

Supplemental Site Investigation

City of Shakopee Redevelopment
Scott Street North and 1st Avenue West
Shakopee, Scott County, Minnesota

June 1, 2018

Terracon Project No. MP185083



Prepared for:
City of Shakopee
Shakopee, Minnesota

Prepared by:
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Minneapolis, Minnesota

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

June 1, 2018



City of Shakopee
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Attn: Michael Kerski, Director of Planning and Development
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Re: Supplemental Site Investigation
City of Shakopee Redevelopment
Scott Street North and 1st Avenue West
Shakopee, Scott County, Minnesota
Terracon Project No. MP185083

Dear Mr. Kerski:

Terracon Consultants, Inc. (Terracon) is pleased to submit our report of Supplemental Site Investigation (SSI) activities completed at the Site referenced above. The report presents data from recent field activities that included the collection and chemical analyses of soil and soil vapor samples during an environmental investigation. The activities were completed in conjunction with the geotechnical field investigation completed on May 14 and 15, 2018, as well as the Phase I Environmental Site Assessment (ESA) for the Site. Terracon conducted the SSI in general accordance with Terracon Proposal No. PMP185083 dated April 23, 2018.

Terracon appreciates this opportunity to provide environmental services to the City of Shakopee. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

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Environmental



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Geotechnical



Materials

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**SUPPLEMENTAL SITE INVESTIGATION
City of Shakopee Redevelopment
Scott Street North and 1st Avenue West
Shakopee, Scott County, Minnesota**

**Terracon Project No. MP185083
June 1, 2018**

1.0 SITE DESCRIPTION

The approximate 2.7-acre Site is comprised of eight parcels, located north of the intersection of 1st Avenue West and Scott Street, just south of the Minnesota River in Shakopee, Scott County, Minnesota. The Site consists of the following parcels.

- 321 1st Avenue West – consists of an approximately 4,600 square foot, single-story commercial building and adjoining paved parking lot. Assigned Parcel Identification Numbers (PIN) 270010820 and 270010830 (0.33 acre).
- 339 1st Avenue West - consists of an approximately 1,300 square foot, two-story residence with a partial basement and a detached garage. Assigned PIN 270010810 (0.18 acre).
- 126 Atwood Street North –consists of an approximately 3,400 square foot, two-story residence with a basement. Assigned PIN 270010880 (0.3 acre).
- Vacant lots - Vacant, landscaped lots including portions of Levee Drive. A former shed is located on the southeast corner of one of the lots. Assigned PINs 270010870 and 270010890 (0.08 and 0.58 acre, respectively).
- Vacant lot - Vacant, landscaped lot north of Levee Drive and including portions of the river walkway. This lot does not have an assigned street address nor a PIN (0.61 acre).
- Rahr Parcel - Undeveloped wooded lot northwest of Scott Street North. Consists of a portion of PIN 274470010 and is known as the “Rahr” parcel. This parcel does not have an assigned street address (0.61 acre).

It is Terracon's understanding that the City of Shakopee is in the process of purchasing parcels east of Scott Street North to facilitate the development of a multi-tenant apartment building with a developer. The Rahr Parcel, located west of Scott Street may be purchased in the future and used as a storm water retention pond. A Topographic Map showing the Site location is included as **Exhibit 1**, and a figure showing the Site layout with boring locations is included as **Exhibit 2** in **Appendix A**.

Terracon completed this Supplemental Site Investigation (SSI) in conjunction with a Phase I Environmental Site Assessment (ESA) dated May 2018, as well as a geotechnical exploration program which is underway. Both reports are provided under separate covers.

Supplemental Site Investigation

Scott Street N & 1st Avenue W Parcels ■ Shakopee, MN

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Based on a review of available historical information, the Site has been developed since at least the 1860s. Several of the parcels were developed with residences in the late-1800s and early-1900s, and a limestone quarry was present on the northern parcels from at least 1890 through 1910. By the 1960s, the Site appeared as it does today with two residences, a commercial building, parking lots, and vacant/wooded land. Surrounding properties have historically consisted of residential and commercial development. The Minnesota River is located north of the Site.

The City of Shakopee provided three reports completed by others for the southern developed parcels, including the 321 and 339 parcels. The Phase I ESA dated August 31, 2017 for the residential property at 339 1st Avenue West indicated that the parcel has historically had a residential use with multiple detached garages/sheds. The Phase I ESA identified the potential for off-site facilities to impact the 339 parcel and the potential for a water well on the 339 parcel as recognized environmental conditions (RECs).

The Phase I ESA dated September 5, 2017 for the 321 1st Avenue West parcel indicated that it has been developed for residential/commercial use since at least 1937 and was most recently occupied by a one-story commercial building used by Doggie Doo's Spa and Treatment. The Phase I ESA identified RECs related to the potential for off-site facilities to impact the parcel and the former tenants of the parcel building (former printing and auto repair business) to impact the parcel.

To further assess the RECs identified on the two parcels, a Limited Phase II ESA dated December 4, 2017 was completed, which included the drilling of four soil borings, collection of soil samples for field screening and chemical analyses, and collection of three soil gas samples. During the assessment, bedrock was encountered from 2.5 to 6 feet below grade (bg). No groundwater was encountered above the shallow bedrock. The recovered soil samples did not reveal field indications of impacts, and the laboratory analyses only revealed relatively low diesel range organic (DRO) impacts (i.e., below the criteria for regulated fill). In the soil vapor analysis, no volatile organic compounds (VOCs) were detected above their respective 33X Residential Intrusion Screening Values (ISVs), except for 1,3-butadiene.

The May 2018 Terracon Phase I ESA identified the following RECs for the Site.

- **Former Site Operations:** The commercial building located at 321 1st Avenue West formerly operated as a print shop and an auto repair facility. Although no violations have been reported regarding the printing or auto repair operations, the potential for chemicals used in former operations to have impacted the soil and/or groundwater beneath the Site via floor drains or other pathways represents a REC.

- **On-Site Dumping:** Terracon observed evidence of dumping and debris on the Rahr parcel during the Site visit. Debris included furniture, concrete rubble, metals scrap, bricks, and small oil containers. The historical Sanborn Fire Insurance Maps also indicated that the northern parcels including the Rahr parcel had been occupied by a limestone quarry, suggesting that the quarry may have been filled with uncontrolled material. Furthermore, Mr. Kerski noted that during installation of underground utilities on the south side of the Rahr parcel, debris was intermixed with the soil. The suspected uncontrolled filling of the former limestone quarry is considered a REC for the Site.
- **Up-Gradient Leak Site:** Located south-southwest of the Site, the former CYS Amoco/Stop & Shop facility is listed as an underground storage tank (UST) facility and a Petroleum Remediation Site (LS0004711). A petroleum release was discovered in December 1991 with reported impacts to soil and groundwater. The leak was issued closure by the Minnesota Pollution Control Agency (MPCA) in February 2000. Additional information was not provided on the MPCA's What's in My Neighborhood (WIMN) online database or the regulatory database report; however, Terracon has requested additional files from MPCA for review. Based on the potential for the petroleum release to have impacts groundwater beneath the Site, this release is considered a REC.

2.0 SCOPE OF SERVICES

To further assess the RECs identified for the Site, Terracon completed the following scope of work in support of the redevelopment:

- An environmental field technician monitored the subsurface materials encountered at each investigation location during drilling of the geotechnical soil borings. Soils were classified in the field in accordance with ASTM D 2487 "Unified Soils Classification System" and ASTM D 2488 "Recommended Practice for Visual and Manual Description of Soils." Soil samples were screened for visual or olfactory indications of contamination. Samples were also collected for field screening for organic vapors using headspace analyses using a photoionization detector (PID) in accordance with MPCA guidance. The PID was equipped with a 10.6-electron-volt (eV) lamp and calibrated at least daily to an isobutylene standard.
- Collected soil samples from select soil borings for chemical analyses for the following parameters: VOCs using United States Environmental Protection Agency (EPA) Method 8260; the 8 Resource Conservation and Recovery Act (RCRA) metals using EPA Methods 6010/6020 and 7471; polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8270; and DRO/GRO using the Wisconsin Department of Natural

Resources Methods. The samples were collected from intervals that exhibited field indications of contamination, or if no indications of contamination were observed, from intervals that are anticipated to be excavated during redevelopment. Terracon collected eight soil samples from the geotechnical/environmental soil borings for laboratory analysis.

- Advanced five soil vapor probes to depths ranging from three to seven feet bg, dictated by the depth to bedrock, in order to collect soil vapor samples for chemical analyses of VOCs using EPA Method TO-15. The soil vapor probes were placed within the footprint of the proposed building. Soil vapor samples were collected using the Geoprobe® Post-Run Tubing method.
- Advanced two hand auger borings inside the building located at 321 1st Avenue West near current or former floor drains and chemical/petroleum storage areas. Collected one soil sample from each boring for field screening and analytical testing. Soil samples were collected for laboratory analysis of DRO, GRO, VOCs, 8 RCRA Metals, and PAHs.
- Prepared this SSI report.

The scope of services was not intended to identify every chemical possibly associated with the Site. Similarly, the proposed scope was not intended to determine the extent or magnitude of existing contamination, if encountered.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These SSI services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not restricted by ASTM E1903-11.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot

represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this SSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of the City of Shakopee. Any authorization for use or reliance by any other party is prohibited without the express written authorization of City of Shakopee and Terracon. Any unauthorized distribution or reuse is at City of Shakopee 's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, SSI report, and Terracon's Agreement for Services.

3.0 FIELD INVESTIGATION

Terracon conducted the fieldwork under a site-specific safety plan developed for this project. Work was performed using EPA Level D work attire consisting of hard hats, safety glasses, protective gloves, reflective vests, and protective boots. Prior to beginning the field investigation, public utilities were cleared through Gopher State One Call system. Terracon also contracted with Private Underground, a private locating service, to clear privately-owned utilities near the drilling locations.

3.1 Soil Sampling Procedures

3.1.1 Soil Borings

Terracon drilled 19 soil borings using a Geoprobe® 8040DT with hollow-stem augers; note that boring B-1 was not drilled owing to access limitations. Soil samples were collected using split-barrel sampling procedures. To conduct the split barrel sampling procedure, a standard 2-inch outer diameter split barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. Four samples were obtained in the upper 10 feet of each boring, and one sample was obtained at 5-foot intervals thereafter. The hollow stem augers and drill rig were pressure washed prior to mobilization, and the split spoon sampler was decontaminated between soil sample collection with a Alconox®/ distilled water solution. Following sampling, the boreholes were sealed with bentonite grout, and the surface restored. Soil cutting from the soil borings were thin spread on the ground.

3.1.2 Hand Auger Borings

For the interior hand auger borings, Terracon initially cored the floor slab with an electric coring machine and then used a clean stainless steel hand auger to collect soil samples. Following sampling, the auger hole was filled with bentonite and the floor was patched with concrete.

3.1.3 Field Screening and Sample Collection

At each soil sampling location, Terracon classified the soil obtained from each interval, field screened the soil using a PID, and collected soil samples as determined by field indications of possible contamination, the presence of apparent fill/debris, or the proposed building layout.

Terracon field-screened soil samples for the presence of organic vapors using a PID, which was equipped with a 10.6- eV lamp source. The PID was calibrated in accordance with the manufacturer's recommendations prior to field activities. The detector provides a direct reading of organic vapors in parts per million isobutylene equivalents.

Terracon collected soil samples for analytical testing from the following boring locations and intervals:

Boring Identifier	Location Rationale	Depth (feet)	Analytical Parameters*
B-2	Rahr Parcel - interval of observed debris	8 to 10	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-3	Rahr Parcel - interval of observed debris	6 to 8	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-8	Southeast parcel and area of 2017 Limited Phase II boring.	0 to 2	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-10	Southeast parcel and area of 2017 Limited Phase II boring.	1 to 3	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-11	Central parcel and interval of observed debris.	7 to 9	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-13	North-central parcel and interval of observed debris.	13 to 15	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-14	North-central parcel and interval of observed debris.	8 to 10	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
B-20	East parcel and interval of observed debris.	13 to 15	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
HA-1	Interior boring – NW corner of commercial building near current or former floor drains and chemical/petroleum storage areas	0 to 1	VOCs, 8 RCRA Metals, PAHs, DRO and GRO

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HA-2	Interior boring – NE corner of commercial building near current or former floor drains and chemical/petroleum storage areas	0 to 1	VOCs, 8 RCRA Metals, PAHs, DRO and GRO
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Terracon packaged each sample in laboratory-provided containers, preserved as appropriate, and labeled the containers with a unique sample identifier, sample location and depth interval, and sample collection time. This information was also recorded on the chain of custody. The containers were then placed in an ice-chilled cooler and transported to Pace Analytical, Inc. (Pace) in Minneapolis, Minnesota, which is accredited by National Environmental Laboratory Accreditation Program.

3.2 Groundwater Sampling Procedure

Groundwater was not encountered during the SSI field activities. Based on data reported on nearby water well logs as reviewed on the Minnesota Department of Health (MDH) Minnesota Well Index (CWI) database, groundwater in the area of the Site is estimated at approximately 55 feet bg.

3.3 Soil Vapor Sampling

Terracon advanced five soil vapor probes to depths ranging from three to seven feet bg within the area of the proposed building. Push-probe drilling techniques were used to advance the soil vapor probes. The temporary soil gas probes were constructed with a surface seal around the drilling rods to prevent short-circuiting. Soil vapor samples were collected using PRT methods. A sampling train was constructed with new, inert materials following advancement of the PRT system. A shut-in test was then performed to detect leaks in the connections in the sampling train (i.e., sample tubing, valves and moisture filter). To conduct the shut-in test, the valve leading to the sampling tube was closed, and air was drawn out of the sampling train until a vacuum of about 25 inches of mercury was read on the canister gauge. The gauge was then monitored for a minimum of 60 seconds to ensure pressure in sampling train did not leak. If pressure was lost, fittings were checked and re-established before performing a subsequent shut-in test.

Following the shut-in test, the two-way valve was re-opened and at least two “dead” volumes of air were purged from the tubing. The valve on the sampling canister, which was equipped with a 250-milliliter per minute flow controller, was then opened, and the initial pressure reading on the gauge was recorded. The sampling canister valve remained open to collect the sample until the gauge read nearly zero. Following sample collection, a PID equipped with a 10.6 eV lamp was connected to the tubing to collect an organic vapor measurement. The sampling locations are shown on **Exhibit 2**.

Soil gas samples were analyzed by Pace for VOCs using EPA Method TO-15.

4.0 RESULTS OF THE FIELD INVESTIGATION

4.1 Geology/Hydrogeology

The boring logs in **Appendix B** detail the observed soil stratigraphy. In general, on the southern portion of the Site (borings B-5, B-6, B-7, B-8, B-9, and B-10), Terracon encountered fill soil consisting of silty sand and sand with gravel to the weathered limestone bedrock surface ranging from approximately 2.5 to 3.5 feet bg. The HSA auger was drilled an additional 0.0 to 1.1 feet into the weathered bedrock until refusal was encountered.

On the eastern portion of the Site (borings B-15, B-16, and B-17), Terracon encountered the bedrock surface ranging from the surface to approximately 3.5 feet bg. The HSA auger was drilled an additional 0.4 to 3.0 feet into the weathered bedrock until refusal was encountered.

In the central portion of the Site (borings B-11, B-12, B-13, B-14, B-18, B-19, B-20), Terracon encountered fill consisting of silty sand and sandy lean clay intermixed with sand and gravel to depths ranging from approximately 7.8 to 19.5 feet bg. This fill was underlain by weathered limestone bedrock where the HSA auger was drilled up to an additional 5 feet into bedrock.

On the Rahr parcel (borings B-2, B-3, B-4), Terracon encountered fill consisting of silty sand to depths ranging from 13.5 to 18.5 feet bg. In boring B-3, native poorly graded sand was encountered from 13.5 to 20 feet bg. This fill and native sand was underlain by weathered limestone bedrock where the HSA auger was drilled up to an additional 5.9 feet into bedrock.

Terracon observed debris in borings B-2, B-11, B-13, and B-20, at depths ranging from approximately 6 to 15 feet bg. Debris included slag, brick, metal, glass, coal, and wood. In addition, Terracon noted apparent roofing material in boring B-11 from 6 to 8 feet bg.

In summary, based upon the depth of bedrock and presence of fill and debris, it appears the former limestone quarry extended to depths ranging from approximately 13.5 to 20 feet bg and was located on north side of the Site, east of Scott Street and extends west onto the Rahr parcel. Based upon visual observations, only portions of the Rahr parcel had been backfilled as evidenced by the ravine-like feature extending west to east with surficial debris being present.

In the two interior hand auger borings, coarse sand was encountered below the floor slab, and bedrock was encountered within one foot.

Also note that groundwater was not encountered during field investigation.

4.2 Field Screening

The field screening results are summarized on the boring logs in **Appendix B**. PID readings were recorded between 0.0 and 3.0 parts per million (ppm). No PID headspace readings were considered above background in the soil samples from the push probes.

Soil vapor samples were also field screened with the PID, following sample collection. Sample SV-5 had a PID reading of 0.5 ppm, which is considered background. The remaining vapor points had PID readings of 0.0 ppm.

5.0 ANALYTICAL RESULTS

Summary tables with the analytical results are included in **Appendix C**. The laboratory analytical report and chain-of-custody record are attached in **Appendix D**. The following sections describe the results of the analytical testing.

5.1 Soil Sample Results

Terracon collected one soil sample for chemical analyses from eight of the 19 exterior borings, and one from each interior hand-auger borings. Soil samples were collected from intervals that exhibited field indications of possible contamination, the presence of debris, or if no indications of contamination were observed, from intervals that are anticipated to be excavated during redevelopment. **Table 1** in **Appendix C** provides a summary of the analytical results for the soil samples that were collected.

The soil analytical results were compared to applicable action levels published by the MPCA. These action levels include Soil Reference Values (SRVs), which were developed for different land use scenarios. Based on the proposed use of the Site as a residential complex, results were compared to Residential SRVs. The SRVs are primarily based on the risks via human contact with impacted soil. If a soil contaminant concentration is above a SRV, the MPCA concludes there may be a risk to human health and further assessment, response actions, and/or institutional controls may be required. The results were also compared to MPCA-established Screening Soil Leaching Values (SLVs), which assess the risks to groundwater from a soil contaminant. Some parameters, including DRO and GRO, do not have established SRVs or SLVs. The MPCA has provided guidance regarding the off-site reuse of petroleum-contaminated fill soil as referenced in the MPCA Remediation Division's Guidance Document, Best Management Practices for the Off-Site Reuse of Unregulated Fill, February 2012. One of the criteria for unregulated fill includes DRO/GRO concentrations being below 100 milligrams per kilogram (mg/kg).

Analytical results indicated the following:

- Arsenic was detected in six of the samples at concentrations ranging from 6.1 to 13.7 mg/kg, exceeding the Screening SLV for arsenic of 5.8 mg/kg. In addition, samples B-10 (1-3'), B-11 (7-9'), B-14 (8-10'), and B-20 (13-15') were detected at concentrations exceeding the Residential SRV for arsenic of 9 mg/kg. The remaining borings had detections of arsenic exceeding laboratory reporting limits, but below Residential SRVs or Screening SLVs. Note that these arsenic concentrations are within the naturally-occurring range for this area of Minnesota.
- Chromium was detected in sample B-2 (8-10') at a concentration of 71.3 mg/kg, exceeding the Screening SLV of 36 mg/kg. Chromium was detected in the remaining borings at concentrations exceeding laboratory reporting limits, but below its respective Residential SRVs and Screening SLVs. Also note that the referenced Screening SLV for chromium is for hexavalent chromium and the laboratory reported the chromium result as a total of trivalent and hexavalent chromium. Additional testing would be required to determine the hexavalent fraction, which has a lower action level (i.e., 36 mg/kg as the Screening SLV).
- Lead was detected in samples B-11 (7-9') and B-14 (8-10') at concentrations of 575 and 477 mg/kg, respectively, exceeding the Residential SRV of 300 mg/kg. In sample B-20 (13-15'), lead was detected at a concentration of 2,240 mg/kg, exceeding both the Residential and Industrial SRV of 700 mg/kg. Per the client's approval, additional testing for lead is being conducted using the Toxicity Characteristic Leaching Procedure (TCLP) in five of the soil samples where lead was detected above 100 mg/kg. The TCLP method is used to determine whether a compound is characteristically hazardous based on its concentration. The TCLP analysis has not been completed to date.
- Mercury was detected in samples B-13 (13-15') and B-20 (13-15') at concentrations of 0.99 and 0.53 mg/kg, respectively, exceeding the Residential SRV of 0.5 mg/kg. The remaining RCRA metal compounds were either detected below their respective laboratory reporting limits, or below the Screening SLVs and Residential SRVs.
- Benzene was detected in sample B-13 (13-15') at a concentration of 0.051 mg/kg, exceeding the Screening SLV of 0.017mg/kg. In addition, tetrachloroethene (PCE) was detected in sample B-11 (7-9') at a concentration of 0.23 mg/kg, exceeding the Screening SLV of 0.042 mg/kg. The remaining VOC compounds were either detected below their respective laboratory reporting limits, or below the Screening SLVs and Residential SRVs.

