56477	
Pentachlorophenol	Averaged	0.16279	14.32309			0.14835	
Phenol	Averaged	1.92393	7.55658			1.73148	
2,4,5-Trichlorophenol	Averaged	0.40395	6.65456			0.40208	
2,4,6-Trichlorophenol	Averaged	0.37871	10.31379			0.36006	
2-Fluorophenol (S)	Averaged	1.25774	4.88176			1.21083	
Nitrobenzene-d5 (S)	Averaged	0.35908	4.78828			0.35363	
Phenol-d5 (S)	Averaged	1.73824	7.64092			1.57750	
2,4,6-Tribromophenol (S)	Averaged	0.10438	8.34537			0.10054	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV FULL SCAN - FORM VII SVOA-1
MSSV FULL SCAN CONTINUING CALIBRATION DATA

15123996CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/24/2019 Time: 15:43

Instrument ID: 50MSS2 GC Column: Col 1 Init. Calib. Date(s): 04/30/2019 04/30/2019

Lab File ID: 052419.B\CCV050.D Init. Calib. Time(s): 14:48 16:31

SDG No.: 50225468

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Benzyl alcohol	Averaged	0.84815	0.80809	0.0500	-4.7224	20.0000
4-Bromophenylphenyl ether	Averaged	0.19647	0.20255	0.0500	3.0930	20.0000
Butylbenzylphthalate	Wt Linear	5	5.792084	0.0500	15.8417	20.0000
4-Chloro-3-methylphenol	Averaged	0.29453	0.33478	0.0500	13.6632	20.0000
4-Chloroaniline	Averaged	0.42074	0.44451	0.0500	5.6487	20.0000
bis(2-Chloroethoxy)methane	Averaged	0.39572	0.40622	0.0500	2.6536	20.0000
bis(2-Chloroethyl) ether	Averaged	1.26995	1.31480	0.0500	3.5311	20.0000
bis(2chloro1methylethyl) ether	Averaged	2.50933	2.67590	0.0500	6.6379	20.0000
2-Chloronaphthalene	Averaged	1.06439	1.14783	0.0500	7.8401	20.0000
2-Chlorophenol	Averaged	1.36536	1.43785	0.0500	5.3088	20.0000
4-Chlorophenylphenyl ether	Averaged	0.72027	0.73341	0.0500	1.8239	20.0000
Dibenzofuran	Averaged	1.72566	1.81692	0.0500	5.2888	20.0000
3,3'-Dichlorobenzidine	Wt Linear	5	4.98423	0.0500	-0.3154	20.0000
2,4-Dichlorophenol	Averaged	0.28385	0.31316	0.0500	10.3270	20.0000
Diethylphthalate	Wt Linear	5	5.138128	0.0500	2.7626	20.0000
2,4-Dimethylphenol	Averaged	0.28432	0.26936	0.0500	-5.2625	20.0000
Dimethylphthalate	Averaged	1.36768	1.38930	0.0500	1.5805	20.0000
Di-n-butylphthalate	Wt Linear	5	5.214808	0.0500	4.2962	20.0000
4,6-Dinitro-2-methylphenol	Wt Linear	5	4.75516	0.0500	-4.8968	20.0000
2,4-Dinitrophenol	Wt Linear	5	4.594555	0.0500	-8.1089	20.0000
2,4-Dinitrotoluene	Wt Linear	5	5.21893	0.0500	4.3786	20.0000
2,6-Dinitrotoluene	Averaged	0.29603	0.31792	0.0500	7.3957	20.0000
Di-n-octylphthalate	Wt Linear	5	5.931028	0.0500	18.6206	20.0000
bis(2-Ethylhexyl)phthalate	Wt Linear	5	5.308486	0.0500	6.1697	20.0000
Hexachloro-1,3-butadiene	Averaged	0.21811	0.22304	0.0500	2.2610	20.0000
Hexachlorobenzene	Averaged	0.22517	0.22841	0.0500	1.4352	20.0000
Hexachlorocyclopentadiene	Averaged	0.34077	0.27685	0.0500	-18.7559	20.0000
Hexachloroethane	Averaged	0.62765	0.67210	0.0500	7.0815	20.0000
Isophorone	Averaged	0.65902	0.71140	0.0500	7.9488	20.0000
2-Methylphenol(o-Cresol)	Averaged	1.22892	1.35840	0.0500	10.5358	20.0000
3&4-Methylphenol(m&p Cresol)	Averaged	1.30604	1.40306	0.0500	7.4281	20.0000
2-Nitroaniline	Wt Linear	5	5.874028	0.0500	17.4806	20.0000
3-Nitroaniline	Wt Linear	5	5.593743	0.0500	11.8749	20.0000
4-Nitroaniline	Wt Linear	5	5.825687	0.0500	16.5137	20.0000
Nitrobenzene	Averaged	0.34728	0.37854	0.0500	9.0008	20.0000
2-Nitrophenol	Wt Linear	5	5.405243	0.0500	8.1049	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV FULL SCAN - FORM VII SVOA-2
MSSV FULL SCAN CONTINUING CALIBRATION DATA

15123996CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/24/2019 Time: 15:43

Instrument ID: 50MSS2 GC Column: Col 1 Init. Calib. Date(s): 04/30/2019 04/30/2019

Lab File ID: 052419.B\CCV050.D Init. Calib. Time(s): 14:48 16:31

SDG No.: 50225468

COMPOUND	CURVE	$\overline{RRF}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
4-Nitrophenol	Wt Linear	5	5.036048	0.0500	0.7210	20.0000
N-Nitroso-di-n-propylamine	Averaged	1.01367	1.14790	0.0500	13.2415	20.0000
N-Nitrosodiphenylamine	Averaged	0.56477	0.58032	0.0500	2.7529	20.0000
Pentachlorophenol	Averaged	0.14835	0.18245	0.0500	22.9815	20.0000
Phenol	Averaged	1.73148	1.89250	0.0500	9.3001	20.0000
2,4,5-Trichlorophenol	Averaged	0.40208	0.45998	0.0500	14.4003	20.0000
2,4,6-Trichlorophenol	Averaged	0.36006	0.39156	0.0500	8.7489	20.0000
2-Fluorophenol (S)	Averaged	1.21083	1.28604	0.0500	6.2110	20.0000
Nitrobenzene-d5 (S)	Averaged	0.35363	0.39347	0.0500	11.2649	20.0000
Phenol-d5 (S)	Averaged	1.57750	1.74521	0.0500	10.6312	20.0000
2,4,6-Tribromophenol (S)	Averaged	0.10054	0.10518	0.0500	4.6134	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

Prep Log Report

Batch Information: OEXT 502356 COMBO SCAN (W)

Template Version: EF-IN-Q-387-Rev.03 (23Jun2017)

Prep Method	EPA 3510	Analysis Method	EPA 8270	Extracted By	ARB/BLR	Extracted Date/Time	05/24/2019 10:11:32:408
Spiked By	ARB/BLR	Spiked By Date/Time	05/24/2019 10:11:33:984	Vialed By	ARB/BLR	Vialed By Date	05/24/2019 14:41:35:152
Sulfuric Acid	209124	Methylene Chloride	208699	Sodium Sulfate	206976	10N Sodium Hydroxide	206978
Glass Wool	78279	Reviewed By		Reviewed By Date		Batch Notes	Batched with 502357

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Volume (mL)	pH	Adjusted pH	Adjusted pH	Final Volume (mL)	Sample Notes	8270C-SPK (uL)	8270C-SS (uL)
COMBSCANLV	BLANK	**2318319**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	LCS	**2318320**	100	6	<2	>11	1		194954 (100)	177522 (100)
COMBSCANLV	PS	**50225487008**	75	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225490011**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225703001**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225703002**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225703003**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225465001**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225465002**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	RQS	**50225468001**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	MS	**2318321**	100	6	<2	>11	1		194954 (100)	177522 (100)
COMBSCANLV	MSD	**2318322**	100	6	<2	>11	1		194954 (100)	177522 (100)
COMBSCANLV	PS	**50225468002**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225468003**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225468004**	88	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225468005**	100	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225468006**	100	6	<2	>11	1			177522 (100)

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Initial Volume (mL)	pH	Adjusted pH	Adjusted pH	Final Volume (mL)	Sample Notes	8270C-SPK (uL)	8270C-SS (uL)
COMBSCANLV	PS	**50225773001**	94	6	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225773002**	82	7	<2	>11	1			177522 (100)
COMBSCANLV	PS	**50225773003**	82	7	<2	>11	1			177522 (100)

Standard Notes:

177522: Sim/Scan Combo Surr Stock (12)

194954: 8270 combo spike (7)

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS2.i
Column .50um DB-5ms 30m X 0.25mm He
Misc. Prep Info [L]: MeCl2 Lot# 165774
ISTD lot: 203434:1
Lot:
Tune std: _____

Method: Semivolatile REPORT SW-846 Method 8
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/dftpp.d	TUNE,204028:1	L/28633	DFTPP	1	m625tune	4/30/19	14:41	grm	ok
1/cal4.d	CAL4,199461:1	L/28633	CALIB_4	1	m8270lve	4/30/19	14:48	grm	
1/cal1.d	CAL1,199458:1	L/28633	CALIB_1	1	m8270lve	4/30/19	15:05	grm	
1/cal2-rlcheck.d	RL check	L/		1	m8270lve	4/30/19	15:22	grm	
1/cal2.d	CAL2,199459:1	L/28633	CALIB_2	1	m8270lve	4/30/19	15:22	grm	
1/cal3.d	CAL3,199460:1	L/28633	CALIB_3	1	m8270lve	4/30/19	15:40	grm	
1/cal5.d	CAL5,199462:1	L/28633	CALIB_5	1	m8270lve	4/30/19	15:57	grm	
1/cal6.d	CAL6,199463:1	L/28633	CALIB_6	1	m8270lve	4/30/19	16:14	grm	
1/cal7.d	CAL7,199464:1	L/28633	CALIB_7	1	m8270lve	4/30/19	16:31	grm	
1/icv.d	ICV,199589:1	L/28633	ICV	1	m8270lve	4/30/19	18:32	grm	
1/2295525b.d	2295525	L/28630	BLANK	1	m8270lve	4/30/19	19:18	grm	
1/2295535b.d	2295535	L/28631	BLANK	1	m8270lve	4/30/19	19:18	grm	
1/2295731b.d	2295731	L/28632	BLANK	1	m8270lve	4/30/19	19:18	grm	
1/2295526l.d	2295526	L/28630	LCS	1	m8270lve	4/30/19	19:35	grm	
1/2295536l.d	2295536	L/28631	LCS	1	m8270lve	4/30/19	19:35	grm	
1/2295732l.d	2295732	L/28632	LCS	1	m8270lve	4/30/19	19:35	grm	
1/50223000004.d	50223000004	L/28631	SAMPLE	1	m8270lve	4/30/19	19:51	grm	
1/50223076002.d	50223076002	L/28631	SAMPLE	1	m8270lve	4/30/19	20:07	grm	
1/60300878001x10.d	60300878001X10	L/28630	SAMPLE	10	m8270lve	4/30/19	20:24	grm	
1/50223093001.d	50223093001	L/28630	SAMPLE	1	m8270lve	4/30/19	20:40	grm	
1/50222936001.d	50222936001	L/28632	SAMPLE	1	m8270lve	4/30/19	20:57	grm	
1/50222936001x20.d	50222936001X20	L/28632	SAMPLE	20	m8270lve	4/30/19	21:13	grm	

File Path 1: \\192.168.50.6\chem\50MSS2.i\043019cal.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 11:30 05/01/2019

5-1-19
Reviewed By/Date: _____ Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS2.i
Column .50um DB-5ms 30m X 0.25mm He
Misc. Prep Info [L]: MeCl2 Lot# 165774
ISTD lot: 203434:1
Lot:
Tune std: _____

Method: Semivolatile REPORT SW-846 Method 8
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/acal3.d	ACAL3,197747:1	L/28633	CALIB_3	1	mappixlv	4/30/19	16:48	grm	ok
1/acal1.d	ACAL1,197745:1	L/28633	CALIB_1	1	mappixlv	4/30/19	17:06	grm	
1/acal2.d	ACAL2,197746:1	L/28633	CALIB_2	1	mappixlv	4/30/19	17:23	grm	
1/acal4.d	ACAL4,197748:1	L/28633	CALIB_4	1	mappixlv	4/30/19	17:40	grm	
1/acal5.d	ACAL5,197749:1	L/28633	CALIB_5	1	mappixlv	4/30/19	17:57	grm	
1/acal6.d	ACAL6,197750:1	L/28633	CALIB_6	1	mappixlv	4/30/19	18:14	grm	
1/aicv.d	AICV,194392:1	L/28633	ICV	1	mappixlv	4/30/19	18:49	grm	
1/2295731b.d	2295731	L/28632	BLANK	1	mappixlv	4/30/19	19:18	grm	
1/50222936001.d	50222936001	L/28632	SAMPLE	1	mappixlv	4/30/19	20:57	grm	

File Path 1: \\192.168.50.6\chem\50MSS2.i\043019acal.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 11:35 05/01/2019

5-1-19
Reviewed By/Date: _____ Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50MSS2.i
Column 0m X 2mm
Misc. Prep Info [L]: MeCl2 Lot# 165774
ISTD lot: 7540-025
Lot:
Tune std: _____

Method:
Surr. lot: see extract sheet
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/dftpp.d	TUNE,204028:1	L/28633	DFTPP	1	m625tune	5/24/19	15:36	grm	ok
1/ccv050.d	CCV,199465:1	L/28633	CCALIB_4	1	m8270lve	5/24/19	15:43	grm	ok
1/2318304b.d	2318304	L/28821	BLANK	1	m8270lve	5/24/19	16:21	grm	
1/2318307b.d	2318307	L/28822	BLANK	1	m8270lve	5/24/19	16:21	grm	
1/23183051.d	2318305	L/28821	LCS	1	m8270lve	5/24/19	16:37	grm	
1/23183081.d	2318308	L/28822	LCS	1	m8270lve	5/24/19	16:37	grm	
1/50225515001.d	50225515001	L/28821	SAMPLE	1	m8270lve	5/24/19	16:54	grm	
1/50225740009.d	50225740009	L/28822	SAMPLE	1	m8270lve	5/24/19	17:10	grm	
1/50225740010x10.d	50225740010X10	L/28822	SAMPLE	10	m8270lve	5/24/19	17:27	grm	
1/2318319b.d	2318319	L/28823	BLANK	1	m8270lve	5/24/19	17:43	grm	
1/23183201.d	2318320	L/28823	LCS	1	m8270lve	5/24/19	17:59	grm	
1/50225487008.d	50225487008	L/28823	SAMPLE	1	m8270lve	5/24/19	18:16	grm	
1/50225490011.d	50225490011	L/28823	SAMPLE	1	m8270lve	5/24/19	18:32	grm	
1/50225703001.d	50225703001	L/28823	SAMPLE	1	m8270lve	5/24/19	18:49	grm	
1/50225703002.d	50225703002	L/28823	SAMPLE	1	m8270lve	5/24/19	19:05	grm	
1/50225703003.d	50225703003	L/28823	SAMPLE	1	m8270lve	5/24/19	19:22	grm	
1/50225465001.d	50225465001	L/28823	SAMPLE	1	m8270lve	5/24/19	19:38	grm	
1/50225465002.d	50225465002	L/28823	SAMPLE	1	m8270lve	5/24/19	19:55	grm	
1/50225468001.d	50225468001	L/28823	SAMPLE	1	m8270lve	5/24/19	20:11	grm	
1/2318321m.d	2318321	L/28823	MS	1	m8270lve	5/24/19	20:27	grm	
1/2318322d.d	2318322	L/28823	MSD	1	m8270lve	5/24/19	20:44	grm	
1/50225468002.d	50225468002	L/28823	SAMPLE	1	m8270lve	5/24/19	21:00	grm	
1/50225468003.d	50225468003	L/28823	SAMPLE	1	m8270lve	5/24/19	21:17	grm	
1/50225468004.d	50225468004	L/28823	SAMPLE	1	m8270lve	5/24/19	21:33	grm	
1/50225468005.d	50225468005	L/28823	SAMPLE	1	m8270lve	5/24/19	21:50	grm	
1/50225468006.d	50225468006	L/28823	SAMPLE	1	m8270lve	5/24/19	22:06	grm	
1/50225773001.d	50225773001	L/28823	SAMPLE	1	m8270lve	5/24/19	22:22	grm	
1/50225773002.d	50225773002	L/28823	SAMPLE	1	m8270lve	5/24/19	22:39	grm	
1/50225773003.d	50225773003	L/28823	SAMPLE	1	m8270lve	5/24/19	22:55	grm	

File Path 1: \\192.168.50.6\chem\50MSS2.i\052419.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 13:18 05/28/2019

5-28-19
Reviewed By/Date: _____ Page: 1 of 1

MSSV SIM - FORM II SVOA-1
WATER SEMI-VOLATILE SURROGATE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Instrument ID: 50MSS5

LAB SAMPLE ID	SAMPLE NAME	2FBP	TD14
2318323	2318323BLANK	54	72
2318324	2318324LCS	56	63
2318325	2318325MS	37	65
2318326	2318326MSD	41	79
50225468001	SP-1	50	89
50225468002	SP-3	43	66
50225468003	SP-4	44	76
50225468004	SP-5	46	87
50225468005	SP-5 DUP	39	72
50225468006	EQ Blank	42	60

	QC LIMITS
(2FBP) = 2-Fluorobiphenyl (S)	(10-83)
(TD14) = p-Terphenyl-d14 (S)	(28-125)

* Values outside of QC Limits

MSSV SIM - FORM III SVOA-1
WATER LABORATORY CONTROL SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana
Lab Sample ID: 2318324LCS
Date Extracted: 05/22/2019
Date Analyzed (1): 05/24/2019
Instrument: 50MSS5
LCS Lot No: 205376
Lab File ID: 052419.B\2318324L.D
SDG No.: 50225468

COMPOUND	AMOUNT ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS %REC	QC LIMITS REC.
Acenaphthene	10.0	5.8	58	21-102
Acenaphthylene	10.0	6.3	63	23-118
Anthracene	10.0	6.1	61	29-119
Benzo(a)anthracene	10.0	6.4	64	36-131
Benzo(a)pyrene	10.0	5.2	52	31-121
Benzo(b)fluoranthene	10.0	6.8	68	32-130
Benzo(g,h,i)perylene	10.0	4.5	45	23-118
Benzo(k)fluoranthene	10.0	5.4	54	33-127
Chrysene	10.0	6.0	60	41-118
Dibenz(a,h)anthracene	10.0	4.9	49	25-121
Fluoranthene	10.0	6.8	68	36-128
Fluorene	10.0	6.4	64	26-114
Indeno(1,2,3-cd)pyrene	10.0	5.1	51	26-119
1-Methylnaphthalene	10.0	5.4	54	20-92
2-Methylnaphthalene	10.0	5.3	53	18-98
Naphthalene	10.0	5.3	53	19-97
Phenanthrene	10.0	6.4	64	32-115
Pyrene	10.0	6.7	67	36-123

Spike Recovery: 0 out of 18 outside limits.

MSSV SIM - FORM III SVOA-1

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Pace Analytical - Indiana
Matrix Spike - Sample No: 2318325MS
Date Extracted: 05/22/2019
Date Analyzed (1): 05/28/2019
Instrument: 50MSS5
Lab File ID: 052819.B\2318325M.D
Parent Sample ID: SP-1
SDG No.: 50225468

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS %REC	QC LIMITS REC.
1-Methylnaphthalene	10.0	<0.045	6.3	63	15-88
2-Methylnaphthalene	10.0	<0.044	6.1	61	19-92
Acenaphthene	10.0	<0.032	6.4	64	13-91
Acenaphthylene	10.0	<0.045	6.1	61	10-110
Anthracene	10.0	<0.040	6.9	69	18-111
Benzo(a)anthracene	10.0	<0.042	7.4	74	36-113
Benzo(a)pyrene	10.0	<0.043	6.1	61	22-92
Benzo(b)fluoranthene	10.0	<0.038	6.8	68	28-104
Benzo(g,h,i)perylene	10.0	<0.029	5.0	50	10-83
Benzo(k)fluoranthene	10.0	<0.042	6.3	63	19-98
Chrysene	10.0	<0.056	7.1	71	36-100
Dibenz(a,h)anthracene	10.0	<0.032	5.5	55	12-88
Fluoranthene	10.0	<0.029	5.2	52	41-114
Fluorene	10.0	<0.044	6.8	68	21-104
Indeno(1,2,3-cd)pyrene	10.0	<0.031	5.5	55	13-88
Naphthalene	10.0	<0.053	6.2	62	14-92
Phenanthrene	10.0	<0.052	6.6	66	29-105
Pyrene	10.0	<0.034	7.9	79	29-112

Spike Recovery: 0 out of 18 outside limits.

MSSV SIM - FORM III SVOA-2

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Instrument (2): 50MSS5 Matrix Spike Duplicate - Sample No: 2318326MSD

Lab File ID (2): 052819.B\2318326D.D Date Analyzed (2): 05/28/2019

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %REC	%RPD	QC LIMITS	
					RPD	REC.
1-Methylnaphthalene	10.0	6.1	61	2	0-20	15-88
2-Methylnaphthalene	10.0	6.0	60	3	0-20	19-92
Acenaphthene	10.0	6.2	62	3	0-20	13-91
Acenaphthylene	10.0	7.2	72	16	0-20	10-110
Anthracene	10.0	7.1	71	3	0-20	18-111
Benzo(a)anthracene	10.0	7.2	72	3	0-20	36-113
Benzo(a)pyrene	10.0	6.7	67	9	0-20	22-92
Benzo(b)fluoranthene	10.0	8.6	86	23	0-20	28-104
Benzo(g,h,i)perylene	10.0	5.7	57	13	0-20	10-83
Benzo(k)fluoranthene	10.0	5.7	57	9	0-20	19-98
Chrysene	10.0	7.5	75	6	0-20	36-100
Dibenz(a,h)anthracene	10.0	6.3	63	14	0-20	12-88
Fluoranthene	10.0	11.2	112	74	0-20	41-114
Fluorene	10.0	4.8	48	36	0-20	21-104
Indeno(1,2,3-cd)pyrene	10.0	6.2	62	11	0-20	13-88
Naphthalene	10.0	6.2	62	0	0-20	14-92
Phenanthrene	10.0	6.5	65	1	0-20	29-105
Pyrene	10.0	8.3	83	4	0-20	29-112

RPD: 3 out of 18 outside limits.

Spike Recovery: 0 out of 18 outside limits.

SAMPLE NO.

2318323BLANK

MSSV SIM - FORM IV SVOA-1
SEMI-VOLATILE METHOD BLANK SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Instrument ID: 50MSS5 Matrix: Water Lab Sample ID: 2318323

Lab File ID: 052419.B\2318323B.D Date Analyzed: 05/24/2019 Time: 18:56

SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	ANALYZED
2318324LCS	2318324	052419.B\2318324L.D	05/24/2019 19:08
SP-1	50225468001	052819.B\50225468001.D	05/28/2019 16:41
2318325MS	2318325	052819.B\2318325M.D	05/28/2019 16:53
2318326MSD	2318326	052819.B\2318326D.D	05/28/2019 17:04
SP-3	50225468002	052819.B\50225468002.D	05/28/2019 17:16
SP-4	50225468003	052819.B\50225468003.D	05/28/2019 17:27
SP-5	50225468004	052819.B\50225468004.D	05/28/2019 17:39
SP-5 DUP	50225468005	052819.B\50225468005.D	05/28/2019 17:50
EQ Blank	50225468006	052819.B\50225468006.D	05/28/2019 18:01

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15131266CCV Date Analyzed: 05/24/2019

Instrument ID: 50MSS5 GC Column: FULL Time Analyzed: 15:03

Lab File ID: 052419.B\CCV050.D

		AREA ANT	RT	AREA CRY	RT	AREA NPT	RT	AREA PHN	RT
12 HOUR STD		6172	1.831	14836	4.547	10522	1.09	12963	2.665
UPPER LIMIT		12344	2.331	29672	5.047	21044	1.59	25926	3.165
LOWER LIMIT		3086	1.331	7418	4.047	5261	0.59	6481.5	2.165
LAB SAMPLE ID	SAMPLE NO.								
2318323	2318323BLANK	5984	1.831	14218	4.547	10513	1.09	12862	2.665
2318324	2318324LCS	6335	1.831	15581	4.538	11124	1.091	13446	2.665

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15131266CCV Date Analyzed: 05/24/2019

Instrument ID: 50MSS5 GC Column: FULL Time Analyzed: 15:03

Lab File ID: 052419.B\CCV050.D

		AREA PYL	RT
12 HOUR STD		16749	5.876
UPPER LIMIT		33498	6.376
LOWER LIMIT		8374.5	5.376
LAB SAMPLE ID	SAMPLE NO.		
2318323	2318323BLANK	15607	5.876
2318324	2318324LCS	17176	5.876

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15133364CCV Date Analyzed: 05/28/2019

Instrument ID: 50MSS5 GC Column: FULL Time Analyzed: 13:18

Lab File ID: 052819.B\CCV050-C.D

		AREA ANT	RT	AREA CRY	RT	AREA NPT	RT	AREA PHN	RT
12 HOUR STD		4080	1.831	9589	4.547	6886	1.091	8580	2.673
UPPER LIMIT		8160	2.331	19178	5.047	13772	1.591	17160	3.173
LOWER LIMIT		2040	1.331	4794.5	4.047	3443	0.591	4290	2.173
LAB SAMPLE ID	SAMPLE NO.								
2318325	2318325MS	7911	1.831	11533	4.547	8629	1.097	15923	2.665
2318326	2318326MSD	6964	1.831	15921	4.546	8214	1.096	10347	2.665
50225468001	SP-1	5062	1.831	11269	4.547	8491	1.097	16049	2.665
50225468002	SP-3	6316	1.831	11182	4.547	8058	1.097	10199	2.665
50225468003	SP-4	7708	1.831	11043	4.547	8022	1.097	14687	2.665
50225468004	SP-5	6694	1.831	10022	4.547	7425	1.097	9091	2.665
50225468005	SP-5 DUP	7467	1.831	11102	4.547	7913	1.096	14804	2.665
50225468006	EQ Blank	6997	1.831	10574	4.547	7814	1.097	9773	2.665

ANT = Acenaphthene-d10 (IS)
CRY = Chrysene-d12 (IS)
NPT = Naphthalene-d8 (IS)
PHN = Phenanthrene-d10 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VIII SVOA-1
MSSV SIM INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Pace Analytical - Indiana SDG No.: 50225468 Contract: 216 College / 19-146

Sample ID : 15133364CCV Date Analyzed: 05/28/2019

Instrument ID: 50MSS5 GC Column: FULL Time Analyzed: 13:18

Lab File ID: 052819.B\CCV050-C.D

		AREA PYL	RT
12 HOUR STD		14665	5.876
UPPER LIMIT		29330	6.376
LOWER LIMIT		7332.5	5.376
LAB SAMPLE ID	SAMPLE NO.		
2318325	2318325MS	12821	5.876
2318326	2318326MSD	12254	5.874
50225468001	SP-1	12515	5.876
50225468002	SP-3	11750	5.876
50225468003	SP-4	11959	5.876
50225468004	SP-5	11179	5.876
50225468005	SP-5 DUP	11688	5.876
50225468006	EQ Blank	16972	5.876

PYL = Perylene-d12 (IS)

AREA UPPER LIMIT = 200% of Internal Standard Area
AREA LOWER LIMIT = 50% of Internal Standard Area
RT UPPER LIMIT = +0.50 minutes of Internal Standard RT
RT LOWER LIMIT = -0.50 minutes of Internal Standard RT

* Values outside of QC Limits

MSSV SIM - FORM VI SVOA-1

MSSV SIM INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS5 GC Column: FULL SDG No.: 50225468

Calibration Date(s): 03/20/2019 03/20/2019 Calibration Time(s): 17:19 18:27

LAB FILE ID

CAL1 = 032019CAL.B\CAL1.D CAL2 = 032019CAL.B\CAL2.D CAL3 = 032019CAL.B\CAL3.D

CAL4 = 032019CAL.B\CAL4.D CAL5 = 032019CAL.B\CAL5.D CAL6 = 032019CAL.B\CAL6.D

CAL7 = 032019CAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6
Acenaphthene	Averaged		1.55989	1.30763	1.23661	1.21557	1.22577
Acenaphthylene	Averaged	2.27196	2.22723	2.04177	2.02128	1.98774	2.00141
Anthracene	Averaged	1.27415	1.18074	1.16204	1.18343	1.22665	1.28845
Benzo(a)anthracene	Averaged	1.80723	1.61983	1.38307	1.25122	1.33940	1.30605
Benzo(a)pyrene	Averaged	1.25705	1.24232	1.29670	1.34592	1.38937	1.35546
Benzo(b)fluoranthene	Averaged	1.19720	1.22037	1.13104	1.17394	1.26945	1.50628
Benzo(g,h,i)perylene	Averaged	1.26561	1.29939	1.35584	1.46032	1.52947	1.50772
Benzo(k)fluoranthene	Averaged	1.67607	1.48376	1.59004	1.77521	1.77756	1.56569
Chrysene	Averaged	1.89582	1.77645	1.69417	1.55154	1.39650	1.49651
Dibenz(a,h)anthracene	Averaged	1.08603	1.00088	1.12086	1.26281	1.33460	1.35145
Fluoranthene	Averaged	1.49354	1.40187	1.38279	1.40075	1.48007	1.51059
Fluorene	Averaged	1.69976	1.65165	1.55904	1.53191	1.55463	1.55787
Indeno(1,2,3-cd)pyrene	Averaged	1.24850	1.38718	1.47215	1.55503	1.63779	1.65258
1-Methylnaphthalene	Averaged	0.82216	0.78643	0.74435	0.73426	0.72582	0.72360
2-Methylnaphthalene	Averaged	0.92046	0.83945	0.77120	0.76306	0.75385	0.75944
Naphthalene	Averaged	1.25112	1.21057	1.13762	1.11250	1.06467	1.05922
Phenanthrene	Averaged	1.50198	1.36849	1.33494	1.28264	1.25107	1.25341
Pyrene	Averaged	1.47059	1.56166	1.43134	1.34585	1.29003	1.30721
2-Fluorobiphenyl (S)	Averaged	1.91855	1.81014	1.70763	1.64886	1.55753	1.54646
p-Terphenyl-d14 (S)	Averaged	1.03650	1.01575	0.95519	0.88969	0.84827	0.84296

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

MSSV SIM - FORM VI SVOA-2

MSSV SIM INITIAL CALIBRATION DATA

Lab Name: Pace Analytical - Indiana Instrument ID: 50MSS5 GC Column: FULL SDG No.: 50225468

Calibration Date(s): 03/20/2019 03/20/2019 Calibration Time(s): 17:19 18:27

LAB FILE ID

CAL1 = 032019CAL.B\CAL1.D CAL2 = 032019CAL.B\CAL2.D CAL3 = 032019CAL.B\CAL3.D

CAL4 = 032019CAL.B\CAL4.D CAL5 = 032019CAL.B\CAL5.D CAL6 = 032019CAL.B\CAL6.D

CAL7 = 032019CAL.B\CAL7.D

COMPOUND	CURVE TYPE	CAL7	%RSD	R2	A1	A2	A3
Acenaphthene	Averaged	1.24127	10.20377			1.29779	
Acenaphthylene	Averaged	2.06096	5.46528			2.08748	
Anthracene	Averaged	1.29557	4.56127			1.23015	
Benzo(a)anthracene	Averaged	1.36258	13.90687			1.43848	
Benzo(a)pyrene	Averaged	1.38685	4.52756			1.32481	
Benzo(b)fluoranthene	Averaged	1.61449	14.15419			1.30183	
Benzo(g,h,i)perylene	Averaged	1.51934	7.80526			1.41967	
Benzo(k)fluoranthene	Averaged	1.53961	7.09737			1.62970	
Chrysene	Averaged	1.43161	11.65042			1.60609	
Dibenz(a,h)anthracene	Averaged	1.38214	12.26609			1.21982	
Fluoranthene	Averaged	1.54984	4.42229			1.45992	
Fluorene	Averaged	1.58202	3.85090			1.59098	
Indeno(1,2,3-cd)pyrene	Averaged	1.69568	10.63907			1.52127	
1-Methylnaphthalene	Averaged	0.73835	4.88847			0.75357	
2-Methylnaphthalene	Averaged	0.77171	7.72991			0.79703	
Naphthalene	Averaged	1.07114	6.69048			1.12955	
Phenanthrene	Averaged	1.26198	6.87778			1.32207	
Pyrene	Averaged	1.31505	7.32399			1.38882	
2-Fluorobiphenyl (S)	Averaged	1.56736	8.45856			1.67951	
p-Terphenyl-d14 (S)	Averaged	0.85245	8.93367			0.92012	

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV SIM - FORM VII SVOA-1
MSSV SIM CONTINUING CALIBRATION DATA

15131266CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/24/2019 Time: 15:03

Instrument ID: 50MSS5 GC Column: FULL Init. Calib. Date(s): 03/20/2019 03/20/2019

Lab File ID: 052419.B\CCV050.D Init. Calib. Time(s): 17:19 18:27

SDG No.: 50225468

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.29779	1.28321	0.0500	-1.1231	20.0000
Acenaphthylene	Averaged	2.08748	2.12492	0.0500	1.7936	20.0000
Anthracene	Averaged	1.23015	1.27841	0.0500	3.9232	20.0000
Benzo(a)anthracene	Averaged	1.43848	1.45518	0.0500	1.1605	20.0000
Benzo(a)pyrene	Averaged	1.32481	1.38313	0.0500	4.4020	20.0000
Benzo(b)fluoranthene	Averaged	1.30183	1.39973	0.0500	7.5202	20.0000
Benzo(g,h,i)perylene	Averaged	1.41967	1.47310	0.0500	3.7640	20.0000
Benzo(k)fluoranthene	Averaged	1.62970	1.74530	0.0500	7.0930	20.0000
Chrysene	Averaged	1.60609	1.64215	0.0500	2.2457	20.0000
Dibenz(a,h)anthracene	Averaged	1.21982	1.36641	0.0500	12.0170	20.0000
Fluoranthene	Averaged	1.45992	1.51986	0.0500	4.1058	20.0000
Fluorene	Averaged	1.59098	1.63172	0.0500	2.5607	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.52127	1.66780	0.0500	9.6318	20.0000
1-Methylnaphthalene	Averaged	0.75357	0.78360	0.0500	3.9848	20.0000
2-Methylnaphthalene	Averaged	0.79703	0.81848	0.0500	2.6913	20.0000
Naphthalene	Averaged	1.12955	1.13800	0.0500	0.7480	20.0000
Phenanthrene	Averaged	1.32207	1.27278	0.0500	-3.7289	20.0000
Pyrene	Averaged	1.38882	1.39856	0.0500	0.7013	20.0000
2-Fluorobiphenyl (S)	Averaged	1.67951	1.64031	0.0500	-2.3337	20.0000
p-Terphenyl-d14 (S)	Averaged	0.92012	0.93334	0.0500	1.4371	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

SAMPLE NO.

MSSV SIM - FORM VII SVOA-1
MSSV SIM CONTINUING CALIBRATION DATA

15133364CCV

Lab Name: Pace Analytical - Indiana Calibration Date: 05/28/2019 Time: 13:18

Instrument ID: 50MSS5 GC Column: FULL Init. Calib. Date(s): 03/20/2019 03/20/2019

Lab File ID: 052819.B\CCV050-C.D Init. Calib. Time(s): 17:19 18:27

SDG No.: 50225468

COMPOUND	CURVE	$\overline{\text{RRF}}$ or Amount	RRF or Amount	MIN RRF	%D	MAX %D
Acenaphthene	Averaged	1.29779	1.26103	0.0500	-2.8326	20.0000
Acenaphthylene	Averaged	2.08748	2.07034	0.0500	-0.8209	20.0000
Anthracene	Averaged	1.23015	1.28159	0.0500	4.1814	20.0000
Benzo(a)anthracene	Averaged	1.43848	1.61174	0.0500	12.0446	20.0000
Benzo(a)pyrene	Averaged	1.32481	1.32376	0.0500	-0.0789	20.0000
Benzo(b)fluoranthene	Averaged	1.30183	1.51695	0.0500	16.5245	20.0000
Benzo(g,h,i)perylene	Averaged	1.41967	1.41241	0.0500	-0.5111	20.0000
Benzo(k)fluoranthene	Averaged	1.62970	1.50501	0.0500	-7.6512	20.0000
Chrysene	Averaged	1.60609	1.43456	0.0500	-10.6798	20.0000
Dibenz(a,h)anthracene	Averaged	1.21982	1.33086	0.0500	9.1023	20.0000
Fluoranthene	Averaged	1.45992	1.53974	0.0500	5.4675	20.0000
Fluorene	Averaged	1.59098	1.64485	0.0500	3.3859	20.0000
Indeno(1,2,3-cd)pyrene	Averaged	1.52127	1.64194	0.0500	7.9317	20.0000
1-Methylnaphthalene	Averaged	0.75357	0.78028	0.0500	3.5446	20.0000
2-Methylnaphthalene	Averaged	0.79703	0.79901	0.0500	0.2493	20.0000
Naphthalene	Averaged	1.12955	1.14609	0.0500	1.4649	20.0000
Phenanthrene	Averaged	1.32207	1.32599	0.0500	0.2962	20.0000
Pyrene	Averaged	1.38882	1.42757	0.0500	2.7906	20.0000
2-Fluorobiphenyl (S)	Averaged	1.67951	1.61593	0.0500	-3.7853	20.0000
p-Terphenyl-d14 (S)	Averaged	0.92012	0.90562	0.0500	-1.5753	20.0000

The values for compounds reported as total are based on a summation of the components within the laboratory information management system.

Prep Log Report

Batch Information: OEXT 502357 COMBO SEP (W)

Template Version: EF-IN-Q-387-Rev.03 (23Jun2017)

Prep Method	EPA 3510	Analysis Method	EPA 8270 by SIM	Extracted By	ARB/BLR	Extracted Date/Time	05/24/2019 10:11:33:173
Spiked By	ARB/BLR	Spiked By Date/Time	05/24/2019 10:11:34:461	Vialed By	ARB/BLR	Vialed By Date	05/24/2019 14:41:35:533
Methylene Chloride	208699	Sodium Sulfate	206976	10N Sodium Hydroxide	206978	Glass Wool	78279
Reviewed By		Reviewed By Date		Batch Notes	Batched with 502356		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Volume (mL)	pH	Adjusted pH	Final Volume (mL)	Sample Notes	8270C-SPK (uL)	8270C-SS (uL)
COMBSEPLVP	BLANK	**2318323**	100	6		1			177522 (100)
COMBSEPLVP	LCS	**2318324**	100	6		1		194954 (100)	177522 (100)
COMBSEPLVP	PS	**50225487008**	75	6		1			177522 (100)
COMBSEPLVP	PS	**50225490011**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225703001**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225703002**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225703003**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225465001**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225465002**	100	6		1			177522 (100)
COMBSEPLVP	RQS	**50225468001**	100	6		1			177522 (100)
COMBSEPLVP	MS	**2318325**	100	6		1		194954 (100)	177522 (100)
COMBSEPLVP	MSD	**2318326**	100	6		1		194954 (100)	177522 (100)
COMBSEPLVP	PS	**50225468002**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225468003**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225468004**	88	6		1			177522 (100)
COMBSEPLVP	PS	**50225468005**	100	6		1			177522 (100)
COMBSEPLVP	PS	**50225468006**	100	6		1			177522 (100)

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Initial Volume (mL)	pH	Adjusted pH	Final Volume (mL)	Sample Notes	8270C-SPK (uL)	8270C-SS (uL)
COMBSEPLVPPS		**50225773001**	94	6		1			177522 (100)
COMBSEPLVPPS		**50225773002**	82	7		1			177522 (100)
COMBSEPLVPPS		**50225773003**	82	7		1			177522 (100)

Standard Notes:

177522: Sim/Scan Combo Surr Stock (12) **194954: 8270 combo spike (7)**

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss5.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [L]: MeCl2 Lot# 173082
ISTD lot: 199046:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/sblank.d	SBLANK	L/	SAMPLE	1	mlvpahsim	3/20/19	17:07	grm	
1/cal4.d	CAL4,202162:1	L/28328	CALIB_4	1	mlvpahsim	3/20/19	17:19	grm	ok
1/cal1.d	CAL1,202159:1	L/28328	CALIB_1	1	mlvpahsim	3/20/19	17:30	grm	
1/cal2.d	CAL2,202160:1	L/28328	CALIB_2	1	mlvpahsim	3/20/19	17:42	grm	
1/cal3.d	CAL3,202161:1	L/28328	CALIB_3	1	mlvpahsim	3/20/19	17:53	grm	
1/cal5.d	CAL5,202163:1	L/28328	CALIB_5	1	mlvpahsim	3/20/19	18:05	grm	
1/cal6.d	CAL6,202164:1	L/28328	CALIB_6	1	mlvpahsim	3/20/19	18:16	grm	
1/cal7.d	CAL7,202165:1	L/28328	CALIB_7	1	mlvpahsim	3/20/19	18:27	grm	
1/icv.d	ICV,201764:1	L/28328	ICV	1	mlvpahsim	3/20/19	18:39	grm	
1/2261001b.d	2261001	L/28333	BLANK	1	mlvpahsim	3/20/19	18:53	grm	
1/22610021.d	2261002	L/28333	LCS	1	mlvpahsim	3/20/19	19:04	grm	
1/50219479016.d	50219479016	L/28333	SAMPLE	1	mlvpahsim	3/20/19	19:16	grm	
1/50219479017.d	50219479017	L/28333	SAMPLE	1	mlvpahsim	3/20/19	19:27	grm	
1/50219479019.d	50219479019	L/28333	SAMPLE	1	mlvpahsim	3/20/19	19:39	grm	
1/50219601023.d	50219601023	L/28333	SAMPLE	1	mlvpahsim	3/20/19	19:50	grm	
1/50219601024.d	50219601024	L/28333	SAMPLE	1	mlvpahsim	3/20/19	20:02	grm	
1/50219611013.d	50219611013	L/28333	SAMPLE	1	mlvpahsim	3/20/19	20:13	grm	
1/50219664023.d	50219664023	L/28333	SAMPLE	1	mlvpahsim	3/20/19	20:24	grm	
1/50219664024x5.d	50219664024X5	L/28333	SAMPLE	5	mlvpahsim	3/20/19	20:36	grm	
1/50219495001.d	50219495001	L/28333	SAMPLE	1	mlvpahsim	3/20/19	20:47	grm	
1/50219644007.d	50219644007	L/28333	SAMPLE	1	mlvpahsim	3/20/19	20:59	grm	
1/2260982b.d	2260982	L/28335	BLANK	1	mlvpahsim	3/20/19	21:10	grm	
1/2260983l.d	2260983	L/28335	LCS	1	mlvpahsim	3/20/19	21:22	grm	
1/50219490005.d	50219490005	L/28335	SAMPLE	1	mlvpahsim	3/20/19	21:33	grm	
1/2260984m.d	2260984	L/28335	MS	1	mlvpahsim	3/20/19	21:44	grm	
1/2260985d.d	2260985	L/28335	MSD	1	mlvpahsim	3/20/19	21:56	grm	
1/50219490006.d	50219490006	L/28335	SAMPLE	1	mlvpahsim	3/20/19	22:07	grm	
1/50219493001.d	50219493001	L/28335	SAMPLE	1	mlvpahsim	3/20/19	22:19	grm	
1/2260986m.d	2260986	L/28335	MS	1	mlvpahsim	3/20/19	22:30	grm	
1/2260987d.d	2260987	L/28335	MSD	1	mlvpahsim	3/20/19	22:42	grm	
1/50219493003.d	50219493003	L/28335	SAMPLE	1	mlvpahsim	3/20/19	22:53	grm	

File Path 1: \\192.168.50.6\chem\50mss5.i\032019cal.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 12:04 03/21/2019

Reviewed By/Date: _____ Page: 1 of 2

INSTRUMENT RUN LOG

Pace Analytical Services, Inc.

Instrument: 50mss5.i

Column Rtx-5MS 15m X 0.25mm Method: Low-Level PAH Report by SW-846 Method 8270 SIM

Misc. Prep Info [L]: MeCl2 Lot# 173082

ISTD lot: 199046:1 Surr. lot:

Lot:

Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/50219493005.d	50219493005	L/28335	SAMPLE	1	mlvpahsim	3/20/19	23:05	grm	
1/50219493007.d	50219493007	L/28335	SAMPLE	1	mlvpahsim	3/20/19	23:16	grm	
1/50219493009.d	50219493009	L/28335	SAMPLE	1	mlvpahsim	3/20/19	23:27	grm	
1/50219561011.d	50219561011	L/28335	SAMPLE	1	mlvpahsim	3/20/19	23:39	grm	NR
1/50219561012.d	50219561012	L/28335	SAMPLE	1	mlvpahsim	3/20/19	23:50	grm	NR
1/50219561013.d	50219561013	L/28335	SAMPLE	1	mlvpahsim	3/21/19	00:02	grm	
1/50219561014.d	50219561014	L/28335	SAMPLE	1	mlvpahsim	3/21/19	00:13	grm	
1/50219561015.d	50219561015	L/28335	SAMPLE	1	mlvpahsim	3/21/19	00:25	grm	NR
1/50219561016.d	50219561016	L/28335	SAMPLE	1	mlvpahsim	3/21/19	00:36	grm	NR
1/50219561017.d	50219561017	L/28335	SAMPLE	1	mlvpahsim	3/21/19	00:47	grm	
1/2260988m.d	2260988	L/28335	MS	1	mlvpahsim	3/21/19	00:59	grm	
1/2260989d.d	2260989	L/28335	MSD	1	mlvpahsim	3/21/19	01:10	grm	
1/50219561018.d	50219561018	L/28335	SAMPLE	1	mlvpahsim	3/21/19	01:22	grm	
1/50219561019.d	50219561019	L/28335	SAMPLE	1	mlvpahsim	3/21/19	01:33	grm	

File Path 1: \\192.168.50.6\chem\50mss5.i\032019cal.b

Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one

Report Date: 12:04 03/21/2019

3-21-19

Reviewed By/Date: _____ Page: 2 of 2

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss5.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [L]: MeCl2 Lot# 173082
ISTD lot: 199046:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/sblank.d	SBLANK	L/	SAMPLE	1	mlvpahsim	5/24/19	14:51	grm	
1/ccv050.d	CCV,201765:1	L/28328	CCALIB_4	1	mlvpahsim	5/24/19	15:03	grm	ok
1/2318495b.d	2318495	L/28820	BLANK	1	mlvpahsim	5/24/19	15:31	grm	
1/2318496l.d	2318496	L/28820	LCS	1	mlvpahsim	5/24/19	15:42	grm	
1/50225731001.d	50225731001	L/28820	SAMPLE	1	mlvpahsim	5/24/19	15:53	grm	
1/10475665001.d	10475665001	L/28820	SAMPLE	1	mlvpahsim	5/24/19	16:05	grm	
1/10475665002.d	10475665002	L/28820	SAMPLE	1	mlvpahsim	5/24/19	16:16	grm	
1/10475665003.d	10475665003	L/28820	SAMPLE	1	mlvpahsim	5/24/19	16:28	grm	
1/10475665004.d	10475665004	L/28820	SAMPLE	1	mlvpahsim	5/24/19	16:39	grm	
1/50225929028.d	50225929028	L/28820	SAMPLE	1	mlvpahsim	5/24/19	16:50	grm	
1/50225765007.d	50225765007	L/28820	SAMPLE	1	mlvpahsim	5/24/19	17:02	grm	
1/50225995010.d	50225995010	L/28820	SAMPLE	1	mlvpahsim	5/24/19	17:13	grm	
1/50225995014.d	50225995014	L/28820	SAMPLE	1	mlvpahsim	5/24/19	17:25	grm	
1/50225995019.d	50225995019	L/28820	SAMPLE	1	mlvpahsim	5/24/19	17:36	grm	
1/50226043009.d	50226043009	L/28820	SAMPLE	1	mlvpahsim	5/24/19	17:48	grm	
1/50225987001.d	50225987001	L/28820	SAMPLE	1	mlvpahsim	5/24/19	17:59	grm	
1/50225987002.d	50225987002	L/28820	SAMPLE	1	mlvpahsim	5/24/19	18:11	grm	
1/50225987003x5.d	50225987003X5	L/28820	SAMPLE	5	mlvpahsim	5/24/19	18:22	grm	
1/50225987004.d	50225987004	L/28820	SAMPLE	1	mlvpahsim	5/24/19	18:33	grm	
1/50225542008x5.d	50225542008X5	L/28815	SAMPLE	5	mlvpahsim	5/24/19	18:45	grm	
1/2318323b.d	2318323	L/28824	BLANK	1	mlvpahsim	5/24/19	18:56	grm	
1/2318324l.d	2318324	L/28824	LCS	1	mlvpahsim	5/24/19	19:08	grm	
1/50225487008.d	50225487008	L/28824	SAMPLE	1	mlvpahsim	5/24/19	19:19	grm	
1/50225490011.d	50225490011	L/28824	SAMPLE	1	mlvpahsim	5/24/19	19:30	grm	
1/50225703001.d	50225703001	L/28824	SAMPLE	1	mlvpahsim	5/24/19	19:42	grm	
1/50225703002.d	50225703002	L/28824	SAMPLE	1	mlvpahsim	5/24/19	19:53	grm	
1/50225703003.d	50225703003	L/28824	SAMPLE	1	mlvpahsim	5/24/19	20:05	grm	NR

File Path 1: \\192.168.50.6\chem\50mss5.i\052419.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 10:53 05/28/2019

5-28-19
Reviewed By/Date: grm Page: 1 of 1

INSTRUMENT RUN LOG
Pace Analytical Services, Inc.