- Several PAHs exceeding the laboratory reporting limits were detected in samples B-2 through B-20; however, with the exception of the Benzo(a)pyrene (BaP) Equivalent in sample B-13 (13-15'), none exceeded the Screening SLVs or Residential SRVs. The BaP Equivalent was calculated for sample B-13 (13-15') at a concentration of 1.6 m/kg, exceeding the Screening SLV of 1.4 mg/kg.
- DRO was detected in samples B-2, B-8, B-10, B-11, B-13, B-14 and B-20 at concentrations ranging from 11.3 to 220 mg/kg. Sample B-20 (13-15') was the only sample with a DRO concentration exceeding the MPCA's guidance for the off-site reuse of petroleum-contaminated fill soil of 100 mg/kg.
- GRO was not detected above the respective laboratory reporting limits for any of the samples.

5.2 Soil Vapor Results

The soil vapor analytical results are summarized on **Table 2** in **Appendix C**, and the laboratory analytical report is included in **Appendix D**. Based on the proposed redevelopment as an apartment complex, the soil vapor results were compared to MPCA ISVs for Residential use. The ISVs were developed by the MPCA in coordination with the Minnesota Department of Health (MDH) to be used as screening values in evaluating risks posed by the volatile compounds in indoor air. The potential for indoor air to be impacted by soil vapor intrusion can also be assessed using the ISVs.

Per MPCA guidance, soil vapor results for contaminants associated with non-petroleum and petroleum VOC releases should be compared to 33 times (33X) the ISV, for buildings with competent floor slabs (i.e. no dirt floors or open penetrations to exterior soils), to assess vapor intrusion risk. Soil vapor concentrations greater than 33X the ISV indicate a higher potential for risk associated with vapor intrusion, and a site with contaminants greater than 33X the ISV could require mitigation of soil vapor to limit the potential for vapors to enter the building. For certain compounds, the MPCA has also established Expedited ISVs. In the event contaminant concentrations exceed 33X the Expedited ISV or in the event of concentrations of TCE exceed 33x the ISV and a pregnant woman is present, expedited action (i.e., within 30 days of receipt of laboratory data) may be necessary. It is important to note the MPCA typically requires collection of two rounds of soil vapor samples in order to make a determination that vapor mitigation is not needed for non-petroleum and petroleum VOC-related contaminants. One round should be collected during the non-heating months of the year (April through October), and the second round should be collected during the heating months of the year (November through March).

The laboratory results indicated that several VOC compounds were detected in samples SV-1 through SV-5; however, none exceeded the Residential 33X ISVs.

5.3 Suspect Asbestos Containing Materials

In boring B-11 from 6 to 8 feet bgs, Terracon noted an apparent roofing material. Roofing material is considered a suspect asbestos containing material (ACM), and per the client's approval, Terracon submitted the sample to EMSL Analytical, Inc. for analysis of ACM by EPA 600/R-93/116 Method using Polarized Light Microscopy. The result was non-detect for asbestos.

The EMSL lab report is provided in **Appendix D**.

6.0 CONCLUSIONS

Based on the scope of services described in this report and subject to the limitations described herein, Terracon concludes the following.

- Based upon the depth of bedrock and presence of fill and debris, it appears the former limestone quarry extended to depths ranging from approximately 13.5 to 20 feet bg and was located on north side of the Site, east of Scott Street and extends west onto the Rahr parcel. Based upon visual observations, only portions of the Rahr parcel had been backfilled as evidenced by the ravine-like feature extending west to east with surficial debris evident.
- Analytical testing biased toward the fill with debris layers indicated petroleum and non-petroleum impacts. Of note, several of the arsenic, lead, and mercury concentrations exceeded their respective Residential SRVs acknowledging that the arsenic concentrations are within the naturally-occurring range for this area. PCE, a chlorinated solvent commonly associated with dry cleaning, was detected in sample B-11 (7-9') above its Screening SLV, but below its Residential SRV. The source of this solvent could be related to impacted fill backfilled on the Site in the past, or potentially from the west-adjointing former dry cleaner, although migration of solvents through the vadose zone (unsaturated) from the former dry cleaner to the Site is unlikely. Several relatively low petroleum-related VOCs were also detected samples B-13 (13-15') and B-14 (8-10'), which correspond to the higher DRO concentrations.
- The interior assessment next to floor drains at 321 1st Avenue West, where a historic printing and auto repair operated, did not indicate evidence of a release at the assessment locations.
- Terracon collected five soil gas samples from the Site and no VOCs were detected above their respective 33X Residences ISVs; the 33X Residential ISV is an action level that could trigger vapor response actions for the redevelopment. Also note

that 1,3-butadiene was not detected above laboratory reporting limits during this SSI and had been detected above its 33X Residential ISV during the December 2017 Limited Phase II ESA completed by others. Concentrations of 1,3-butadiene are seldom reproducible and should not dictate future vapor response actions alone.

- The south-adjointing former Amoco/Stop filling station reported a petroleum release in 1991 with closure being issued in 2000 (Leak No. LS0004711). Based upon the soil gas testing on the Site, the off-site petroleum release does not appear to have resulted in the significant impacts to soil gas on the Site acknowledging that groundwater has not been tested on the Site owing to the shallow bedrock. Terracon also intends to review the leak site files for Leak No. LS0004711 when available at the MPCA to determine the extent of groundwater contamination.

7.0 RECOMMENDATIONS

Based on the scope of services, limitations, and conclusions of this assessment, Terracon recommends the following additional actions:

- Report the soil impacts to the Minnesota State Duty Officer pursuant to Minnesota Statute 115.061B, Duty to Notify. Terracon can assist with this notification to the MPCA.
- Incorporate the pending TCLP lead soil results into final SSI report.
- Complete a test pit assessment on the Site to further assess/characterize the fill soil and presence of debris. Soil samples will be collected for field and analytical testing. This test pit assessment will assist in segregation of regulated versus unregulated fill during the redevelopment.
- Conduct a second round of subsurface vapor sampling during heating season near vapor points VP-3, VP-4 and VP-5 per MPCA vapor intrusion guidance. This supplemental vapor testing will determine whether the new redevelopment will require vapor mitigation beyond the planned underground parking structure. Two rounds of vapor testing has been completed for vapor points VP-1 and VP-2.
- The Site should be enrolled into the MPCA's Voluntary Investigation and Cleanup (VIC) Program and Petroleum Brownfields (PB) Program to request the appropriate approvals and liability assurances related to the identified contamination at the Site. Specifically, for the parcels already owned by the City, prepare a Past Actions Letter along with an affidavit requesting a Retroactive No

Supplemental Site Investigation

Scott Street N & 1st Avenue W Parcels ■ Shakopee, MN

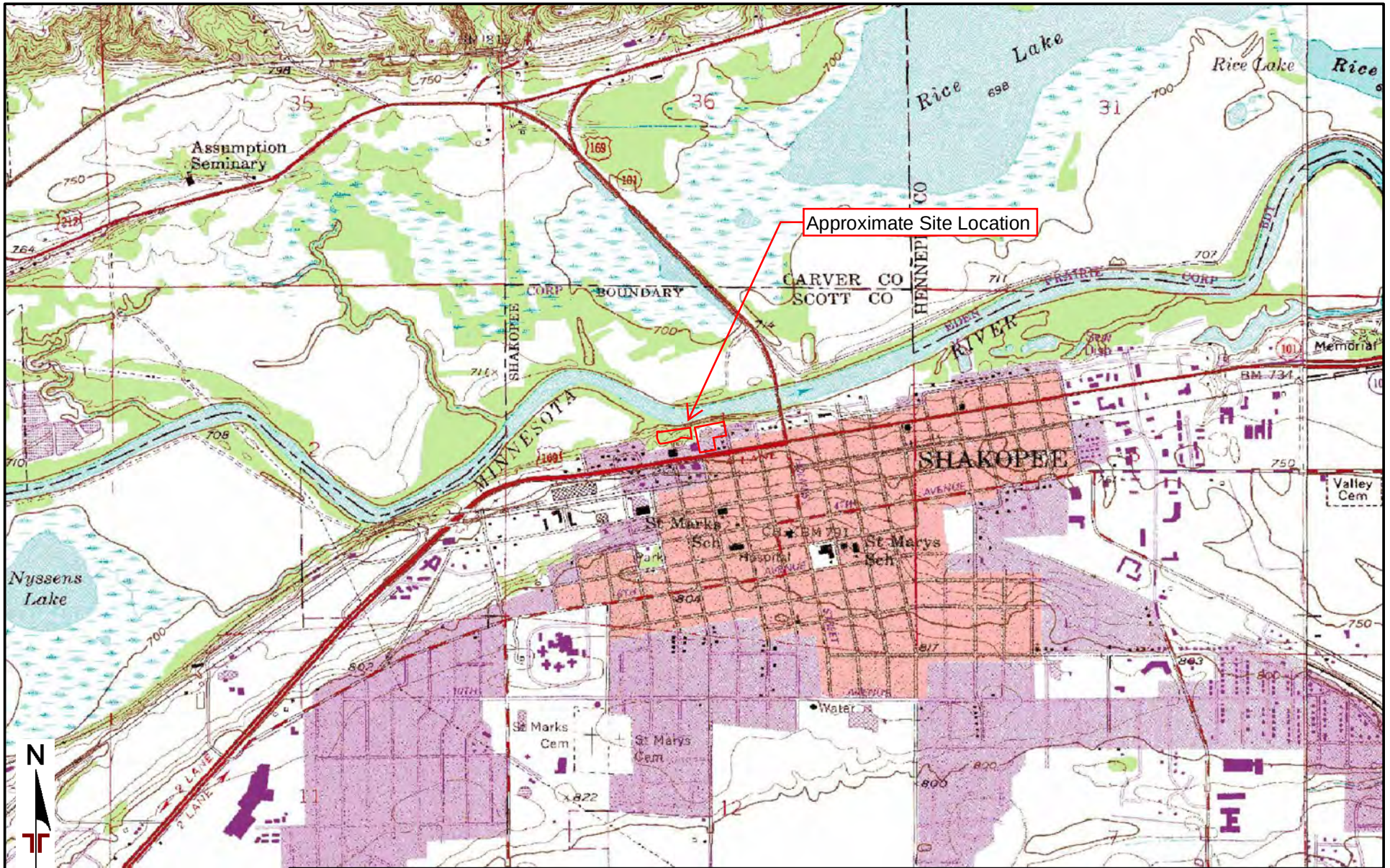
June 1, 2018 ■ Terracon Project No. MP185083



Association Determination (NAD) and prepare a Proposed Actions Letter for the parcels not owned by the City to date, requesting a prospective NAD letter for the Identified Releases (i.e., the non-petroleum releases) at the Site. The future buyer/developer of the Site could also receive a NAD letter for their prospective/proposed actions on the Site.

- Prior to redevelopment, prepare and submit a Response Action Plan (RAP) to the MPCA VIC and PB Programs for review and approval prior to the start of construction. The RAP will describe the proposed redevelopment, identify the various parties involved with the project, and outline the procedures that will be used to manage/mitigate the soil, fill/debris, and possibly soil vapor impacts that will be encountered during redevelopment. Based on the Site redevelopment plan, response actions will include appropriate management of contaminated soil and fill soil mixed with debris, which will likely include off-site disposal at a landfill. The RAP should also include contingencies that will be implemented in the event previously unidentified conditions are encountered such as underground storage tanks, potential asbestos-containing materials or contamination that differs from that encountered during Site investigations. Following redevelopment, a RAP Implementation Report should be prepared and submitted to the MPCA to request approval of response actions, a No Further Action Determination and a Petroleum No Further Action, as appropriate.

APPENDIX A



TOPOGRAPHIC MAP IMAGE COURTESY OF
THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: SHAKOPEE, MN
(1/1/1993) and EDEN PRAIRIE, MN (1/1/1993).

DIAGRAM IS FOR GENERAL LOCATION ONLY,
AND IS NOT INTENDED FOR CONSTRUCTION
PURPOSES

Project Manager:	EPS	Project No.	MP185083
Drawn by:	JEB	Scale:	1"=2,000'
Checked by:	EPS	File Name:	Ex 1 & 2
Approved by:	EPS	Date:	MAY 2018

Terracon

13400 15th Ave N
Minneapolis, MN 55441-4532

TOPOGRAPHIC MAP

City of Shakopee Redevelopment
Scott St North, 1st Ave West, and Levee Drive Parcels
Shakopee, MN

Exhibit

1

N:\PROJECTS\2018\MP185083\G\EX2.MXD N:\PROJECTS\2018\MP185083\WORKING FILES\DIAGRAMS-DRAWINGS-FIGURES\EXHIBIT 2.PDF



SOURCE: SCOTT CO.
NAD 1983 UTM ZONE 15N

AERIAL PHOTOGRAPHY PROVIDED
BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY,
AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



Project Mgr	EPS
Approved by	EPS
Checked by	JEB
Drawn by	RVL

Project No	MP185083
Scale	1 in = 75 ft
Date	6/1/2018
File No.	Ex2.mxd

Terracon
Consulting Engineers and Scientists

13400 15TH AVE N
PH. (763) 489-3100

MINNEAPOLIS, MN 55441
FAX. (763) 489-3101

SITE DIAGRAM

CITY OF SHAKOPEE REDEVELOPMENT
SCOTT STREET N & 1ST AVENUE W
SHAKOPEE, MN

EXHIBIT

2

APPENDIX B

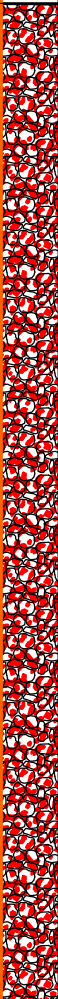
BORING LOG NO. 02

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7985° Longitude: -93.5323° Approximate Surface Elev: 109 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Moderate vegetative ground cover FILL-SILTY SAND WITH GRAVEL , fine to medium grained, dark brown						
	trace organics			X	5-9-2 N=11	0.0	22
	No sample recovery from 3.5 to 5 feet	5		X	2-3-3 N=6		
				X	4-4-3 N=7	0.6	9
	trace slag	10		X	5-6-5 N=11	1.0	6
				X	4-9-6 N=15	0.0	11
	trace slag	15					
	18.5 18.7 LIMESTONE , tan	90.5+/- 90.5+/-		X	50/2"		18
	Boring Terminated at 18.7 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 18.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

 After boring completion

Terracon

13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. MP185083 CITY OF SHAKOPEE. GPJ TERRACON DATATEMPLATE.GDT 5/30/18

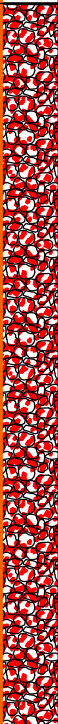
BORING LOG NO. 03

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 44.7986° Longitude: -93.5315° Approximate Surface Elev: 100.5 (Ft.) +/- ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	DEPTH						
	Moderate vegetative ground cover FILL-SILTY SAND TRACE TO WITH GRAVEL , coarse to medium grained, dark brown						
		5		X	1-1-1 N=2	0.0	12
				X	1-2-2 N=4	0.0	14
				X	2-1-2 N=3	0.0	14
		10		X	3-8-4 N=12	0.0	12
		15		X	2-4-2 N=6	0.0	8
		20		X	8-10-10 N=20	0.0	9
	13.5 POORLY GRADED SAND WITH GRAVEL (SP) , fine to coarse grained, brown, loose to medium dense 87+/-						
	20.0 Practical auger refusal at termination depth. Assumed bedrock surface. Boring Terminated at 20 Feet 80.5+/-						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 18.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

 After boring completion

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. MP185083 CITY OF SHAKOPEE-GPJ TERRACON DATATEMPLATE.GDT 5/30/18

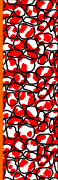
BORING LOG NO. 05

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	See Exploration Plan Latitude: 44.7982° Longitude: -93.5308° Approximate Surface Elev: 110 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND WITH GRAVEL , trace organics, fine to coarse grained, dark brown						
	3.5	106.5+/-			2-9-27 N=36	0.7	18
	4.3	105.5+/-			11-50/4"	0.9	14
	Boring Terminated at 4.3 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 3.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon

13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

BORING LOG NO. 06

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7985° Longitude: -93.5308° Approximate Surface Elev: 106.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND , trace organics, fine to medium grained, dark brown					0.8	
	2.8 103.5+/-			X	1-1-50/4"	1.2	26
	Practical auger refusal at termination depth. Assumed bedrock surface. Boring Terminated at 2.8 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 1.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

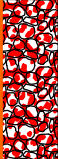
BORING LOG NO. 07

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7983° Longitude: -93.5307° Approximate Surface Elev: 110 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Asphalt pavement FILL-SAND WITH GRAVEL , fine to coarse grained, brown						
	3.0 107+/-			X	4-4-22 N=26	0.2	8
	Practical auger refusal at termination depth. Assumed bedrock surface. Boring Terminated at 3 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 1.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

BORING LOG NO. 08

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	See Exploration Plan Latitude: 44.7983° Longitude: -93.5306° Approximate Surface Elev: 110 (Ft.) +/- ELEVATION (Ft.)						
	Asphalt pavement FILL-SAND , fine to coarse grained, brown					0.1	
	2.5 107.5+/-				6-6-50 N=56	0.4	7
	3.1 107+/- LIMESTONE , with sand, tan						
	Boring Terminated at 3.1 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 1.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

BORING LOG NO. 09

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 44.7985° Longitude: -93.5307° Approximate Surface Elev: 107 (Ft.) +/- ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	DEPTH						
	Asphalt pavement FILL-SILTY SAND WITH GRAVEL , fine to medium grained, dark brown						
3.0		104+/-		X	2-2-14 N=16	0.4	24
4.1	LIMESTONE , with sand, tan	103+/-		X	29-41-50/1"		5
	Boring Terminated at 4.1 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 3 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

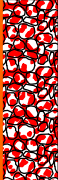
BORING LOG NO. 10

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	See Exploration Plan Latitude: 44.7984° Longitude: -93.5311° Approximate Surface Elev: 107.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND TRACE GRAVEL , trace organics, fine to medium grained, dark brown					0.1	
3.5		104+/-		X	2-2-9 N=11	0.1	15
4.4	LIMESTONE , with sand, tan	103+/-		X	4-50/5"		11
	Boring Terminated at 4.4 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 3.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

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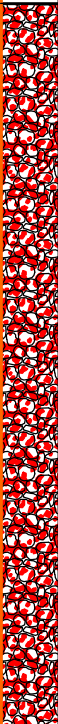
BORING LOG NO. 11

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7987° Longitude: -93.5311° Approximate Surface Elev: 103.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND WITH GRAVEL , fine to medium grained, dark brown						
				X	4-5-11 N=16	0.5	8
		5		X	4-4-4 N=8	2.6	10
	trace slag, coal, glass, metal, possible ACM			X	1-2-0 N=2	0.6	12
	trace glass	10		X	1-1-0 N=1	1.9	23
				X	4-7-3 N=10	1.0	12
	13.5 LIMESTONE , with sand, tan	90+/-					
	15.0 Boring Terminated at 15 Feet	88.5+/-					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 13.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