Instrument: 50mss5.i
Column Rtx-5MS 15m X 0.25mm
Misc. Prep Info [L]: MeCl2 Lot# 173082
ISTD lot: 199046:1
Lot:
Tune std: _____

Method: Low-Level PAH Report by SW-846 Meth
Surr. lot:
Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/sblank.d	SBLANK	L/	SAMPLE	1	mlvpahsim	5/28/19	10:57	grm	
1/sblank-b.d	SBLANK	L/	SAMPLE	1	mlvpahsim	5/28/19	12:34	grm	
1/ccv050.d	CCV,201765:1	L/28328	CCALIB_4	1	mlvpahsim	5/28/19	12:45	grm	NR
1/ccv050-b.d	CCV,201765:1	L/28328	CCALIB_4	1	mlvpahsim	5/28/19	13:04	grm	NR Reinjection
1/ccv050-c.d	CCV,201765:1	L/28328	CCALIB_4	1	mlvpahsim	5/28/19	13:18	grm	ok used mid-pt of cal
1/2320358b.d	2320358	L/28829	BLANK	1	mlvpahsim	5/28/19	13:50	grm	
1/23203591.d	2320359	L/28829	LCS	1	mlvpahsim	5/28/19	14:01	grm	
1/5214416001.d	5214416001	L/28829	SAMPLE	1	mlvpahsim	5/28/19	14:13	grm	
1/5214416002.d	5214416002	L/28829	SAMPLE	1	mlvpahsim	5/28/19	14:24	grm	
1/50226057003.d	50226057003	L/28829	SAMPLE	1	mlvpahsim	5/28/19	14:35	grm	
1/50226057004.d	50226057004	L/28829	SAMPLE	1	mlvpahsim	5/28/19	14:47	grm	
1/50226057007.d	50226057007	L/28829	SAMPLE	1	mlvpahsim	5/28/19	14:58	grm	
1/50226057008.d	50226057008	L/28829	SAMPLE	1	mlvpahsim	5/28/19	15:10	grm	
1/50226102001.d	50226102001	L/28829	SAMPLE	1	mlvpahsim	5/28/19	15:21	grm	
1/50226102002.d	50226102002	L/28829	SAMPLE	1	mlvpahsim	5/28/19	15:33	grm	
1/50226102003.d	50226102003	L/28829	SAMPLE	1	mlvpahsim	5/28/19	15:44	grm	
1/50226102004.d	50226102004	L/28829	SAMPLE	1	mlvpahsim	5/28/19	15:55	grm	
1/50225703003.d	50225703003	L/28824	SAMPLE	1	mlvpahsim	5/28/19	16:07	grm	NR
1/50225465001.d	50225465001	L/28824	SAMPLE	1	mlvpahsim	5/28/19	16:18	grm	
1/50225465002.d	50225465002	L/28824	SAMPLE	1	mlvpahsim	5/28/19	16:30	grm	
1/50225468001.d	50225468001	L/28824	SAMPLE	1	mlvpahsim	5/28/19	16:41	grm	
1/2318325m.d	2318325	L/28824	MS	1	mlvpahsim	5/28/19	16:53	grm	
1/2318326d.d	2318326	L/28824	MSD	1	mlvpahsim	5/28/19	17:04	grm	
1/50225468002.d	50225468002	L/28824	SAMPLE	1	mlvpahsim	5/28/19	17:16	grm	
1/50225468003.d	50225468003	L/28824	SAMPLE	1	mlvpahsim	5/28/19	17:27	grm	
1/50225468004.d	50225468004	L/28824	SAMPLE	1	mlvpahsim	5/28/19	17:39	grm	
1/50225468005.d	50225468005	L/28824	SAMPLE	1	mlvpahsim	5/28/19	17:50	grm	
1/50225468006.d	50225468006	L/28824	SAMPLE	1	mlvpahsim	5/28/19	18:01	grm	
1/50225773001.d	50225773001	L/28824	SAMPLE	1	mlvpahsim	5/28/19	18:13	grm	
1/50225773002.d	50225773002	L/28824	SAMPLE	1	mlvpahsim	5/28/19	18:24	grm	
1/50225773003.d	50225773003	L/28824	SAMPLE	1	mlvpahsim	5/28/19	18:36	grm	

File Path 1: \\192.168.50.6\chem\50mss5.i\052819.b
Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one
Report Date: 13:00 05/29/2019

Reviewed By/Date: _____ Page: 1 of 3

INSTRUMENT RUN LOG

Pace Analytical Services, Inc.

Instrument: 50mss5.i

Column Rtx-5MS 15m X 0.25mm Method: Low-Level PAH Report by SW-846 Method 8270 SIM

Misc. Prep Info [L]: MeCl2 Lot# 173082

ISTD lot: 199046:1 Surr. lot:

Lot:

Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/2319997b.d	2319997	L/28830	BLANK	1	mlvpahsim	5/28/19	18:47	grm	
1/2319998l.d	2319998	L/28830	LCS	1	mlvpahsim	5/28/19	18:59	grm	
1/50226057001.d	50226057001	L/28830	SAMPLE	1	mlvpahsim	5/28/19	19:10	grm	
1/50226057002.d	50226057002	L/28830	SAMPLE	1	mlvpahsim	5/28/19	19:21	grm	
1/50226057005.d	50226057005	L/28830	SAMPLE	1	mlvpahsim	5/28/19	19:33	grm	
1/50226057006.d	50226057006	L/28830	SAMPLE	1	mlvpahsim	5/28/19	19:44	grm	
1/50226057009.d	50226057009	L/28830	SAMPLE	1	mlvpahsim	5/28/19	19:56	grm	
1/50226057010.d	50226057010	L/28830	SAMPLE	1	mlvpahsim	5/28/19	20:07	grm	
1/50226057011.d	50226057011	L/28830	SAMPLE	1	mlvpahsim	5/28/19	20:19	grm	
1/50226057012.d	50226057012	L/28830	SAMPLE	1	mlvpahsim	5/28/19	20:30	grm	
1/50226057015.d	50226057015	L/28830	SAMPLE	1	mlvpahsim	5/28/19	20:42	grm	
1/2320360b.d	2320360	L/28834	BLANK	1	mlvpahsim	5/28/19	20:53	grm	
1/2320361l.d	2320361	L/28834	LCS	1	mlvpahsim	5/28/19	21:04	grm	
1/50225773004.d	50225773004	L/28834	SAMPLE	1	mlvpahsim	5/28/19	21:16	grm	
1/50225773005.d	50225773005	L/28834	SAMPLE	1	mlvpahsim	5/28/19	21:27	grm	
1/50225773006.d	50225773006	L/28834	SAMPLE	1	mlvpahsim	5/28/19	21:39	grm	
1/50225773007.d	50225773007	L/28834	SAMPLE	1	mlvpahsim	5/28/19	21:50	grm	
1/50225773008.d	50225773008	L/28834	SAMPLE	1	mlvpahsim	5/28/19	22:02	grm	
1/50225773009.d	50225773009	L/28834	SAMPLE	1	mlvpahsim	5/28/19	22:13	grm	
1/50225773010.d	50225773010	L/28834	SAMPLE	1	mlvpahsim	5/28/19	22:25	grm	
1/50225773011.d	50225773011	L/28834	SAMPLE	1	mlvpahsim	5/28/19	22:36	grm	
1/50225774001.d	50225774001	L/28834	SAMPLE	1	mlvpahsim	5/28/19	22:47	grm	
1/50225774002.d	50225774002	L/28834	SAMPLE	1	mlvpahsim	5/28/19	22:59	grm	
1/50225774003.d	50225774003	L/28834	SAMPLE	1	mlvpahsim	5/28/19	23:10	grm	
1/50225774004.d	50225774004	L/28834	SAMPLE	1	mlvpahsim	5/28/19	23:22	grm	
1/50225774005.d	50225774005	L/28834	SAMPLE	1	mlvpahsim	5/28/19	23:33	grm	
1/50225774006.d	50225774006	L/28834	SAMPLE	1	mlvpahsim	5/28/19	23:44	grm	
1/50225774007.d	50225774007	L/28834	SAMPLE	1	mlvpahsim	5/28/19	23:56	grm	
1/50225774008.d	50225774008	L/28834	SAMPLE	1	mlvpahsim	5/29/19	00:07	grm	
1/50225774009.d	50225774009	L/28834	SAMPLE	1	mlvpahsim	5/29/19	00:19	grm	
1/50225774010.d	50225774010	L/28834	SAMPLE	1	mlvpahsim	5/29/19	00:30	grm	

File Path 1: \\192.168.50.6\chem\50mss5.i\052819.b

Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one

Report Date: 13:00 05/29/2019

Reviewed By/Date: _____ Page: 2 of 3

INSTRUMENT RUN LOG

Pace Analytical Services, Inc.

Instrument: 50mss5.i

Column Rtx-5MS 15m X 0.25mm Method: Low-Level PAH Report by SW-846 Method 8270 SIM

Misc. Prep Info [L]: MeCl2 Lot# 173082

ISTD lot: 199046:1 Surr. lot:

Lot:

Tune std: _____ Cal. std: _____

Path/File	Smp Info	Mtrx/Batch	Type	DF	Method	Date	Time	Oper	Comments
1/50225774011.d	50225774011	L/28834	SAMPLE	1	mlvpahsim	5/29/19	00:42	grm	

File Path 1: \\192.168.50.6\chem\50mss5.i\052819.b

Matrix Codes: [B]iota, [G]as, [L]iquid, [S]olid, [N]one

Report Date: 13:00 05/29/2019

5-29-19

Reviewed By/Date: _____ Page: 3 of 3

SAMPLE NO.

SP-1

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468001 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<3.3	U	ug/L	1	05/21/2019 23:33
7440-38-2	Arsenic	8.2	J	ug/L	1	05/21/2019 23:33
7440-39-3	Barium	276		ug/L	1	05/21/2019 23:33
7440-41-7	Beryllium	<0.24	U	ug/L	1	05/21/2019 23:33
7440-43-9	Cadmium	<0.44	U	ug/L	1	05/21/2019 23:33
7440-47-3	Chromium	<1.1	U	ug/L	1	05/21/2019 23:33
7440-50-8	Copper	<2.7	U	ug/L	1	05/21/2019 23:33
7439-92-1	Lead	<3.5	U	ug/L	1	05/21/2019 23:33
7440-02-0	Nickel	3.7	J	ug/L	1	05/21/2019 23:33
7782-49-2	Selenium	<5.2	U	ug/L	1	05/21/2019 23:33
7440-22-4	Silver	<1.2	U	ug/L	1	05/21/2019 23:33
7440-66-6	Zinc	3.5	J	ug/L	1	05/21/2019 23:33

SAMPLE NO.

SP-3

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468002 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	3.9	J	ug/L	1	05/21/2019 23:45
7440-38-2	Arsenic	10	J	ug/L	1	05/21/2019 23:45
7440-39-3	Barium	203		ug/L	1	05/21/2019 23:45
7440-41-7	Beryllium	1.6	J	ug/L	1	05/21/2019 23:45
7440-43-9	Cadmium	1.3	J	ug/L	1	05/21/2019 23:45
7440-47-3	Chromium	44.6		ug/L	1	05/21/2019 23:45
7440-50-8	Copper	18.1		ug/L	1	05/21/2019 23:45
7439-92-1	Lead	33.2		ug/L	1	05/21/2019 23:45
7440-02-0	Nickel	29.4		ug/L	1	05/21/2019 23:45
7782-49-2	Selenium	<5.2	U	ug/L	1	05/21/2019 23:45
7440-22-4	Silver	<1.2	U	ug/L	1	05/21/2019 23:45
7440-66-6	Zinc	69.2		ug/L	1	05/21/2019 23:45

SAMPLE NO.

SP-4

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468003 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<3.3	U	ug/L	1	05/21/2019 23:47
7440-38-2	Arsenic	14.9		ug/L	1	05/21/2019 23:47
7440-39-3	Barium	607		ug/L	1	05/21/2019 23:47
7440-41-7	Beryllium	1.2	J	ug/L	1	05/21/2019 23:47
7440-43-9	Cadmium	0.73	J	ug/L	1	05/21/2019 23:47
7440-47-3	Chromium	22.7		ug/L	1	05/21/2019 23:47
7440-50-8	Copper	24.3		ug/L	1	05/21/2019 23:47
7439-92-1	Lead	26.4		ug/L	1	05/21/2019 23:47
7440-02-0	Nickel	18.0		ug/L	1	05/21/2019 23:47
7782-49-2	Selenium	<5.2	U	ug/L	1	05/21/2019 23:47
7440-22-4	Silver	<1.2	U	ug/L	1	05/21/2019 23:47
7440-66-6	Zinc	68.1		ug/L	1	05/21/2019 23:47

SAMPLE NO.

SP-5

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468004 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<3.3	U	ug/L	1	05/21/2019 23:50
7440-38-2	Arsenic	12.4		ug/L	1	05/21/2019 23:50
7440-39-3	Barium	459		ug/L	1	05/21/2019 23:50
7440-41-7	Beryllium	<0.24	U	ug/L	1	05/21/2019 23:50
7440-43-9	Cadmium	0.58	J	ug/L	1	05/21/2019 23:50
7440-47-3	Chromium	2.8	J	ug/L	1	05/21/2019 23:50
7440-50-8	Copper	<2.7	U	ug/L	1	05/21/2019 23:50
7439-92-1	Lead	<3.5	U	ug/L	1	05/21/2019 23:50
7440-02-0	Nickel	5.8	J	ug/L	1	05/21/2019 23:50
7782-49-2	Selenium	<5.2	U	ug/L	1	05/21/2019 23:50
7440-22-4	Silver	<1.2	U	ug/L	1	05/21/2019 23:50
7440-66-6	Zinc	12.7	J	ug/L	1	05/21/2019 23:50

SAMPLE NO.

SP-5 DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468005 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<3.3	U	ug/L	1	05/21/2019 23:52
7440-38-2	Arsenic	12.1		ug/L	1	05/21/2019 23:52
7440-39-3	Barium	460		ug/L	1	05/21/2019 23:52
7440-41-7	Beryllium	<0.24	U	ug/L	1	05/21/2019 23:52
7440-43-9	Cadmium	0.59	J	ug/L	1	05/21/2019 23:52
7440-47-3	Chromium	3.4	J	ug/L	1	05/21/2019 23:52
7440-50-8	Copper	<2.7	U	ug/L	1	05/21/2019 23:52
7439-92-1	Lead	<3.5	U	ug/L	1	05/21/2019 23:52
7440-02-0	Nickel	6.8	J	ug/L	1	05/21/2019 23:52
7782-49-2	Selenium	<5.2	U	ug/L	1	05/21/2019 23:52
7440-22-4	Silver	<1.2	U	ug/L	1	05/21/2019 23:52
7440-66-6	Zinc	15.7	J	ug/L	1	05/21/2019 23:52

SAMPLE NO.

EQ Blank

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468006 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-36-0	Antimony	<3.3	U	ug/L	1	05/24/2019 22:58
7440-38-2	Arsenic	<4.3	U	ug/L	1	05/24/2019 22:58
7440-39-3	Barium	<0.66	U	ug/L	1	05/24/2019 22:58
7440-41-7	Beryllium	<0.24	U	ug/L	1	05/24/2019 22:58
7440-43-9	Cadmium	<0.44	U	ug/L	1	05/24/2019 22:58
7440-47-3	Chromium	<1.1	U	ug/L	1	05/24/2019 22:58
7440-50-8	Copper	<2.7	U	ug/L	1	05/24/2019 22:58
7439-92-1	Lead	<3.5	U	ug/L	1	05/24/2019 22:58
7440-02-0	Nickel	<1.0	U	ug/L	1	05/24/2019 22:58
7782-49-2	Selenium	<5.2	U	ug/L	1	05/24/2019 22:58
7440-22-4	Silver	<1.2	U	ug/L	1	05/24/2019 22:58
7440-66-6	Zinc	1.6	J	ug/L	1	05/24/2019 22:58

SAMPLE NO.

SP-4 FIELD FILTERED

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468008 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	4.7	J	ug/L	1	06/10/2019 13:44
7439-92-1	Lead	3.7	J	ug/L	1	06/10/2019 13:44

SAMPLE NO.

SP-5 FIELD FILTERED

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468009 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	10.2		ug/L	1	06/10/2019 13:46

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 209431

Continuing Calibration Verification Source: 209432

Concentration Units: ug/L Instrument ID: 50ICP3

	Initial Calibration Verification				Continuing Calibration Verification						
	05/21/2019 20:52				05/21/2019 21:32			05/21/2019 22:39			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Antimony	1000	1020	102.3	90-110	1000	1030	103.0	1000	1010	101.4	90-110
Arsenic	1000	1030	103.4	90-110	1000	1040	103.7	1000	1020	102.0	90-110
Barium	1000	999	99.9	90-110	1000	1010	100.8	1000	993	99.3	90-110
Beryllium	1000	1010	100.6	90-110	1000	1010	101.0	1000	994	99.4	90-110
Cadmium	1000	1010	101.3	90-110	1000	1010	101.4	1000	997	99.7	90-110
Chromium	1000	1000	100.5	90-110	1000	1010	101.3	1000	993	99.3	90-110
Copper	1000	975	97.5	90-110	1000	991	99.1	1000	973	97.3	90-110
Lead	1000	964	96.4	90-110	1000	957	95.7	1000	943	94.3	90-110
Nickel	1000	1030	102.9	90-110	1000	1020	102.2	1000	1010	101.0	90-110
Selenium	1000	1010	101.0	90-110	1000	1020	101.6	1000	1000	100.4	90-110
Silver	500	477	95.4	90-110	500	482	96.3	500	474	94.7	90-110
Zinc	1000	1040	103.6	90-110	1000	1020	102.4	1000	1010	100.8	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 209432

Concentration Units: ug/L Instrument ID: 50ICP3

	Continuing Calibration Verification									
	05/21/2019 23:08			05/21/2019 23:36			05/22/2019 00:04			Control Limit
Analyte	True	Found	%R	True	Found	%R	True	Found	%R	
Antimony	1000	1020	102.4	1000	1010	100.9	1000	1020	102.4	90-110
Arsenic	1000	1030	103.0	1000	1020	101.8	1000	1030	102.8	90-110
Barium	1000	997	99.7	1000	987	98.7	1000	992	99.2	90-110
Beryllium	1000	1010	100.9	1000	1000	100.0	1000	1000	100.4	90-110
Cadmium	1000	1010	101.3	1000	999	99.9	1000	1010	101.0	90-110
Chromium	1000	1010	100.6	1000	995	99.5	1000	1010	100.8	90-110
Copper	1000	982	98.2	1000	970	97.0	1000	982	98.2	90-110
Lead	1000	952	95.2	1000	942	94.2	1000	952	95.2	90-110
Nickel	1000	1010	101.4	1000	1000	100.5	1000	1010	101.2	90-110
Selenium	1000	1000	100.3	1000	994	99.4	1000	1000	100.4	90-110
Silver	500	479	95.8	500	474	94.9	500	479	95.9	90-110
Zinc	1000	1020	102.5	1000	1010	101.4	1000	1020	101.8	90-110

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210008

Continuing Calibration Verification Source: 210009

Concentration Units: ug/L Instrument ID: 50ICP3

	Initial Calibration Verification				Continuing Calibration Verification						
	05/24/2019 20:42				05/24/2019 20:51			05/24/2019 22:26			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Antimony	1000	1000	100.5	90-110	1000	965	96.5	1000	990	99.0	90-110
Arsenic	1000	1000	100.2	90-110	1000	951	95.1	1000	973	97.3	90-110
Barium	1000	996	99.6	90-110	1000	977	97.7	1000	973	97.3	90-110
Beryllium	1000	1010	100.8	90-110	1000	990	99.0	1000	994	99.4	90-110
Cadmium	1000	992	99.2	90-110	1000	948	94.8	1000	980	98.0	90-110
Chromium	1000	965	96.5	90-110	1000	949	94.9	1000	953	95.3	90-110
Copper	1000	961	96.1	90-110	1000	952	95.2	1000	947	94.7	90-110
Lead	1000	944	94.4	90-110	1000	901	90.1	1000	930	93.0	90-110
Nickel	1000	994	99.4	90-110	1000	942	94.2	1000	972	97.2	90-110
Selenium	1000	983	98.3	90-110	1000	943	94.3	1000	958	95.8	90-110
Silver	500	481	96.2	90-110	500	477	95.4	500	474	94.8	90-110
Zinc	1000	1010	100.9	90-110	1000	957	95.7	1000	996	99.6	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210009

Concentration Units: ug/L Instrument ID: 50ICP3

	Continuing Calibration Verification						
	05/24/2019 22:52			05/24/2019 23:17			Control Limit
Analyte	True	Found	%R	True	Found	%R	
Antimony	1000	996	99.6	1000	1000	100.2	90-110
Arsenic	1000	978	97.8	1000	991	99.1	90-110
Barium	1000	975	97.5	1000	985	98.5	90-110
Beryllium	1000	994	99.4	1000	1010	100.6	90-110
Cadmium	1000	984	98.4	1000	990	99.0	90-110
Chromium	1000	956	95.6	1000	975	97.5	90-110
Copper	1000	950	95.0	1000	970	97.0	90-110
Lead	1000	931	93.1	1000	950	95.0	90-110
Nickel	1000	976	97.6	1000	991	99.1	90-110
Selenium	1000	959	95.9	1000	974	97.4	90-110
Silver	500	477	95.4	500	485	97.0	90-110
Zinc	1000	998	99.8	1000	1010	101.4	90-110

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 211595

Continuing Calibration Verification Source: 211596, 211855

Concentration Units: ug/L Instrument ID: 50ICP3

	Initial Calibration Verification				Continuing Calibration Verification						
	06/10/2019 08:37				06/10/2019 09:10			06/10/2019 13:23			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Arsenic	1000	1010	100.7	90-110	1000	999	99.9	1000	1010	101.0	90-110
Lead	1000	994	99.4	90-110	1000	988	98.8	1000	1000	100.3	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 211855, 211596

Concentration Units: ug/L Instrument ID: 50ICP3

	Continuing Calibration Verification									
	06/10/2019 13:51			06/10/2019 14:07			06/10/2019 14:34			Control Limit
Analyte	True	Found	%R	True	Found	%R	True	Found	%R	
Arsenic	1000	1010	101.4	1000	1020	101.6	1000	1030	102.6	90-110
Lead	1000	1000	100.3	1000	1000	100.0	1000	1020	101.5	90-110

FORM II INORGANIC-3

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 211855

Concentration Units: ug/L Instrument ID: 50ICP3

	Continuing Calibration Verification			
	06/10/2019 14:34			Control Limit
Analyte	True	Found	%R	
Arsenic	1000	1030	102.6	90-110
Lead	1000	1020	101.5	90-110

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 211854

Continuing Calibration Verification Source: 211855

Concentration Units: ug/L Instrument ID: 50ICP3

	Initial Calibration Verification				Continuing Calibration Verification						
	06/11/2019 08:56				06/11/2019 09:29			06/11/2019 10:26			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Arsenic	1000	997	99.7	90-110	1000	986	98.6	1000	1040	104.4	90-110
Lead	1000	971	97.1	90-110	1000	959	95.9	1000	1010	101.3	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 211855

Concentration Units: ug/L Instrument ID: 50ICP3

	Continuing Calibration Verification			
	06/11/2019 10:53			Control Limit
Analyte	True	Found	%R	
Arsenic	1000	1020	102.5	90-110
Lead	1000	996	99.6	90-110

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 209758 Analysis Date/Time: 05/21/2019 20:57

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Antimony	6.0	5.9	98.6	50-150
Arsenic	10.0	11.9	118.9	50-150
Barium	10.0	10.4	104.0	50-150
Beryllium	4.0	4.1	102.9	50-150
Cadmium	2.0	1.9	95.8	50-150
Chromium	10.0	10.2	101.8	50-150
Copper	10.0	10.2	102.5	50-150
Lead	10.0	9.4	93.7	50-150
Nickel	10.0	10.4	104.0	50-150
Selenium	10.0	8.8	88.0	50-150
Silver	10.0	9.9	99.5	50-150
Zinc	20	22.8	114.2	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210076 Analysis Date/Time: 05/24/2019 20:24

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Antimony	6.0	8.0	134.0	50-150
Arsenic	10.0	10.2	101.5	50-150
Barium	10.0	9.8	97.7	50-150
Beryllium	4.0	4.0	100.6	50-150
Cadmium	2.0	2.0	97.6	50-150
Chromium	10.0	9.9	98.7	50-150
Copper	10.0	8.7	87.0	50-150
Lead	10.0	9.7	96.8	50-150
Nickel	10.0	9.8	98.4	50-150
Selenium	10.0	8.0	80.0	50-150
Silver	10.0	9.6	95.9	50-150
Zinc	20	20.5	102.4	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 211319 Analysis Date/Time: 06/10/2019 08:41

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Arsenic	10.0	8.7	87.0	50-150
Lead	10.0	10.1	100.7	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 211916 Analysis Date/Time: 06/11/2019 09:00

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Arsenic	10.0	7.8	78.1	50-150
Lead	10.0	9.3	93.2	50-150

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Water Instrument ID: 50ICP3

Method Blank Concentration Units: ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	05/21/2019 20:54	C	05/21/2019 21:34	C	05/21/2019 22:41	C	05/21/2019 23:10	C	2313609	C
Antimony	4.0	U	4.0	U	4.0	U	4.8	J	<3.3	U
Arsenic	5.0	U	5.0	U	5.0	U	5.0	U	<4.3	U
Barium	5.0	U	5.0	U	5.0	U	5.0	U	<0.66	U
Beryllium	2.0	U	2.0	U	2.0	U	2.0	U	<0.24	U
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	<0.44	U
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	<1.1	U
Copper	5.0	U	5.0	U	5.0	U	5.0	U	<2.7	U
Lead	4.0	U	4.0	U	4.0	U	4.0	U	<3.5	U
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	<1.0	U
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	<5.2	U
Silver	5.0	U	5.0	U	5.0	U	5.0	U	<1.2	U
Zinc	10.0	U	10.0	U	10.0	U	10.0	U	1.5	J

FORM III INORGANIC-2

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50ICP3

Method Blank Concentration Units:

Analyte	Initial Calibration Blank		Continuing Calibration Blank (ug/L)					
		C	05/21/2019 23:38	C	05/22/2019 00:06	C		C
Antimony			4.0	U	4.0	U		
Arsenic			5.0	U	5.0	U		
Barium			5.0	U	5.0	U		
Beryllium			2.0	U	2.0	U		
Cadmium			1.0	U	1.0	U		
Chromium			5.0	U	5.0	U		
Copper			5.0	U	5.0	U		
Lead			4.0	U	4.0	U		
Nickel			5.0	U	5.0	U		
Selenium			5.0	U	5.0	U		
Silver			5.0	U	5.0	U		
Zinc			10.0	U	10.0	U		

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Water Instrument ID: 50ICP3

Method Blank Concentration Units: ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	05/24/2019 20:22	C	05/24/2019 20:53	C	05/24/2019 22:28	C	05/24/2019 22:53	C	2316804	C
Antimony	4.4	J	4.0	U	4.0	U	4.0	U	<3.3	U
Arsenic	5.0	U	5.0	U	5.0	U	5.0	U	<4.3	U
Barium	5.0	U	5.0	U	5.0	U	5.0	U	<0.66	U
Beryllium	2.0	U	2.0	U	2.0	U	2.0	U	<0.24	U
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	<0.44	U
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	<1.1	U
Copper	5.0	U	5.0	U	5.0	U	5.0	U	<2.7	U
Lead	4.0	U	4.0	U	4.0	U	4.0	U	<3.5	U
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	<1.0	U
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	<5.2	U
Silver	5.0	U	5.0	U	5.0	U	5.0	U	<1.2	U
Zinc	10.0	U	10.0	U	10.0	U	10.0	U	2.2	J

FORM III INORGANIC-2

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50ICP3

Method Blank Concentration Units:

Analyte	Initial Calibration Blank		Continuing Calibration Blank (ug/L)					
		C	05/24/2019 23:19	C		C		C
Antimony			4.0	U				
Arsenic			5.0	U				
Barium			5.0	U				
Beryllium			2.0	U				
Cadmium			1.0	U				
Chromium			5.0	U				
Copper			5.0	U				
Lead			4.0	U				
Nickel			5.0	U				
Selenium			5.0	U				
Silver			5.0	U				
Zinc			10.0	U				