 After boring completion

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

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BORING LOG NO. 13

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.799° Longitude: -93.531° Approximate Surface Elev: 100 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Asphalt pavement						
	FILL-SILTY SAND WITH GRAVEL , fine to medium grained, dark brown						
	3.5	96.5+/-		X	8-8-8 N=16	1.3	7
	FILL-CLAYEY SAND WITH GRAVEL , fine to medium grained, dark brown						
		5		X	3-4-11 N=15	0.9	
				X	6-7-14 N=21	1.2	19
		10		X	6-9-19 N=28	2.1	12
	trace slag	15		X	6-6-5 N=11	2.3	14
	18.5	81.5+/-					
	19.0 LIMESTONE , with sand, tan	81+/-		X	50		7
	Boring Terminated at 19 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 18.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

 After boring completion

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

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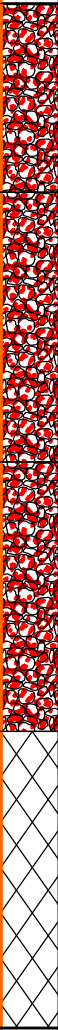
BORING LOG NO. 14

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	See Exploration Plan Latitude: 44.799° Longitude: -93.5311° Approximate Surface Elev: 98.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND WITH GRAVEL , trace organics, fine to medium grained, dark brown						
	3.5	95+/-		X	5-6-7 N=13	2.2	12
	FILL-SANDY LEAN CLAY , brown			X	1-0-0 N=0	1.5	23
	8.5	90+/-		X	10-15-16 N=31	1.2	15
	FILL-CLAYEY SAND , trace gravel, dark brown			X	4-12-18 N=30	0.9	18
	13.5	85+/-		X	6-6-11 N=17	0.1	8
	LIMESTONE , with sand, tan						
	19.0	79.5+/-		X	50		
	Boring Terminated at 19 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 18.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

 After boring completion

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. MP185083 CITY OF SHAKOPEE. GPJ TERRACON DATATEMPLATE.GDT 5/30/18

BORING LOG NO. 15

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7991° Longitude: -93.5306° Approximate Surface Elev: 100.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover LIMESTONE , tan, Assumed bedrock surface.						
	1.9	98.5+/-		X	50/5"		
	Boring Terminated at 1.9 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 1.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

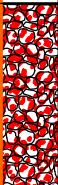
BORING LOG NO. 16

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7991° Longitude: -93.5301° Approximate Surface Elev: 100.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND , trace organics, fine to medium grained, dark brown						
	3.5 97 +/- 3.8 96.5 +/-			X	3-7-5 N=12	0.2	20
	LIMESTONE, tan Boring Terminated at 3.8 Feet			X	50/4"		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 3.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL MP185083 CITY OF SHAKOPEE-GPJ TERRACON_DATATEMPLATE.GDT 5/30/18

BORING LOG NO. 17

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.799° Longitude: -93.5305°						
	Approximate Surface Elev: 100.5 (Ft.) +/-						
	DEPTH	ELEVATION (Ft.)					
	Light vegetative ground cover					0.4	
	LIMESTONE , with sand, tan, Assumed bedrock surface.						
	3.0	97.5+/-		X	8-9-50 N=59		8
	Boring Terminated at 3 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 1.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL MP185083 CITY OF SHAKOPEE-GPJ TERRACON_DATATEMPLATE.GDT 5/30/18

BORING LOG NO. 18

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7989° Longitude: -93.5307°						
	Approximate Surface Elev: 100.5 (Ft.) +/-						
	DEPTH ELEVATION (Ft.)						
	Moderate vegetative ground cover						
	FILL-SILTY SAND WITH GRAVEL , trace organics, fine to medium grained, dark brown						
	3.5 97+/-				7-6-4 N=10	0.0	11
	FILL-SANDY LEAN CLAY WITH GRAVEL , brown						
		5			3-5-4 N=9	0.4	11
					1-1-1 N=2	0.9	14
		10			10-3-3 N=6	3.0	20
					2-3-2 N=5	0.8	20
	19.5 81+/-				8-9-50 N=59	2.9	9
	20.3 80+/-	20					
	LIMESTONE , with sand, tan						
	Boring Terminated at 20.3 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 18.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

 After boring completion

Terracon

13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. MP185083 CITY OF SHAKOPEE. GPJ TERRACON DATATEMPLATE.GDT 5/30/18

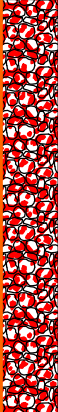
BORING LOG NO. 19

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	Latitude: 44.7988° Longitude: -93.5309° Approximate Surface Elev: 102.5 (Ft.) +/- ELEVATION (Ft.)						
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND WITH GRAVEL , trace organics, fine to medium grained, dark brown to brown						
				X	6-4-2 N=6	3.0	9
				X	3-1-0 N=1	1.0	13
				X	4-50/4"	0.3	
	7.8 Practical auger refusal at termination depth. Assumed bedrock surface. Boring Terminated at 7.8 Feet	94.5+/-					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 6.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-15-2018

Boring Completed: 05-15-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

BORING LOG NO. 20

Page 1 of 1

PROJECT: Scott Street Site

CLIENT: City of Shakopee
Shakopee, MN

SITE: Scott Street N & 1st Ave W
Shakopee, Minnesota

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 44.7988° Longitude: -93.5307° Approximate Surface Elev: 103 (Ft.) +/- ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	PID reading (ppm)	WATER CONTENT (%)
	DEPTH						
	Light vegetative ground cover FILL-SILTY SAND , trace organics, fine to medium grained, dark brown	0.0					
	3.5	99.5+/-		X	0-0-0 N=0	1.2	16
	FILL-CLAYEY SAND , trace gravel to with gravel, fine to coarse grained, dark brown			X	1-1-1 N=2	0.3	16
		5		X	4-3-6 N=9	0.1	12
		10		X	4-5-4 N=9	0.2	14
	13.5	89.5+/-		X	1-2-3 N=5	0.1	
	FILL-SANDY LEAN CLAY WITH GRAVEL , gray, debris including slag, coal, glass & metal						
	18.5	84.5+/-		X	8-39-50/1"	0.0	14
	LIMESTONE , with sand, tan						
	19.6	83.5+/-					
	Boring Terminated at 19.6 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow stem auger to 18.5 feet

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with bentonite grout upon completion

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations measured in the field

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13400 15th Ave N
Plymouth, MN

Boring Started: 05-14-2018

Boring Completed: 05-14-2018

Drill Rig: 848

Driller: Terry

Project No.: MP185083

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. MP185083 CITY OF SHAKOPEE-GPJ TERRACON DATATEMPLATE.GDT 5/30/18



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Vapor Intrusion Sample Information Form

Page 1 of 1

Project: City of Shakopee Parcels			Project #: MP185083		
Location: Scott Street N & 1st Avenue W			Date: 5/15/18		
Weather: Sunny, 80°F			Completed by: JEB		
General					
Sample ID:	SV-1	SV-2	SV-3	SV-4	SV-5
Date:	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018
Time Started:	11:07	12:27	13:00	13:20	13:45
Sample Location:	See map	See map	See map	See map	See map
Sample Depth (feet):	3.5	3.5	7	6	3
Ground Surface:	Asphalt	Grass	Grass	Grass	Grass
Sampling Method (i.e. Geoprobe PRT)	PRT	PRT	PRT	PRT	PRT
Sample Vessel (i.e. 1L or 6L Summa Can)	1 Liter	2 Liter	3 Liter	4 Liter	5 Liter
Summa Can Number:	1131	3222	2079	8/5/1907	5/11/1908
Purging					
Tubing Length (feet):	6	7	10	9	6
Tubing Diameter (ID):	3/16"	3/16"	3/16"	3/16"	3/16"
Tubing Volume:	27.18 mL	38.01 mL	54.3 mL	48.87 mL	27.18 mL
Volume Purged (2 volumes minimum)	300 mL	300 mL	300 mL	300 mL	300 mL
Purge Method:	Syringe	Syringe	Syringe	Syringe	Syringe
Sampling					
Vacuum Gauge (yes/no):	FC1562	FC1593	FC1505	FC0829	FC1589
Vacuum reading before opening valve (inHg):	0	0	0	0	0
Initial Vacuum - immediately after opening valve (inHg):	-29	-30	-29	-29	-29
Vacuum end reading (inHg)	-2	-2	-2	-2	-2
Fill time (seconds):	480	420	420	420	420
Sample Collection Time:	11:15	12:34	13:07	13:27	13:52
PID reading; sample point (ppm)	0.0	0.0	0.0	0.0	0.5
PID reading; background (ppm)	0.0	0.0	0.0	0.0	0.0
Pressure differential (Pa)	NA	NA	NA	NA	NA
Water Dam? (y/n)	NA	NA	NA	NA	NA
Shut-in test? (y/n)	Yes	Yes	Yes	Yes	Yes
Notes:					

*For 3/16" ID (1/4" OD) tubing, there are 5.43 mL per linear foot

**For other diameter tubing, formula is $\pi r^2 \times 12 \times \text{linear feet} \times 16.387064$

APPENDIX C

Table 1
Summary of Soil Analytical Results
City of Shakopee Parcels
Shakopee, Minnesota
MP185083

Parameter	Method	Residential Soil Reference Value (mg/kg)	Industrial Soil Reference Value (mg/kg)	Screening Soil Leaching Value (mg/kg)	Regulatory Level (mg/L)	Sample Identifier									
						Exterior Borings								Interior Borings	
						B-2 (8-10)	B-3 (6-8)	B-8 (0-2)	B-10 (1-3)	B-11 (7-9)	B-13 (13-15)	B-14 (8-10)	B-20 (13-15)	HA-1 (0-1)	HA-2 (0-1)
						15/15/2018	5/15/2018	5/14/2018	5/14/2018	5/14/2018	5/14/2018	5/14/2018	5/14/2018	15/15/2018	15/15/2018
8 RCRA metals (mg/kg)															
Arsenic	EPA 6020B	9	20	5.8	NE	7.1	2.8	6.8	10	11.2	6.1	13.7	13.1	1.9	2.8
Barium	EPA 6010C	1100	18000	1700	NE	71.4	82.9	119	81.8	307	99	229	336	38.9	53.1
Cadmium	EPA 6010C	25	200	8.8	NE	0.36	<0.17	0.26	0.34	0.72	0.55	1	2	<0.16	<0.16
Chromium	EPA 6010C	87*	650*	36*	NE	71.3	10.6	13.6	11.7	36.6	12.6	23	29.5	4.9	10.7
Lead	EPA 6010C	300	700	2700	NE	79.9	43.7	124	62.5	575	227	477	2240	1.6	4
Selenium	EPA 6020B	160	1300	2.6	NE	<0.52	<0.53	<0.59	<0.56	<0.63	<0.56	0.7	<0.59	<0.54	<0.53
Silver	EPA 6010C	160	1300	7.9	NE	<0.55	<0.56	<0.59	<0.55	<0.62	<0.56	<0.60	1.3	<0.54	<0.55
Mercury	EPA 7471B	0.5	1.5	3.3	NE	0.034	0.022	0.19	0.11	0.27	0.99	0.25	0.53	<0.021	<0.022
Volatile Organic Compounds (VOCs) (mg/kg)															
1,2,4-Trimethylbenz	EPA 8260B	8	25	2.7	NE	<0.054	<0.059	<0.061	<0.056	<0.064	0.059	<0.066	<0.063	<0.057	<0.057
Benzene	EPA 8260B	6	10	0.017	NE	<0.021	<0.024	<0.025	<0.022	<0.026	0.051	<0.026	<0.025	<0.023	<0.023
Naphthalene	EPA 8260B	10	28	4.5	NE	<0.21	<0.24	<0.25	<0.22	<0.26	<0.22	0.51	<0.25	<0.23	<0.23
Tetrachloroethene	EPA 8260B	72	131	0.042	NE	<0.054	<0.059	<0.061	<0.056	0.23	<0.056	<0.066	<0.063	<0.057	<0.057
Toluene	EPA 8260B	107	305	2.5	NE	<0.054	<0.059	<0.061	<0.056	<0.064	0.091	<0.066	<0.063	<0.057	<0.057
Other VOCs	EPA 8260B	NE	NE	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/kg)															
Acenaphthene	EPA 8270	1200	5260	81	NE	0.014	<0.011	<0.024	<0.011	<0.025	0.38	0.068	<0.060	<0.011	<0.011
Acenaphthylene	EPA 8270	NE	NE	NE	NE	<0.011	0.014	<0.024	0.035	0.037	0.053	<0.061	0.072	<0.011	<0.011
Anthracene	EPA 8270	7880	45400	1300	NE	0.035	0.016	<0.024	0.047	0.036	0.79	0.25	0.14	<0.011	<0.011
Benzo(a)anthracene	EPA 8270	cPAH	cPAH	cPAH	NE	0.13	0.061	0.062	0.16	0.098	1.4	0.49	0.39	<0.011	<0.011
Benzo(a)pyrene	EPA 8270	2	3	1.4	NE	0.21	0.069	0.09	0.17	0.12	1.1	0.46	0.39	<0.011	<0.011
Benzo(b)fluoranthene	EPA 8270	cPAH	cPAH	cPAH	NE	0.27	0.088	0.12	0.26	0.17	1.4	0.63	0.56	<0.011	<0.011
Benzo(g,h,i)perylene	EPA 8270	NE	NE	NE	NE	0.17	0.039	0.11	0.12	0.077	0.61	0.29	0.25	<0.011	<0.011
Benzo(k)fluoranthene	EPA 8270	cPAH	cPAH	cPAH	NE	0.08	0.031	0.041	0.084	0.064	0.54	0.19	0.18	<0.011	<0.011
Chrysene	EPA 8270	cPAH	cPAH	cPAH	NE	0.14	0.065	0.14	0.2	0.13	1.3	0.51	0.44	<0.011	<0.011
Dibenz(a,h)anthracene	EPA 8270	cPAH	cPAH	cPAH	NE	0.037	<0.011	<0.024	0.027	<0.025	0.18	0.073	0.066	<0.011	<0.011
Fluoranthene	EPA 8270	1080	6800	670	NE	0.19	0.11	0.13	0.37	0.23	2.9	0.96	0.79	<0.011	<0.011
Fluorene	EPA 8270	850	4120	110	NE	0.011	<0.011	<0.024	<0.011	<0.025	0.41	0.075	<0.060	<0.011	<0.011
Indeno(1,2,3-cd)pyrene	EPA 8270	cPAH	cPAH	cPAH	NE	0.14	0.03	0.045	0.1	0.071	0.53	0.26	0.23	<0.011	<0.011
Naphthalene	EPA 8270	10	28	4.5	NE	<0.011	<0.011	<0.024	<0.011	<0.025	0.32	<0.061	<0.060	<0.011	<0.011
Phenanthrene	EPA 8270	NE	NE	NE	NE	0.12	0.038	0.067	0.14	0.084	3.2	0.75	0.36	<0.011	<0.011
Pyrene	EPA 8270	890	5800	440	NE	0.16	0.094	0.16	0.29	0.18	2.3	0.82	0.62	<0.011	<0.011
Benzo(a)pyrene Equivalent		2	3	1.4	NE	0.3	0.091	0.12	0.25	0.16	1.6	0.67	0.57	<0.011	<0.011
Other Parameters (mg/kg)															
Diesel Range Organics	WI MOD DRO	NE	NE	NE	NE	14.6	<7.6	12.8	11.3	18.7	220	59.3	60.4	<10.1	<11.1
Gasoline Range Organics	WI MOD GRO	NE	NE	NE	NE	<11.1	<11.7	<12.1	<12.5	<12.7	<11.2	<12.8	<12.3	<11.2	<11.4

Notes
Only detected compounds are shown in summary table.
Detected concentrations are shown in bold print.
Soil Reference Values (SRVs) - Established by Minnesota Pollution Control Agency (MPCA) June 2009.
Screening Soil Leaching Values (SLVs) - Established by MPCA April 2013.
*SRVs and SLV provided for hexavalent chromium.
cPAH - Carcinogenic Polynuclear Aromatic Hydrocarbon used in calculation of benzo(a)pyrene equivalent.
NE - Not established.
< - Less than laboratory reporting limit indicated.
mg/kg - Milligrams per kilogram.
NA - Not analyzed for.
ND - Not detected above laboratory limits

Table 2
Summary of Soil Vapor Analytical Results
City of Shakopee Parcels
Shakopee, Minnesota
MP185083

Parameter	Method	Soil Vapor		Sample Identifier				
		33x Residential Intrusion Screening Values (ug/m3)	33x Residential Expedited Intrusion Screening Values (ug/m3)	SV-1	SV-2	SV-3	SV-4	SV-5
				collected 3.5 feet bgs	collected 3.5 feet bgs	collected 7 feet bgs	collected 6 feet bgs	collected 3 feet bgs
				5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018
Volatile Organic Compounds (ug/m3)								
1,1,1-Trichloroethane	TO-15	165,000	NE	<2.7	<2.8	<3.4	<2.6	<2.7
1,1,2,2-Tetrachloroethane	TO-15	6.6	NE	<1.7	<1.8	<2.1	<1.7	<1.7
1,1,2-Trichloroethane	TO-15	19.8	NE	<1.4	<1.4	<1.7	<1.3	<1.3
1,1,2-Trichlorotrifluoroethane	TO-15	990,000	NE	<3.8	<3.9	<4.7	<3.7	<3.8
1,1-Dichloroethane	TO-15	16,500	NE	<2.0	<2.1	<2.5	<2.0	<2.0
1,1-Dichloroethene	TO-15	6,600	NE	<2.0	<2.0	<2.4	<1.9	<1.9
1,2,4-Trichlorobenzene	TO-15	132	NE	<9.2	<9.5	<11.4	<9.0	<9.1
1,2,4-Trimethylbenzene	TO-15	231	NE	<2.4	4.9	9.2	7	7
1,2-Dibromoethane (EDB)	TO-15	0.66	NE	<3.8	<3.9	<4.7	<3.7	<3.8
1,2-Dichlorobenzene	TO-15	6,600	NE	<3.0	<3.1	<3.7	<2.9	<2.9
1,2-Dichloroethane	TO-15	13.2	NE	<1.0	<1.0	<1.2	<0.98	<0.99
1,2-Dichloropropane	TO-15	132	NE	<2.3	<2.4	<2.8	<2.2	<2.3
1,3,5-Trimethylbenzene	TO-15	198	NE	<2.4	<2.5	3.9	2.9	3.3
1,3-Butadiene	TO-15	9.3**	93**	<1.1	<1.1	<1.4	<1.1	<1.1
1,3-Dichlorobenzene	TO-15	NE	NE	3.5	8.7	7.2	9.5	11.4
1,4-Dichlorobenzene	TO-15	1,980	NE	<3.0	<3.1	<3.7	<2.9	<2.9
2-Butanone (MEK)	TO-15	165,000	NE	184	39.9	29	57.4	46.6
2-Hexanone	TO-15	1,000**	3,100**	11.8	<10.4	<12.6	<9.9	<10.0
2-Propanol	TO-15	231,000	NE	11.6	18.8	12.8	<6.0	16.7
4-Ethyltoluene	TO-15	NE	NE	<2.4	<2.5	3.6	2.8	3
4-Methyl-2-pentanone (MIBK)	TO-15	99,000	NE	<10.2	<10.4	<12.6	<9.9	<10.0
Acetone	TO-15	1,023,000	NE	135	172	297	593	438
Benzene	TO-15	150**	1,500**	13.7	16.8	2.9	11.7	45.6
Benzyl chloride	TO-15	33	NE	<6.4	<6.6	<7.9	<6.3	<6.3
Bromodichloromethane	TO-15	NE	NE	<3.3	<3.4	<4.1	<3.2	<3.3
Bromoform	TO-15	297	NE	<5.1	<5.3	<6.3	<5.0	<5.1
Bromomethane	TO-15	165	NE	<1.9	<2.0	<2.4	<1.9	<1.9
Carbon disulfide	TO-15	23,100	NE	3.8	2.9	<1.9	7.4	21.2
Carbon tetrachloride	TO-15	57**	570**	<1.6	<1.6	<1.9	<1.5	<1.5
Chlorobenzene	TO-15	1,650	NE	<2.3	<2.3	<2.8	<2.2	<2.3
Chloroethane	TO-15	330,000	NE	<1.3	<1.3	<1.6	<1.3	<1.3
Chloroform	TO-15	3,300	NE	<1.2	<1.2	<1.5	<1.2	<1.2
Chloromethane	TO-15	2,970	NE	2.7	1.4	<1.3	6.4	9.5
cis-1,2-Dichloroethene	TO-15	NE**	NE	<2.0	<2.0	<2.4	<1.9	<1.9
cis-1,3-Dichloropropene	TO-15	660	NE	<2.3	<2.3	<2.8	<2.2	<2.2
Cyclohexane	TO-15	198,000	NE	<1.7	3.8	<2.1	<1.7	134
Dibromochloromethane	TO-15	NE	NE	<4.2	<4.3	<5.2	<4.1	<4.2
Dichlorodifluoromethane	TO-15	NE**	NE	3.8	3.1	6.1	6.2	3.4
Dichlorotetrafluoroethane	TO-15	NE	NE	<3.5	<3.6	<4.3	<3.4	<3.4
Ethanol	TO-15	495,000	NE	38.8	55.5	70	37.5	48.7
Ethyl acetate	TO-15	99,000	NE	<1.8	<1.8	<2.2	<1.7	<1.8
Ethylbenzene	TO-15	140**	1,400**	2.2	8.5	22.1	13.5	20.3
Hexachloro-1,3-butadiene	TO-15	16.5	NE	<5.3	<5.4	<6.6	<5.2	<5.2
m&p-Xylene	TO-15	3,300*	NE	<4.3	16.4	41.5	25.6	37
Methylene Chloride	TO-15	21,000**	63,000**	19.6	13.2	280	14.2	16.5
Methyl-tert-butyl ether	TO-15	99,000	NE	<9.0	<9.2	<11.1	<8.7	<8.8
Naphthalene	TO-15	297	NE	<6.5	136	51.6	85.3	49.2
n-Heptane	TO-15	NE	NE	<2.0	<2.1	<2.5	21.5	60.4
n-Hexane	TO-15	66,000	NE	9.7	7.5	21.4	37.8	119
O-Xylene	TO-15	3,300*	NE	<2.2	5.1	11.6	7.6	12.6
Propylene	TO-15	99,000	NE	139	147	17.1	399	687
Styrene	TO-15	33,000	NE	<2.1	<2.2	<2.6	<2.1	<2.1
Tetrachloroethene	TO-15	110**	1,100**	2	2.7	45.7	7.9	13.1
Tetrahydrofuran	TO-15	NE	NE	5.1	11.5	2.7	4.3	4.6
Toluene	TO-15	165,000	NE	13.5	19.1	24.6	22.3	54.7
trans-1,2-Dichloroethene	TO-15	NE**	NE	<2.0	<2.0	<2.4	<1.9	<1.9
trans-1,3-Dichloropropene	TO-15	660	NE	<2.3	<2.3	<2.8	<2.2	<2.2
Trichloroethene	TO-15	70**	210**	<1.3	<1.4	<1.6	<1.3	<1.3
Trichlorofluoromethane	TO-15	23,100	NE	3.3	<2.9	<3.4	6.2	<2.7
Vinyl acetate	TO-15	6,600	NE	<1.8	<1.8	<2.2	<1.7	<1.7
Vinyl chloride	TO-15	110**	1,100**	<0.64	<0.65	<0.79	<0.62	<0.63

Notes:
Detected concentrations are shown in bold print.
Intrusion Screening Values - ISVs established by MPCA February 2009.
ug/m3 - Micrograms per cubic meter
NE - Not established
< - Less than laboratory reporting limit indicated.
* - ISV for total xylenes provided.
** - Interim ISV or EISV established by MPCA May and October 2016

APPENDIX D



EMSL Analytical, Inc.

14375 23rd Avenue North Minneapolis, Mn 55447

Tel/Fax: (763) 449-4922 / (763) 449-4924

<http://www.EMSL.com / minneapolislab@emsl.com>

EMSL Order: 351803647

Customer ID: BALI50

Customer PO: MP185083 task 2

Project ID:

Attention: Mike Willey

Liesch Associates, Inc.

13400 15th Avenue North

Plymouth, MN 55441

Phone: (763) 489-3100

Fax: (763) 489-3101

Received Date: 05/17/2018 4:40 PM

Analysis Date: 05/22/2018

Collected Date:

Project: MP185083 Levee/Scott St. Shakopee

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-11 (6-8)	Bormg 11 6-8' - Black roofing with green spots	Black/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
351803647-0001					

Analyst(s)

Brian De Corte (1)

Rachel Travis, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn NVLAP Lab Code 200019-0

Initial report from: 05/22/2018 17:24:11

May 23, 2018

Eric Stommes
Liesch Associates, Inc.
13400 15th Ave. N.
Minneapolis, MN 55441

RE: Project: MP185083 City of Shakopee Par.
Pace Project No.: 10431124

Dear Eric Stommes:

Enclosed are the analytical results for sample(s) received by the laboratory on May 14, 2018. 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: Jocelyn Blase, Liesch-A Terracon Company
Kirsten Thompson, Terracon Minneapolis/Plymouth



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10431124001	B-8 (0-2)	Solid	05/14/18 14:50	05/14/18 17:17
10431124002	B-10 (1-3)	Solid	05/14/18 15:20	05/14/18 17:17
10431124003	B-11 (7-9)	Solid	05/14/18 12:00	05/14/18 17:17
10431124004	B-13 (13-15)	Solid	05/14/18 10:30	05/14/18 17:17
10431124005	B-14 (8-10)	Solid	05/14/18 11:00	05/14/18 17:17
10431124006	B-20 (13-15)	Solid	05/14/18 13:40	05/14/18 17:17
10431124007	Trip Blank	Solid	05/14/18 00:00	05/14/18 17:17

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10431124001	B-8 (0-2)	WI MOD DRO	JRH	2
		WI MOD GRO	AJR	2
		EPA 6010D	DM	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431124002	B-10 (1-3)	WI MOD DRO	JRH	2
		WI MOD GRO	AJR	2
		EPA 6010D	DM	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431124003	B-11 (7-9)	WI MOD DRO	JRH	2
		WI MOD GRO	AJR	2
		EPA 6010D	DM	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431124004	B-13 (13-15)	WI MOD DRO	JRH	2
		WI MOD GRO	AJR	2
		EPA 6010D	DM	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431124005	B-14 (8-10)	WI MOD DRO	JRH	2
		WI MOD GRO	AJR	2
		EPA 6010D	DM	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10431124006	B-20 (13-15)	ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
		WI MOD DRO	JRH	2
		WI MOD GRO	AJR	2
		EPA 6010D	DM	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
10431124007	Trip Blank	EPA 8260B	CD2	70
		WI MOD GRO	AJR	2
		EPA 8260B	CD2	70

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431124001	B-8 (0-2)					
WI MOD DRO	WDRO C10-C28	12.8	mg/kg	7.4	05/19/18 17:45	T6
EPA 6010D	Barium	119	mg/kg	0.59	05/15/18 17:19	
EPA 6010D	Cadmium	0.26	mg/kg	0.18	05/15/18 17:19	
EPA 6010D	Chromium	13.6	mg/kg	0.59	05/15/18 17:19	
EPA 6010D	Lead	124	mg/kg	0.59	05/15/18 17:19	
EPA 6020B	Arsenic	6.8	mg/kg	0.59	05/23/18 13:36	
EPA 7471B	Mercury	0.19	mg/kg	0.023	05/15/18 16:07	
ASTM D2974	Percent Moisture	16.3	%	0.10	05/16/18 14:04	
EPA 8270D by SIM	Benzo(a)anthracene	0.062	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Benzo(a)pyrene	0.090	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Benzo(b)fluoranthene	0.12	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.11	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Benzo(k)fluoranthene	0.041	mg/kg	0.024	05/17/18 11:36	R1
EPA 8270D by SIM	Chrysene	0.14	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Fluoranthene	0.13	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.045	mg/kg	0.024	05/17/18 11:36	R1
EPA 8270D by SIM	Phenanthrene	0.067	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Pyrene	0.16	mg/kg	0.024	05/17/18 11:36	M1, R1
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.12	mg/kg	0.024	05/17/18 11:36	
10431124002	B-10 (1-3)					
WI MOD DRO	WDRO C10-C28	11.3	mg/kg	9.5	05/19/18 18:20	T6
EPA 6010D	Barium	81.8	mg/kg	0.55	05/15/18 17:22	
EPA 6010D	Cadmium	0.34	mg/kg	0.16	05/15/18 17:22	
EPA 6010D	Chromium	11.7	mg/kg	0.55	05/15/18 17:22	
EPA 6010D	Lead	62.5	mg/kg	0.55	05/15/18 17:22	
EPA 6020B	Arsenic	10.0	mg/kg	0.56	05/21/18 23:19	
EPA 7471B	Mercury	0.11	mg/kg	0.022	05/15/18 16:09	
ASTM D2974	Percent Moisture	11.4	%	0.10	05/16/18 14:04	
EPA 8270D by SIM	Acenaphthylene	0.035	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Anthracene	0.047	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Benzo(a)anthracene	0.16	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Benzo(a)pyrene	0.17	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Benzo(b)fluoranthene	0.26	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.12	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.084	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Chrysene	0.20	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Dibenz(a,h)anthracene	0.027	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Fluoranthene	0.37	mg/kg	0.056	05/16/18 17:26	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.10	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Phenanthrene	0.14	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Pyrene	0.29	mg/kg	0.011	05/16/18 17:05	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.25	mg/kg	0.011	05/16/18 17:05	
10431124003	B-11 (7-9)					
WI MOD DRO	WDRO C10-C28	18.7	mg/kg	10.3	05/19/18 17:52	T6
EPA 6010D	Barium	307	mg/kg	0.62	05/15/18 17:25	
EPA 6010D	Cadmium	0.72	mg/kg	0.19	05/15/18 17:25	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431124003	B-11 (7-9)					
EPA 6010D	Chromium	36.6	mg/kg	0.62	05/15/18 17:25	
EPA 6010D	Lead	575	mg/kg	0.62	05/15/18 17:25	
EPA 6020B	Arsenic	11.2	mg/kg	0.63	05/21/18 23:22	
EPA 7471B	Mercury	0.27	mg/kg	0.023	05/15/18 16:11	
ASTM D2974	Percent Moisture	21.2	%	0.10	05/16/18 14:04	
EPA 8270D by SIM	Acenaphthylene	0.037	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Anthracene	0.036	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Benzo(a)anthracene	0.098	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Benzo(a)pyrene	0.12	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Benzo(b)fluoranthene	0.17	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.077	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.064	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Chrysene	0.13	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Fluoranthene	0.23	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.071	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Phenanthrene	0.084	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Pyrene	0.18	mg/kg	0.025	05/17/18 12:38	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.16	mg/kg	0.025	05/17/18 12:38	
EPA 8260B	Tetrachloroethene	0.23	mg/kg	0.064	05/22/18 03:43	
10431124004	B-13 (13-15)					
WI MOD DRO	WDRO C10-C28	220	mg/kg	46.5	05/19/18 18:29	T6
EPA 6010D	Barium	99.0	mg/kg	0.56	05/15/18 17:27	
EPA 6010D	Cadmium	0.55	mg/kg	0.17	05/15/18 17:27	
EPA 6010D	Chromium	12.6	mg/kg	0.56	05/15/18 17:27	
EPA 6010D	Lead	227	mg/kg	0.56	05/15/18 17:27	
EPA 6020B	Arsenic	6.1	mg/kg	0.56	05/21/18 23:24	
EPA 7471B	Mercury	0.99	mg/kg	0.023	05/15/18 16:13	
ASTM D2974	Percent Moisture	12.9	%	0.10	05/16/18 14:04	
EPA 8270D by SIM	Acenaphthene	0.38	mg/kg	0.011	05/16/18 18:08	
EPA 8270D by SIM	Acenaphthylene	0.053	mg/kg	0.011	05/16/18 18:08	
EPA 8270D by SIM	Anthracene	0.79	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Benzo(a)anthracene	1.4	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Benzo(a)pyrene	1.1	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Benzo(b)fluoranthene	1.4	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.61	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.54	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Chrysene	1.3	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Dibenz(a,h)anthracene	0.18	mg/kg	0.011	05/16/18 18:08	
EPA 8270D by SIM	Fluoranthene	2.9	mg/kg	0.11	05/17/18 12:59	
EPA 8270D by SIM	Fluorene	0.41	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.53	mg/kg	0.057	05/16/18 18:29	
EPA 8270D by SIM	Naphthalene	0.32	mg/kg	0.011	05/16/18 18:08	
EPA 8270D by SIM	Phenanthrene	3.2	mg/kg	0.11	05/17/18 12:59	
EPA 8270D by SIM	Pyrene	2.3	mg/kg	0.11	05/17/18 12:59	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	1.6	mg/kg	0.057	05/16/18 18:29	
EPA 8260B	Benzene	0.051	mg/kg	0.022	05/22/18 03:58	
EPA 8260B	Toluene	0.091	mg/kg	0.056	05/22/18 03:58	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431124004	B-13 (13-15)					
EPA 8260B	1,2,4-Trimethylbenzene	0.059	mg/kg	0.056	05/22/18 03:58	
10431124005	B-14 (8-10)					
WI MOD DRO	WDRO C10-C28	59.3	mg/kg	9.1	05/19/18 18:13	T6
EPA 6010D	Barium	229	mg/kg	0.60	05/15/18 17:36	
EPA 6010D	Cadmium	1.0	mg/kg	0.18	05/15/18 17:36	
EPA 6010D	Chromium	23.0	mg/kg	0.60	05/15/18 17:36	
EPA 6010D	Lead	477	mg/kg	0.60	05/15/18 17:36	
EPA 6020B	Arsenic	13.7	mg/kg	0.61	05/21/18 23:27	
EPA 6020B	Selenium	0.70	mg/kg	0.61	05/21/18 23:27	
EPA 7471B	Mercury	0.25	mg/kg	0.023	05/15/18 16:16	
ASTM D2974	Percent Moisture	17.8	%	0.10	05/16/18 14:04	
EPA 8270D by SIM	Acenaphthene	0.068	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Anthracene	0.25	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Benzo(a)anthracene	0.49	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Benzo(a)pyrene	0.46	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Benzo(b)fluoranthene	0.63	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.29	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.19	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Chrysene	0.51	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Dibenz(a,h)anthracene	0.073	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Fluoranthene	0.96	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Fluorene	0.075	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.26	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Phenanthrene	0.75	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Pyrene	0.82	mg/kg	0.061	05/16/18 18:50	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.67	mg/kg	0.061	05/16/18 18:50	
EPA 8260B	Naphthalene	0.51	mg/kg	0.26	05/22/18 04:13	
10431124006	B-20 (13-15)					
WI MOD DRO	WDRO C10-C28	60.4	mg/kg	12.4	05/19/18 17:59	T6
EPA 6010D	Barium	336	mg/kg	0.58	05/15/18 17:38	
EPA 6010D	Cadmium	2.0	mg/kg	0.17	05/15/18 17:38	
EPA 6010D	Chromium	29.5	mg/kg	0.58	05/15/18 17:38	
EPA 6010D	Lead	2240	mg/kg	2.9	05/16/18 10:19	
EPA 6010D	Silver	1.3	mg/kg	0.58	05/15/18 17:38	
EPA 6020B	Arsenic	13.1	mg/kg	0.59	05/21/18 23:30	
EPA 7471B	Mercury	0.53	mg/kg	0.024	05/15/18 16:18	
ASTM D2974	Percent Moisture	16.6	%	0.10	05/16/18 14:05	
EPA 8270D by SIM	Acenaphthylene	0.072	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Anthracene	0.14	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Benzo(a)anthracene	0.39	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Benzo(a)pyrene	0.39	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Benzo(b)fluoranthene	0.56	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.25	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.18	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Chrysene	0.44	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Dibenz(a,h)anthracene	0.066	mg/kg	0.060	05/16/18 19:11	