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50ICP3

Method Blank Concentration Units:

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)					
	06/10/2019 08:39	C	06/10/2019 09:12	C	06/10/2019 13:25	C	06/10/2019 13:52	C
Arsenic	5.0	U	5.0	U	5.0	U	5.0	U
Lead	4.0	U	4.0	U	4.0	U	4.0	U

FORM III INORGANIC-2

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50ICP3

Method Blank Concentration Units:

Analyte	Initial Calibration Blank		Continuing Calibration Blank (ug/L)			
		C	06/10/2019 14:08	C	06/10/2019 14:36	C
Arsenic			5.0	U	5.0	U
Lead			4.0	U	4.0	U

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Water Instrument ID: 50ICP3

Method Blank Concentration Units: ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	06/11/2019 08:58	C	06/11/2019 09:31	C	06/11/2019 10:28	C	06/11/2019 10:55	C	2331106	C
Arsenic	5.0	U	5.0	U	5.0	U	5.0	U	<3.8	U
Lead	4.0	U	4.0	U	4.0	U	4.0	U	<2.7	U

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Solution A Run Date: 05/21/2019 20:59

ICS Source: 209423,209324 Solution AB Run Date: 05/21/2019 21:01

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	489500	97.9	490400	98.1	80-120
Antimony		500	5.496		504	100.8	80-120
Arsenic		500	0.6677		521.7	104.3	80-120
Barium		500	0.9072		498.9	99.8	80-120
Beryllium		500	-0.0201		493.4	98.7	80-120
Cadmium		500	-0.1378		510.4	102.1	80-120
Calcium	500000	500000	447700	89.5	447900	89.6	80-120
Chromium		500	-0.0201		474.5	94.9	80-120
Copper		500	0.1561		508	101.6	80-120
Iron	200000	200000	184100	92.1	184100	92.1	80-120
Lead		500	4.039		419.5	83.9	80-120
Magnesium	500000	500000	501800	100.4	504700	100.9	80-120
Nickel		500	1.41		442.5	88.5	80-120
Selenium		500	-0.4219		496.2	99.2	80-120
Silver		250	-0.4047		257	102.8	80-120
Zinc		500	-8.524		451.9	90.4	80-120

FORM IV INORGANIC-2
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Solution A Run Date: 05/21/2019 23:03

ICS Source: 209423,209324 Solution AB Run Date: 05/21/2019 23:06

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	477700	95.5	479500	95.9	80-120
Antimony		500	2.654		498.8	99.8	80-120
Arsenic		500	2.502		511.9	102.4	80-120
Barium		500	0.814		489.1	97.8	80-120
Beryllium		500	0.0272		484.1	96.8	80-120
Cadmium		500	-0.2199		510.9	102.2	80-120
Calcium	500000	500000	430200	86	428800	85.8	80-120
Chromium		500	0.065		465.6	93.1	80-120
Copper		500	0.39		506.2	101.2	80-120
Iron	200000	200000	176700	88.4	177600	88.8	80-120
Lead		500	4.462		412.8	82.6	80-120
Magnesium	500000	500000	488000	97.6	488100	97.6	80-120
Nickel		500	1.561		437.7	87.5	80-120
Selenium		500	3.627		496.4	99.3	80-120
Silver		250	-0.8876		255.7	102.3	80-120
Zinc		500	-8.341		445.6	89.1	80-120

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Solution A Run Date: 05/24/2019 20:27

ICS Source: 209950,209902 Solution AB Run Date: 05/24/2019 20:29

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	480500	96.1	474000	94.8	80-120
Antimony		500	3.644		471.8	94.4	80-120
Arsenic		500	2.092		485.7	97.1	80-120
Barium		500	0.5747		490.2	98	80-120
Beryllium		500	-0.0377		490.7	98.1	80-120
Cadmium		500	0.0575		491.8	98.4	80-120
Calcium	500000	500000	444200	88.8	438800	87.8	80-120
Chromium		500	-1.172		453.7	90.7	80-120
Copper		500	-0.4381		496.2	99.2	80-120
Iron	200000	200000	187200	93.6	184900	92.5	80-120
Lead		500	3.479		406.4	81.3	80-120
Magnesium	500000	500000	508800	101.8	500300	100.1	80-120
Nickel		500	1.162		422.1	84.4	80-120
Selenium		500	5.922		470.6	94.1	80-120
Silver		250	-0.7146		250.9	100.4	80-120
Zinc		500	-8.472		435.5	87.1	80-120

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Solution A Run Date: 06/10/2019 08:43

ICS Source: 211568,211569 Solution AB Run Date: 06/10/2019 08:46

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	520600	104.1	524100	104.8	80-120
Antimony		500	3.274		496.2	99.2	80-120
Arsenic		500	-4.381		525.2	105	80-120
Barium		500	0.835		508.5	101.7	80-120
Beryllium		500	-0.0816		520.6	104.1	80-120
Cadmium		500	-0.0707		550.3	110.1	80-120
Calcium	500000	500000	464300	92.9	467500	93.5	80-120
Chromium		500	-1.302		488.3	97.7	80-120
Copper		500	-0.083		533	106.6	80-120
Iron	200000	200000	194000	97	195400	97.7	80-120
Lead		500	-0.7866		456.6	91.3	80-120
Magnesium	500000	500000	532000	106.4	530800	106.2	80-120
Nickel		500	2.138		456.3	91.3	80-120
Selenium		500	4.376		537.3	107.5	80-120
Silver		250	-0.5847		248.3	99.3	80-120
Zinc		500	-9.084		485.6	97.1	80-120

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Solution A Run Date: 06/11/2019 09:02

ICS Source: 211568,211569 Solution AB Run Date: 06/11/2019 09:05

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	529000	105.8	528800	105.8	80-120
Antimony		500	4.552		503.1	100.6	80-120
Arsenic		500	2.9		526	105.2	80-120
Barium		500	0.7898		510.8	102.2	80-120
Beryllium		500	-0.0657		512.8	102.6	80-120
Cadmium		500	0.1813		535.4	107.1	80-120
Calcium	500000	500000	479400	95.9	476100	95.2	80-120
Chromium		500	-0.0829		486.3	97.3	80-120
Copper		500	1.038		529.1	105.8	80-120
Iron	200000	200000	197800	98.9	197200	98.6	80-120
Lead		500	-3.476		444.3	88.9	80-120
Magnesium	500000	500000	547500	109.5	547100	109.4	80-120
Nickel		500	1.685		460	92	80-120
Selenium		500	6.753		524.2	104.8	80-120
Silver		250	-1.081		243.6	97.4	80-120
Zinc		500	-9.32		474.2	94.8	80-120

SAMPLE NO.

2313611MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225400001

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	972	ND	1000	97
Arsenic	ug/L	75-125	1010	15.4	1000	99
Barium	ug/L	75-125	1160	202	1000	95
Beryllium	ug/L	75-125	955	ND	1000	95
Cadmium	ug/L	75-125	981	2.1	1000	98
Chromium	ug/L	75-125	967	57.8	1000	91
Copper	ug/L	75-125	1040	95.5	1000	94
Lead	ug/L	75-125	956	137	1000	82
Nickel	ug/L	75-125	982	109	1000	87
Selenium	ug/L	75-125	986	ND	1000	99
Silver	ug/L	75-125	486	ND	500	97
Zinc	ug/L	75-125	1280	401	1000	88

SAMPLE NO.

2313612MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225400001

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	972	ND	1000	97
Arsenic	ug/L	75-125	1010	15.4	1000	99
Barium	ug/L	75-125	1160	202	1000	96
Beryllium	ug/L	75-125	960	ND	1000	96
Cadmium	ug/L	75-125	987	2.1	1000	99
Chromium	ug/L	75-125	976	57.8	1000	92
Copper	ug/L	75-125	1040	95.5	1000	95
Lead	ug/L	75-125	961	137	1000	82
Nickel	ug/L	75-125	989	109	1000	88
Selenium	ug/L	75-125	986	ND	1000	99
Silver	ug/L	75-125	488	ND	500	98
Zinc	ug/L	75-125	1290	401	1000	89

SAMPLE NO.

2313613MS

FORM V INORGANIC-3

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: SP-1

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	1010	<3.3	1000	101
Arsenic	ug/L	75-125	1020	8.2J	1000	101
Barium	ug/L	75-125	1250	276	1000	97
Beryllium	ug/L	75-125	981	<0.24	1000	98
Cadmium	ug/L	75-125	990	<0.44	1000	99
Chromium	ug/L	75-125	941	<1.1	1000	94
Copper	ug/L	75-125	956	<2.7	1000	95
Lead	ug/L	75-125	846	<3.5	1000	85
Nickel	ug/L	75-125	909	3.7J	1000	91
Selenium	ug/L	75-125	1000	<5.2	1000	100
Silver	ug/L	75-125	488	<1.2	500	98
Zinc	ug/L	75-125	942	3.5J	1000	94

SAMPLE NO.

2313614MSD

FORM V INORGANIC-4

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: SP-1

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	1010	<3.3	1000	101
Arsenic	ug/L	75-125	1010	8.2J	1000	100
Barium	ug/L	75-125	1250	276	1000	97
Beryllium	ug/L	75-125	988	<0.24	1000	99
Cadmium	ug/L	75-125	994	<0.44	1000	99
Chromium	ug/L	75-125	946	<1.1	1000	95
Copper	ug/L	75-125	952	<2.7	1000	95
Lead	ug/L	75-125	845	<3.5	1000	84
Nickel	ug/L	75-125	914	3.7J	1000	91
Selenium	ug/L	75-125	1000	<5.2	1000	100
Silver	ug/L	75-125	488	<1.2	500	98
Zinc	ug/L	75-125	944	3.5J	1000	94

SAMPLE NO.

2316806MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225740008

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	3290	30.5	5000	65*
Arsenic	ug/L	75-125	5330	789	5000	91
Barium	ug/L	75-125	6540	1940	5000	92
Beryllium	ug/L	75-125	4680	21.5	5000	93
Cadmium	ug/L	75-125	4720	13.8	5000	94
Chromium	ug/L	75-125	5080	752	5000	87
Copper	ug/L	75-125	6080	1450	5000	93
Lead	ug/L	75-125	4490	637	5000	77
Nickel	ug/L	75-125	4820	766	5000	81
Selenium	ug/L	75-125	4490	ND	5000	90
Silver	ug/L	75-125	2370	ND	2500	95
Zinc	ug/L	75-125	6990	2860	5000	83

* Spike Recovery outside QC Limits

SAMPLE NO.

2316807MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225740008

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	3250	30.5	5000	64*
Arsenic	ug/L	75-125	5250	789	5000	89
Barium	ug/L	75-125	6500	1940	5000	91
Beryllium	ug/L	75-125	4670	21.5	5000	93
Cadmium	ug/L	75-125	4670	13.8	5000	93
Chromium	ug/L	75-125	5020	752	5000	85
Copper	ug/L	75-125	5960	1450	5000	90
Lead	ug/L	75-125	4450	637	5000	76
Nickel	ug/L	75-125	4780	766	5000	80
Selenium	ug/L	75-125	4500	ND	5000	90
Silver	ug/L	75-125	2350	ND	2500	94
Zinc	ug/L	75-125	6760	2860	5000	78

* Spike Recovery outside QC Limits

SAMPLE NO.

2332014MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50227311002

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Arsenic	ug/L	75-125	1090	220	1000	87
Lead	ug/L	75-125	914	246	1000	67*

* Spike Recovery outside QC Limits

SAMPLE NO.

2332015MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50227311002

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Arsenic	ug/L	75-125	1080	220	1000	86
Lead	ug/L	75-125	911	246	1000	66*

* Spike Recovery outside QC Limits

SAMPLE NO.

2315237PDS

FORM V INORGANIC-1

POST-DIGESTION SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: 50225400001

Analyte	Units	Control Limit %R	DF	Spiked Sample Result (SSR)	DF	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	1	979	1	3.2U	1000	97.9
Arsenic	ug/L	75-125	1	1000	1	15.4	1000	98.9
Barium	ug/L	75-125	1	1140	1	202	1000	94.0
Beryllium	ug/L	75-125	1	958	1	1.3J	1000	95.7
Cadmium	ug/L	75-125	1	982	1	2.1	1000	98.0
Chromium	ug/L	75-125	1	971	1	57.8	1000	91.3
Copper	ug/L	75-125	1	1030	1	95.5	1000	93.7
Lead	ug/L	75-125	1	953	1	137	1000	81.6
Nickel	ug/L	75-125	1	982	1	109	1000	87.3
Selenium	ug/L	75-125	1	978	1	4.0U	1000	97.8
Silver	ug/L	75-125	1	481	1	0.85U	500	96.1
Zinc	ug/L	75-125	1	1290	1	401	1000	88.5

SAMPLE NO.

2319685PDS

FORM V INORGANIC-1

POST-DIGESTION SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: 50225740008

Analyte	Units	Control Limit %R	DF	Spiked Sample Result (SSR)	DF	Sample Result (SR)	Spike Added (SA)	%R
Antimony	ug/L	75-125	1	911	1	6.1	1000	90.5
Arsenic	ug/L	75-125	1	1050	1	158	1000	89.3
Barium	ug/L	75-125	1	1280	1	389	1000	88.9
Beryllium	ug/L	75-125	1	923	1	4.3	1000	91.9
Cadmium	ug/L	75-125	1	924	1	2.8	1000	92.1
Chromium	ug/L	75-125	1	997	1	150	1000	84.6
Copper	ug/L	75-125	1	1200	1	291	1000	90.7
Lead	ug/L	75-125	1	887	1	127	1000	75.9
Nickel	ug/L	75-125	1	950	1	153	1000	79.6
Selenium	ug/L	75-125	1	890	1	4.0U	1000	89.0
Silver	ug/L	75-125	1	466	1	0.85U	500	93.3
Zinc	ug/L	75-125	1	1370	1	572	1000	80.2

SAMPLE NO.

2332468PDS

FORM V INORGANIC-1

POST-DIGESTION SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: 50227311002

Analyte	Units	Control Limit %R	DF	Spiked Sample Result (SSR)	DF	Sample Result (SR)	Spike Added (SA)	%R
Arsenic	ug/L	75-125	1	1090	1	220	1000	87.4
Lead	ug/L	75-125	1	909	1	246	1000	66.3*

SAMPLE NO.

2313612MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Antimony	20	972	972	0
Arsenic	20	1010	1010	0
Barium	20	1160	1160	0
Beryllium	20	955	960	0
Cadmium	20	981	987	1
Chromium	20	967	976	1
Copper	20	1040	1040	0
Lead	20	956	961	1
Nickel	20	982	989	1
Selenium	20	986	986	0
Silver	20	486	488	1
Zinc	20	1280	1290	1

SAMPLE NO.

2313614MSD

FORM VI INORGANIC-2
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Antimony	20	1010	1010	0
Arsenic	20	1020	1010	1
Barium	20	1250	1250	0
Beryllium	20	981	988	1
Cadmium	20	990	994	0
Chromium	20	941	946	0
Copper	20	956	952	0
Lead	20	846	845	0
Nickel	20	909	914	1
Selenium	20	1000	1000	0
Silver	20	488	488	0
Zinc	20	942	944	0

SAMPLE NO.

2316807MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Antimony	20	3290	3250	1
Arsenic	20	5330	5250	2
Barium	20	6540	6500	1
Beryllium	20	4680	4670	0
Cadmium	20	4720	4670	1
Chromium	20	5080	5020	1
Copper	20	6080	5960	2
Lead	20	4490	4450	1
Nickel	20	4820	4780	1
Selenium	20	4490	4500	0
Silver	20	2370	2350	1
Zinc	20	6990	6760	3

SAMPLE NO.

2332015MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Arsenic	20	1090	1080	1
Lead	20	914	911	0

SAMPLE NO.

2313610LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water

Analyte	Units	True	Found	%R	Limits	
Antimony	ug/L	1000	996	100	80	120
Arsenic	ug/L	1000	971	97	80	120
Barium	ug/L	1000	969	97	80	120
Beryllium	ug/L	1000	986	99	80	120
Cadmium	ug/L	1000	978	98	80	120
Chromium	ug/L	1000	977	98	80	120
Copper	ug/L	1000	958	96	80	120
Lead	ug/L	1000	925	93	80	120
Nickel	ug/L	1000	985	99	80	120
Selenium	ug/L	1000	979	98	80	120
Silver	ug/L	500	473	95	80	120
Zinc	ug/L	1000	976	98	80	120

SAMPLE NO.

2316805LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water

Analyte	Units	True	Found	%R	Limits	
Antimony	ug/L	1000	996	100	80	120
Arsenic	ug/L	1000	953	95	80	120
Barium	ug/L	1000	977	98	80	120
Beryllium	ug/L	1000	1010	101	80	120
Cadmium	ug/L	1000	986	99	80	120
Chromium	ug/L	1000	957	96	80	120
Copper	ug/L	1000	957	96	80	120
Lead	ug/L	1000	933	93	80	120
Nickel	ug/L	1000	976	98	80	120
Selenium	ug/L	1000	968	97	80	120
Silver	ug/L	500	475	95	80	120
Zinc	ug/L	1000	988	99	80	120

SAMPLE NO.

2331107LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water

Analyte	Units	True	Found	%R	Limits	
Arsenic	ug/L	1000	1010	101	80	120
Lead	ug/L	1000	1020	102	80	120

SAMPLE NO.

2315238SD

FORM VIII INORGANIC-1
SERIAL DILUTIONS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: 50225400001

Analyte	Units	Initial Sample Result	Serial Dilution Result	% Difference	Control Limit %D
Antimony	ug/L	3.2U	42.9		10
Arsenic	ug/L	15.4	23.3J	51.2*	10
Barium	ug/L	202	206	2.1	10
Beryllium	ug/L	1.3J	1.9J	42.2*	10
Cadmium	ug/L	2.1	2.8J	32.7*	10
Chromium	ug/L	57.8	59.7	3.3	10
Copper	ug/L	95.5	96.7	1.2	10
Lead	ug/L	137	150	10.1*	10
Nickel	ug/L	109	118	8.7	10
Selenium	ug/L	4.0U	20.0U		10
Silver	ug/L	0.85U	4.2U		10
Zinc	ug/L	401	433	8.0	10

* Indicates that the % Difference exceeds the control limit.
No difference is calculated if either result is a non-detect.

SAMPLE NO.

2319686SD

FORM VIII INORGANIC-1
SERIAL DILUTIONS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: 50225740008

Analyte	Units	Initial Sample Result	Serial Dilution Result	% Difference	Control Limit %D
Antimony	ug/L	6.1	30.4	398.9*	10
Arsenic	ug/L	158	166	4.9	10
Barium	ug/L	389	414	6.5	10
Beryllium	ug/L	4.3	5.0J	15.7*	10
Cadmium	ug/L	2.8	4.9J	76.9*	10
Chromium	ug/L	150	168	11.7*	10
Copper	ug/L	291	301	3.7	10
Lead	ug/L	127	152	19.0*	10
Nickel	ug/L	153	177	15.9*	10
Selenium	ug/L	4.0U	20.0U		10
Silver	ug/L	0.85U	4.2U		10
Zinc	ug/L	572	660	15.4*	10

* Indicates that the % Difference exceeds the control limit.
No difference is calculated if either result is a non-detect.

SAMPLE NO.

2332469SD

FORM VIII INORGANIC-1
SERIAL DILUTIONS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: 50227311002

Analyte	Units	Initial Sample Result	Serial Dilution Result	% Difference	Control Limit %D
Arsenic	ug/L	220	228	4.1	10
Lead	ug/L	246	328	33.3*	10

* Indicates that the % Difference exceeds the control limit.
No difference is calculated if either result is a non-detect.

FORM XI - INORGANIC-1
LINEAR DYNAMIC RANGES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Instrument ID: 50ICP3 Effective Date:01/28/2016

Analyte	Concentration (ug/L)
Antimony	40000
Arsenic	35000
Barium	25000
Beryllium	10000
Cadmium	20000
Chromium	25000
Copper	100000
Lead	100000
Nickel	100000
Selenium	50000
Silver	10000
Zinc	50000

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Preparation Method: EPA 3010 Batch: MPRP 35817

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2313609	2313609BLANK	05/21/2019	50	50
2313610	2313610LCS	05/21/2019	25	25
2313611	2313611MS	05/21/2019	25	25
2313612	2313612MSD	05/21/2019	25	25
2313613	2313613MS	05/21/2019	25	25
2313614	2313614MSD	05/21/2019	25	25
50225468001	SP-1	05/21/2019	50	50
50225468002	SP-3	05/21/2019	50	50
50225468003	SP-4	05/21/2019	50	50
50225468004	SP-5	05/21/2019	50	50
50225468005	SP-5 DUP	05/21/2019	50	50

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Preparation Method: EPA 3010 Batch: MPRP 35873

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2316804	2316804BLANK	05/24/2019	50	50
2316805	2316805LCS	05/24/2019	25	25
2316806	2316806MS	05/24/2019	5	25
2316807	2316807MSD	05/24/2019	5	25
50225468006	EQ Blank	05/24/2019	50	50

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Preparation Method: EPA 3010 Batch: MPRP 36174

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2331106	2331106BLANK	06/10/2019	50	50
2331107	2331107LCS	06/10/2019	25	25
2332014	2332014MS	06/10/2019	25	25
2332015	2332015MSD	06/10/2019	25	25
50225468008	SP-4 FIELD FILTERED	06/10/2019	50	50
50225468009	SP-5 FIELD FILTERED	06/10/2019	50	50

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Analysis Method: EPA 6010

Start Date: 05/21/2019 20:33 End Date: 05/22/2019 00:06

Sample Name	Lab Sample ID	D/F	Date	Time	Ag	As	Ba	Be	Cd	Cr	Cu	Ni	Pb	Sb	Se	Zn
15092684CAL0	15092684CAL0	1	05/21/2019	20:33	X	X	X	X	X	X	X	X	X	X	X	X
15092685CAL1	15092685CAL1	1	05/21/2019	20:36				X	X				X		X	X
15092686CAL2	15092686CAL2	1	05/21/2019	20:39			X				X					
15092687CAL3	15092687CAL3	1	05/21/2019	20:41		X										
15092688CAL4	15092688CAL4	1	05/21/2019	20:43						X		X				
15092689CAL5	15092689CAL5	1	05/21/2019	20:45										X		
15092691CAL7	15092691CAL7	1	05/21/2019	20:50	X											
15092692ICV	15092692ICV	1	05/21/2019	20:52	X	X	X	X	X	X	X	X	X	X	X	X
15092693ICB	15092693ICB	1	05/21/2019	20:54	X	X	X	X	X	X	X	X	X	X	X	X
15092694CRDL	15092694CRDL	1	05/21/2019	20:57	X	X	X	X	X	X	X	X	X	X	X	X
15092695ICSA	15092695ICSA	1	05/21/2019	20:59	X	X	X	X	X	X	X	X	X	X	X	X
15092696ICSAB	15092696ICSAB	1	05/21/2019	21:01	X	X	X	X	X	X	X	X	X	X	X	X
15092697CCV	15092697CCV	1	05/21/2019	21:32	X	X	X	X	X	X	X	X	X	X	X	X
15092698CCB	15092698CCB	1	05/21/2019	21:34	X	X	X	X	X	X	X	X	X	X	X	X
15092701CCV	15092701CCV	1	05/21/2019	22:39	X	X	X	X	X	X	X	X	X	X	X	X
15092702CCB	15092702CCB	1	05/21/2019	22:41	X	X	X	X	X	X	X	X	X	X	X	X
2313609BLANK	2313609	1	05/21/2019	22:45	X	X	X	X	X	X	X	X	X	X	X	X
2313610LCS	2313610	1	05/21/2019	22:47	X	X	X	X	X	X	X	X	X	X	X	X
50225400001	50225400001	1	05/21/2019	22:49									X			
2313611MS	2313611	1	05/21/2019	22:52	X	X	X	X	X	X	X	X	X	X	X	X
2313612MSD	2313612	1	05/21/2019	22:54	X	X	X	X	X	X	X	X	X	X	X	X
2315237PDS	2315237	1	05/21/2019	22:56	X	X	X	X	X	X	X	X	X	X	X	X
2315238SD	2315238	1	05/21/2019	22:59	X	X	X	X	X	X	X	X	X	X	X	X
15092703ICSA	15092703ICSA	1	05/21/2019	23:03	X	X	X	X	X	X	X	X	X	X	X	X
15092704ICSAB	15092704ICSAB	1	05/21/2019	23:06	X	X	X	X	X	X	X	X	X	X	X	X
15092705CCV	15092705CCV	1	05/21/2019	23:08	X	X	X	X	X	X	X	X	X	X	X	X
15092706CCB	15092706CCB	1	05/21/2019	23:10	X	X	X	X	X	X	X	X	X	X	X	X
SP-1	50225468001	1	05/21/2019	23:33	X	X	X	X	X	X	X	X	X	X	X	X
15092707CCV	15092707CCV	1	05/21/2019	23:36	X	X	X	X	X	X	X	X	X	X	X	X
15092708CCB	15092708CCB	1	05/21/2019	23:38	X	X	X	X	X	X	X	X	X	X	X	X
2313613MS	2313613	1	05/21/2019	23:40	X	X	X	X	X	X	X	X	X	X	X	X
2313614MSD	2313614	1	05/21/2019	23:43	X	X	X	X	X	X	X	X	X	X	X	X
SP-3	50225468002	1	05/21/2019	23:45	X	X	X	X	X	X	X	X	X	X	X	X
SP-4	50225468003	1	05/21/2019	23:47	X	X	X	X	X	X	X	X	X	X	X	X
SP-5	50225468004	1	05/21/2019	23:50	X	X	X	X	X	X	X	X	X	X	X	X
SP-5 DUP	50225468005	1	05/21/2019	23:52	X	X	X	X	X	X	X	X	X	X	X	X
15092709CCV	15092709CCV	1	05/22/2019	00:04	X	X	X	X	X	X	X	X	X	X	X	X
15092710CCB	15092710CCB	1	05/22/2019	00:06	X	X	X	X	X	X	X	X	X	X	X	X