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431124006	B-20 (13-15)					
EPA 8270D by SIM	Fluoranthene	0.79	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.23	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Phenanthrene	0.36	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Pyrene	0.62	mg/kg	0.060	05/16/18 19:11	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.57	mg/kg	0.060	05/16/18 19:11	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-8 (0-2) **Lab ID: 10431124001** Collected: 05/14/18 14:50 Received: 05/14/18 17:17 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	12.8	mg/kg	7.4	1.5	1	05/15/18 12:00	05/19/18 17:45		T6
Surrogates									
n-Triacontane (S)	76	%	59-133		1	05/15/18 12:00	05/19/18 17:45	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<12.1	mg/kg	12.1	1.5	1	05/18/18 10:37	05/18/18 17:49		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/18/18 17:49	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	119	mg/kg	0.59	0.032	1	05/15/18 08:31	05/15/18 17:19	7440-39-3	
Cadmium	0.26	mg/kg	0.18	0.018	1	05/15/18 08:31	05/15/18 17:19	7440-43-9	
Chromium	13.6	mg/kg	0.59	0.075	1	05/15/18 08:31	05/15/18 17:19	7440-47-3	
Lead	124	mg/kg	0.59	0.13	1	05/15/18 08:31	05/15/18 17:19	7439-92-1	
Silver	<0.59	mg/kg	0.59	0.046	1	05/15/18 08:31	05/15/18 17:19	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	6.8	mg/kg	0.59	0.27	20	05/16/18 07:00	05/23/18 13:36	7440-38-2	
Selenium	<0.59	mg/kg	0.59	0.30	20	05/16/18 07:00	05/21/18 23:38	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.19	mg/kg	0.023	0.011	1	05/15/18 07:02	05/15/18 16:07	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	16.3	%	0.10	0.10	1		05/16/18 14:04		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.024	mg/kg	0.024	0.0014	2	05/15/18 13:02	05/17/18 11:36	83-32-9	
Acenaphthylene	<0.024	mg/kg	0.024	0.0016	2	05/15/18 13:02	05/17/18 11:36	208-96-8	M1
Anthracene	<0.024	mg/kg	0.024	0.0013	2	05/15/18 13:02	05/17/18 11:36	120-12-7	M1
Benzo(a)anthracene	0.062	mg/kg	0.024	0.0037	2	05/15/18 13:02	05/17/18 11:36	56-55-3	M1,R1
Benzo(a)pyrene	0.090	mg/kg	0.024	0.0025	2	05/15/18 13:02	05/17/18 11:36	50-32-8	M1,R1
Benzo(b)fluoranthene	0.12	mg/kg	0.024	0.0013	2	05/15/18 13:02	05/17/18 11:36	205-99-2	M1,R1
Benzo(g,h,i)perylene	0.11	mg/kg	0.024	0.0023	2	05/15/18 13:02	05/17/18 11:36	191-24-2	M1,R1
Benzo(k)fluoranthene	0.041	mg/kg	0.024	0.0028	2	05/15/18 13:02	05/17/18 11:36	207-08-9	R1
Chrysene	0.14	mg/kg	0.024	0.00072	2	05/15/18 13:02	05/17/18 11:36	218-01-9	M1,R1
Dibenz(a,h)anthracene	<0.024	mg/kg	0.024	0.0011	2	05/15/18 13:02	05/17/18 11:36	53-70-3	M1
Fluoranthene	0.13	mg/kg	0.024	0.00074	2	05/15/18 13:02	05/17/18 11:36	206-44-0	M1,R1
Fluorene	<0.024	mg/kg	0.024	0.00060	2	05/15/18 13:02	05/17/18 11:36	86-73-7	
Indeno(1,2,3-cd)pyrene	0.045	mg/kg	0.024	0.0025	2	05/15/18 13:02	05/17/18 11:36	193-39-5	R1
Naphthalene	<0.024	mg/kg	0.024	0.0024	2	05/15/18 13:02	05/17/18 11:36	91-20-3	
Phenanthrene	0.067	mg/kg	0.024	0.0034	2	05/15/18 13:02	05/17/18 11:36	85-01-8	M1,R1
Pyrene	0.16	mg/kg	0.024	0.00083	2	05/15/18 13:02	05/17/18 11:36	129-00-0	M1,R1
Total BaP Eq. MN 2006sh. ND=0	0.12	mg/kg	0.024		2	05/15/18 13:02	05/17/18 11:36		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-8 (0-2) **Lab ID: 10431124001** Collected: 05/14/18 14:50 Received: 05/14/18 17:17 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	83	%.	42-125		2	05/15/18 13:02	05/17/18 11:36	321-60-8	D3
p-Terphenyl-d14 (S)	93	%.	57-125		2	05/15/18 13:02	05/17/18 11:36	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.2	mg/kg	1.2	0.60	1	05/18/18 08:58	05/22/18 02:58	67-64-1	
Allyl chloride	<0.25	mg/kg	0.25	0.058	1	05/18/18 08:58	05/22/18 02:58	107-05-1	
Benzene	<0.025	mg/kg	0.025	0.0091	1	05/18/18 08:58	05/22/18 02:58	71-43-2	
Bromobenzene	<0.061	mg/kg	0.061	0.017	1	05/18/18 08:58	05/22/18 02:58	108-86-1	
Bromochloromethane	<0.061	mg/kg	0.061	0.030	1	05/18/18 08:58	05/22/18 02:58	74-97-5	
Bromodichloromethane	<0.061	mg/kg	0.061	0.022	1	05/18/18 08:58	05/22/18 02:58	75-27-4	
Bromoform	<0.61	mg/kg	0.61	0.044	1	05/18/18 08:58	05/22/18 02:58	75-25-2	
Bromomethane	<0.61	mg/kg	0.61	0.066	1	05/18/18 08:58	05/22/18 02:58	74-83-9	
2-Butanone (MEK)	<0.31	mg/kg	0.31	0.11	1	05/18/18 08:58	05/22/18 02:58	78-93-3	
n-Butylbenzene	<0.061	mg/kg	0.061	0.015	1	05/18/18 08:58	05/22/18 02:58	104-51-8	
sec-Butylbenzene	<0.061	mg/kg	0.061	0.017	1	05/18/18 08:58	05/22/18 02:58	135-98-8	
tert-Butylbenzene	<0.061	mg/kg	0.061	0.016	1	05/18/18 08:58	05/22/18 02:58	98-06-6	
Carbon tetrachloride	<0.061	mg/kg	0.061	0.025	1	05/18/18 08:58	05/22/18 02:58	56-23-5	
Chlorobenzene	<0.061	mg/kg	0.061	0.018	1	05/18/18 08:58	05/22/18 02:58	108-90-7	
Chloroethane	<0.61	mg/kg	0.61	0.094	1	05/18/18 08:58	05/22/18 02:58	75-00-3	
Chloroform	<0.061	mg/kg	0.061	0.025	1	05/18/18 08:58	05/22/18 02:58	67-66-3	
Chloromethane	<0.25	mg/kg	0.25	0.040	1	05/18/18 08:58	05/22/18 02:58	74-87-3	
2-Chlorotoluene	<0.061	mg/kg	0.061	0.020	1	05/18/18 08:58	05/22/18 02:58	95-49-8	
4-Chlorotoluene	<0.061	mg/kg	0.061	0.015	1	05/18/18 08:58	05/22/18 02:58	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	mg/kg	1.5	0.11	1	05/18/18 08:58	05/22/18 02:58	96-12-8	
Dibromochloromethane	<0.25	mg/kg	0.25	0.061	1	05/18/18 08:58	05/22/18 02:58	124-48-1	
1,2-Dibromoethane (EDB)	<0.061	mg/kg	0.061	0.024	1	05/18/18 08:58	05/22/18 02:58	106-93-4	
Dibromomethane	<0.061	mg/kg	0.061	0.021	1	05/18/18 08:58	05/22/18 02:58	74-95-3	
1,2-Dichlorobenzene	<0.061	mg/kg	0.061	0.013	1	05/18/18 08:58	05/22/18 02:58	95-50-1	
1,3-Dichlorobenzene	<0.061	mg/kg	0.061	0.021	1	05/18/18 08:58	05/22/18 02:58	541-73-1	
1,4-Dichlorobenzene	<0.061	mg/kg	0.061	0.022	1	05/18/18 08:58	05/22/18 02:58	106-46-7	
Dichlorodifluoromethane	<0.25	mg/kg	0.25	0.096	1	05/18/18 08:58	05/22/18 02:58	75-71-8	
1,1-Dichloroethane	<0.061	mg/kg	0.061	0.016	1	05/18/18 08:58	05/22/18 02:58	75-34-3	
1,2-Dichloroethane	<0.061	mg/kg	0.061	0.022	1	05/18/18 08:58	05/22/18 02:58	107-06-2	
1,1-Dichloroethene	<0.061	mg/kg	0.061	0.026	1	05/18/18 08:58	05/22/18 02:58	75-35-4	
cis-1,2-Dichloroethene	<0.061	mg/kg	0.061	0.011	1	05/18/18 08:58	05/22/18 02:58	156-59-2	
trans-1,2-Dichloroethene	<0.061	mg/kg	0.061	0.025	1	05/18/18 08:58	05/22/18 02:58	156-60-5	
Dichlorofluoromethane	<0.61	mg/kg	0.61	0.058	1	05/18/18 08:58	05/22/18 02:58	75-43-4	
1,2-Dichloropropane	<0.061	mg/kg	0.061	0.022	1	05/18/18 08:58	05/22/18 02:58	78-87-5	
1,3-Dichloropropane	<0.061	mg/kg	0.061	0.023	1	05/18/18 08:58	05/22/18 02:58	142-28-9	
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.061	1	05/18/18 08:58	05/22/18 02:58	594-20-7	
1,1-Dichloropropene	<0.061	mg/kg	0.061	0.017	1	05/18/18 08:58	05/22/18 02:58	563-58-6	
cis-1,3-Dichloropropene	<0.061	mg/kg	0.061	0.020	1	05/18/18 08:58	05/22/18 02:58	10061-01-5	
trans-1,3-Dichloropropene	<0.061	mg/kg	0.061	0.044	1	05/18/18 08:58	05/22/18 02:58	10061-02-6	
Diethyl ether (Ethyl ether)	<0.25	mg/kg	0.25	0.051	1	05/18/18 08:58	05/22/18 02:58	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-8 (0-2) **Lab ID: 10431124001** Collected: 05/14/18 14:50 Received: 05/14/18 17:17 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
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.061	mg/kg	0.061	0.018	1	05/18/18 08:58	05/22/18 02:58	100-41-4	
Hexachloro-1,3-butadiene	<0.31	mg/kg	0.31	0.063	1	05/18/18 08:58	05/22/18 02:58	87-68-3	
Isopropylbenzene (Cumene)	<0.061	mg/kg	0.061	0.020	1	05/18/18 08:58	05/22/18 02:58	98-82-8	
p-Isopropyltoluene	<0.061	mg/kg	0.061	0.013	1	05/18/18 08:58	05/22/18 02:58	99-87-6	
Methylene Chloride	<0.25	mg/kg	0.25	0.032	1	05/18/18 08:58	05/22/18 02:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.31	mg/kg	0.31	0.081	1	05/18/18 08:58	05/22/18 02:58	108-10-1	
Methyl-tert-butyl ether	<0.061	mg/kg	0.061	0.019	1	05/18/18 08:58	05/22/18 02:58	1634-04-4	
Naphthalene	<0.25	mg/kg	0.25	0.054	1	05/18/18 08:58	05/22/18 02:58	91-20-3	
n-Propylbenzene	<0.061	mg/kg	0.061	0.015	1	05/18/18 08:58	05/22/18 02:58	103-65-1	
Styrene	<0.061	mg/kg	0.061	0.017	1	05/18/18 08:58	05/22/18 02:58	100-42-5	
1,1,1,2-Tetrachloroethane	<0.061	mg/kg	0.061	0.016	1	05/18/18 08:58	05/22/18 02:58	630-20-6	
1,1,2,2-Tetrachloroethane	<0.061	mg/kg	0.061	0.028	1	05/18/18 08:58	05/22/18 02:58	79-34-5	
Tetrachloroethene	<0.061	mg/kg	0.061	0.026	1	05/18/18 08:58	05/22/18 02:58	127-18-4	
Tetrahydrofuran	<2.5	mg/kg	2.5	0.64	1	05/18/18 08:58	05/22/18 02:58	109-99-9	
Toluene	<0.061	mg/kg	0.061	0.017	1	05/18/18 08:58	05/22/18 02:58	108-88-3	
1,2,3-Trichlorobenzene	<0.061	mg/kg	0.061	0.015	1	05/18/18 08:58	05/22/18 02:58	87-61-6	
1,2,4-Trichlorobenzene	<0.061	mg/kg	0.061	0.018	1	05/18/18 08:58	05/22/18 02:58	120-82-1	
1,1,1-Trichloroethane	<0.061	mg/kg	0.061	0.014	1	05/18/18 08:58	05/22/18 02:58	71-55-6	
1,1,2-Trichloroethane	<0.061	mg/kg	0.061	0.017	1	05/18/18 08:58	05/22/18 02:58	79-00-5	
Trichloroethene	<0.061	mg/kg	0.061	0.010	1	05/18/18 08:58	05/22/18 02:58	79-01-6	
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.091	1	05/18/18 08:58	05/22/18 02:58	75-69-4	
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.049	1	05/18/18 08:58	05/22/18 02:58	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.032	1	05/18/18 08:58	05/22/18 02:58	76-13-1	
1,2,4-Trimethylbenzene	<0.061	mg/kg	0.061	0.016	1	05/18/18 08:58	05/22/18 02:58	95-63-6	
1,3,5-Trimethylbenzene	<0.061	mg/kg	0.061	0.012	1	05/18/18 08:58	05/22/18 02:58	108-67-8	
Vinyl chloride	<0.025	mg/kg	0.025	0.010	1	05/18/18 08:58	05/22/18 02:58	75-01-4	
Xylene (Total)	<0.18	mg/kg	0.18	0.033	1	05/18/18 08:58	05/22/18 02:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	75-125		1	05/18/18 08:58	05/22/18 02:58	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	05/18/18 08:58	05/22/18 02:58	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 02:58	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-10 (1-3) **Lab ID: 10431124002** Collected: 05/14/18 15:20 Received: 05/14/18 17:17 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO									
WDRO C10-C28	11.3	mg/kg	9.5	1.9	1		05/19/18 18:20		T6
Surrogates									
n-Triacontane (S)	71	%	59-133		1		05/19/18 18:20	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<12.5	mg/kg	12.5	1.6	1	05/18/18 10:37	05/18/18 18:15		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/18/18 18:15	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	81.8	mg/kg	0.55	0.030	1	05/15/18 08:31	05/15/18 17:22	7440-39-3	
Cadmium	0.34	mg/kg	0.16	0.017	1	05/15/18 08:31	05/15/18 17:22	7440-43-9	
Chromium	11.7	mg/kg	0.55	0.070	1	05/15/18 08:31	05/15/18 17:22	7440-47-3	
Lead	62.5	mg/kg	0.55	0.12	1	05/15/18 08:31	05/15/18 17:22	7439-92-1	
Silver	<0.55	mg/kg	0.55	0.043	1	05/15/18 08:31	05/15/18 17:22	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	10.0	mg/kg	0.56	0.25	20	05/16/18 07:00	05/21/18 23:19	7440-38-2	
Selenium	<0.56	mg/kg	0.56	0.28	20	05/16/18 07:00	05/21/18 23:19	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.11	mg/kg	0.022	0.010	1	05/15/18 07:02	05/15/18 16:09	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	11.4	%	0.10	0.10	1		05/16/18 14:04		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.011	mg/kg	0.011	0.00066	1	05/15/18 13:02	05/16/18 17:05	83-32-9	
Acenaphthylene	0.035	mg/kg	0.011	0.00073	1	05/15/18 13:02	05/16/18 17:05	208-96-8	
Anthracene	0.047	mg/kg	0.011	0.00059	1	05/15/18 13:02	05/16/18 17:05	120-12-7	
Benzo(a)anthracene	0.16	mg/kg	0.011	0.0017	1	05/15/18 13:02	05/16/18 17:05	56-55-3	
Benzo(a)pyrene	0.17	mg/kg	0.011	0.0012	1	05/15/18 13:02	05/16/18 17:05	50-32-8	
Benzo(b)fluoranthene	0.26	mg/kg	0.011	0.00062	1	05/15/18 13:02	05/16/18 17:05	205-99-2	
Benzo(g,h,i)perylene	0.12	mg/kg	0.011	0.0011	1	05/15/18 13:02	05/16/18 17:05	191-24-2	
Benzo(k)fluoranthene	0.084	mg/kg	0.011	0.0013	1	05/15/18 13:02	05/16/18 17:05	207-08-9	
Chrysene	0.20	mg/kg	0.011	0.00034	1	05/15/18 13:02	05/16/18 17:05	218-01-9	
Dibenz(a,h)anthracene	0.027	mg/kg	0.011	0.00052	1	05/15/18 13:02	05/16/18 17:05	53-70-3	
Fluoranthene	0.37	mg/kg	0.056	0.0017	5	05/15/18 13:02	05/16/18 17:26	206-44-0	
Fluorene	<0.011	mg/kg	0.011	0.00028	1	05/15/18 13:02	05/16/18 17:05	86-73-7	
Indeno(1,2,3-cd)pyrene	0.10	mg/kg	0.011	0.0012	1	05/15/18 13:02	05/16/18 17:05	193-39-5	
Naphthalene	<0.011	mg/kg	0.011	0.0011	1	05/15/18 13:02	05/16/18 17:05	91-20-3	
Phenanthrene	0.14	mg/kg	0.011	0.0016	1	05/15/18 13:02	05/16/18 17:05	85-01-8	
Pyrene	0.29	mg/kg	0.011	0.00039	1	05/15/18 13:02	05/16/18 17:05	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	0.25	mg/kg	0.011		1	05/15/18 13:02	05/16/18 17:05		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-10 (1-3) Lab ID: 10431124002 Collected: 05/14/18 15:20 Received: 05/14/18 17:17 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	83	%.	42-125		1	05/15/18 13:02	05/16/18 17:05	321-60-8	
p-Terphenyl-d14 (S)	98	%.	57-125		1	05/15/18 13:02	05/16/18 17:05	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.1	mg/kg	1.1	0.54	1	05/18/18 08:58	05/22/18 03:28	67-64-1	
Allyl chloride	<0.22	mg/kg	0.22	0.052	1	05/18/18 08:58	05/22/18 03:28	107-05-1	
Benzene	<0.022	mg/kg	0.022	0.0082	1	05/18/18 08:58	05/22/18 03:28	71-43-2	
Bromobenzene	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:28	108-86-1	
Bromochloromethane	<0.056	mg/kg	0.056	0.027	1	05/18/18 08:58	05/22/18 03:28	74-97-5	
Bromodichloromethane	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:28	75-27-4	
Bromoform	<0.56	mg/kg	0.56	0.040	1	05/18/18 08:58	05/22/18 03:28	75-25-2	
Bromomethane	<0.56	mg/kg	0.56	0.059	1	05/18/18 08:58	05/22/18 03:28	74-83-9	
2-Butanone (MEK)	<0.28	mg/kg	0.28	0.10	1	05/18/18 08:58	05/22/18 03:28	78-93-3	
n-Butylbenzene	<0.056	mg/kg	0.056	0.013	1	05/18/18 08:58	05/22/18 03:28	104-51-8	
sec-Butylbenzene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:28	135-98-8	
tert-Butylbenzene	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:28	98-06-6	
Carbon tetrachloride	<0.056	mg/kg	0.056	0.022	1	05/18/18 08:58	05/22/18 03:28	56-23-5	
Chlorobenzene	<0.056	mg/kg	0.056	0.017	1	05/18/18 08:58	05/22/18 03:28	108-90-7	
Chloroethane	<0.56	mg/kg	0.56	0.085	1	05/18/18 08:58	05/22/18 03:28	75-00-3	
Chloroform	<0.056	mg/kg	0.056	0.023	1	05/18/18 08:58	05/22/18 03:28	67-66-3	
Chloromethane	<0.22	mg/kg	0.22	0.036	1	05/18/18 08:58	05/22/18 03:28	74-87-3	
2-Chlorotoluene	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:28	95-49-8	
4-Chlorotoluene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:28	106-43-4	
1,2-Dibromo-3-chloropropane	<1.4	mg/kg	1.4	0.097	1	05/18/18 08:58	05/22/18 03:28	96-12-8	
Dibromochloromethane	<0.22	mg/kg	0.22	0.056	1	05/18/18 08:58	05/22/18 03:28	124-48-1	
1,2-Dibromoethane (EDB)	<0.056	mg/kg	0.056	0.022	1	05/18/18 08:58	05/22/18 03:28	106-93-4	
Dibromomethane	<0.056	mg/kg	0.056	0.019	1	05/18/18 08:58	05/22/18 03:28	74-95-3	
1,2-Dichlorobenzene	<0.056	mg/kg	0.056	0.012	1	05/18/18 08:58	05/22/18 03:28	95-50-1	
1,3-Dichlorobenzene	<0.056	mg/kg	0.056	0.019	1	05/18/18 08:58	05/22/18 03:28	541-73-1	
1,4-Dichlorobenzene	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:28	106-46-7	
Dichlorodifluoromethane	<0.22	mg/kg	0.22	0.087	1	05/18/18 08:58	05/22/18 03:28	75-71-8	
1,1-Dichloroethane	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:28	75-34-3	
1,2-Dichloroethane	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:28	107-06-2	
1,1-Dichloroethene	<0.056	mg/kg	0.056	0.024	1	05/18/18 08:58	05/22/18 03:28	75-35-4	
cis-1,2-Dichloroethene	<0.056	mg/kg	0.056	0.010	1	05/18/18 08:58	05/22/18 03:28	156-59-2	
trans-1,2-Dichloroethene	<0.056	mg/kg	0.056	0.023	1	05/18/18 08:58	05/22/18 03:28	156-60-5	
Dichlorofluoromethane	<0.56	mg/kg	0.56	0.052	1	05/18/18 08:58	05/22/18 03:28	75-43-4	
1,2-Dichloropropane	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:28	78-87-5	
1,3-Dichloropropane	<0.056	mg/kg	0.056	0.021	1	05/18/18 08:58	05/22/18 03:28	142-28-9	
2,2-Dichloropropane	<0.22	mg/kg	0.22	0.055	1	05/18/18 08:58	05/22/18 03:28	594-20-7	
1,1-Dichloropropene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:28	563-58-6	
cis-1,3-Dichloropropene	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:28	10061-01-5	
trans-1,3-Dichloropropene	<0.056	mg/kg	0.056	0.040	1	05/18/18 08:58	05/22/18 03:28	10061-02-6	
Diethyl ether (Ethyl ether)	<0.22	mg/kg	0.22	0.047	1	05/18/18 08:58	05/22/18 03:28	60-29-7	MO