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Analysis Method: EPA 6010

Start Date: 05/24/2019 20:01 End Date: 05/24/2019 23:19

Sample Name	Lab Sample ID	D/F	Date	Time	Ag	As	Ba	Be	Cd	Cr	Cu	Ni	Pb	Sb	Se	Zn
15126448CAL0	15126448CAL0	1	05/24/2019	20:01	X	X	X	X	X	X	X	X	X	X	X	X
15126449CAL1	15126449CAL1	1	05/24/2019	20:04				X	X				X		X	X
15126450CAL2	15126450CAL2	1	05/24/2019	20:07			X				X					
15126451CAL3	15126451CAL3	1	05/24/2019	20:09		X										
15126452CAL4	15126452CAL4	1	05/24/2019	20:11						X		X				
15126453CAL5	15126453CAL5	1	05/24/2019	20:13										X		
15126455CAL7	15126455CAL7	1	05/24/2019	20:18	X											
15126456ICB	15126456ICB	1	05/24/2019	20:22	X	X	X	X	X	X	X	X	X	X	X	X
15126457CRDL	15126457CRDL	1	05/24/2019	20:24	X	X	X	X	X	X	X	X	X	X	X	X
15126458ICSA	15126458ICSA	1	05/24/2019	20:27	X	X	X	X	X	X	X	X	X	X	X	X
15126459ICSAB	15126459ICSAB	1	05/24/2019	20:29	X	X	X	X	X	X	X	X	X	X	X	X
15126460ICV	15126460ICV	1	05/24/2019	20:42	X	X	X	X	X	X	X	X	X	X	X	X
15126461CCV	15126461CCV	1	05/24/2019	20:51	X	X	X	X	X	X	X	X	X	X	X	X
15126462CCB	15126462CCB	1	05/24/2019	20:53	X	X	X	X	X	X	X	X	X	X	X	X
15126470CCV	15126470CCV	1	05/24/2019	22:26	X	X	X	X	X	X	X	X	X	X	X	X
15126471CCB	15126471CCB	1	05/24/2019	22:28	X	X	X	X	X	X	X	X	X	X	X	X
2316804BLANK	2316804	1	05/24/2019	22:35	X	X	X	X	X	X	X	X	X	X	X	X
2316805LCS	2316805	1	05/24/2019	22:37	X	X	X	X	X	X	X	X	X	X	X	X
50225740008	50225740008	1	05/24/2019	22:38	X	X	X		X	X			X		X	
2316806MS	2316806	1	05/24/2019	22:41	X	X	X	X	X	X	X	X	X	X	X	X
2316807MSD	2316807	1	05/24/2019	22:43	X	X	X	X	X	X	X	X	X	X	X	X
2319685PDS	2319685	1	05/24/2019	22:45	X	X	X	X	X	X	X	X	X	X	X	X
2319686SD	2319686	1	05/24/2019	22:47	X	X	X	X	X	X	X	X	X	X	X	X
15126472CCV	15126472CCV	1	05/24/2019	22:52	X	X	X	X	X	X	X	X	X	X	X	X
15126473CCB	15126473CCB	1	05/24/2019	22:53	X	X	X	X	X	X	X	X	X	X	X	X
EQ Blank	50225468006	1	05/24/2019	22:58	X	X	X	X	X	X	X	X	X	X	X	X
15126474CCV	15126474CCV	1	05/24/2019	23:17	X	X	X	X	X	X	X	X	X	X	X	X
15126475CCB	15126475CCB	1	05/24/2019	23:19	X	X	X	X	X	X	X	X	X	X	X	X

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Analysis Method: EPA 6010

Start Date: 06/10/2019 08:19 End Date: 06/10/2019 14:36

Sample Name	Lab Sample ID	D/F	Date	Time	As	Pb
15219287CAL0	15219287CAL0	1	06/10/2019	08:19	X	X
15219288CAL1	15219288CAL1	1	06/10/2019	08:21		X
15219290CAL3	15219290CAL3	1	06/10/2019	08:26	X	
15219295ICV	15219295ICV	1	06/10/2019	08:37	X	X
15219296ICB	15219296ICB	1	06/10/2019	08:39	X	X
15219298CRDL	15219298CRDL	1	06/10/2019	08:41	X	X
15219299ICSA	15219299ICSA	1	06/10/2019	08:43	X	X
15219300ICSAB	15219300ICSAB	1	06/10/2019	08:46	X	X
15219303CCV	15219303CCV	1	06/10/2019	09:10	X	X
15219304CCB	15219304CCB	1	06/10/2019	09:12	X	X
15223927CCV	15223927CCV	1	06/10/2019	13:23	X	X
15223928CCB	15223928CCB	1	06/10/2019	13:25	X	X
2331107LCS	2331107	1	06/10/2019	13:42	X	X
SP-4 FIELD FILTERED	50225468008	1	06/10/2019	13:44	X	X
SP-5 FIELD FILTERED	50225468009	1	06/10/2019	13:46	X	
15223929CCV	15223929CCV	1	06/10/2019	13:51	X	X
15223930CCB	15223930CCB	1	06/10/2019	13:52	X	X
50227311002	50227311002	1	06/10/2019	13:59	X	X
2332468PDS	2332468	1	06/10/2019	14:01	X	X
15223931CCV	15223931CCV	1	06/10/2019	14:07	X	X
15223932CCB	15223932CCB	1	06/10/2019	14:08	X	X
2332469SD	2332469	1	06/10/2019	14:11	X	X
2332014MS	2332014	1	06/10/2019	14:13	X	X
2332015MSD	2332015	1	06/10/2019	14:15	X	X
15219720CCV	15219720CCV	1	06/10/2019	14:34	X	X
15223933CCV	15223933CCV	1	06/10/2019	14:34	X	X
15219721CCB	15219721CCB	1	06/10/2019	14:36	X	X
15223934CCB	15223934CCB	1	06/10/2019	14:36	X	X

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Analysis Method: EPA 6010

Start Date: 06/11/2019 08:38 End Date: 06/11/2019 10:55

Sample Name	Lab Sample ID	D/F	Date	Time	As	Pb
15224303CAL0	15224303CAL0	1	06/11/2019	08:38	X	X
15224304CAL1	15224304CAL1	1	06/11/2019	08:40		X
15224306CAL3	15224306CAL3	1	06/11/2019	08:45	X	
15224311ICV	15224311ICV	1	06/11/2019	08:56	X	X
15224312ICB	15224312ICB	1	06/11/2019	08:58	X	X
15224313CRDL	15224313CRDL	1	06/11/2019	09:00	X	X
15224314ICSA	15224314ICSA	1	06/11/2019	09:02	X	X
15224315ICSAB	15224315ICSAB	1	06/11/2019	09:05	X	X
15224316CCV	15224316CCV	1	06/11/2019	09:29	X	X
15224317CCB	15224317CCB	1	06/11/2019	09:31	X	X
15224323CCV	15224323CCV	1	06/11/2019	10:26	X	X
15224324CCB	15224324CCB	1	06/11/2019	10:28	X	X
2331106BLANK	2331106	1	06/11/2019	10:35	X	X
15224328CCV	15224328CCV	1	06/11/2019	10:53	X	X
15224329CCB	15224329CCB	1	06/11/2019	10:55	X	X

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Start Date: 05/21/2019 20:33 End Date: 05/22/2019 00:06

Sample Name	Time	Y1	Y2	Y3
15092684CAL0	20:33	100.0	100.0	100.0
15092685CAL1	20:36	100.1	99.4	97.5
15092686CAL2	20:39	100.0	99.4	98.2
15092687CAL3	20:41	101.8	101.3	
15092688CAL4	20:43	98.9	97.2	97.4
15092689CAL5	20:45	100.6	100.1	
15092690CAL6	20:48	99.6	98.2	99.0
15092691CAL7	20:50	98.9		
15092692ICV	20:52	99.3	98.2	98.4
15092693ICB	20:54	100.4	99.9	97.2
15092694CRDL	20:57	100.7	101.0	98.1
15092695ICSA	20:59	87.8	85.3	93.5
15092696ICSAB	21:01	87.6	85.1	92.9
15092697CCV	21:32	99.7	99.9	101.3
15092698CCB	21:34	100.0	101.3	99.5
15092701CCV	22:39	99.7	99.5	100.7
15092702CCB	22:41	101.1	101.7	99.7
15092703ICSA	23:03	88.2	87.1	95.8
15092704ICSAB	23:06	88.1	87.2	96.6
15092705CCV	23:08	99.9	100.5	100.6
15092706CCB	23:10	100.8	102.7	100.2
15092707CCV	23:36	100.6	100.8	100.6
15092708CCB	23:38	101.4	103.2	100.3
15092709CCV	00:04	100.0	101.0	100.8
15092710CCB	00:06	101.1	103.4	101.4

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Start Date: 05/24/2019 20:01 End Date: 05/24/2019 23:19

Sample Name	Time	Y1	Y2	Y3
15126448CAL0	20:01	100.0	100.0	100.0
15126449CAL1	20:04	102.9	103.7	104.5
15126450CAL2	20:07	102.1	102.0	103.6
15126451CAL3	20:09	105.2	105.8	
15126452CAL4	20:11	102.2	101.3	102.9
15126453CAL5	20:13	103.8	104.4	
15126454CAL6	20:16	102.4	103.0	105.7
15126455CAL7	20:18	102.5		
15126456ICB	20:22	103.7	104.5	105.0
15126457CRDL	20:24	105.2	105.6	105.8
15126458ICSA	20:27	93.9	90.5	101.9
15126459ICSAB	20:29	93.4	90.4	102.1
15126460ICV	20:42	101.5	100.4	102.7
15126461CCV	20:51	103.4	102.9	106.4
15126462CCB	20:53	104.0	105.2	104.8
15126470CCV	22:26	105.7	104.7	106.6
15126471CCB	22:28	105.0	105.2	104.8
15126472CCV	22:52	106.5	105.7	106.9
15126473CCB	22:53	106.6	107.5	106.8
15126474CCV	23:17	104.4	104.6	105.6
15126475CCB	23:19	104.3	103.6	101.8

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Start Date: 06/10/2019 08:19 End Date: 06/10/2019 14:36

Sample Name	Time	Y1	Y2	Y3
15219287CAL0	08:19	100.0	100.0	100.0
15219288CAL1	08:21	101.9	100.7	100.3
15219289CAL2	08:24	101.4	100.1	99.5
15219290CAL3	08:26	102.7	101.4	
15219291CAL4	08:28	100.3	98.7	99.0
15219292CAL5	08:30	107.3	105.4	
15219293CAL6	08:32	100.1	99.7	99.4
15219294CAL7	08:35	99.1		
15219295ICV	08:37	100.4	99.2	100.2
15219296ICB	08:39	101.1	101.0	99.7
15219298CRDL	08:41	101.8	102.7	100.8
15219299ICSA	08:43	89.8	87.1	96.8
15219300ICSAB	08:46	88.6	86.2	95.5
15219303CCV	09:10	101.2	99.9	99.8
15219304CCB	09:12	102.1	102.6	101.5
15223927CCV	13:23	101.4	96.8	93.4
15223928CCB	13:25	102.0	97.9	94.2
15223929CCV	13:51	102.0	96.2	94.3
15223930CCB	13:52	102.0	97.9	94.9
15223931CCV	14:07	100.5	94.7	96.0
15223932CCB	14:08	101.7	97.7	93.7
15219720CCV	14:34	99.7	94.7	94.1
15223933CCV	14:34	99.7	94.7	94.1
15219721CCB	14:36	100.3	95.6	93.2
15223934CCB	14:36	100.3	95.6	93.2

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICP3 Start Date: 06/11/2019 08:38 End Date: 06/11/2019 10:55

Sample Name	Time	Y1	Y2	Y3
15224303CAL0	08:38	100.0	100.0	100.0
15224304CAL1	08:40	100.7	101.1	99.5
15224305CAL2	08:42	101.3	100.6	99.6
15224306CAL3	08:45	103.9	104.2	
15224307CAL4	08:47	101.5	101.6	101.4
15224308CAL5	08:49	103.9	105.2	
15224309CAL6	08:51	102.9	100.9	100.8
15224310CAL7	08:54	99.2		
15224311ICV	08:56	102.4	101.9	103.2
15224312ICB	08:58	102.4	102.0	100.9
15224313CRDL	09:00	103.6	105.1	101.9
15224314ICSA	09:02	89.2	86.8	96.4
15224315ICSAB	09:05	89.9	87.2	96.7
15224316CCV	09:29	103.3	100.3	100.8
15224317CCB	09:31	105.7	104.0	101.7
15224323CCV	10:26	100.0	96.7	96.5
15224324CCB	10:28	100.5	99.6	96.8
15224328CCV	10:53	100.5	97.8	97.3
15224329CCB	10:55	102.7	100.1	100.2

Prep Log Report

Batch Information: MPRP 35817

Template Version: EF-IN-I-317(rev.00, 30Nov2011)

Prep Method	EPA 3010	Analysis Method	EPA 6010	Extracted By	cel	Extracted Date/Time	05/21/2019 13:28:46:303
Block ID	5	Block Temp (C)	95	Correction Factor (C)	0	Corrected Temp. (C)	95
Thermometer ID	pt187	Digestion Vessel Lot	204633	Batch Notes	p/b phb 052119	Reviewed By	JPK
Reviewed By Date	05/22/2019 06:09						

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	Conc. HCL (mL)	Final Volume (mL)	Sample Notes	6010-SPK (mL)
6010 W_P	BLANK	**2313609**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	LCS	**2313610**	Water	25	200224 (1.25)	206319 (1)	25		209405 (0.5)
6010 W_P	RQS	**50225400001**	Water	50	200224 (2.5)	206319 (2)	50	sediment	
6010 W_P	MS	**2313611**	Water	25	200224 (1.25)	206319 (1)	25	sediment	209405 (0.5)
6010 W_P	MSD	**2313612**	Water	25	200224 (1.25)	206319 (1)	25	sediment	209405 (0.5)
6010 W_P	PS	**50225400002**	Water	50	200224 (2.5)	206319 (2)	50	sediment	
6010 W_P	PS	**50225400003**	Water	50	200224 (2.5)	206319 (2)	50	sediment	
6010 W_P	PS	**50225400004**	Water	50	200224 (2.5)	206319 (2)	50	sediment	
6010 W_P	PS	**50225442021**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225442022**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225442023**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225442024**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225442025**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225442026**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225442027**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	RQS	**50225468001**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	MS	**2313613**	Water	25	200224 (1.25)	206319 (1)	25		209405 (0.5)

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	Conc. HCL (mL)	Final Volume (mL)	Sample Notes	6010-SPK (mL)
6010 W_P	MSD	**2313614**	Water	25	200224 (1.25)	206319 (1)	25		209405 (0.5)
6010 W_P	PS	**50225468002**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225468003**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225468004**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50225468005**	Water	50	200224 (2.5)	206319 (2)	50		

Standard Notes:

209405: ICP-SPK

Prep Log Report

Batch Information: MPRP 35873

Template Version: EF-IN-I-317(rev.00, 30Nov2011)

Prep Method	EPA 3010	Analysis Method	EPA 6010	Extracted By	cel	Extracted Date/Time	05/24/2019 13:15:01:723
Block ID	5	Block Temp (C)	95	Correction Factor (C)	0	Corrected Temp. (C)	95
Thermometer ID	pt187	Digestion Vessel Lot	204633	Batch Notes		Reviewed By	JPK
Reviewed By Date	05/25/2019 04:55						

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	Conc. HCL (mL)	Final Volume (mL)	Sample Notes	6010-SPK (mL)
6010 W_P	BLANK	**2316804**	Water	50	200224 (2.5)	206319 (2)	50	3*	
6010 W_P	LCS	**2316805**	Water	25	200224 (1.25)	206319 (1)	25	3*	209416 (0.5)
6010 W_P	PS	**50225740008**	Water	10	200224 (2.5)	206319 (2)	50	3*	
6010 W_P	MS	**2316806**	Water	5	200224 (1.25)	206319 (1)	25	3*	209416 (0.5)
6010 W_P	MSD	**2316807**	Water	5	200224 (1.25)	206319 (1)	25	3*	209416 (0.5)
6010 W_P	PS	**50225740009**	Water	10	200224 (2.5)	206319 (2)	50	5*	
6010 W_P	PS	**50225740010**	Water	10	200224 (2.5)	206319 (2)	50	5*	
6010 W_P	PS	**50225468006**	Water	50	200224 (2.5)	206319 (2)	50		
6010 W_P	PS	**50224840001**	Water	0.5	200224 (2.5)	206319 (2)	50	utp	
6010 W_P	PS	**50224843001**	Water	0.5	200224 (2.5)	206319 (2)	50	utp	
6010 W_P	PS	**50225824001**	Water	0.5	200224 (2.5)	206319 (2)	50	4*	
6010 W_P	PS	**50225826001**	Water	0.5	200224 (2.5)	206319 (2)	50	4*	
6010 W_P	PS	**50225827001**	Water	0.5	200224 (2.5)	206319 (2)	50	2*	
6010 W_P	PS	**50225829001**	Water	0.5	200224 (2.5)	206319 (2)	50	1*	
6010 W_P	PS	**50225833001**	Water	0.5	200224 (2.5)	206319 (2)	50	utp	
6010 W_P	PS	**50225837001**	Water	0.5	200224 (2.5)	206319 (2)	50	4*	
6010 W_P	PS	**50225839001**	Water	0.5	200224 (2.5)	206319 (2)	50	4*	

Prep Log Report

Sample Notes:

1*: pur 022319 07:25

2*: pur 0502319 07:35

3*: pur 052219 14:05 sediment

4*: pur 052319 07:35

5*: utp sediment

Standard Notes:

209416: ICP-SPK

Prep Log Report

Batch Information: MPRP 36174

Template Version: EF-IN-I-317(rev.00, 30Nov2011)

Prep Method	EPA 3010	Analysis Method	EPA 6010	Extracted By	phb	Extracted Date/Time	06/10/2019 06:21:25:799
Block ID	9	Block Temp (C)	94	Correction Factor (C)	0	Corrected Temp. (C)	94.0
Thermometer ID	PT-258	Digestion Vessel Lot	211320/211570 filtermate	Batch Notes		Reviewed By	RAM
Reviewed By Date	06/10/2019 13:14						

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	Conc. HCL (mL)	Final Volume (mL)	Sample Notes	6010-SPK (mL)
6010 W_P	BLANK	**2331106**	Water	50	200224 (2.5)	209941 (2)	50		
6010 W_P	LCS	**2331107**	Water	25	200224 (1.25)	209941 (1)	25		210984 (0.5)
6010 W_P	PS	**50225468008**	Water	50	200224 (2.5)	209941 (2)	50		
6010 W_P	PS	**50225468009**	Water	50	200224 (2.5)	209941 (2)	50		
6010 W_P	PS	**50227282007**	Water	50	200224 (2.5)	209941 (2)	50		
6010 W_P	PS	**50227282008**	Water	50	200224 (2.5)	209941 (2)	50		
6010 W_P	PS	**50227311001**	Water	50	200224 (2.5)	209941 (2)	50	utp	
6010 W_P	PS	**50227311002**	Water	50	200224 (2.5)	209941 (2)	50	utp	
6010 W_P	MS	**2332014**	Water	25	200224 (1.25)	209941 (1)	25	utp	210984 (0.5)
6010 W_P	MSD	**2332015**	Water	25	200224 (1.25)	209941 (1)	25	utp	210984 (0.5)
6010 W_P	PS	**50227311005**	Water	50	200224 (2.5)	209941 (2)	50	utp	
6010 W_P	PS	**50227311006**	Water	50	200224 (2.5)	209941 (2)	50	utp	
6010 W_P	PS	**50226414001**	Water	50	200224 (2.5)	209941 (2)	50	1*	
6010 W_P	PS	**50227158001**	Water	0.5	200224 (2.5)	209941 (2)	50	2*	
6010 W_P	PS	**50227298001**	Water	0.5	200224 (2.5)	209941 (2)	50	2*	
6010 W_P	PS	**50227301001**	Water	0.5	200224 (2.5)	209941 (2)	50	2*	
6010 W_P	PS	**50227305001**	Water	0.5	200224 (2.5)	209941 (2)	50	utp	

Prep Log Report

Sample Notes:

1*: pur 060619 08:20

2*: pur 060719 17:50

Standard Notes:

210984: ICP-SPK

SAMPLE NO.

SP-1

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468001 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-28-0	Thallium	<0.040	U	ug/L	1	06/01/2019 12:02

SAMPLE NO.

SP-3

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468002 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-28-0	Thallium	0.18	J	ug/L	1	06/01/2019 14:17

SAMPLE NO.

SP-4

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468003 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-28-0	Thallium	0.22	J	ug/L	1	06/01/2019 14:22

SAMPLE NO.

SP-5

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468004 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-28-0	Thallium	<0.040	U	ug/L	1	06/01/2019 14:26

SAMPLE NO.

SP-5 DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468005 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-28-0	Thallium	<0.040	U	ug/L	1	06/01/2019 14:31

SAMPLE NO.

EQ Blank

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468006 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-28-0	Thallium	<0.040	U	ug/L	1	06/01/2019 14:45

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210189

Continuing Calibration Verification Source: 210187

Concentration Units: ug/L Instrument ID: 50ICM2

	Initial Calibration Verification				Continuing Calibration Verification						
	06/01/2019 10:44				06/01/2019 11:07			06/01/2019 11:39			Control Limit
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	
Thallium	50	50.1	100.2	90-110	20	19.1	95.6	20	18.9	94.5	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210187

Concentration Units: ug/L Instrument ID: 50ICM2

	Continuing Calibration Verification			
	06/01/2019 12:24			Control Limit
Analyte	True	Found	%R	
Thallium	20	19.0	95.0	90-110

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210189

Continuing Calibration Verification Source: 210187

Concentration Units: ug/L Instrument ID: 50ICM2

	Initial Calibration Verification				Continuing Calibration Verification						
	06/01/2019 13:45				06/01/2019 14:08			06/01/2019 14:36			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Thallium	50	49.9	99.9	90-110	20	19.1	95.6	20	19.3	96.3	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210187

Concentration Units: ug/L Instrument ID: 50ICM2

	Continuing Calibration Verification			
	06/01/2019 15:03			Control Limit
Analyte	True	Found	%R	
Thallium	20	19.3	96.7	90-110

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210190 Analysis Date/Time: 06/01/2019 10:53

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Thallium	1.0	0.94	94.5	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210190 Analysis Date/Time: 06/01/2019 11:48

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Thallium	1.0	0.93	93.0	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210190 Analysis Date/Time: 06/01/2019 13:54

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Thallium	1.0	0.93	93.3	50-150

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Water Instrument ID: 50ICM2

Method Blank Concentration Units: ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	06/01/2019 10:48	C	06/01/2019 11:11	C	06/01/2019 11:43	C	06/01/2019 12:29	C	2321049	C
Thallium	0.50	U	0.50	U	0.50	U	0.50	U	<0.040	U

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50ICM2

Method Blank Concentration Units:

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)					
	06/01/2019 13:49	C	06/01/2019 14:13	C	06/01/2019 14:40	C	06/01/2019 15:08	C
Thallium	0.50	U	0.50	U	0.50	U	0.50	U

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICM2 Solution A Run Date: 06/01/2019 10:57

ICS Source: 210191,210192 Solution AB Run Date: 06/01/2019 11:02

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	20000	20800	18787.207	93.9	18994.972	91.3	80-120
Molybdenum	400	408	397.207	99.3	400.041	98	80-120
Thallium		8	0.003		7.875	98.4	80-120
Titanium	400	408	432.948	108.2	446.27	109.4	80-120

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICM2 Solution A Run Date: 06/01/2019 13:59

ICS Source: 210191,210192 Solution AB Run Date: 06/01/2019 14:03

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	20000	20800	19111.988	95.6	19171.277	92.2	80-120
Molybdenum	400	408	394.665	98.7	399.096	97.8	80-120
Thallium		8	0.003		7.903	98.8	80-120
Titanium	400	408	443.314	110.8	450.747	110.5	80-120

SAMPLE NO.

2321051MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: SP-1

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Thallium	ug/L	75-125	40.5	<0.040	40.0	101

SAMPLE NO.

2321052MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: SP-1

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Thallium	ug/L	75-125	41.5	<0.040	40.0	104

SAMPLE NO.

2323165PDS

FORM V INORGANIC-1

POST-DIGESTION SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: SP-1

Analyte	Units	Control Limit %R	DF	Spiked Sample Result (SSR)	DF	Sample Result (SR)	Spike Added (SA)	%R
Thallium	ug/L	75-125	1	19.4	1	0.040U	20	97.2

SAMPLE NO.

2321052MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Thallium	20	40.5	41.5	2

SAMPLE NO.

2321050LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water

Analyte	Units	True	Found	%R	Limits	
Thallium	ug/L	40.0	40.2	101	80	120

SAMPLE NO.

2323166SD

FORM VIII INORGANIC-1
SERIAL DILUTIONS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Parent Sample ID: SP-1

Analyte	Units	Initial Sample Result	Serial Dilution Result	% Difference	Control Limit %D
Thallium	ug/L	0.040U	0.20U		10

* Indicates that the % Difference exceeds the control limit.
No difference is calculated if either result is a non-detect.

FORM XI - INORGANIC-1
LINEAR DYNAMIC RANGES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Instrument ID: 50ICM2 Effective Date:12/05/2014

Analyte	Concentration (ug/L)
Thallium	200

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Preparation Method: EPA 200.2 Batch: MPRP 35982

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2321049	2321049BLANK	05/30/2019	50	50
2321050	2321050LCS	05/30/2019	50	50
2321051	2321051MS	05/30/2019	50	50
2321052	2321052MSD	05/30/2019	50	50
50225468001	SP-1	05/30/2019	50	50
50225468002	SP-3	05/30/2019	50	50
50225468003	SP-4	05/30/2019	50	50
50225468004	SP-5	05/30/2019	50	50
50225468005	SP-5 DUP	05/30/2019	50	50
50225468006	EQ Blank	05/30/2019	50	50

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICM2 Analysis Method: EPA 6020

Start Date: 06/01/2019 10:21 End Date: 06/01/2019 12:29

Sample Name	Lab Sample ID	D/F	Date	Time	TI
15168265CAL0	15168265CAL0	1	06/01/2019	10:21	X
15168266CAL1	15168266CAL1	1	06/01/2019	10:26	X
15168267CAL2	15168267CAL2	1	06/01/2019	10:30	X
15168268CAL3	15168268CAL3	1	06/01/2019	10:35	X
15168269ICV	15168269ICV	1	06/01/2019	10:44	X
15168270ICB	15168270ICB	1	06/01/2019	10:48	X
15168271CRDL	15168271CRDL	1	06/01/2019	10:53	X
15168272ICSA	15168272ICSA	1	06/01/2019	10:57	X
15168273ICSAB	15168273ICSAB	1	06/01/2019	11:02	X
15168274CCV	15168274CCV	1	06/01/2019	11:07	X
15168275CCB	15168275CCB	1	06/01/2019	11:11	X
15168276CCV	15168276CCV	1	06/01/2019	11:39	X
15168277CCB	15168277CCB	1	06/01/2019	11:43	X
15168278CRDL	15168278CRDL	1	06/01/2019	11:48	X
2321049BLANK	2321049	1	06/01/2019	11:52	X
2321050LCS	2321050	1	06/01/2019	11:57	X
SP-1	50225468001	1	06/01/2019	12:02	X
2321051MS	2321051	1	06/01/2019	12:06	X
2321052MSD	2321052	1	06/01/2019	12:11	X
2323165PDS	2323165	1	06/01/2019	12:15	X
2323166SD	2323166	1	06/01/2019	12:20	X
15168279CCV	15168279CCV	1	06/01/2019	12:24	X
15168280CCB	15168280CCB	1	06/01/2019	12:29	X

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICM2 Analysis Method: EPA 6020

Start Date: 06/01/2019 13:22 End Date: 06/01/2019 15:08

Sample Name	Lab Sample ID	D/F	Date	Time	TI
15168281CAL0	15168281CAL0	1	06/01/2019	13:22	X
15168282CAL1	15168282CAL1	1	06/01/2019	13:27	X
15168283CAL2	15168283CAL2	1	06/01/2019	13:31	X
15168284CAL3	15168284CAL3	1	06/01/2019	13:36	X
15168285ICV	15168285ICV	1	06/01/2019	13:45	X
15168286ICB	15168286ICB	1	06/01/2019	13:49	X
15168287CRDL	15168287CRDL	1	06/01/2019	13:54	X
15168288ICSA	15168288ICSA	1	06/01/2019	13:59	X
15168289ICSAB	15168289ICSAB	1	06/01/2019	14:03	X
15168290CCV	15168290CCV	1	06/01/2019	14:08	X
15168291CCB	15168291CCB	1	06/01/2019	14:13	X
SP-3	50225468002	1	06/01/2019	14:17	X
SP-4	50225468003	1	06/01/2019	14:22	X
SP-5	50225468004	1	06/01/2019	14:26	X
SP-5 DUP	50225468005	1	06/01/2019	14:31	X
15168292CCV	15168292CCV	1	06/01/2019	14:36	X
15168293CCB	15168293CCB	1	06/01/2019	14:40	X
EQ Blank	50225468006	1	06/01/2019	14:45	X
15168294CCV	15168294CCV	1	06/01/2019	15:03	X
15168295CCB	15168295CCB	1	06/01/2019	15:08	X

US EPA Tune Check Sample Report
ICPM2

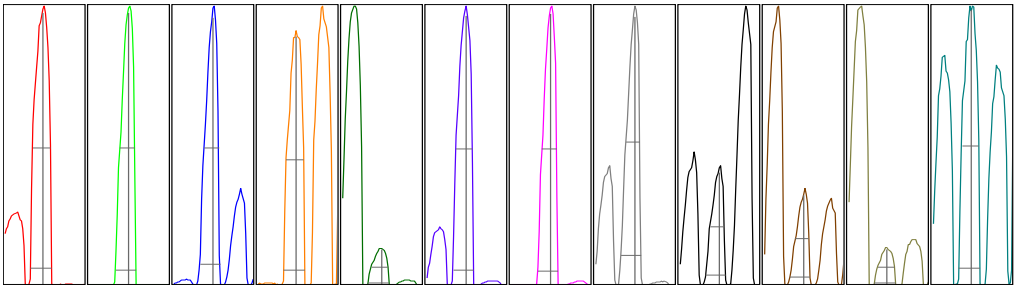
Batch Folder C:\Agilent\ICPMH\1\DATA\060119.b
Report Comment
Instrument Name G3281A JP10420651

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	15092	1.02	5.00	
89	56989	0.61	5.00	
205	38597	0.60	5.00	
9	3788	1.93	5.00	
24	28407	0.56	5.00	
59	37843	0.76	5.00	
115	53305	0.19	5.00	
208	27597	0.88	5.00	
207	12064	0.82	5.00	
206	12705	1.18	5.00	
25	3765	2.63	5.00	
26	4821	0.67	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	14990	15012	15019	15360	15079
89	57117	56381	57210	57034	57204
205	38361	38902	38661	38696	38365
9	3793	3877	3739	3836	3695
24	28588	28160	28442	28473	28374
59	38009	37981	38124	37427	37671
115	53359	53448	53265	53182	53273
208	27276	27440	27899	27673	27698
207	11999	12083	11956	12215	12068
206	12735	12518	12582	12840	12850
25	3625	3886	3741	3744	3827
26	4821	4769	4848	4848	4822

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	2446	6.95	6.9 - 7.1		0.789	0.900	
89	10493	89.00	88.9 - 89.1		0.773	0.900	
205	7306	205.00	204.9 - 205.1		0.747	0.900	
9	632	8.95	8.9 - 9.1		0.787	0.900	
24	4833	24.00	23.9 - 24.1		0.787	0.900	
59	6522	59.00	58.9 - 59.1		0.781	0.900	
115	10016	115.00	114.9 - 115.1		0.754	0.900	
208	5339	208.00	207.9 - 208.1		0.747	0.900	
207	2235	207.00	206.9 - 207.1		0.738	0.900	
206	2441	206.00	205.9 - 206.1		0.746	0.900	
25	636	24.95	24.9 - 25.1		0.787	0.900	
26	801	25.95	25.9 - 26.1		0.787	0.900	

US EPA Tune Check Sample Report
ICPM2

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 307.4 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.80	L/min	S/C Temp	2	℃
RF Matching	1.40	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.30	L/min
Smpl Depth	10.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	10.6	V	Deflect	17.0	V
Extract 2	-200.0	V	Cell Entrance	-34	V	Plate Bias	-50	V
Omega Bias	-95	V	Cell Exit	-58	V			

Cell Parameters

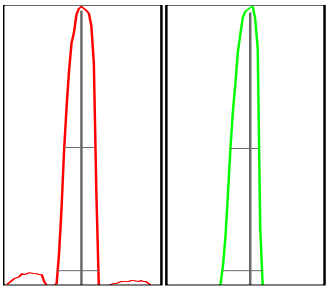
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	5.0	V
OctP RF	200	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	15563	1.00	5.00
89	15975	0.84	5.00

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	15374	15702	15734	15557	15450
89	15826	15886	16179	15999	15983

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
59	2779	59.000	58.9 - 59.1		0.771	0.900	
89	3100	89.050	88.9 - 89.1		0.753	0.900	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 73.8 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.80	L/min	S/C Temp	2	℃
RF Matching	1.40	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.30	L/min
Smpl Depth	10.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	10.6	V	Deflect	3.4	V
Extract 2	-200.0	V	Cell Entrance	-40	V	Plate Bias	-60	V

Omega Bias	-95 V	Cell Exit	-70 V

US EPA Tune Check Sample Report
ICPM2

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-17.0	V	He Flow	3.0	mL/min	Energy Discrimination	5.0	V
OctP RF	200	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICM2 Start Date: 06/01/2019 10:21 End Date: 06/01/2019 12:29

Sample Name	Time	Bi-209	In-115	Li-6	Sc-45-IS	Tb-159	Y-89
15168265CAL0	10:21	100.0	100.0	100.0	100.0	100.0	100.0
15168266CAL1	10:26	100.0	99.9	99.6	102.3	101.4	101.2
15168267CAL2	10:30	99.4	99.0	99.3	99.3	100.5	99.6
15168268CAL3	10:35	99.0	98.1	100.9	96.6	99.9	97.2
15168269ICV	10:44	97.7	97.3	97.3	98.1	99.2	97.8
15168270ICB	10:48	99.6	98.7	97.6	98.5	100.0	99.5
15168271CRDL	10:53	98.5	98.8	97.6	98.3	99.8	98.3
15168272ICSA	10:57	92.9	94.1	91.2	96.8	97.1	97.3
15168273ICSAB	11:02	93.9	96.1	87.1	96.7	99.1	98.7
15168274CCV	11:07	100.0	99.5	90.4	98.3	101.4	99.7
15168275CCB	11:11	100.1	99.4	91.2	98.2	100.9	99.0
15168276CCV	11:39	104.3	101.8	89.6	93.6	104.4	96.4
15168277CCB	11:43	100.8	98.2	93.9	94.5	101.4	98.0
15168278CRDL	11:48	103.4	101.3	97.9	95.1	103.8	98.1
2321049BLANK	11:52	97.6	96.0	91.6	94.1	98.7	96.9
2321050LCS	11:57	96.5	94.7	90.9	90.8	97.5	94.6
SP-1	12:02	82.1	86.0	80.9	91.2	90.3	91.7
2321051MS	12:06	82.7	86.8	83.9	92.3	91.4	92.7
2321052MSD	12:11	81.1	86.0	82.7	92.1	90.6	91.9
2323165PDS	12:15	83.5	88.4	82.9	91.6	92.7	92.9
2323166SD	12:20	94.0	94.9	89.6	95.3	98.4	96.3
15168279CCV	12:24	101.2	100.7	95.8	98.1	102.0	98.4
15168280CCB	12:29	100.1	99.3	96.2	97.5	101.0	97.7

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50ICM2 Start Date: 06/01/2019 13:22 End Date: 06/01/2019 15:08

Sample Name	Time	Bi-209	In-115	Li-6	Sc-45-IS	Tb-159	Y-89
15168281CAL0	13:22	100.0	100.0	100.0	100.0	100.0	100.0
15168282CAL1	13:27	98.3	98.4	99.1	100.1	98.9	101.1
15168283CAL2	13:31	97.7	98.7	99.4	98.3	99.3	100.6
15168284CAL3	13:36	98.2	97.8	100.9	97.9	98.9	98.9
15168285ICV	13:45	98.2	98.5	98.8	98.7	99.2	97.9
15168286ICB	13:49	98.3	98.4	97.6	99.0	98.9	99.6
15168287CRDL	13:54	98.3	98.9	97.4	99.1	99.1	99.3
15168288ICSA	13:59	92.1	93.7	90.2	95.9	96.8	96.9
15168289ICSAB	14:03	93.6	95.5	86.3	96.1	97.7	98.3
15168290CCV	14:08	99.4	99.6	90.6	98.0	99.7	100.6
15168291CCB	14:13	100.7	100.3	90.6	97.9	100.0	99.6
SP-3	14:17	85.6	90.4	78.8	98.0	95.4	125.8
SP-4	14:22	86.8	89.9	78.7	103.9	95.3	118.0
SP-5	14:26	85.1	89.4	79.0	91.9	94.1	97.0
SP-5 DUP	14:31	85.9	89.0	81.2	91.8	93.6	97.3
15168292CCV	14:36	97.3	98.5	93.8	98.7	98.4	101.1
15168293CCB	14:40	96.9	98.4	92.6	99.0	98.3	99.6
EQ Blank	14:45	96.0	95.7	88.4	94.2	96.6	97.0
15168294CCV	15:03	97.4	96.4	90.6	94.9	97.5	97.2
15168295CCB	15:08	96.6	95.5	93.2	97.3	96.7	99.9

Prep Log Report

Batch Information: MPRP 35982

Template Version: EF-IN-I-317(rev.00, 30Nov2011)

Prep Method	EPA 200.2	Analysis Method	EPA 6020	Extracted By	JDG	Extracted Date/Time	05/30/2019 08:09:00
Block ID	G	Block Temp (C)	94	Correction Factor (C)	0	Corrected Temp. (C)	94
Thermometer ID	PT-259	Digestion Vessel Lot	204633	Batch Notes	Pre-digested cups used	Reviewed By	CAW
Reviewed By Date	05/30/2019 16:26						

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	Conc. HCL (mL)	Final Volume (mL)	Sample Notes	6020-SPK (mL)	6020-SPK2 (mL)
6020 W_P	BLANK	**2321049**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	LCS	**2321050**	Water	50	200224 (0.5)	206319 (0.25)	50		209455 (1)	209456 (1)
6020 W_P	RQS	**50225468001**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	MS	**2321051**	Water	50	200224 (0.5)	206319 (0.25)	50		209455 (1)	209456 (1)
6020 W_P	MSD	**2321052**	Water	50	200224 (0.5)	206319 (0.25)	50		209455 (1)	209456 (1)
6020 W_P	PS	**50225468002**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225468003**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225468004**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225468005**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225468006**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225473001**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225473006**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225508001**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225508002**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225508003**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225508004**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225508005**	Water	50	200224 (0.5)	206319 (0.25)	50			

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	Conc. HCL (mL)	Final Volume (mL)	Sample Notes	6020-SPK (mL)	6020-SPK2 (mL)
6020 W_P	PS	**50225508006**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225574001**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225574002**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225574003**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225574004**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225574005**	Water	50	200224 (0.5)	206319 (0.25)	50			
6020 W_P	PS	**50225574006**	Water	50	200224 (0.5)	206319 (0.25)	50			

Standard Notes:

209455: ICP-MS STK Spike#1 for MS/MSD, LCS, **209456: ICP-MS STK Spike#2 for MS/MSD, LCS,**

SAMPLE NO.

SP-1

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468001 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.069	U	ug/L	1	05/28/2019 19:45

SAMPLE NO.

SP-3

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468002 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.069	U	ug/L	1	05/28/2019 19:58

SAMPLE NO.

SP-4

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468003 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.069	U	ug/L	1	05/28/2019 20:00

SAMPLE NO.

SP-5

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468004 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.069	U	ug/L	1	05/28/2019 20:02

SAMPLE NO.

SP-5 DUP

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468005 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.069	U	ug/L	1	05/28/2019 20:04

SAMPLE NO.

EQ Blank

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Lab Sample ID: 50225468006 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7439-97-6	Mercury	<0.069	U	ug/L	1	05/24/2019 09:28

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210111

Continuing Calibration Verification Source: 210108

Concentration Units: ug/L Instrument ID: 50HG03

	Initial Calibration Verification				Continuing Calibration Verification						
	05/24/2019 07:57				05/24/2019 08:25			05/24/2019 09:18			Control Limit
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	
Mercury	5.0	4.8	96.2	90-110	5.0	5.1	102.6	5.0	5.1	101.8	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210108

Concentration Units: ug/L Instrument ID: 50HG03

	Continuing Calibration Verification						
	05/24/2019 09:43			05/24/2019 10:11			Control Limit
Analyte	True	Found	%R	True	Found	%R	
Mercury	5.0	5.2	103.6	5.0	5.2	104.6	90-110

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source: 210323

Continuing Calibration Verification Source: 210320

Concentration Units: ug/L Instrument ID: 50HG03

	Initial Calibration Verification				Continuing Calibration Verification						
	05/28/2019 18:58				05/28/2019 19:26			05/28/2019 19:51			Control Limit
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	
Mercury	5.0	5.1	101.6	90-110	5.0	5.4	108.0	5.0	5.4	107.2	90-110

FORM II INORGANIC-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Initial Calibration Verification Source:

Continuing Calibration Verification Source: 210320

Concentration Units: ug/L Instrument ID: 50HG03

	Continuing Calibration Verification			
	05/28/2019 20:19			Control Limit
Analyte	True	Found	%R	
Mercury	5.0	5.4	109.0	90-110

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210105 Analysis Date/Time: 05/24/2019 08:01

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.24	120.5	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210105 Analysis Date/Time: 05/24/2019 09:47

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.25	127.0	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210317 Analysis Date/Time: 05/28/2019 19:03

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.14	71.0	50-150

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

CRDL Check Standard Source: 210317 Analysis Date/Time: 05/28/2019 19:55

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Mercury	0.2	0.16	77.5	50-150

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Water Instrument ID: 50HG03

Method Blank Concentration Units: ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	05/24/2019 07:59	C	05/24/2019 08:27	C	05/24/2019 09:20	C	05/24/2019 09:45	C	2317087	C
Mercury	0.20	U	0.20	U	0.20	U	0.20	U	<0.069	U

FORM III INORGANIC-2

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Instrument ID: 50HG03

Method Blank Concentration Units:

Analyte	Initial Calibration Blank		Continuing Calibration Blank (ug/L)					
		C	05/24/2019 10:13	C		C		C
Mercury			0.20	U				

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract : 216 College / 19-146

Method Blank Matrix: Water Instrument ID: 50HG03

Method Blank Concentration Units: ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	05/28/2019 19:00	C	05/28/2019 19:28	C	05/28/2019 19:53	C	05/28/2019 20:21	C	2315928	C
Mercury	0.20	U	0.20	U	0.20	U	0.20	U	<0.069	U

SAMPLE NO.

2317089MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225773003

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	ug/L	75-125	5.0	ND	5.0	97

SAMPLE NO.

2317090MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225773003

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	ug/L	75-125	4.9	ND	5.0	95

SAMPLE NO.

2315930MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225442011

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	ug/L	75-125	4.7	ND	5.0	93

SAMPLE NO.

2315931MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: 50225442011

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	ug/L	75-125	4.3	ND	5.0	86

SAMPLE NO.

2315932MS

FORM V INORGANIC-3

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: SP-1

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	ug/L	75-125	5.3	<0.069	5.0	105

SAMPLE NO.

2315933MSD

FORM V INORGANIC-4

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Basis: Wet Parent Sample ID: SP-1

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Mercury	ug/L	75-125	5.0	<0.069	5.0	100

SAMPLE NO.

2317090MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Mercury	20	5.0	4.9	2

SAMPLE NO.

2315931MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Mercury	20	4.7	4.3	8

SAMPLE NO.

2315933MSD

FORM VI INORGANIC-2
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water Concentration Units: ug/L

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Mercury	20	5.3	5.0	5

SAMPLE NO.

2317088LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water

Analyte	Units	True	Found	%R	Limits	
Mercury	ug/L	5.0	4.8	96	80	120

SAMPLE NO.

2315929LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Matrix: Water

Analyte	Units	True	Found	%R	Limits	
Mercury	ug/L	5.0	5.2	104	80	120

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Preparation Method: EPA 7470 Batch: MERP 11820

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2317087	2317087BLANK	05/23/2019	30	30
2317088	2317088LCS	05/23/2019	30	30
2317089	2317089MS	05/23/2019	30	30
2317090	2317090MSD	05/23/2019	30	30
50225468006	EQ Blank	05/23/2019	30	30

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Preparation Method: EPA 7470 Batch: MERP 11818

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2315928	2315928BLANK	05/28/2019	30	30
2315929	2315929LCS	05/28/2019	30	30
2315930	2315930MS	05/28/2019	30	30
2315931	2315931MSD	05/28/2019	30	30
2315932	2315932MS	05/28/2019	30	30
2315933	2315933MSD	05/28/2019	30	30
50225468001	SP-1	05/28/2019	30	30
50225468002	SP-3	05/28/2019	30	30
50225468003	SP-4	05/28/2019	30	30
50225468004	SP-5	05/28/2019	30	30
50225468005	SP-5 DUP	05/28/2019	30	30

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50HG03 Analysis Method: EPA 7470

Start Date: 05/24/2019 07:42 End Date: 05/24/2019 10:13

Sample Name	Lab Sample ID	D/F	Date	Time	Hg
15119037CAL0	15119037CAL0	1	05/24/2019	07:42	X
15119038CAL1	15119038CAL1	1	05/24/2019	07:44	X
15119039CAL2	15119039CAL2	1	05/24/2019	07:46	X
15119040CAL3	15119040CAL3	1	05/24/2019	07:49	X
15119041CAL4	15119041CAL4	1	05/24/2019	07:51	X
15119042CAL5	15119042CAL5	1	05/24/2019	07:53	X
15119043CAL6	15119043CAL6	1	05/24/2019	07:55	X
15119044ICV	15119044ICV	1	05/24/2019	07:57	X
15119045ICB	15119045ICB	1	05/24/2019	07:59	X
15119046CRDL	15119046CRDL	1	05/24/2019	08:01	X
15119047CCV	15119047CCV	1	05/24/2019	08:25	X
15119048CCB	15119048CCB	1	05/24/2019	08:27	X
15119053CCV	15119053CCV	1	05/24/2019	09:18	X
15119054CCB	15119054CCB	1	05/24/2019	09:20	X
2317087BLANK	2317087	1	05/24/2019	09:22	X
2317088LCS	2317088	1	05/24/2019	09:24	X
EQ Blank	50225468006	1	05/24/2019	09:28	X
50225773003	50225773003	1	05/24/2019	09:39	X
2317089MS	2317089	1	05/24/2019	09:41	X
15119059CCV	15119059CCV	1	05/24/2019	09:43	X
15119060CCB	15119060CCB	1	05/24/2019	09:45	X
15119061CRDL	15119061CRDL	1	05/24/2019	09:47	X
2317090MSD	2317090	1	05/24/2019	09:49	X
15119062CCV	15119062CCV	1	05/24/2019	10:11	X
15119064CCB	15119064CCB	1	05/24/2019	10:13	X

FORM XIII INORGANIC-1
ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50225468 Contract: 216 College / 19-146

Instrument ID: 50HG03 Analysis Method: EPA 7470

Start Date: 05/28/2019 18:43 End Date: 05/28/2019 20:21

Sample Name	Lab Sample ID	D/F	Date	Time	Hg
15136297CAL0	15136297CAL0	1	05/28/2019	18:43	X
15136298CAL1	15136298CAL1	1	05/28/2019	18:45	X
15136299CAL2	15136299CAL2	1	05/28/2019	18:48	X
15136300CAL3	15136300CAL3	1	05/28/2019	18:50	X
15136301CAL4	15136301CAL4	1	05/28/2019	18:52	X
15136302CAL5	15136302CAL5	1	05/28/2019	18:54	X
15136303CAL6	15136303CAL6	1	05/28/2019	18:56	X
15136304ICV	15136304ICV	1	05/28/2019	18:58	X
15136305ICB	15136305ICB	1	05/28/2019	19:00	X
15136306CRDL	15136306CRDL	1	05/28/2019	19:03	X
2315928BLANK	2315928	1	05/28/2019	19:05	X
2315929LCS	2315929	1	05/28/2019	19:07	X
50225442011	50225442011	1	05/28/2019	19:09	X
2315930MS	2315930	1	05/28/2019	19:11	X
2315931MSD	2315931	1	05/28/2019	19:13	X
15136307CCV	15136307CCV	1	05/28/2019	19:26	X
15136308CCB	15136308CCB	1	05/28/2019	19:28	X
SP-1	50225468001	1	05/28/2019	19:45	X
2315932MS	2315932	1	05/28/2019	19:47	X
2315933MSD	2315933	1	05/28/2019	19:49	X
15136309CCV	15136309CCV	1	05/28/2019	19:51	X
15136310CCB	15136310CCB	1	05/28/2019	19:53	X
15136311CRDL	15136311CRDL	1	05/28/2019	19:55	X
SP-3	50225468002	1	05/28/2019	19:58	X
SP-4	50225468003	1	05/28/2019	20:00	X
SP-5	50225468004	1	05/28/2019	20:02	X
SP-5 DUP	50225468005	1	05/28/2019	20:04	X
15136312CCV	15136312CCV	1	05/28/2019	20:19	X
15136313CCB	15136313CCB	1	05/28/2019	20:21	X

Prep Log Report

Batch Information: MERP 11820

Template Version: EF-IN-I-322(rev.01, 21Jan2014)

Prep Method	EPA 7470	Analysis Method	EPA 7470	Extracted By	LBT	Extracted Date/Time	05/23/2019 22:50:06:682
Block ID	D	Thermometer ID	PT-245	Block Temp (C)	96	Correction Factor (C)	-1.0
Corrected Temp. (C)	95.00	Digestion Start Time	05/23/2019 22:50:06:682	Digestion End Time	05/24/2019 00:50:06:682	Digestion Vessel Lot	204633/PT-268
Batch Notes	Final Volume represents Final Sample Volume	Reviewed By	FRW	Reviewed By Date	05/24/2019 06:44		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	H2SO4 (mL)	5% KMnO4 (mL)	5% K2S2O8 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MERCURY-SPK (mL)
7470 W_P	BLANK	**2317087**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	LCS	**2317088**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		209998 (1.5)
7470 W_P	PS	**50225602001**	Water	10	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30	1*	
7470 W_P	PS	**50225468006**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225750001**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225750002**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773001**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773002**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773003**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	MS	**2317089**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		209998 (1.5)
7470 W_P	MSD	**2317090**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		209998 (1.5)
7470 W_P	PS	**50225773004**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773005**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773006**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773007**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773008**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773009**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	H2SO4 (mL)	5% KMnO4 (mL)	5% K2S2O8 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MERCURY-SPK (mL)
7470 W_P	PS	**50225773010**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225773011**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225853001**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225853004**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	209715 (2.5)	209861 (1.8)	30		

Sample Notes:

1*: p: 5/22 @ 14:45

Standard Notes:

209998: prepared fresh daily

Prep Log Report

Batch Information: MERC 15031

Template Version: EF-IN-I-322(rev.01, 21Jan2014)