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-10 (1-3) **Lab ID: 10431124002** Collected: 05/14/18 15:20 Received: 05/14/18 17:17 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:28	100-41-4	
Hexachloro-1,3-butadiene	<0.28	mg/kg	0.28	0.057	1	05/18/18 08:58	05/22/18 03:28	87-68-3	
Isopropylbenzene (Cumene)	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:28	98-82-8	
p-Isopropyltoluene	<0.056	mg/kg	0.056	0.011	1	05/18/18 08:58	05/22/18 03:28	99-87-6	
Methylene Chloride	<0.22	mg/kg	0.22	0.029	1	05/18/18 08:58	05/22/18 03:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.28	mg/kg	0.28	0.074	1	05/18/18 08:58	05/22/18 03:28	108-10-1	
Methyl-tert-butyl ether	<0.056	mg/kg	0.056	0.017	1	05/18/18 08:58	05/22/18 03:28	1634-04-4	
Naphthalene	<0.22	mg/kg	0.22	0.049	1	05/18/18 08:58	05/22/18 03:28	91-20-3	
n-Propylbenzene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:28	103-65-1	
Styrene	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:28	100-42-5	
1,1,1,2-Tetrachloroethane	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:28	630-20-6	
1,1,2,2-Tetrachloroethane	<0.056	mg/kg	0.056	0.025	1	05/18/18 08:58	05/22/18 03:28	79-34-5	
Tetrachloroethene	<0.056	mg/kg	0.056	0.023	1	05/18/18 08:58	05/22/18 03:28	127-18-4	
Tetrahydrofuran	<2.2	mg/kg	2.2	0.58	1	05/18/18 08:58	05/22/18 03:28	109-99-9	
Toluene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:28	108-88-3	
1,2,3-Trichlorobenzene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:28	87-61-6	
1,2,4-Trichlorobenzene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:28	120-82-1	
1,1,1-Trichloroethane	<0.056	mg/kg	0.056	0.013	1	05/18/18 08:58	05/22/18 03:28	71-55-6	
1,1,2-Trichloroethane	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:28	79-00-5	
Trichloroethene	<0.056	mg/kg	0.056	0.0094	1	05/18/18 08:58	05/22/18 03:28	79-01-6	
Trichlorofluoromethane	<0.22	mg/kg	0.22	0.083	1	05/18/18 08:58	05/22/18 03:28	75-69-4	
1,2,3-Trichloropropane	<0.22	mg/kg	0.22	0.044	1	05/18/18 08:58	05/22/18 03:28	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.22	mg/kg	0.22	0.029	1	05/18/18 08:58	05/22/18 03:28	76-13-1	
1,2,4-Trimethylbenzene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:28	95-63-6	
1,3,5-Trimethylbenzene	<0.056	mg/kg	0.056	0.011	1	05/18/18 08:58	05/22/18 03:28	108-67-8	
Vinyl chloride	<0.022	mg/kg	0.022	0.0094	1	05/18/18 08:58	05/22/18 03:28	75-01-4	
Xylene (Total)	<0.17	mg/kg	0.17	0.030	1	05/18/18 08:58	05/22/18 03:28	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	75-125		1	05/18/18 08:58	05/22/18 03:28	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	05/18/18 08:58	05/22/18 03:28	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 03:28	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-11 (7-9) **Lab ID: 10431124003** Collected: 05/14/18 12:00 Received: 05/14/18 17:17 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO									
WDRO C10-C28	18.7	mg/kg	10.3	2.0	1		05/19/18 17:52		T6
Surrogates									
n-Triacontane (S)	60	%	59-133		1		05/19/18 17:52	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<12.7	mg/kg	12.7	1.6	1	05/18/18 10:37	05/19/18 00:02		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/19/18 00:02	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	307	mg/kg	0.62	0.034	1	05/15/18 08:31	05/15/18 17:25	7440-39-3	
Cadmium	0.72	mg/kg	0.19	0.019	1	05/15/18 08:31	05/15/18 17:25	7440-43-9	
Chromium	36.6	mg/kg	0.62	0.079	1	05/15/18 08:31	05/15/18 17:25	7440-47-3	
Lead	575	mg/kg	0.62	0.14	1	05/15/18 08:31	05/15/18 17:25	7439-92-1	
Silver	<0.62	mg/kg	0.62	0.049	1	05/15/18 08:31	05/15/18 17:25	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	11.2	mg/kg	0.63	0.28	20	05/16/18 07:00	05/21/18 23:22	7440-38-2	
Selenium	<0.63	mg/kg	0.63	0.31	20	05/16/18 07:00	05/21/18 23:22	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.27	mg/kg	0.023	0.011	1	05/15/18 07:02	05/15/18 16:11	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	21.2	%	0.10	0.10	1		05/16/18 14:04		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.025	mg/kg	0.025	0.0015	2	05/15/18 13:02	05/17/18 12:38	83-32-9	
Acenaphthylene	0.037	mg/kg	0.025	0.0017	2	05/15/18 13:02	05/17/18 12:38	208-96-8	
Anthracene	0.036	mg/kg	0.025	0.0013	2	05/15/18 13:02	05/17/18 12:38	120-12-7	
Benzo(a)anthracene	0.098	mg/kg	0.025	0.0039	2	05/15/18 13:02	05/17/18 12:38	56-55-3	
Benzo(a)pyrene	0.12	mg/kg	0.025	0.0027	2	05/15/18 13:02	05/17/18 12:38	50-32-8	
Benzo(b)fluoranthene	0.17	mg/kg	0.025	0.0014	2	05/15/18 13:02	05/17/18 12:38	205-99-2	
Benzo(g,h,i)perylene	0.077	mg/kg	0.025	0.0024	2	05/15/18 13:02	05/17/18 12:38	191-24-2	
Benzo(k)fluoranthene	0.064	mg/kg	0.025	0.0030	2	05/15/18 13:02	05/17/18 12:38	207-08-9	
Chrysene	0.13	mg/kg	0.025	0.00077	2	05/15/18 13:02	05/17/18 12:38	218-01-9	
Dibenz(a,h)anthracene	<0.025	mg/kg	0.025	0.0012	2	05/15/18 13:02	05/17/18 12:38	53-70-3	
Fluoranthene	0.23	mg/kg	0.025	0.00079	2	05/15/18 13:02	05/17/18 12:38	206-44-0	
Fluorene	<0.025	mg/kg	0.025	0.00064	2	05/15/18 13:02	05/17/18 12:38	86-73-7	
Indeno(1,2,3-cd)pyrene	0.071	mg/kg	0.025	0.0026	2	05/15/18 13:02	05/17/18 12:38	193-39-5	
Naphthalene	<0.025	mg/kg	0.025	0.0026	2	05/15/18 13:02	05/17/18 12:38	91-20-3	
Phenanthrene	0.084	mg/kg	0.025	0.0036	2	05/15/18 13:02	05/17/18 12:38	85-01-8	
Pyrene	0.18	mg/kg	0.025	0.00088	2	05/15/18 13:02	05/17/18 12:38	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	0.16	mg/kg	0.025		2	05/15/18 13:02	05/17/18 12:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-11 (7-9) **Lab ID: 10431124003** Collected: 05/14/18 12:00 Received: 05/14/18 17:17 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	92	%.	42-125		2	05/15/18 13:02	05/17/18 12:38	321-60-8	D3
p-Terphenyl-d14 (S)	101	%.	57-125		2	05/15/18 13:02	05/17/18 12:38	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.3	mg/kg	1.3	0.62	1	05/18/18 08:58	05/22/18 03:43	67-64-1	
Allyl chloride	<0.26	mg/kg	0.26	0.060	1	05/18/18 08:58	05/22/18 03:43	107-05-1	
Benzene	<0.026	mg/kg	0.026	0.0095	1	05/18/18 08:58	05/22/18 03:43	71-43-2	
Bromobenzene	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	108-86-1	
Bromochloromethane	<0.064	mg/kg	0.064	0.031	1	05/18/18 08:58	05/22/18 03:43	74-97-5	
Bromodichloromethane	<0.064	mg/kg	0.064	0.023	1	05/18/18 08:58	05/22/18 03:43	75-27-4	
Bromoform	<0.64	mg/kg	0.64	0.046	1	05/18/18 08:58	05/22/18 03:43	75-25-2	
Bromomethane	<0.64	mg/kg	0.64	0.069	1	05/18/18 08:58	05/22/18 03:43	74-83-9	
2-Butanone (MEK)	<0.32	mg/kg	0.32	0.12	1	05/18/18 08:58	05/22/18 03:43	78-93-3	
n-Butylbenzene	<0.064	mg/kg	0.064	0.016	1	05/18/18 08:58	05/22/18 03:43	104-51-8	
sec-Butylbenzene	<0.064	mg/kg	0.064	0.018	1	05/18/18 08:58	05/22/18 03:43	135-98-8	
tert-Butylbenzene	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	98-06-6	
Carbon tetrachloride	<0.064	mg/kg	0.064	0.026	1	05/18/18 08:58	05/22/18 03:43	56-23-5	
Chlorobenzene	<0.064	mg/kg	0.064	0.019	1	05/18/18 08:58	05/22/18 03:43	108-90-7	
Chloroethane	<0.64	mg/kg	0.64	0.099	1	05/18/18 08:58	05/22/18 03:43	75-00-3	
Chloroform	<0.064	mg/kg	0.064	0.026	1	05/18/18 08:58	05/22/18 03:43	67-66-3	
Chloromethane	<0.26	mg/kg	0.26	0.042	1	05/18/18 08:58	05/22/18 03:43	74-87-3	
2-Chlorotoluene	<0.064	mg/kg	0.064	0.020	1	05/18/18 08:58	05/22/18 03:43	95-49-8	
4-Chlorotoluene	<0.064	mg/kg	0.064	0.016	1	05/18/18 08:58	05/22/18 03:43	106-43-4	
1,2-Dibromo-3-chloropropane	<1.6	mg/kg	1.6	0.11	1	05/18/18 08:58	05/22/18 03:43	96-12-8	
Dibromochloromethane	<0.26	mg/kg	0.26	0.064	1	05/18/18 08:58	05/22/18 03:43	124-48-1	
1,2-Dibromoethane (EDB)	<0.064	mg/kg	0.064	0.026	1	05/18/18 08:58	05/22/18 03:43	106-93-4	
Dibromomethane	<0.064	mg/kg	0.064	0.022	1	05/18/18 08:58	05/22/18 03:43	74-95-3	
1,2-Dichlorobenzene	<0.064	mg/kg	0.064	0.014	1	05/18/18 08:58	05/22/18 03:43	95-50-1	
1,3-Dichlorobenzene	<0.064	mg/kg	0.064	0.022	1	05/18/18 08:58	05/22/18 03:43	541-73-1	
1,4-Dichlorobenzene	<0.064	mg/kg	0.064	0.023	1	05/18/18 08:58	05/22/18 03:43	106-46-7	
Dichlorodifluoromethane	<0.26	mg/kg	0.26	0.10	1	05/18/18 08:58	05/22/18 03:43	75-71-8	
1,1-Dichloroethane	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	75-34-3	
1,2-Dichloroethane	<0.064	mg/kg	0.064	0.024	1	05/18/18 08:58	05/22/18 03:43	107-06-2	
1,1-Dichloroethene	<0.064	mg/kg	0.064	0.028	1	05/18/18 08:58	05/22/18 03:43	75-35-4	
cis-1,2-Dichloroethene	<0.064	mg/kg	0.064	0.012	1	05/18/18 08:58	05/22/18 03:43	156-59-2	
trans-1,2-Dichloroethene	<0.064	mg/kg	0.064	0.026	1	05/18/18 08:58	05/22/18 03:43	156-60-5	
Dichlorofluoromethane	<0.64	mg/kg	0.64	0.060	1	05/18/18 08:58	05/22/18 03:43	75-43-4	
1,2-Dichloropropane	<0.064	mg/kg	0.064	0.023	1	05/18/18 08:58	05/22/18 03:43	78-87-5	
1,3-Dichloropropane	<0.064	mg/kg	0.064	0.024	1	05/18/18 08:58	05/22/18 03:43	142-28-9	
2,2-Dichloropropane	<0.26	mg/kg	0.26	0.064	1	05/18/18 08:58	05/22/18 03:43	594-20-7	
1,1-Dichloropropene	<0.064	mg/kg	0.064	0.018	1	05/18/18 08:58	05/22/18 03:43	563-58-6	
cis-1,3-Dichloropropene	<0.064	mg/kg	0.064	0.021	1	05/18/18 08:58	05/22/18 03:43	10061-01-5	
trans-1,3-Dichloropropene	<0.064	mg/kg	0.064	0.046	1	05/18/18 08:58	05/22/18 03:43	10061-02-6	
Diethyl ether (Ethyl ether)	<0.26	mg/kg	0.26	0.054	1	05/18/18 08:58	05/22/18 03:43	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-11 (7-9) **Lab ID: 10431124003** Collected: 05/14/18 12:00 Received: 05/14/18 17:17 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.064	mg/kg	0.064	0.019	1	05/18/18 08:58	05/22/18 03:43	100-41-4	
Hexachloro-1,3-butadiene	<0.32	mg/kg	0.32	0.066	1	05/18/18 08:58	05/22/18 03:43	87-68-3	
Isopropylbenzene (Cumene)	<0.064	mg/kg	0.064	0.021	1	05/18/18 08:58	05/22/18 03:43	98-82-8	
p-Isopropyltoluene	<0.064	mg/kg	0.064	0.013	1	05/18/18 08:58	05/22/18 03:43	99-87-6	
Methylene Chloride	<0.26	mg/kg	0.26	0.033	1	05/18/18 08:58	05/22/18 03:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.32	mg/kg	0.32	0.085	1	05/18/18 08:58	05/22/18 03:43	108-10-1	
Methyl-tert-butyl ether	<0.064	mg/kg	0.064	0.020	1	05/18/18 08:58	05/22/18 03:43	1634-04-4	
Naphthalene	<0.26	mg/kg	0.26	0.057	1	05/18/18 08:58	05/22/18 03:43	91-20-3	
n-Propylbenzene	<0.064	mg/kg	0.064	0.016	1	05/18/18 08:58	05/22/18 03:43	103-65-1	
Styrene	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	100-42-5	
1,1,1,2-Tetrachloroethane	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	630-20-6	
1,1,1,2-Tetrachloroethane	<0.064	mg/kg	0.064	0.029	1	05/18/18 08:58	05/22/18 03:43	79-34-5	
Tetrachloroethene	0.23	mg/kg	0.064	0.027	1	05/18/18 08:58	05/22/18 03:43	127-18-4	
Tetrahydrofuran	<2.6	mg/kg	2.6	0.67	1	05/18/18 08:58	05/22/18 03:43	109-99-9	
Toluene	<0.064	mg/kg	0.064	0.018	1	05/18/18 08:58	05/22/18 03:43	108-88-3	
1,2,3-Trichlorobenzene	<0.064	mg/kg	0.064	0.016	1	05/18/18 08:58	05/22/18 03:43	87-61-6	
1,2,4-Trichlorobenzene	<0.064	mg/kg	0.064	0.018	1	05/18/18 08:58	05/22/18 03:43	120-82-1	
1,1,1-Trichloroethane	<0.064	mg/kg	0.064	0.015	1	05/18/18 08:58	05/22/18 03:43	71-55-6	
1,1,2-Trichloroethane	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	79-00-5	
Trichloroethene	<0.064	mg/kg	0.064	0.011	1	05/18/18 08:58	05/22/18 03:43	79-01-6	
Trichlorofluoromethane	<0.26	mg/kg	0.26	0.096	1	05/18/18 08:58	05/22/18 03:43	75-69-4	
1,2,3-Trichloropropane	<0.26	mg/kg	0.26	0.051	1	05/18/18 08:58	05/22/18 03:43	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.26	mg/kg	0.26	0.034	1	05/18/18 08:58	05/22/18 03:43	76-13-1	
1,2,4-Trimethylbenzene	<0.064	mg/kg	0.064	0.017	1	05/18/18 08:58	05/22/18 03:43	95-63-6	
1,3,5-Trimethylbenzene	<0.064	mg/kg	0.064	0.012	1	05/18/18 08:58	05/22/18 03:43	108-67-8	
Vinyl chloride	<0.026	mg/kg	0.026	0.011	1	05/18/18 08:58	05/22/18 03:43	75-01-4	
Xylene (Total)	<0.19	mg/kg	0.19	0.034	1	05/18/18 08:58	05/22/18 03:43	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%	75-125		1	05/18/18 08:58	05/22/18 03:43	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 03:43	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 03:43	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-13 (13-15) **Lab ID: 10431124004** Collected: 05/14/18 10:30 Received: 05/14/18 17:17 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	220	mg/kg	46.5	9.1	5	05/15/18 12:00	05/19/18 18:29		T6
Surrogates									
n-Triacontane (S)	123	%	59-133		5	05/15/18 12:00	05/19/18 18:29	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<11.2	mg/kg	11.2	1.4	1	05/18/18 10:37	05/18/18 18:40		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	80-150		1	05/18/18 10:37	05/18/18 18:40	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	99.0	mg/kg	0.56	0.030	1	05/15/18 08:31	05/15/18 17:27	7440-39-3	
Cadmium	0.55	mg/kg	0.17	0.017	1	05/15/18 08:31	05/15/18 17:27	7440-43-9	
Chromium	12.6	mg/kg	0.56	0.072	1	05/15/18 08:31	05/15/18 17:27	7440-47-3	
Lead	227	mg/kg	0.56	0.13	1	05/15/18 08:31	05/15/18 17:27	7439-92-1	
Silver	<0.56	mg/kg	0.56	0.044	1	05/15/18 08:31	05/15/18 17:27	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	6.1	mg/kg	0.56	0.25	20	05/16/18 07:00	05/21/18 23:24	7440-38-2	
Selenium	<0.56	mg/kg	0.56	0.28	20	05/16/18 07:00	05/21/18 23:24	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.99	mg/kg	0.023	0.011	1	05/15/18 07:02	05/15/18 16:13	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	12.9	%	0.10	0.10	1		05/16/18 14:04		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	0.38	mg/kg	0.011	0.00067	1	05/15/18 13:02	05/16/18 18:08	83-32-9	
Acenaphthylene	0.053	mg/kg	0.011	0.00075	1	05/15/18 13:02	05/16/18 18:08	208-96-8	
Anthracene	0.79	mg/kg	0.057	0.0030	5	05/15/18 13:02	05/16/18 18:29	120-12-7	
Benzo(a)anthracene	1.4	mg/kg	0.057	0.0088	5	05/15/18 13:02	05/16/18 18:29	56-55-3	
Benzo(a)pyrene	1.1	mg/kg	0.057	0.0060	5	05/15/18 13:02	05/16/18 18:29	50-32-8	
Benzo(b)fluoranthene	1.4	mg/kg	0.057	0.0032	5	05/15/18 13:02	05/16/18 18:29	205-99-2	
Benzo(g,h,i)perylene	0.61	mg/kg	0.057	0.0054	5	05/15/18 13:02	05/16/18 18:29	191-24-2	
Benzo(k)fluoranthene	0.54	mg/kg	0.057	0.0067	5	05/15/18 13:02	05/16/18 18:29	207-08-9	
Chrysene	1.3	mg/kg	0.057	0.0017	5	05/15/18 13:02	05/16/18 18:29	218-01-9	
Dibenz(a,h)anthracene	0.18	mg/kg	0.011	0.00053	1	05/15/18 13:02	05/16/18 18:08	53-70-3	
Fluoranthene	2.9	mg/kg	0.11	0.0036	10	05/15/18 13:02	05/17/18 12:59	206-44-0	
Fluorene	0.41	mg/kg	0.057	0.0014	5	05/15/18 13:02	05/16/18 18:29	86-73-7	
Indeno(1,2,3-cd)pyrene	0.53	mg/kg	0.057	0.0060	5	05/15/18 13:02	05/16/18 18:29	193-39-5	
Naphthalene	0.32	mg/kg	0.011	0.0012	1	05/15/18 13:02	05/16/18 18:08	91-20-3	
Phenanthrene	3.2	mg/kg	0.11	0.016	10	05/15/18 13:02	05/17/18 12:59	85-01-8	
Pyrene	2.3	mg/kg	0.11	0.0040	10	05/15/18 13:02	05/17/18 12:59	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	1.6	mg/kg	0.057		5	05/15/18 13:02	05/16/18 18:29		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-13 (13-15) **Lab ID: 10431124004** Collected: 05/14/18 10:30 Received: 05/14/18 17:17 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	79	%.	42-125		1	05/15/18 13:02	05/16/18 18:08	321-60-8	