Prep Method		Analysis Method	EPA 7470/7471/245.1	Extracted By	LBT	Extracted Date/Time	05/23/2019 22:50:09:695
Block ID	8	Thermometer ID	PT-245	Block Temp (C)	95	Correction Factor (C)	0
Corrected Temp. (C)	95.00	Digestion Start Time	05/23/2019 22:50:09:695	Digestion End Time	05/24/2019 00:50:09:695	Digestion Vessel Lot	204633 / pt-289
Batch Notes	Final Volume represents Final Sample Volume	Reviewed By		Reviewed By Date			

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	H2SO4 (mL)	5% KMnO4 (mL)	5% K2S2O8 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	CAL-STD
MERC_Q	CAL0	**CAL0**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210104 (1)
MERC_Q	CAL1	**CAL1**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210105 (1)
MERC_Q	CAL2	**CAL2**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210106 (1)
MERC_Q	CAL3	**CAL3**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210107 (1)
MERC_Q	CAL4	**CAL4**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210108 (1)
MERC_Q	CAL5	**CAL5**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210109 (1)
MERC_Q	CAL6	**CAL6**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210110 (1)
MERC_Q	ICV	**ICV**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210111 (1)

Standard Notes:

210104: MERC 7470/245.1
210105: MERC 7470/245.1
210106: MERC 7470/245.1
210107: MERC 7470/245.1
210108: MERC 7470/245.1
210109: MERC 7470/245.1
210110: MERC 7470/245.1
210111: MERC 7470/245.1

Prep Log Report

Batch Information: MERP 11818

Template Version: EF-IN-I-322(rev.01, 21Jan2014)

Prep Method	EPA 7470	Analysis Method	EPA 7470	Extracted By	LBT	Extracted Date/Time	05/28/2019 01:09:43:743
Block ID	8	Thermometer ID	PT-245	Block Temp (C)	93	Correction Factor (C)	0
Corrected Temp. (C)	93.00	Digestion Start Time	05/28/2019 01:10:24:143	Digestion End Time	05/28/2019 03:10:29:423	Digestion Vessel Lot	204633/PT-289
Batch Notes	Final Volume represents Final Sample Volume	Reviewed By	FRW	Reviewed By Date	05/28/2019 17:13		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	H2SO4 (mL)	5% KMnO4 (mL)	5% K2S2O8 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MERCURY-SPK (mL)
7470 W_P	BLANK	**2315928**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	LCS	**2315929**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210217 (1.5)
7470 W_P	RQS	**50225442011**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	MS	**2315930**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210217 (1.5)
7470 W_P	MSD	**2315931**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210217 (1.5)
7470 W_P	PS	**50225442018**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442019**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442020**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442021**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442022**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442023**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442024**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442025**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442026**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225442027**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225463001**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225463002**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	H2SO4 (mL)	5% KMnO4 (mL)	5% K2S2O8 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	MERCURY-SPK (mL)
7470 W_P	RQS	**50225468001**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	MS	**2315932**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210217 (1.5)
7470 W_P	MSD	**2315933**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		210217 (1.5)
7470 W_P	PS	**50225468002**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225468003**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225468004**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		
7470 W_P	PS	**50225468005**	Water	30	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	209861 (1.8)	30		

Standard Notes:

210217: prepared fresh daily

Prep Log Report

Batch Information: MERC 15045

Template Version: EF-IN-I-322(rev.01, 21Jan2014)

Prep Method		Analysis Method	EPA 7470/7471/245.1	Extracted By	LBT	Extracted Date/Time	05/28/2019 01:11:13:264
Block ID	D	Thermometer ID	PT-245	Block Temp (C)	94	Correction Factor (C)	-1
Corrected Temp. (C)	93.00	Digestion Start Time	05/28/2019 01:11:13:264	Digestion End Time	05/28/2019 03:11:13:264	Digestion Vessel Lot	204633/PT-268
Batch Notes	Final Volume represents Final Sample Volume	Reviewed By		Reviewed By Date			

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Volume (mL)	Conc. HNO3 (mL)	H2SO4 (mL)	5% KMnO4 (mL)	5% K2S2O8 (mL)	12% NH2OH*HCL (mL)	Final Volume (mL)	Sample Notes	CAL-STD
MERC_Q	CAL0	**CAL0**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210324 (1)
MERC_Q	CAL1	**CAL1**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210325 (1)
MERC_Q	CAL2	**CAL2**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210326 (1)
MERC_Q	CAL3	**CAL3**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210327 (1)
MERC_Q	CAL4	**CAL4**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210328 (1)
MERC_Q	CAL5	**CAL5**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210329 (1)
MERC_Q	CAL6	**CAL6**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210330 (1)
MERC_Q	ICV	**ICV**	WT	20	200224 (0.75)	208287 (1.5)	203545 (5)	210056 (2.5)	210332 (1.8)	30		210331 (1)

Standard Notes:

210324: MERC 7470/245.1
210325: MERC 7470/245.1
210326: MERC 7470/245.1
210327: MERC 7470/245.1
210328: MERC 7470/245.1
210329: MERC 7470/245.1
210330: MERC 7470/245.1
210331: MERC 7470/245.1

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 01, 2019

Pace Analytical - Indianapolis, IN

Sample Delivery Group:	L1101712
Samples Received:	05/23/2019
Project Number:	50225468
Description:	216 College / 19-146

Report To: Regina Bedel
7726 Moller Rd.
Indianapolis, IN 46268

Entire Report Reviewed By: Nancy F. McLain

Nancy McLain
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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SP-1 L1101712-01 GW

Collected by | Collected date/time 05/17/19 11:45 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 18:29	05/29/19 18:29	GB	Mt. Juliet, TN

SP-4 L1101712-02 GW

Collected by | Collected date/time 05/17/19 13:45 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 21:04	05/29/19 21:04	GB	Mt. Juliet, TN

SP-5 L1101712-03 GW

Collected by | Collected date/time 05/17/19 10:23 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:08	05/29/19 19:08	GB	Mt. Juliet, TN

SP-5 DUP L1101712-04 GW

Collected by | Collected date/time 05/17/19 10:23 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:23	05/29/19 19:23	GB	Mt. Juliet, TN

EQ BLANK L1101712-05 GW

Collected by | Collected date/time 05/17/19 14:50 | Received date/time 05/23/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 7199	WG1287501	1	05/29/19 19:32	05/29/19 19:32	GB	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Nancy McLain
Project Manager

Sample Handling and Receiving

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1101712-01	SP-1	7199
L1101712-02	SP-4	7199
L1101712-03	SP-5	7199
L1101712-04	SP-5 DUP	7199
L1101712-05	EQ BLANK	7199

7199 Wet Chemistry

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SP-1

Lab Sample ID:	L1101712-01	**SDG:**	L1101712
Client Sample ID:	SP-1	**Collected Date/Time:**	05/17/19 11:45
Lab File ID:	13.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 18:29
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 18:29
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.224	J6	0.0200	0.0600

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SP-4

Lab Sample ID:	L1101712-02	**SDG:**	L1101712
Client Sample ID:	SP-4	**Collected Date/Time:**	05/17/19 13:45
Lab File ID:	27.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 21:04
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 21:04
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.0539	J P1	0.0200	0.0600

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SP-5

Lab Sample ID:	L1101712-03	**SDG:**	L1101712
Client Sample ID:	SP-5	**Collected Date/Time:**	05/17/19 10:23
Lab File ID:	18.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 19:08
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 19:08
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.124		0.0200	0.0600

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SP-5 DUP

Lab Sample ID:	L1101712-04	**SDG:**	L1101712
Client Sample ID:	SP-5 DUP	**Collected Date/Time:**	05/17/19 10:23
Lab File ID:	19.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 19:23
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 19:23
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.0999		0.0200	0.0600

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
EQ BLANK

Lab Sample ID:	L1101712-05	**SDG:**	L1101712
Client Sample ID:	EQ BLANK	**Collected Date/Time:**	05/17/19 14:50
Lab File ID:	20.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 19:32
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 19:32
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.135		0.0200	0.0600

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3416028-1

Lab Sample ID:	R3416028-1	**SDG:**	L1101712
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	11.0000.TXT	**Received Date/Time:**	
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 17:53
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 17:53
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	U		0.0200	0.0600

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3416028-2

Lab Sample ID:	R3416028-2	**SDG:**	L1101712
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	12.0000.TXT	**Received Date/Time:**	
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 18:02
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 18:02
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.499		0.0200	0.0300

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3416028-7

Lab Sample ID:	R3416028-7	**SDG:**	L1101712
Client Sample ID:	DUP	**Collected Date/Time:**	05/17/19 13:45
Lab File ID:	28.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 21:13
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 21:13
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	0.0266	J P1	0.0200	0.0300

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3416028-3

Lab Sample ID:	R3416028-3	**SDG:**	L1101712
Client Sample ID:	MS	**Collected Date/Time:**	05/17/19 11:45
Lab File ID:	14.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 18:38
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 18:38
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	1.04	J6	0.0200	0.0300

1-IN

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3416028-4

Lab Sample ID:	R3416028-4	**SDG:**	L1101712
Client Sample ID:	MSD	**Collected Date/Time:**	05/17/19 11:45
Lab File ID:	15.0000.TXT	**Received Date/Time:**	05/23/19 08:45
Instrument ID:	IC-17	**Preparation Date/Time:**	05/29/19 18:45
Analytical Batch:	WG1287501	**Analysis Date/Time:**	05/29/19 18:45
Dilution Factor:	1	**Prep Method:**	7199
Analytical Method:	7199	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	MDL	RDL
		ug/l		*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	18540-29-9	1.03	J6	0.0200	0.0300

2-IN

CALIBRATION VERIFICATION

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919
Concentration Units:	mg/l		

		ICV				CCV				CCV			
Sample ID:		IC-170529191700-2				IC-170529191940-2				IC-170529192009-2			
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	True	Found	%R	%RSD
HEXAVALENT CHROMIUM-LOW LEVEL	0.0010	0.0009619208	96.20		0.0010	0.0009719823	97.20		0.0010	0.0009715478	97.20	

ICV Limits: 90 - 110 CCV Limits: 90 - 110

2-IN

CALIBRATION VERIFICATION

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919
Concentration Units:	mg/l		

CCV

Sample ID: IC-170529192121

Analyte	True	Found	%R	%RSD
HEXAVALENT CHROMIUM-LOW LEVEL	0.0010	0.0009808657	98.10	

ICV Limits: 90 - 110 CCV Limits: 90 - 110

3-IN

BLANKS

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919

Sample ID:	**BLANK Result**	**BLANK Qual**	**CCB Result**	**CCB Qual**	**CCB Result**	**CCB Qual**	**CCB Result**	**CCB Qual**
File ID:	11.0000.TXT		22.0000.TXT-2		26.0000.TXT-2		30.0000.TXT	
Analyte	mg/l		mg/l		mg/l		mg/l	
HEXAVALENT CHROMIUM-LOW LEVEL	U		0.0000		0.0000		0.0000	

5A-IN

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

L1101712-01,02,03,04,05

SAMPLE NO.:
R3416028-3
R3416028-4

MS Sample / File ID:	R3416028-3 / 14.0000.TXT	**SDG:**	L1101712
MSD Sample / File ID:	R3416028-4 / 15.0000.TXT	**Analytical Batch:**	WG1287501
OS Sample / File ID:	L1101712-01 / 13.0000.TXT	**Matrix:**	GW
Instrument ID:	IC-17		
Analytical Method:	7199		

Analyte	Spike Amount	OS Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	RPD	RPD Limits
	ug/l	*ug/l*	*ug/l*	*ug/l*	*%*	*%*		*%*	*%*	*%*
Hexavalent Chromium-Low Level	1.00	0.224	1.04	1.03	81.1*	80.9*	1	90.0 - 110	0.222	20

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

6-IN

DUPLICATES

L1101712-01,02,03,04,05

SAMPLE NO.:
R3416028-7

DUP Sample / File ID:	R3416028-7 / 28.0000.TXT	**SDG:**	L1101712
OS Sample / File ID:	L1101712-02 / 27.0000.TXT	**Analytical Batch:**	WG1287501
Instrument ID:	IC-17	**Dilution Factor:**	1
Analytical Method:	7199	**Matrix:**	GW

Analyte	OS Result	DUP Result	RPD	RPD Limits
	ug/l	*ug/l*	*ug/l*	*ug/l*
Hexavalent Chromium-Low Level	0.0539	0.0266	67.8*	20

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

7-IN

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L1101712-01,02,03,04,05

SAMPLE NO.:
R3416028-2

LCS Sample / File ID:	R3416028-2 / 12.0000.TXT	**SDG:**	L1101712
LCSD Sample / File ID:	_____	**Analytical Batch:**	WG1287501
Instrument ID:	IC-17	**Dilution Factor:**	1
Analytical Method:	7199	**Matrix:**	GW

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limits
	ug/l	*ug/l*		*%*	*%*	*%*	*%*	*%*
Hexavalent Chromium-Low Level	0.500	0.499		99.8		90.0 - 110		

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

12-IN

ANALYSIS LOG

SDG:	L1101712	**Analytical Method:**	7199
Instrument ID:	IC-17	**Calibration Start Date:**	05/29/19 16:08
Analytical Run:	052919	**Calibration End Date:**	05/29/19 16:45

Client Sample ID	Lab Sample ID	File ID	Analysis Date Time	Dilution	Batch
CAL	CAL 1	02.0000.TXT	05/29/19 16:08	1	
CAL	CAL 2	03.0000.TXT	05/29/19 16:15	1	
CAL	CAL 3	04.0000.TXT	05/29/19 16:23	1	
CAL	CAL 4	05.0000.TXT	05/29/19 16:30	1	
CAL	CAL 5	06.0000.TXT	05/29/19 16:37	1	
CAL	CAL 6	07.0000.TXT	05/29/19 16:45	1	
ICV	IC-170529191700-2	08.0000.TXT-2	05/29/19 17:00	1	
RL	IC-170529191710-2	09.0000.TXT-2	05/29/19 17:10	1	
BLANK	R3416028-1	11.0000.TXT	05/29/19 17:53	1	WG1287501
LCS	R3416028-2	12.0000.TXT	05/29/19 18:02	1	WG1287501
SP-1	L1101712-01	13.0000.TXT	05/29/19 18:29	1	WG1287501
MS	R3416028-3	14.0000.TXT	05/29/19 18:38	1	WG1287501
MSD	R3416028-4	15.0000.TXT	05/29/19 18:45	1	WG1287501
SP-5	L1101712-03	18.0000.TXT	05/29/19 19:08	1	WG1287501
SP-5 DUP	L1101712-04	19.0000.TXT	05/29/19 19:23	1	WG1287501
EQ BLANK	L1101712-05	20.0000.TXT	05/29/19 19:32	1	WG1287501
CCV	IC-170529191940-2	21.0000.TXT-2	05/29/19 19:40	1	
CCB	IC-170529191947-2	22.0000.TXT-2	05/29/19 19:47	1	
CCV	IC-170529192009-2	25.0000.TXT-2	05/29/19 20:09	1	
CCB	IC-170529192017-2	26.0000.TXT-2	05/29/19 20:17	1	
SP-4	L1101712-02	27.0000.TXT	05/29/19 21:04	1	WG1287501
DUP	R3416028-7	28.0000.TXT	05/29/19 21:13	1	WG1287501
CCV	IC-170529192121	29.0000.TXT	05/29/19 21:21	1	
CCB	IC-170529192128	30.0000.TXT	05/29/19 21:28	1	

15-IN

INITIAL CALIBRATION RECOVERY

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919

Analyte	**Std Conc**	**Result**	**Rec.**	**Std Conc**	**Result**	**Rec.**
	mg/l	mg/l	%	mg/l	mg/l	%
HEXAVALENT CHROMIUM-LOW LEVEL	0.000030	.00002706938	90.20	0.000050	.00005426466	109
File ID:		02.0000.TXT			03.0000.TXT	

15-IN

INITIAL CALIBRATION RECOVERY

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919

Analyte	**Std Conc**	**Result**	**Rec.**	**Std Conc**	**Result**	**Rec.**
	mg/l	mg/l	%	mg/l	mg/l	%
HEXAVALENT CHROMIUM-LOW LEVEL	0.0001	.00010101001	101	0.0005	.00050311603	101
File ID:		04.0000.TXT			05.0000.TXT	

15-IN

INITIAL CALIBRATION RECOVERY

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919

Analyte	**Std Conc**	**Result**	**Rec.**	**Std Conc**	**Result**	**Rec.**
	mg/l	mg/l	%	mg/l	mg/l	%
HEXAVALENT CHROMIUM-LOW LEVEL	0.0010	.00099758409	99.80	0.0020	.00199695584	99.80
File ID:		06.0000.TXT			07.0000.TXT	

16C-IN

GENERAL CHEMISTRY
INITIAL CALIBRATION

SDG:	L1101712	**Calibration (begin) date/time:**	05/29/19 16:08
Instrument ID:	IC-17	**Calibration (end) date/time:**	05/29/19 16:45
Analytical Method:	7199	**Analytical Run:**	052919

Analyte	Cal. Type	Weightage	Corr.	Coef1	Coef2	Slope	Incpt	% RSD
HEXAVALENT CHROMIUM-LOW LEVEL	5	1	0.99989			0.658	0.003	4.179

Calibration Type

5 = Weighted Linear Regression

Weightage

1 = Inverse Concentration

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

Coef1	First Order Coefficient.
Coef2	Second Order Coefficient.
Corr.	Correlation Coefficient.
Incpt	Intercept.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
RSD	Relative Standard Deviation.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Slope	Slope of calibration curve.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

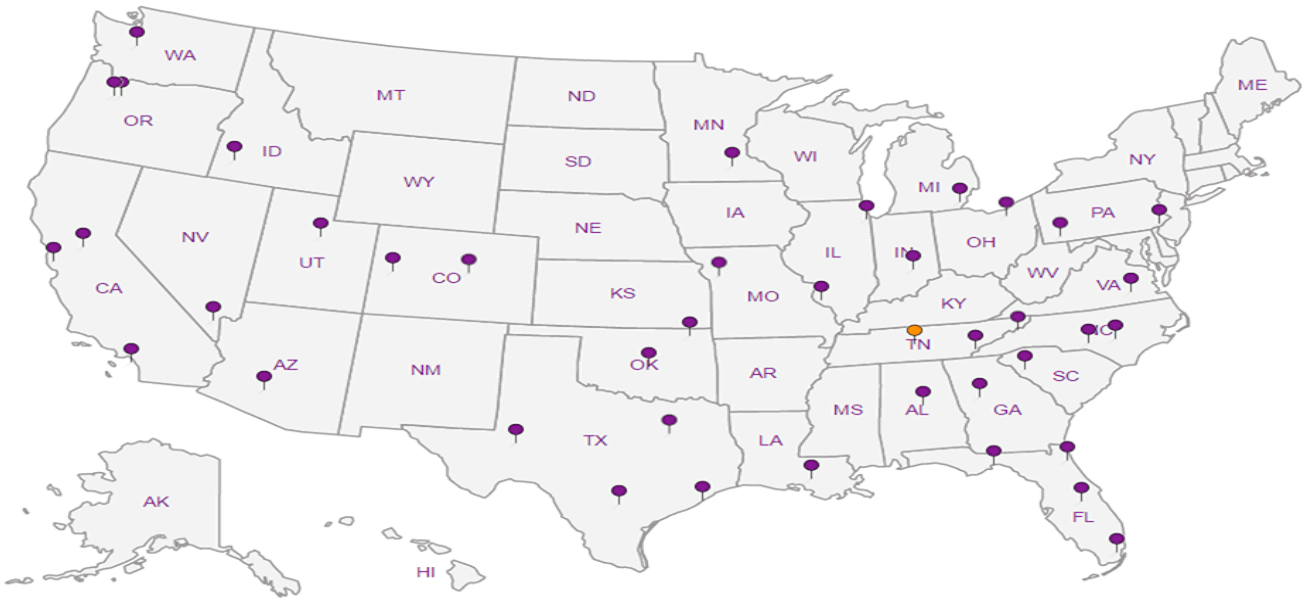
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Chain of Custody

Pace Analytical®
www.pacelabs.com

A116

Workorder: 50225468 **Workorder Name:** 216 College / 19-146 **Results Requested By:** 6/4/2019

Report / Invoice To	Subcontract To
Regina Bedel Pace Analytical Indianapolis 7726 Moller Road Indianapolis, IN 46268 Phone (317)228-3100 Email: regina.bedel@pacelabs.com	Pace National 12065 Lebanon Rd Mt Juliet, TN 37122

P.O. 50225468

State of Sample Origin: IN

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: General	7199 CR6 LLFFP + MS/MSD	7199 CR6 LLFFP	LAB USE ONLY
1	SP-1	5/17/2019 11:45	50225468001	Water	3	X		-01
2	SP-4	5/17/2019 13:45	50225468003	Water	1		X	-02
3	SP-5	5/17/2019 10:23	50225468004	Water	1		X	-03
4	SP-5 DUP	5/17/2019 10:23	50225468005	Water	1		X	-04
5	EQ Blank	5/17/2019 14:50	50225468006	Water	1		X	-05

L1101712

Transfers	Released By	Date/Time	Received By	Date/Time
1		5-22-19 1649		5-23-19 8:45
2				
3				

Comments: OK

Cooler Temperature on Receipt 3.4±0 °C 3.4 A39F | Custody Seal Y or N 4893 0206 3376 | Received on Ice (Y) or N | Samples Intact (Y) or N

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACEEFN	SDG#:	L1101712	
Cooler Received/Opened On: 5/23/19	Temperature:	3.4	
Received By: Lexxi Romero			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Analytical Data Package

Prepared by:

Pace Analytical Services

Pace Project No.: 50227372

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InOrganic

ICP

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

June 11, 2019

Mr. Jacob Teuschler
BCA Environmental Consultants, LLC
7202 E. 87th St.
Suite 110
Indianapolis, IN 46256

RE: Project: 216 S. College / 19-146
Pace Project No.: 50227372

Dear Mr. Teuschler:
Enclosed are the analytical results for sample(s) received by the laboratory on June 07, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Bedel
regina.bedel@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. John Kilmer, BCA Environmental Consultants, LLC
Rod Manny, BCA Environmental Consultants
Mr. Dan Rust, BCA Environmental Consultants, LLC

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CERTIFICATIONS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50227372001	**SP-3 (4-6)**	Solid	05/16/19 10:33	06/07/19 16:45
50227372002	**SP-3 (6-8)**	Solid	05/16/19 10:35	06/07/19 16:45
50227372003	**SP-3 (8-10.5)**	Solid	05/16/19 10:40	06/07/19 16:45
50227372004	**SP-4 (4-6)**	Solid	05/16/19 12:25	06/07/19 16:45
50227372005	**SP-4 (6-8)**	Solid	05/16/19 12:00	06/07/19 16:45
50227372006	**SP-4 (8-10.5)**	Solid	05/16/19 12:07	06/07/19 16:45

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SAMPLE ANALYTE COUNT

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50227372001	**SP-3 (4-6)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372002	**SP-3 (6-8)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372003	**SP-3 (8-10.5)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372004	**SP-4 (4-6)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372005	**SP-4 (6-8)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I
50227372006	**SP-4 (8-10.5)**	EPA 6010	RAM	1	PASI-I
		SM 2540G	RM1	1	PASI-I

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SUMMARY OF DETECTION

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50227372001	**SP-3 (4-6)**					
EPA 6010	Arsenic	8.4	mg/kg	1.2	06/10/19 09:17	
SM 2540G	Percent Moisture	20.1	%	0.10	06/10/19 09:05	H3
50227372002	**SP-3 (6-8)**					
EPA 6010	Arsenic	4.2	mg/kg	1.2	06/10/19 09:19	
SM 2540G	Percent Moisture	18.5	%	0.10	06/10/19 09:05	H3
50227372003	**SP-3 (8-10.5)**					
EPA 6010	Arsenic	5.2	mg/kg	1.1	06/10/19 09:21	
SM 2540G	Percent Moisture	17.7	%	0.10	06/10/19 09:06	H3
50227372004	**SP-4 (4-6)**					
EPA 6010	Arsenic	15.1	mg/kg	1.3	06/10/19 09:23	
SM 2540G	Percent Moisture	24.6	%	0.10	06/10/19 09:06	H3
50227372005	**SP-4 (6-8)**					
EPA 6010	Arsenic	8.6	mg/kg	1.2	06/10/19 09:26	
SM 2540G	Percent Moisture	21.4	%	0.10	06/10/19 09:06	H3
50227372006	**SP-4 (8-10.5)**					
EPA 6010	Arsenic	4.2	mg/kg	1.2	06/10/19 09:28	
SM 2540G	Percent Moisture	22.0	%	0.10	06/10/19 09:06	H3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-3 (4-6) **Lab ID: 50227372001** Collected: 05/16/19 10:33 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.08 g Final Volume/Weight: 50 mL								
Arsenic	**8.4**	mg/kg	1.2	0.23	1	06/08/19 09:50	06/10/19 09:17	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**20.1**	%	0.10	0.10	1		06/10/19 09:05		H3

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-3 (6-8) **Lab ID: 50227372002** Collected: 05/16/19 10:35 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.063 g Final Volume/Weight: 50 mL								
Arsenic	**4.2**	mg/kg	1.2	0.23	1	06/08/19 09:50	06/10/19 09:19	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**18.5**	%	0.10	0.10	1		06/10/19 09:05		H3

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-3 (8-10.5) **Lab ID: 50227372003** Collected: 05/16/19 10:40 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.068 g Final Volume/Weight: 50 mL								
Arsenic	**5.2**	mg/kg	1.1	0.23	1	06/08/19 09:50	06/10/19 09:21	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**17.7**	%	0.10	0.10	1		06/10/19 09:06		H3

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-4 (4-6) **Lab ID: 50227372004** Collected: 05/16/19 12:25 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.053 g Final Volume/Weight: 50 mL								
Arsenic	**15.1**	mg/kg	1.3	0.25	1	06/08/19 09:50	06/10/19 09:23	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**24.6**	%	0.10	0.10	1		06/10/19 09:06		H3

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-4 (6-8) **Lab ID: 50227372005** Collected: 05/16/19 12:00 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.075 g Final Volume/Weight: 50 mL								
Arsenic	**8.6**	mg/kg	1.2	0.24	1	06/08/19 09:50	06/10/19 09:26	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**21.4**	%	0.10	0.10	1		06/10/19 09:06		H3

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ANALYTICAL RESULTS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Sample: SP-4 (8-10.5) **Lab ID: 50227372006** Collected: 05/16/19 12:07 Received: 06/07/19 16:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Initial Volume/Weight: 1.105 g Final Volume/Weight: 50 mL								
Arsenic	**4.2**	mg/kg	1.2	0.23	1	06/08/19 09:50	06/10/19 09:28	7440-38-2	
Percent Moisture	Analytical Method: SM 2540G								
Percent Moisture	**22.0**	%	0.10	0.10	1		06/10/19 09:06		H3

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QUALITY CONTROL DATA

Project: 216 S. College / 19-146
Pace Project No.: 50227372

QC Batch: 505182 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 50227372001, 50227372002, 50227372003, 50227372004, 50227372005, 50227372006

METHOD BLANK: 2331140 Matrix: Solid
Associated Lab Samples: 50227372001, 50227372002, 50227372003, 50227372004, 50227372005, 50227372006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<0.20	1.0	0.20	06/10/19 08:48	

LABORATORY CONTROL SAMPLE: 2331141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2331142 2331143

Parameter	Units	50226732001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.1	23.4	23.1	31.4	24.6	126	97	75-125	25	20	M0,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 216 S. College / 19-146
Pace Project No.: 50227372

QC Batch: 505358 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 50227372001, 50227372002, 50227372003, 50227372004, 50227372005, 50227372006

SAMPLE DUPLICATE: 2332191

Parameter	Units	50227372001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.1	20.2	0	5	

SAMPLE DUPLICATE: 2332192

Parameter	Units	50227356001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.8	18.1	2	5	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: 216 S. College / 19-146
Pace Project No.: 50227372

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
R1	RPD value was outside control limits.