p-Terphenyl-d14 (S)	97	%.	57-125		1	05/15/18 13:02	05/16/18 18:08	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.1	mg/kg	1.1	0.54	1	05/18/18 08:58	05/22/18 03:58	67-64-1	
Allyl chloride	<0.22	mg/kg	0.22	0.053	1	05/18/18 08:58	05/22/18 03:58	107-05-1	
Benzene	0.051	mg/kg	0.022	0.0083	1	05/18/18 08:58	05/22/18 03:58	71-43-2	
Bromobenzene	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	108-86-1	
Bromochloromethane	<0.056	mg/kg	0.056	0.027	1	05/18/18 08:58	05/22/18 03:58	74-97-5	
Bromodichloromethane	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:58	75-27-4	
Bromoform	<0.56	mg/kg	0.56	0.041	1	05/18/18 08:58	05/22/18 03:58	75-25-2	
Bromomethane	<0.56	mg/kg	0.56	0.060	1	05/18/18 08:58	05/22/18 03:58	74-83-9	
2-Butanone (MEK)	<0.28	mg/kg	0.28	0.10	1	05/18/18 08:58	05/22/18 03:58	78-93-3	
n-Butylbenzene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:58	104-51-8	
sec-Butylbenzene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:58	135-98-8	
tert-Butylbenzene	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	98-06-6	
Carbon tetrachloride	<0.056	mg/kg	0.056	0.022	1	05/18/18 08:58	05/22/18 03:58	56-23-5	
Chlorobenzene	<0.056	mg/kg	0.056	0.017	1	05/18/18 08:58	05/22/18 03:58	108-90-7	
Chloroethane	<0.56	mg/kg	0.56	0.086	1	05/18/18 08:58	05/22/18 03:58	75-00-3	
Chloroform	<0.056	mg/kg	0.056	0.023	1	05/18/18 08:58	05/22/18 03:58	67-66-3	
Chloromethane	<0.22	mg/kg	0.22	0.036	1	05/18/18 08:58	05/22/18 03:58	74-87-3	
2-Chlorotoluene	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:58	95-49-8	
4-Chlorotoluene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:58	106-43-4	
1,2-Dibromo-3-chloropropane	<1.4	mg/kg	1.4	0.098	1	05/18/18 08:58	05/22/18 03:58	96-12-8	
Dibromochloromethane	<0.22	mg/kg	0.22	0.056	1	05/18/18 08:58	05/22/18 03:58	124-48-1	
1,2-Dibromoethane (EDB)	<0.056	mg/kg	0.056	0.022	1	05/18/18 08:58	05/22/18 03:58	106-93-4	
Dibromomethane	<0.056	mg/kg	0.056	0.019	1	05/18/18 08:58	05/22/18 03:58	74-95-3	
1,2-Dichlorobenzene	<0.056	mg/kg	0.056	0.012	1	05/18/18 08:58	05/22/18 03:58	95-50-1	
1,3-Dichlorobenzene	<0.056	mg/kg	0.056	0.019	1	05/18/18 08:58	05/22/18 03:58	541-73-1	
1,4-Dichlorobenzene	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:58	106-46-7	
Dichlorodifluoromethane	<0.22	mg/kg	0.22	0.088	1	05/18/18 08:58	05/22/18 03:58	75-71-8	
1,1-Dichloroethane	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	75-34-3	
1,2-Dichloroethane	<0.056	mg/kg	0.056	0.021	1	05/18/18 08:58	05/22/18 03:58	107-06-2	
1,1-Dichloroethene	<0.056	mg/kg	0.056	0.024	1	05/18/18 08:58	05/22/18 03:58	75-35-4	
cis-1,2-Dichloroethene	<0.056	mg/kg	0.056	0.010	1	05/18/18 08:58	05/22/18 03:58	156-59-2	
trans-1,2-Dichloroethene	<0.056	mg/kg	0.056	0.023	1	05/18/18 08:58	05/22/18 03:58	156-60-5	
Dichlorofluoromethane	<0.56	mg/kg	0.56	0.053	1	05/18/18 08:58	05/22/18 03:58	75-43-4	
1,2-Dichloropropane	<0.056	mg/kg	0.056	0.020	1	05/18/18 08:58	05/22/18 03:58	78-87-5	
1,3-Dichloropropane	<0.056	mg/kg	0.056	0.021	1	05/18/18 08:58	05/22/18 03:58	142-28-9	
2,2-Dichloropropane	<0.22	mg/kg	0.22	0.055	1	05/18/18 08:58	05/22/18 03:58	594-20-7	
1,1-Dichloropropene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:58	563-58-6	
cis-1,3-Dichloropropene	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:58	10061-01-5	
trans-1,3-Dichloropropene	<0.056	mg/kg	0.056	0.040	1	05/18/18 08:58	05/22/18 03:58	10061-02-6	
Diethyl ether (Ethyl ether)	<0.22	mg/kg	0.22	0.047	1	05/18/18 08:58	05/22/18 03:58	60-29-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-13 (13-15) **Lab ID: 10431124004** Collected: 05/14/18 10:30 Received: 05/14/18 17:17 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
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:58	100-41-4	
Hexachloro-1,3-butadiene	<0.28	mg/kg	0.28	0.058	1	05/18/18 08:58	05/22/18 03:58	87-68-3	
Isopropylbenzene (Cumene)	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:58	98-82-8	
p-Isopropyltoluene	<0.056	mg/kg	0.056	0.011	1	05/18/18 08:58	05/22/18 03:58	99-87-6	
Methylene Chloride	<0.22	mg/kg	0.22	0.029	1	05/18/18 08:58	05/22/18 03:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.28	mg/kg	0.28	0.074	1	05/18/18 08:58	05/22/18 03:58	108-10-1	
Methyl-tert-butyl ether	<0.056	mg/kg	0.056	0.018	1	05/18/18 08:58	05/22/18 03:58	1634-04-4	
Naphthalene	<0.22	mg/kg	0.22	0.049	1	05/18/18 08:58	05/22/18 03:58	91-20-3	
n-Propylbenzene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:58	103-65-1	
Styrene	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	100-42-5	
1,1,1,2-Tetrachloroethane	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	630-20-6	
1,1,2,2-Tetrachloroethane	<0.056	mg/kg	0.056	0.025	1	05/18/18 08:58	05/22/18 03:58	79-34-5	
Tetrachloroethene	<0.056	mg/kg	0.056	0.023	1	05/18/18 08:58	05/22/18 03:58	127-18-4	
Tetrahydrofuran	<2.2	mg/kg	2.2	0.58	1	05/18/18 08:58	05/22/18 03:58	109-99-9	
Toluene	0.091	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:58	108-88-3	
1,2,3-Trichlorobenzene	<0.056	mg/kg	0.056	0.014	1	05/18/18 08:58	05/22/18 03:58	87-61-6	
1,2,4-Trichlorobenzene	<0.056	mg/kg	0.056	0.016	1	05/18/18 08:58	05/22/18 03:58	120-82-1	
1,1,1-Trichloroethane	<0.056	mg/kg	0.056	0.013	1	05/18/18 08:58	05/22/18 03:58	71-55-6	
1,1,2-Trichloroethane	<0.056	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	79-00-5	
Trichloroethene	<0.056	mg/kg	0.056	0.0095	1	05/18/18 08:58	05/22/18 03:58	79-01-6	
Trichlorofluoromethane	<0.22	mg/kg	0.22	0.083	1	05/18/18 08:58	05/22/18 03:58	75-69-4	
1,2,3-Trichloropropane	<0.22	mg/kg	0.22	0.044	1	05/18/18 08:58	05/22/18 03:58	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.22	mg/kg	0.22	0.030	1	05/18/18 08:58	05/22/18 03:58	76-13-1	
1,2,4-Trimethylbenzene	0.059	mg/kg	0.056	0.015	1	05/18/18 08:58	05/22/18 03:58	95-63-6	
1,3,5-Trimethylbenzene	<0.056	mg/kg	0.056	0.011	1	05/18/18 08:58	05/22/18 03:58	108-67-8	
Vinyl chloride	<0.022	mg/kg	0.022	0.0094	1	05/18/18 08:58	05/22/18 03:58	75-01-4	
Xylene (Total)	<0.17	mg/kg	0.17	0.030	1	05/18/18 08:58	05/22/18 03:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	75-125		1	05/18/18 08:58	05/22/18 03:58	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 03:58	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 03:58	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-14 (8-10) **Lab ID: 10431124005** Collected: 05/14/18 11:00 Received: 05/14/18 17:17 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	59.3	mg/kg	9.1	1.8	1	05/15/18 12:00	05/19/18 18:13		T6
Surrogates									
n-Triacontane (S)	98	%	59-133		1	05/15/18 12:00	05/19/18 18:13	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<12.8	mg/kg	12.8	1.6	1	05/18/18 10:37	05/18/18 19:04		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/18/18 19:04	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	229	mg/kg	0.60	0.033	1	05/15/18 08:31	05/15/18 17:36	7440-39-3	
Cadmium	1.0	mg/kg	0.18	0.018	1	05/15/18 08:31	05/15/18 17:36	7440-43-9	
Chromium	23.0	mg/kg	0.60	0.077	1	05/15/18 08:31	05/15/18 17:36	7440-47-3	
Lead	477	mg/kg	0.60	0.14	1	05/15/18 08:31	05/15/18 17:36	7439-92-1	
Silver	<0.60	mg/kg	0.60	0.047	1	05/15/18 08:31	05/15/18 17:36	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	13.7	mg/kg	0.61	0.27	20	05/16/18 07:00	05/21/18 23:27	7440-38-2	
Selenium	0.70	mg/kg	0.61	0.30	20	05/16/18 07:00	05/21/18 23:27	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.25	mg/kg	0.023	0.011	1	05/15/18 07:02	05/15/18 16:16	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	17.8	%	0.10	0.10	1		05/16/18 14:04		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	0.068	mg/kg	0.061	0.0036	5	05/15/18 13:02	05/16/18 18:50	83-32-9	
Acenaphthylene	<0.061	mg/kg	0.061	0.0040	5	05/15/18 13:02	05/16/18 18:50	208-96-8	
Anthracene	0.25	mg/kg	0.061	0.0032	5	05/15/18 13:02	05/16/18 18:50	120-12-7	
Benzo(a)anthracene	0.49	mg/kg	0.061	0.0094	5	05/15/18 13:02	05/16/18 18:50	56-55-3	
Benzo(a)pyrene	0.46	mg/kg	0.061	0.0064	5	05/15/18 13:02	05/16/18 18:50	50-32-8	
Benzo(b)fluoranthene	0.63	mg/kg	0.061	0.0034	5	05/15/18 13:02	05/16/18 18:50	205-99-2	
Benzo(g,h,i)perylene	0.29	mg/kg	0.061	0.0057	5	05/15/18 13:02	05/16/18 18:50	191-24-2	
Benzo(k)fluoranthene	0.19	mg/kg	0.061	0.0071	5	05/15/18 13:02	05/16/18 18:50	207-08-9	
Chrysene	0.51	mg/kg	0.061	0.0018	5	05/15/18 13:02	05/16/18 18:50	218-01-9	
Dibenz(a,h)anthracene	0.073	mg/kg	0.061	0.0028	5	05/15/18 13:02	05/16/18 18:50	53-70-3	
Fluoranthene	0.96	mg/kg	0.061	0.0019	5	05/15/18 13:02	05/16/18 18:50	206-44-0	
Fluorene	0.075	mg/kg	0.061	0.0015	5	05/15/18 13:02	05/16/18 18:50	86-73-7	
Indeno(1,2,3-cd)pyrene	0.26	mg/kg	0.061	0.0063	5	05/15/18 13:02	05/16/18 18:50	193-39-5	
Naphthalene	<0.061	mg/kg	0.061	0.0062	5	05/15/18 13:02	05/16/18 18:50	91-20-3	
Phenanthrene	0.75	mg/kg	0.061	0.0086	5	05/15/18 13:02	05/16/18 18:50	85-01-8	
Pyrene	0.82	mg/kg	0.061	0.0021	5	05/15/18 13:02	05/16/18 18:50	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	0.67	mg/kg	0.061		5	05/15/18 13:02	05/16/18 18:50		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-14 (8-10) Lab ID: 10431124005 Collected: 05/14/18 11:00 Received: 05/14/18 17:17 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	71	%.	42-125		5	05/15/18 13:02	05/16/18 18:50	321-60-8	D3
p-Terphenyl-d14 (S)	89	%.	57-125		5	05/15/18 13:02	05/16/18 18:50	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.3	mg/kg	1.3	0.64	1	05/18/18 08:58	05/22/18 04:13	67-64-1	
Allyl chloride	<0.26	mg/kg	0.26	0.062	1	05/18/18 08:58	05/22/18 04:13	107-05-1	
Benzene	<0.026	mg/kg	0.026	0.0098	1	05/18/18 08:58	05/22/18 04:13	71-43-2	
Bromobenzene	<0.066	mg/kg	0.066	0.018	1	05/18/18 08:58	05/22/18 04:13	108-86-1	
Bromochloromethane	<0.066	mg/kg	0.066	0.032	1	05/18/18 08:58	05/22/18 04:13	74-97-5	
Bromodichloromethane	<0.066	mg/kg	0.066	0.024	1	05/18/18 08:58	05/22/18 04:13	75-27-4	
Bromoform	<0.66	mg/kg	0.66	0.048	1	05/18/18 08:58	05/22/18 04:13	75-25-2	
Bromomethane	<0.66	mg/kg	0.66	0.071	1	05/18/18 08:58	05/22/18 04:13	74-83-9	
2-Butanone (MEK)	<0.33	mg/kg	0.33	0.12	1	05/18/18 08:58	05/22/18 04:13	78-93-3	
n-Butylbenzene	<0.066	mg/kg	0.066	0.016	1	05/18/18 08:58	05/22/18 04:13	104-51-8	
sec-Butylbenzene	<0.066	mg/kg	0.066	0.019	1	05/18/18 08:58	05/22/18 04:13	135-98-8	
tert-Butylbenzene	<0.066	mg/kg	0.066	0.018	1	05/18/18 08:58	05/22/18 04:13	98-06-6	
Carbon tetrachloride	<0.066	mg/kg	0.066	0.026	1	05/18/18 08:58	05/22/18 04:13	56-23-5	
Chlorobenzene	<0.066	mg/kg	0.066	0.020	1	05/18/18 08:58	05/22/18 04:13	108-90-7	
Chloroethane	<0.66	mg/kg	0.66	0.10	1	05/18/18 08:58	05/22/18 04:13	75-00-3	
Chloroform	<0.066	mg/kg	0.066	0.027	1	05/18/18 08:58	05/22/18 04:13	67-66-3	
Chloromethane	<0.26	mg/kg	0.26	0.043	1	05/18/18 08:58	05/22/18 04:13	74-87-3	
2-Chlorotoluene	<0.066	mg/kg	0.066	0.021	1	05/18/18 08:58	05/22/18 04:13	95-49-8	
4-Chlorotoluene	<0.066	mg/kg	0.066	0.017	1	05/18/18 08:58	05/22/18 04:13	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	mg/kg	1.7	0.12	1	05/18/18 08:58	05/22/18 04:13	96-12-8	
Dibromochloromethane	<0.26	mg/kg	0.26	0.066	1	05/18/18 08:58	05/22/18 04:13	124-48-1	
1,2-Dibromoethane (EDB)	<0.066	mg/kg	0.066	0.026	1	05/18/18 08:58	05/22/18 04:13	106-93-4	
Dibromomethane	<0.066	mg/kg	0.066	0.022	1	05/18/18 08:58	05/22/18 04:13	74-95-3	
1,2-Dichlorobenzene	<0.066	mg/kg	0.066	0.014	1	05/18/18 08:58	05/22/18 04:13	95-50-1	
1,3-Dichlorobenzene	<0.066	mg/kg	0.066	0.023	1	05/18/18 08:58	05/22/18 04:13	541-73-1	
1,4-Dichlorobenzene	<0.066	mg/kg	0.066	0.024	1	05/18/18 08:58	05/22/18 04:13	106-46-7	
Dichlorodifluoromethane	<0.26	mg/kg	0.26	0.10	1	05/18/18 08:58	05/22/18 04:13	75-71-8	
1,1-Dichloroethane	<0.066	mg/kg	0.066	0.017	1	05/18/18 08:58	05/22/18 04:13	75-34-3	
1,2-Dichloroethane	<0.066	mg/kg	0.066	0.024	1	05/18/18 08:58	05/22/18 04:13	107-06-2	
1,1-Dichloroethene	<0.066	mg/kg	0.066	0.028	1	05/18/18 08:58	05/22/18 04:13	75-35-4	
cis-1,2-Dichloroethene	<0.066	mg/kg	0.066	0.012	1	05/18/18 08:58	05/22/18 04:13	156-59-2	
trans-1,2-Dichloroethene	<0.066	mg/kg	0.066	0.027	1	05/18/18 08:58	05/22/18 04:13	156-60-5	
Dichlorofluoromethane	<0.66	mg/kg	0.66	0.062	1	05/18/18 08:58	05/22/18 04:13	75-43-4	
1,2-Dichloropropane	<0.066	mg/kg	0.066	0.024	1	05/18/18 08:58	05/22/18 04:13	78-87-5	
1,3-Dichloropropane	<0.066	mg/kg	0.066	0.025	1	05/18/18 08:58	05/22/18 04:13	142-28-9	
2,2-Dichloropropane	<0.26	mg/kg	0.26	0.065	1	05/18/18 08:58	05/22/18 04:13	594-20-7	
1,1-Dichloropropene	<0.066	mg/kg	0.066	0.019	1	05/18/18 08:58	05/22/18 04:13	563-58-6	
cis-1,3-Dichloropropene	<0.066	mg/kg	0.066	0.021	1	05/18/18 08:58	05/22/18 04:13	10061-01-5	
trans-1,3-Dichloropropene	<0.066	mg/kg	0.066	0.047	1	05/18/18 08:58	05/22/18 04:13	10061-02-6	
Diethyl ether (Ethyl ether)	<0.26	mg/kg	0.26	0.055	1	05/18/18 08:58	05/22/18 04:13	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-14 (8-10) **Lab ID: 10431124005** Collected: 05/14/18 11:00 Received: 05/14/18 17:17 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.066	mg/kg	0.066	0.019	1	05/18/18 08:58	05/22/18 04:13	100-41-4	
Hexachloro-1,3-butadiene	<0.33	mg/kg	0.33	0.068	1	05/18/18 08:58	05/22/18 04:13	87-68-3	
Isopropylbenzene (Cumene)	<0.066	mg/kg	0.066	0.021	1	05/18/18 08:58	05/22/18 04:13	98-82-8	
p-Isopropyltoluene	<0.066	mg/kg	0.066	0.014	1	05/18/18 08:58	05/22/18 04:13	99-87-6	
Methylene Chloride	<0.26	mg/kg	0.26	0.034	1	05/18/18 08:58	05/22/18 04:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.33	mg/kg	0.33	0.088	1	05/18/18 08:58	05/22/18 04:13	108-10-1	
Methyl-tert-butyl ether	<0.066	mg/kg	0.066	0.021	1	05/18/18 08:58	05/22/18 04:13	1634-04-4	
Naphthalene	0.51	mg/kg	0.26	0.058	1	05/18/18 08:58	05/22/18 04:13	91-20-3	
n-Propylbenzene	<0.066	mg/kg	0.066	0.016	1	05/18/18 08:58	05/22/18 04:13	103-65-1	
Styrene	<0.066	mg/kg	0.066	0.018	1	05/18/18 08:58	05/22/18 04:13	100-42-5	
1,1,1,2-Tetrachloroethane	<0.066	mg/kg	0.066	0.018	1	05/18/18 08:58	05/22/18 04:13	630-20-6	
1,1,1,2-Tetrachloroethane	<0.066	mg/kg	0.066	0.030	1	05/18/18 08:58	05/22/18 04:13	79-34-5	
Tetrachloroethene	<0.066	mg/kg	0.066	0.028	1	05/18/18 08:58	05/22/18 04:13	127-18-4	
Tetrahydrofuran	<2.6	mg/kg	2.6	0.69	1	05/18/18 08:58	05/22/18 04:13	109-99-9	
Toluene	<0.066	mg/kg	0.066	0.019	1	05/18/18 08:58	05/22/18 04:13	108-88-3	
1,2,3-Trichlorobenzene	<0.066	mg/kg	0.066	0.017	1	05/18/18 08:58	05/22/18 04:13	87-61-6	
1,2,4-Trichlorobenzene	<0.066	mg/kg	0.066	0.019	1	05/18/18 08:58	05/22/18 04:13	120-82-1	
1,1,1-Trichloroethane	<0.066	mg/kg	0.066	0.015	1	05/18/18 08:58	05/22/18 04:13	71-55-6	
1,1,2-Trichloroethane	<0.066	mg/kg	0.066	0.018	1	05/18/18 08:58	05/22/18 04:13	79-00-5	