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Indianapolis, IN 46268
(317)228-3100

METHOD CROSS REFERENCE TABLE

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Solid	SW-846 6010B	SW-846 3050B

REPORT OF LABORATORY ANALYSIS

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Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 216 S. College / 19-146
Pace Project No.: 50227372

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50227372001	**SP-3 (4-6)**	EPA 3050	505182	EPA 6010	505342
50227372002	**SP-3 (6-8)**	EPA 3050	505182	EPA 6010	505342
50227372003	**SP-3 (8-10.5)**	EPA 3050	505182	EPA 6010	505342
50227372004	**SP-4 (4-6)**	EPA 3050	505182	EPA 6010	505342
50227372005	**SP-4 (6-8)**	EPA 3050	505182	EPA 6010	505342
50227372006	**SP-4 (8-10.5)**	EPA 3050	505182	EPA 6010	505342
50227372001	**SP-3 (4-6)**	SM 2540G	505358		
50227372002	**SP-3 (6-8)**	SM 2540G	505358		
50227372003	**SP-3 (8-10.5)**	SM 2540G	505358		
50227372004	**SP-4 (4-6)**	SM 2540G	505358		
50227372005	**SP-4 (6-8)**	SM 2540G	505358		
50227372006	**SP-4 (8-10.5)**	SM 2540G	505358		

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1935853

Section A Required Client Information:

Company:	BCA
Address:	
Email To:	JTEUSCHLER@BCA
Phone: 317-578-4233	Fax: Consultants .com
Requested Due Date/TAT:	14-DAY

Section B Required Project Information:

Report To:	J. TEUSCHLER
Copy To:	
Purchase Order No.:	
Project Name:	216 S. College
Project Number:	19-146

Section C Invoice Information:

Attention:	SAME
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: IN

JT

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Arsenic	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 50227372
1	SP-3 (4-6)	SL	G			5-16-19	1033		1	1								1		001
2	SP-3 (6-8)	SL	G			5-16-19	1035		1	1								1		002
3	SP-3 (8-10.5)	SL	G			5-16-19	1040		1	1								1		003
4																				
5	SP-4 (4-6)	SL	G			5-16-19	1225		1	1								1		004
6	SP-4 (6-8)	SL	G			5-16-19	1200		1	1								1		005
7	SP-4 (8-10.5)	SL	G			5-16-19	1207		1	1								1		006
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		6-7-19	15:40		6-7-19	15:40				
		6-7-19	16:45		6/7/19	1645	1.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JACOB TEUSCHLER

SIGNATURE of SAMPLER: _____ DATE Signed (MM/DD/YY): 6-7-19

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical

SAMPLE CONDITION UPON RECEIPT FORM

Project #: 50227372

Date/Time and Initials of person examining contents: LWG 1720 6/7/19

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☑ None ☐ Other _____ LWG

Thermometer: 1 2 3 4 5 6 A B C D E F **Ice Type:** ☑ Wet ☐ Blue ☐ None | **Samples collected today and on ice:** ☐ Yes ☐ No ☑ N/A

Cooler Temperature: 1.3/1.5 **Ice Visible in Sample Containers?:** ☐ Yes ☑ No ☐ N/A

(Initial/Corrected) Temp should be above freezing to 6°C **If temp. is Over 6°C or under 0°C, was the PM Notified?:** ☐ Yes ☐ No ☑ N/A

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been checked?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.			
USDA Regulated Soils? (ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Chain of Custody Present:	✓		Circle: HNO3 H2SO4 NaOH NaOH/ZnAc			✓
Chain of Custody Filled Out:	✓		Dissolved Metals field filtered?:			✓
Short Hold Time Analysis (<72hr)?: Analysis:		✓	Headspace Wisconsin Sulfide			✓
Time 5035A TC placed in Freezer or Short Holds To Lab:				Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
			Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested: 2day	✓		Headspace in VOA Vials (>6mm):			✓
Containers Intact?:	✓		Trip Blank Present?:		✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Custody Seals?:		✓	

Comments:

Sample Container Count

WO# : 50227372

50227372

CLIENT: BCA

COC PAGE 1 of 1

COC ID# 1935853

Project # 50227372

Sample Line Item	DG9H VG9H	AG0U	AG1H	AG1U	AG2U	AG3S	WGFU	SP5T	BP1U	BP2N	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	Bu Kit R	Matrix Sl (Soil/Wat Aqueous	pH <2	pH >9	pH>12
1							1											5u			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial
DG9H	40mL HCL amber voa vial
DG9M	40mL MeOH clear vial
DG9P	40mL TSP amber vial
DG9S	40rnL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved **amber** vial
VG9H	40mL HCL clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved **clear** vial
VGFX	40mL w/hexane wipe vial
VSG	Headspace septa vial & HCL
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide

AG0U	100mL unpreserved amber glass
AG1H	1 liter HCL amber glass
AG1S	1 liter H2SO4 amber glass
AG1T	1 liter Na Thiosulfate amber glass
AG1U	1liter unpreserved amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpreserved amber glass
AG3S	250mL H2SO4 glass amber
AG3U	250mL unpreserved amber glass
BG1H	1 liter HCL clear glass
BG1S	1 liter H2SO4 clear glass
BG1T	1 liter Na Thiosulfate clear glass
BG1U	1 liter unpreserved glass
BG3H	250mL HCl Clear Glass
BG3U	250mL Unpreserved Clear Glass

Plastic / Misc.

BP1A	1 liter NaOH, Asc Acid plastic
BP1N	1 liter HNO3 plastic
BP1S	1 liter H2SO4 plastic
BP1U	1 liter unpreserved plastic
BP1Z	1 liter NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3S	250mL H2SO4 plastic
BP3U	250mL unpreserved plastic
BP3Z	250mL NaOH, Zn Ac plastic

AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

SAMPLE NO.

SP-3 (4-6)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372001 Percent Moisture: 20.1

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	8.4		mg/kg	1	06/10/2019 09:17

SAMPLE NO.

SP-3 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372002 Percent Moisture: 18.5

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	4.2		mg/kg	1	06/10/2019 09:19

SAMPLE NO.

SP-3 (8-10.5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372003 Percent Moisture: 17.7

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	5.2		mg/kg	1	06/10/2019 09:21

SAMPLE NO.

SP-4 (4-6)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372004 Percent Moisture: 24.6

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	15.1		mg/kg	1	06/10/2019 09:23

SAMPLE NO.

SP-4 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372005 Percent Moisture: 21.4

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	8.6		mg/kg	1	06/10/2019 09:26

SAMPLE NO.

SP-4 (8-10.5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372006 Percent Moisture: 22.0

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
7440-38-2	Arsenic	4.2		mg/kg	1	06/10/2019 09:28

FORM II INORGANIC-1

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Initial Calibration Verification Source: 211595

Continuing Calibration Verification Source: 211596

Concentration Units: ug/L Instrument ID: 50ICP3

	Initial Calibration Verification				Continuing Calibration Verification						
	06/10/2019 08:37				06/10/2019 09:10			06/10/2019 09:37			
Analyte	True	Found	%R	Control Limit	True	Found	%R	True	Found	%R	Control Limit
Arsenic	1000	1010	100.7	90-110	1000	999	99.9	1000	1000	100.4	90-110

FORM II INORGANIC-1

CRDL CHECK STANDARD

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

CRDL Check Standard Source: 211319 Analysis Date/Time: 06/10/2019 08:41

Concentration Units: ug/L

Analyte	CRDL Check Standard			
	True	Found	%R	Control Limit %R
Arsenic	10.0	8.7	87.0	50-150

FORM III INORGANIC-1

BLANKS

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract : 216 S. College / 19-146

Method Blank Matrix: Solid Instrument ID: 50ICP3

Method Blank Concentration Units: mg/kg

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Method Blank	
	06/10/2019 08:39	C	06/10/2019 09:12	C	06/10/2019 09:39	C		C	2331140	C
Arsenic	5.0	U	5.0	U	5.0	U			<0.20	U

FORM IV INORGANIC-1
INTERFERENCE CHECK SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Instrument ID: 50ICP3 Solution A Run Date: 06/10/2019 08:43

ICS Source: 211568,211569 Solution AB Run Date: 06/10/2019 08:46

Concentration Units: ug/L

Analyte	True		Found				
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Limits
Aluminum	500000	500000	520600	104.1	524100	104.8	80-120
Arsenic		500	-4.381		525.2	105	80-120
Calcium	500000	500000	464300	92.9	467500	93.5	80-120
Iron	200000	200000	194000	97	195400	97.7	80-120
Magnesium	500000	500000	532000	106.4	530800	106.2	80-120

SAMPLE NO.

2331142MS

FORM V INORGANIC-1

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Non Aqueous Liquid Basis: Wet Parent Sample ID: 50226732001

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Arsenic	mg/kg	75-125	31.4	2.1	23.4	126*

* Spike Recovery outside QC Limits

SAMPLE NO.

2331143MSD

FORM V INORGANIC-2

MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Non Aqueous Liquid Basis: Wet Parent Sample ID: 50226732001

Percent Moisture:

Analyte	Units	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R
Arsenic	mg/kg	75-125	24.6	2.1	23.1	97

SAMPLE NO.

2332136PDS

FORM V INORGANIC-1

POST-DIGESTION SPIKE SAMPLE RECOVERY

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Non Aqueous Liquid Parent Sample ID: 50226732001

Analyte	Units	Control Limit %R	DF	Spiked Sample Result (SSR)	DF	Sample Result (SR)	Spike Added (SA)	%R
Arsenic	ug/L	75-125	1	1070	1	45.5	1000	102.8

SAMPLE NO.

2331143MSD

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Non Aqueous Liquid Concentration Units: mg/kg

Percent Moisture: _____ Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Arsenic	20	31.4	24.6	25*

* RPD outside QC Limits

SAMPLE NO.

2331141LCS

FORM VII INORGANIC-1
LABORATORY CONTROL SAMPLE

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Solid

Analyte	Units	True	Found	%R	Limits	
Arsenic	mg/kg	50.0	50.8	102	80	120

SAMPLE NO.

2332135SD

FORM VIII INORGANIC-1
SERIAL DILUTIONS

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Non Aqueous Liquid Parent Sample ID: 50226732001

Analyte	Units	Initial Sample Result	Serial Dilution Result	% Difference	Control Limit %D
Arsenic	ug/L	45.5	93.6J	105.6*	10

* Indicates that the % Difference exceeds the control limit.
No difference is calculated if either result is a non-detect.

07/01/2019 15:15

FORM XI - INORGANIC-1
LINEAR DYNAMIC RANGES

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract : 216 S. College / 19-146

Instrument ID: 50ICP3 Effective Date:01/28/2016

Analyte	Concentration (ug/L)
Arsenic	35000

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Preparation Method: EPA 3050 Batch: MPRP 36175

Lab Sample ID	Sample Name	Preparation Date	Initial Weight (g)	Final Volume (mL)
2331140	2331140BLANK	06/08/2019	1	50
2331141	2331141LCS	06/08/2019	1	50
2331142	2331142MS	06/08/2019	1.069	50
2331143	2331143MSD	06/08/2019	1.083	50
50227372001	SP-3 (4-6)	06/08/2019	1.08	50
50227372002	SP-3 (6-8)	06/08/2019	1.063	50
50227372003	SP-3 (8-10.5)	06/08/2019	1.068	50
50227372004	SP-4 (4-6)	06/08/2019	1.053	50
50227372005	SP-4 (6-8)	06/08/2019	1.075	50
50227372006	SP-4 (8-10.5)	06/08/2019	1.105	50

FORM XIII INORGANIC-1

ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Instrument ID: 50ICP3 Analysis Method: EPA 6010

Start Date: 06/10/2019 08:19 End Date: 06/10/2019 14:40

Sample Name	Lab Sample ID	D/F	Date	Time	As
15219287CAL0	15219287CAL0	1	06/10/2019	08:19	X
15219290CAL3	15219290CAL3	1	06/10/2019	08:26	X
15219295ICV	15219295ICV	1	06/10/2019	08:37	X
15219296ICB	15219296ICB	1	06/10/2019	08:39	X
15219298CRDL	15219298CRDL	1	06/10/2019	08:41	X
15219299ICSA	15219299ICSA	1	06/10/2019	08:43	X
15219300ICSAB	15219300ICSAB	1	06/10/2019	08:46	X
2331140BLANK	2331140	1	06/10/2019	08:48	X
2331141LCS	2331141	1	06/10/2019	08:50	X
50226732001	50226732001	1	06/10/2019	08:52	
2332135SD	2332135	1	06/10/2019	08:54	X
2332136PDS	2332136	1	06/10/2019	08:57	X
15219303CCV	15219303CCV	1	06/10/2019	09:10	X
15219304CCB	15219304CCB	1	06/10/2019	09:12	X
SP-3 (4-6)	50227372001	1	06/10/2019	09:17	X
SP-3 (6-8)	50227372002	1	06/10/2019	09:19	X
SP-3 (8-10.5)	50227372003	1	06/10/2019	09:21	X
SP-4 (4-6)	50227372004	1	06/10/2019	09:23	X
SP-4 (6-8)	50227372005	1	06/10/2019	09:26	X
SP-4 (8-10.5)	50227372006	1	06/10/2019	09:28	X
15219308CCV	15219308CCV	1	06/10/2019	09:37	X
15219309CCB	15219309CCB	1	06/10/2019	09:39	X
2331142MS	2331142	1	06/10/2019	14:38	X
2331143MSD	2331143	1	06/10/2019	14:40	X

FORM XV INORGANIC-1

INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Instrument ID: 50ICP3 Start Date: 06/10/2019 08:19 End Date: 06/10/2019 09:39

Sample Name	Time	Y1	Y2	Y3
15219287CAL0	08:19	100.0	100.0	100.0
15219290CAL3	08:26	102.7	101.4	
15219295ICV	08:37	100.4	99.2	100.2
15219296ICB	08:39	101.1	101.0	99.7
15219298CRDL	08:41	101.8	102.7	100.8
15219299ICSA	08:43	89.8	87.1	96.8
15219300ICSAB	08:46	88.6	86.2	95.5
2332135SD	08:54	105.8	105.4	104.9
2332136PDS	08:57	104.8	103.7	105.3
15219303CCV	09:10	101.2	99.9	99.8
15219304CCB	09:12	102.1	102.6	101.5
15219308CCV	09:37	100.8	99.7	100.2
15219309CCB	09:39	101.1	100.3	98.6

Prep Log Report

Batch Information: MPRP 36175

Template Version: EF-IN-I-318-Rev.01 (08Aug2017)

Prep Method	EPA 3050	Analysis Method	EPA 6010	Extracted By	cel	Extracted Date/Time	06/08/2019 09:50:09:985
Solid Matrix Lot	201780	Instrument	50BALL	Block ID	9	Block Temp (C)	95
Correction Factor (C)	0	Corrected Temp. (C)	95	Acceptance Range:	95 +/- 3 C	Thermometer ID	pt258
Digestion Vessel Lot	211320/174134 antifoam	Batch Notes	211570 filtermate	Reviewed By	RAM	Reviewed By Date	06/10/2019 14:52

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Matrix	Initial Weight (g)	Conc. HNO3 (mL)	H2O2 (mL)	Conc. HCL (mL)	Final Volume (mL)	Due Date	Sample Notes	6010-SPK (mL)
6010 S_P	BLANK	**2331140**	Solid	1	200224 (5)	211311 (4)	209941 (5)	50		1*	
6010 S_P	LCS	**2331141**	Solid	1	200224 (5)	211311 (4)	209941 (5)	50		1*	210984 (1)
6010 S_P	PS	**50226732001**	Non Aqueous Liquid	1.103	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	MS	**2331142**	Non Aqueous Liquid	1.069	200224 (5)	211311 (4)	209941 (5)	50		2*	210984 (0.5)
6010 S_P	MSD	**2331143**	Non Aqueous Liquid	1.083	200224 (5)	211311 (4)	209941 (5)	50		2*	210984 (0.5)
6010 S_P	PS	**50227282005**	Solid	1.069	200224 (5)	211311 (4)	209941 (5)	50		1*	
6010 S_P	PS	**50227282006**	Solid	1.154	200224 (5)	211311 (4)	209941 (5)	50		1*	
6010 S_P	PS	**50227006001**	Solid	1.018	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227356001**	Solid	1.044	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227372001**	Solid	1.08	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227372002**	Solid	1.063	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227372003**	Solid	1.068	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227372004**	Solid	1.053	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227372005**	Solid	1.075	200224 (5)	211311 (4)	209941 (5)	50		2*	
6010 S_P	PS	**50227372006**	Solid	1.105	200224 (5)	211311 (4)	209941 (5)	50		2*	

Sample Notes:

1*: antifoam; w/b cel 060719

2*: w/b cel 060719

Standard Notes:

210984: ICP-SPK

SAMPLE NO.

SP-3 (4-6)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372001 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	20.1		%	1	06/10/2019 09:05

SAMPLE NO.

SP-3 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372002 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	18.5		%	1	06/10/2019 09:05

SAMPLE NO.

SP-3 (8-10.5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372003 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	17.7		%	1	06/10/2019 09:06

SAMPLE NO.

SP-4 (4-6)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372004 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	24.6		%	1	06/10/2019 09:06

SAMPLE NO.

SP-4 (6-8)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372005 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	21.4		%	1	06/10/2019 09:06

SAMPLE NO.

SP-4 (8-10.5)

FORM I INORGANIC-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Lab Sample ID: 50227372006 Percent Moisture:

CAS No.	Analyte	Concentration	Q	Units	DF	Analysis Date/Time
	Percent Moisture	22.0		%	1	06/10/2019 09:06

SAMPLE NO.

2332191DUP

FORM VI INORGANIC-1
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Solid Concentration Units: %

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Percent Moisture	5	20.1	20.2	0

SAMPLE NO.

2332192DUP

FORM VI INORGANIC-2
DUPLICATES

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Matrix: Solid Concentration Units: %

Percent Moisture: Basis: Wet

Analyte	Control Limit	Sample	Duplicate	RPD
Percent Moisture	5	17.8	18.1	2

FORM XII INORGANIC-1
PREPARATION LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Preparation Method: SM 2540G Batch: PMST 16184

Lab Sample ID	Sample Name	Preparation Date	Initial Volume (mL)	Final Volume (mL)
2332191	2332191DUP	06/10/2019	1	1
2332192	2332192DUP	06/10/2019	1	1
50227372001	SP-3 (4-6)	06/10/2019	1	1
50227372002	SP-3 (6-8)	06/10/2019	1	1
50227372003	SP-3 (8-10.5)	06/10/2019	1	1
50227372004	SP-4 (4-6)	06/10/2019	1	1
50227372005	SP-4 (6-8)	06/10/2019	1	1
50227372006	SP-4 (8-10.5)	06/10/2019	1	1

FORM XIII INORGANIC-1

ANALYSIS RUN LOG

Lab Name: Pace Analytical - Indiana SDG No. : 50227372 Contract: 216 S. College / 19-146

Instrument ID: 50BALH Analysis Method: SM 2540G

Start Date: 06/10/2019 09:05 End Date: 06/10/2019 09:07

Sample Name	Lab Sample ID	D/F	Date	Time	MOIST
SP-3 (4-6)	50227372001	1	06/10/2019	09:05	X
2332191DUP	2332191	1	06/10/2019	09:05	X
SP-3 (6-8)	50227372002	1	06/10/2019	09:05	X
SP-3 (8-10.5)	50227372003	1	06/10/2019	09:06	X
SP-4 (4-6)	50227372004	1	06/10/2019	09:06	X
SP-4 (6-8)	50227372005	1	06/10/2019	09:06	X
SP-4 (8-10.5)	50227372006	1	06/10/2019	09:06	X
50227356001	50227356001	1	06/10/2019	09:06	X
2332192DUP	2332192	1	06/10/2019	09:07	X

Prep Log Report

Batch Information: PMST 16184

Template Version: EF-IN-Q-337-Rev.03 (06Feb2017)

Analysis Method	SM 2540G	Analyzed By	RM1	Instrument	50BALH	Oven ID	50WETZ
Thermometer ID	PT-112	Oven Temp Correction Factor	0	Oven Temp In1 | Corr | Date/Time | Init	105.0 | 105.0 | 06/10/2019 09:30 | RM1	Oven Temp Out1 | Corr | Date/Time | Init	105.0 | 105.0 | 06/11/2019 08:00 | RM1
Reviewed By	MLS	Reviewed By Date	06/11/2019 10:24	Batch Notes			

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Select	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	ID	Sample Notes
DRY WEIGHT	PS	**50227372001**	Y	79.88	20.12	06/10/2019 09:05:33	11.028	1.044	13.542	11.028	M	300	
DRY WEIGHT	DUP	**2332191**	Y	79.82	20.18	06/10/2019 09:05:43	12.275	1.065	15.109	12.275	M	301	
DRY WEIGHT	PS	**50227372002**	Y	81.52	18.48	06/10/2019 09:05:52	15.109	1.035	18.3	15.109	M	302	
DRY WEIGHT	PS	**50227372003**	Y	82.28	17.72	06/10/2019 09:06:01	15.626	1.037	18.768	15.626	M	303	
DRY WEIGHT	PS	**50227372004**	Y	75.43	24.57	06/10/2019 09:06:11	12.337	1.047	16.015	12.337	M	304	
DRY WEIGHT	PS	**50227372005**	Y	78.55	21.45	06/10/2019 09:06:26	10.708	1.023	13.352	10.708	M	305	
DRY WEIGHT	PS	**50227372006**	Y	77.99	22.01	06/10/2019 09:06:35	11.114	1.05	13.954	11.114	M	306	
DRY WEIGHT	PS	**50227356001**	Y	82.16	17.84	06/10/2019 09:06:51	10.372	1.011	12.405	10.372	M	307	
DRY WEIGHT	DUP	**2332192**	Y	81.86	18.14	06/10/2019 09:07:03	10.134	1.061	12.144	10.134	M	308	
DRY WEIGHT	PS	**50227396001**	Y	86.90	13.10	06/10/2019 09:07:26	5.312	1.054	5.954	5.312	M	309	TC
DRY WEIGHT	PS	**50227396002**	Y	79.99	20.01	06/10/2019 09:07:38	4.567	1.053	5.446	4.567	M	310	TC
DRY WEIGHT	PS	**50227396003**	Y	89.27	10.73	06/10/2019 09:07:48	5.927	1.034	6.515	5.927	M	311	TC
DRY WEIGHT	PS	**50227396004**	Y	91.19	8.806	06/10/2019 09:07:58	6.81	1.052	7.366	6.81	M	312	TC
DRY WEIGHT	PS	**50227396005**	Y	81.72	18.28	06/10/2019 09:08:07	3.945	1.025	4.598	3.945	M	313	TC
DRY WEIGHT	PS	**50227396006**	Y	77.20	22.80	06/10/2019 09:08:21	4.522	1.069	5.542	4.522	M	314	TC
DRY WEIGHT	PS	**50227396007**	Y	80.50	19.50	06/10/2019 09:08:31	5.402	1.009	6.466	5.402	M	315	TC
DRY WEIGHT	PS	**50227396008**	Y	90.41	9.591	06/10/2019 09:08:41	5.963	1.033	6.486	5.963	M	316	TC
DRY WEIGHT	PS	**50227396009**	Y	83.29	16.71	06/10/2019 09:08:52	6.829	1.049	7.989	6.829	M	317	TC

Prep Log Report

QC Rule	Sample Type	Lab Sample ID	Select	TS Posted (%)	Percent Moisture	Run Date/Time	Posted Dry Weight /w Dish (g)	Dish Weight (g)	Wet Weight /w Dish (g)	Dry Weight 1 (g)	Dry Wt Use 1	ID	Sample Notes
DRY WEIGHT	PS	**50227396010**	Y	87.48	12.52	06/10/2019 09:09:04	6.166	1.025	6.902	6.166	M	318	TC
DRY WEIGHT	PS	**50227396011**	Y	82.60	17.40	06/10/2019 09:09:31	6.282	1.031	7.388	6.282	M	319	TC
DRY WEIGHT	PS	**50227396012**	Y	80.89	19.11	06/10/2019 09:09:42	4.024	1.018	4.734	4.024	M	320	TC
DRY WEIGHT	PS	**50227396013**	Y	87.86	12.14	06/10/2019 09:10:12	4.783	1.028	5.302	4.783	M	321	TC