Trichloroethene	<0.066	mg/kg	0.066	0.011	1	05/18/18 08:58	05/22/18 04:13	79-01-6	
Trichlorofluoromethane	<0.26	mg/kg	0.26	0.098	1	05/18/18 08:58	05/22/18 04:13	75-69-4	
1,2,3-Trichloropropane	<0.26	mg/kg	0.26	0.052	1	05/18/18 08:58	05/22/18 04:13	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.26	mg/kg	0.26	0.035	1	05/18/18 08:58	05/22/18 04:13	76-13-1	
1,2,4-Trimethylbenzene	<0.066	mg/kg	0.066	0.017	1	05/18/18 08:58	05/22/18 04:13	95-63-6	
1,3,5-Trimethylbenzene	<0.066	mg/kg	0.066	0.013	1	05/18/18 08:58	05/22/18 04:13	108-67-8	
Vinyl chloride	<0.026	mg/kg	0.026	0.011	1	05/18/18 08:58	05/22/18 04:13	75-01-4	
Xylene (Total)	<0.20	mg/kg	0.20	0.035	1	05/18/18 08:58	05/22/18 04:13	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	75-125		1	05/18/18 08:58	05/22/18 04:13	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 04:13	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	05/18/18 08:58	05/22/18 04:13	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-20 (13-15) **Lab ID: 10431124006** Collected: 05/14/18 13:40 Received: 05/14/18 17:17 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	60.4	mg/kg	12.4	2.4	1	05/15/18 12:00	05/19/18 17:59		T6
Surrogates									
n-Triacontane (S)	110	%	59-133		1	05/15/18 12:00	05/19/18 17:59	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<12.3	mg/kg	12.3	1.6	1	05/18/18 10:37	05/18/18 19:29		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-150		1	05/18/18 10:37	05/18/18 19:29	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	336	mg/kg	0.58	0.031	1	05/15/18 08:31	05/15/18 17:38	7440-39-3	
Cadmium	2.0	mg/kg	0.17	0.018	1	05/15/18 08:31	05/15/18 17:38	7440-43-9	
Chromium	29.5	mg/kg	0.58	0.073	1	05/15/18 08:31	05/15/18 17:38	7440-47-3	
Lead	2240	mg/kg	2.9	0.65	5	05/15/18 08:31	05/16/18 10:19	7439-92-1	
Silver	1.3	mg/kg	0.58	0.045	1	05/15/18 08:31	05/15/18 17:38	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	13.1	mg/kg	0.59	0.27	20	05/16/18 07:00	05/21/18 23:30	7440-38-2	
Selenium	<0.59	mg/kg	0.59	0.29	20	05/16/18 07:00	05/21/18 23:30	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.53	mg/kg	0.024	0.011	1	05/15/18 07:02	05/15/18 16:18	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	16.6	%	0.10	0.10	1		05/16/18 14:05		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.060	mg/kg	0.060	0.0035	5	05/15/18 13:02	05/16/18 19:11	83-32-9	
Acenaphthylene	0.072	mg/kg	0.060	0.0039	5	05/15/18 13:02	05/16/18 19:11	208-96-8	
Anthracene	0.14	mg/kg	0.060	0.0031	5	05/15/18 13:02	05/16/18 19:11	120-12-7	
Benzo(a)anthracene	0.39	mg/kg	0.060	0.0092	5	05/15/18 13:02	05/16/18 19:11	56-55-3	
Benzo(a)pyrene	0.39	mg/kg	0.060	0.0063	5	05/15/18 13:02	05/16/18 19:11	50-32-8	
Benzo(b)fluoranthene	0.56	mg/kg	0.060	0.0033	5	05/15/18 13:02	05/16/18 19:11	205-99-2	
Benzo(g,h,i)perylene	0.25	mg/kg	0.060	0.0056	5	05/15/18 13:02	05/16/18 19:11	191-24-2	
Benzo(k)fluoranthene	0.18	mg/kg	0.060	0.0070	5	05/15/18 13:02	05/16/18 19:11	207-08-9	
Chrysene	0.44	mg/kg	0.060	0.0018	5	05/15/18 13:02	05/16/18 19:11	218-01-9	
Dibenz(a,h)anthracene	0.066	mg/kg	0.060	0.0027	5	05/15/18 13:02	05/16/18 19:11	53-70-3	
Fluoranthene	0.79	mg/kg	0.060	0.0019	5	05/15/18 13:02	05/16/18 19:11	206-44-0	
Fluorene	<0.060	mg/kg	0.060	0.0015	5	05/15/18 13:02	05/16/18 19:11	86-73-7	
Indeno(1,2,3-cd)pyrene	0.23	mg/kg	0.060	0.0062	5	05/15/18 13:02	05/16/18 19:11	193-39-5	
Naphthalene	<0.060	mg/kg	0.060	0.0061	5	05/15/18 13:02	05/16/18 19:11	91-20-3	
Phenanthrene	0.36	mg/kg	0.060	0.0085	5	05/15/18 13:02	05/16/18 19:11	85-01-8	
Pyrene	0.62	mg/kg	0.060	0.0021	5	05/15/18 13:02	05/16/18 19:11	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	0.57	mg/kg	0.060		5	05/15/18 13:02	05/16/18 19:11		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-20 (13-15) **Lab ID: 10431124006** Collected: 05/14/18 13:40 Received: 05/14/18 17:17 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	83	%.	42-125		5	05/15/18 13:02	05/16/18 19:11	321-60-8	D3
p-Terphenyl-d14 (S)	95	%.	57-125		5	05/15/18 13:02	05/16/18 19:11	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.3	mg/kg	1.3	0.62	1	05/18/18 08:58	05/22/18 04:29	67-64-1	
Allyl chloride	<0.25	mg/kg	0.25	0.059	1	05/18/18 08:58	05/22/18 04:29	107-05-1	
Benzene	<0.025	mg/kg	0.025	0.0094	1	05/18/18 08:58	05/22/18 04:29	71-43-2	
Bromobenzene	<0.063	mg/kg	0.063	0.017	1	05/18/18 08:58	05/22/18 04:29	108-86-1	
Bromochloromethane	<0.063	mg/kg	0.063	0.031	1	05/18/18 08:58	05/22/18 04:29	74-97-5	
Bromodichloromethane	<0.063	mg/kg	0.063	0.023	1	05/18/18 08:58	05/22/18 04:29	75-27-4	
Bromoform	<0.63	mg/kg	0.63	0.046	1	05/18/18 08:58	05/22/18 04:29	75-25-2	
Bromomethane	<0.63	mg/kg	0.63	0.068	1	05/18/18 08:58	05/22/18 04:29	74-83-9	
2-Butanone (MEK)	<0.32	mg/kg	0.32	0.11	1	05/18/18 08:58	05/22/18 04:29	78-93-3	
n-Butylbenzene	<0.063	mg/kg	0.063	0.015	1	05/18/18 08:58	05/22/18 04:29	104-51-8	
sec-Butylbenzene	<0.063	mg/kg	0.063	0.018	1	05/18/18 08:58	05/22/18 04:29	135-98-8	
tert-Butylbenzene	<0.063	mg/kg	0.063	0.017	1	05/18/18 08:58	05/22/18 04:29	98-06-6	
Carbon tetrachloride	<0.063	mg/kg	0.063	0.025	1	05/18/18 08:58	05/22/18 04:29	56-23-5	
Chlorobenzene	<0.063	mg/kg	0.063	0.019	1	05/18/18 08:58	05/22/18 04:29	108-90-7	
Chloroethane	<0.63	mg/kg	0.63	0.097	1	05/18/18 08:58	05/22/18 04:29	75-00-3	
Chloroform	<0.063	mg/kg	0.063	0.026	1	05/18/18 08:58	05/22/18 04:29	67-66-3	
Chloromethane	<0.25	mg/kg	0.25	0.041	1	05/18/18 08:58	05/22/18 04:29	74-87-3	
2-Chlorotoluene	<0.063	mg/kg	0.063	0.020	1	05/18/18 08:58	05/22/18 04:29	95-49-8	
4-Chlorotoluene	<0.063	mg/kg	0.063	0.016	1	05/18/18 08:58	05/22/18 04:29	106-43-4	
1,2-Dibromo-3-chloropropane	<1.6	mg/kg	1.6	0.11	1	05/18/18 08:58	05/22/18 04:29	96-12-8	
Dibromochloromethane	<0.25	mg/kg	0.25	0.063	1	05/18/18 08:58	05/22/18 04:29	124-48-1	
1,2-Dibromoethane (EDB)	<0.063	mg/kg	0.063	0.025	1	05/18/18 08:58	05/22/18 04:29	106-93-4	
Dibromomethane	<0.063	mg/kg	0.063	0.021	1	05/18/18 08:58	05/22/18 04:29	74-95-3	
1,2-Dichlorobenzene	<0.063	mg/kg	0.063	0.014	1	05/18/18 08:58	05/22/18 04:29	95-50-1	
1,3-Dichlorobenzene	<0.063	mg/kg	0.063	0.022	1	05/18/18 08:58	05/22/18 04:29	541-73-1	
1,4-Dichlorobenzene	<0.063	mg/kg	0.063	0.023	1	05/18/18 08:58	05/22/18 04:29	106-46-7	
Dichlorodifluoromethane	<0.25	mg/kg	0.25	0.099	1	05/18/18 08:58	05/22/18 04:29	75-71-8	
1,1-Dichloroethane	<0.063	mg/kg	0.063	0.016	1	05/18/18 08:58	05/22/18 04:29	75-34-3	
1,2-Dichloroethane	<0.063	mg/kg	0.063	0.023	1	05/18/18 08:58	05/22/18 04:29	107-06-2	
1,1-Dichloroethene	<0.063	mg/kg	0.063	0.027	1	05/18/18 08:58	05/22/18 04:29	75-35-4	
cis-1,2-Dichloroethene	<0.063	mg/kg	0.063	0.011	1	05/18/18 08:58	05/22/18 04:29	156-59-2	
trans-1,2-Dichloroethene	<0.063	mg/kg	0.063	0.026	1	05/18/18 08:58	05/22/18 04:29	156-60-5	
Dichlorofluoromethane	<0.63	mg/kg	0.63	0.059	1	05/18/18 08:58	05/22/18 04:29	75-43-4	
1,2-Dichloropropane	<0.063	mg/kg	0.063	0.023	1	05/18/18 08:58	05/22/18 04:29	78-87-5	
1,3-Dichloropropane	<0.063	mg/kg	0.063	0.024	1	05/18/18 08:58	05/22/18 04:29	142-28-9	
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.063	1	05/18/18 08:58	05/22/18 04:29	594-20-7	
1,1-Dichloropropene	<0.063	mg/kg	0.063	0.018	1	05/18/18 08:58	05/22/18 04:29	563-58-6	
cis-1,3-Dichloropropene	<0.063	mg/kg	0.063	0.020	1	05/18/18 08:58	05/22/18 04:29	10061-01-5	
trans-1,3-Dichloropropene	<0.063	mg/kg	0.063	0.045	1	05/18/18 08:58	05/22/18 04:29	10061-02-6	
Diethyl ether (Ethyl ether)	<0.25	mg/kg	0.25	0.053	1	05/18/18 08:58	05/22/18 04:29	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: B-20 (13-15) **Lab ID: 10431124006** Collected: 05/14/18 13:40 Received: 05/14/18 17:17 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
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.063	mg/kg	0.063	0.018	1	05/18/18 08:58	05/22/18 04:29	100-41-4	
Hexachloro-1,3-butadiene	<0.32	mg/kg	0.32	0.065	1	05/18/18 08:58	05/22/18 04:29	87-68-3	
Isopropylbenzene (Cumene)	<0.063	mg/kg	0.063	0.021	1	05/18/18 08:58	05/22/18 04:29	98-82-8	
p-Isopropyltoluene	<0.063	mg/kg	0.063	0.013	1	05/18/18 08:58	05/22/18 04:29	99-87-6	
Methylene Chloride	<0.25	mg/kg	0.25	0.033	1	05/18/18 08:58	05/22/18 04:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.32	mg/kg	0.32	0.084	1	05/18/18 08:58	05/22/18 04:29	108-10-1	
Methyl-tert-butyl ether	<0.063	mg/kg	0.063	0.020	1	05/18/18 08:58	05/22/18 04:29	1634-04-4	
Naphthalene	<0.25	mg/kg	0.25	0.056	1	05/18/18 08:58	05/22/18 04:29	91-20-3	
n-Propylbenzene	<0.063	mg/kg	0.063	0.016	1	05/18/18 08:58	05/22/18 04:29	103-65-1	
Styrene	<0.063	mg/kg	0.063	0.017	1	05/18/18 08:58	05/22/18 04:29	100-42-5	
1,1,1,2-Tetrachloroethane	<0.063	mg/kg	0.063	0.017	1	05/18/18 08:58	05/22/18 04:29	630-20-6	
1,1,2,2-Tetrachloroethane	<0.063	mg/kg	0.063	0.029	1	05/18/18 08:58	05/22/18 04:29	79-34-5	
Tetrachloroethene	<0.063	mg/kg	0.063	0.027	1	05/18/18 08:58	05/22/18 04:29	127-18-4	
Tetrahydrofuran	<2.5	mg/kg	2.5	0.66	1	05/18/18 08:58	05/22/18 04:29	109-99-9	
Toluene	<0.063	mg/kg	0.063	0.018	1	05/18/18 08:58	05/22/18 04:29	108-88-3	
1,2,3-Trichlorobenzene	<0.063	mg/kg	0.063	0.016	1	05/18/18 08:58	05/22/18 04:29	87-61-6	
1,2,4-Trichlorobenzene	<0.063	mg/kg	0.063	0.018	1	05/18/18 08:58	05/22/18 04:29	120-82-1	
1,1,1-Trichloroethane	<0.063	mg/kg	0.063	0.014	1	05/18/18 08:58	05/22/18 04:29	71-55-6	
1,1,2-Trichloroethane	<0.063	mg/kg	0.063	0.017	1	05/18/18 08:58	05/22/18 04:29	79-00-5	
Trichloroethene	<0.063	mg/kg	0.063	0.011	1	05/18/18 08:58	05/22/18 04:29	79-01-6	
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.094	1	05/18/18 08:58	05/22/18 04:29	75-69-4	
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.050	1	05/18/18 08:58	05/22/18 04:29	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.033	1	05/18/18 08:58	05/22/18 04:29	76-13-1	
1,2,4-Trimethylbenzene	<0.063	mg/kg	0.063	0.016	1	05/18/18 08:58	05/22/18 04:29	95-63-6	
1,3,5-Trimethylbenzene	<0.063	mg/kg	0.063	0.012	1	05/18/18 08:58	05/22/18 04:29	108-67-8	
Vinyl chloride	<0.025	mg/kg	0.025	0.011	1	05/18/18 08:58	05/22/18 04:29	75-01-4	
Xylene (Total)	<0.19	mg/kg	0.19	0.034	1	05/18/18 08:58	05/22/18 04:29	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%	75-125		1	05/18/18 08:58	05/22/18 04:29	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 04:29	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 04:29	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: Trip Blank **Lab ID:** 10431124007 **Collected:** 05/14/18 00:00 **Received:** 05/14/18 17:17 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<10.0	mg/kg	10.0	1.3	1	05/18/18 10:37	05/18/18 22:23		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-150		1	05/18/18 10:37	05/18/18 22:23	98-08-8	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.0	mg/kg	1.0	0.48	1	05/18/18 08:58	05/22/18 02:27	67-64-1	
Allyl chloride	<0.20	mg/kg	0.20	0.047	1	05/18/18 08:58	05/22/18 02:27	107-05-1	
Benzene	<0.020	mg/kg	0.020	0.0074	1	05/18/18 08:58	05/22/18 02:27	71-43-2	
Bromobenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	108-86-1	
Bromochloromethane	<0.050	mg/kg	0.050	0.024	1	05/18/18 08:58	05/22/18 02:27	74-97-5	
Bromodichloromethane	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:27	75-27-4	
Bromoform	<0.50	mg/kg	0.50	0.036	1	05/18/18 08:58	05/22/18 02:27	75-25-2	
Bromomethane	<0.50	mg/kg	0.50	0.053	1	05/18/18 08:58	05/22/18 02:27	74-83-9	
2-Butanone (MEK)	<0.25	mg/kg	0.25	0.090	1	05/18/18 08:58	05/22/18 02:27	78-93-3	
n-Butylbenzene	<0.050	mg/kg	0.050	0.012	1	05/18/18 08:58	05/22/18 02:27	104-51-8	
sec-Butylbenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	135-98-8	
tert-Butylbenzene	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:27	98-06-6	
Carbon tetrachloride	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:27	56-23-5	
Chlorobenzene	<0.050	mg/kg	0.050	0.015	1	05/18/18 08:58	05/22/18 02:27	108-90-7	
Chloroethane	<0.50	mg/kg	0.50	0.077	1	05/18/18 08:58	05/22/18 02:27	75-00-3	
Chloroform	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:27	67-66-3	
Chloromethane	<0.20	mg/kg	0.20	0.032	1	05/18/18 08:58	05/22/18 02:27	74-87-3	
2-Chlorotoluene	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:27	95-49-8	
4-Chlorotoluene	<0.050	mg/kg	0.050	0.012	1	05/18/18 08:58	05/22/18 02:27	106-43-4	
1,2-Dibromo-3-chloropropane	<1.2	mg/kg	1.2	0.087	1	05/18/18 08:58	05/22/18 02:27	96-12-8	
Dibromochloromethane	<0.20	mg/kg	0.20	0.050	1	05/18/18 08:58	05/22/18 02:27	124-48-1	
1,2-Dibromoethane (EDB)	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:27	106-93-4	
Dibromomethane	<0.050	mg/kg	0.050	0.017	1	05/18/18 08:58	05/22/18 02:27	74-95-3	
1,2-Dichlorobenzene	<0.050	mg/kg	0.050	0.011	1	05/18/18 08:58	05/22/18 02:27	95-50-1	
1,3-Dichlorobenzene	<0.050	mg/kg	0.050	0.017	1	05/18/18 08:58	05/22/18 02:27	541-73-1	
1,4-Dichlorobenzene	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:27	106-46-7	
Dichlorodifluoromethane	<0.20	mg/kg	0.20	0.078	1	05/18/18 08:58	05/22/18 02:27	75-71-8	
1,1-Dichloroethane	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:27	75-34-3	
1,2-Dichloroethane	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:27	107-06-2	
1,1-Dichloroethene	<0.050	mg/kg	0.050	0.022	1	05/18/18 08:58	05/22/18 02:27	75-35-4	
cis-1,2-Dichloroethene	<0.050	mg/kg	0.050	0.0090	1	05/18/18 08:58	05/22/18 02:27	156-59-2	
trans-1,2-Dichloroethene	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:27	156-60-5	
Dichlorofluoromethane	<0.50	mg/kg	0.50	0.047	1	05/18/18 08:58	05/22/18 02:27	75-43-4	
1,2-Dichloropropane	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:27	78-87-5	
1,3-Dichloropropane	<0.050	mg/kg	0.050	0.019	1	05/18/18 08:58	05/22/18 02:27	142-28-9	
2,2-Dichloropropane	<0.20	mg/kg	0.20	0.049	1	05/18/18 08:58	05/22/18 02:27	594-20-7	
1,1-Dichloropropene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	563-58-6	
cis-1,3-Dichloropropene	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:27	10061-01-5	
trans-1,3-Dichloropropene	<0.050	mg/kg	0.050	0.036	1	05/18/18 08:58	05/22/18 02:27	10061-02-6	
Diethyl ether (Ethyl ether)	<0.20	mg/kg	0.20	0.042	1	05/18/18 08:58	05/22/18 02:27	60-29-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Sample: Trip Blank **Lab ID:** 10431124007 **Collected:** 05/14/18 00:00 **Received:** 05/14/18 17:17 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	100-41-4	
Hexachloro-1,3-butadiene	<0.25	mg/kg	0.25	0.052	1	05/18/18 08:58	05/22/18 02:27	87-68-3	
Isopropylbenzene (Cumene)	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:27	98-82-8	
p-Isopropyltoluene	<0.050	mg/kg	0.050	0.010	1	05/18/18 08:58	05/22/18 02:27	99-87-6	
Methylene Chloride	<0.20	mg/kg	0.20	0.026	1	05/18/18 08:58	05/22/18 02:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.25	mg/kg	0.25	0.066	1	05/18/18 08:58	05/22/18 02:27	108-10-1	
Methyl-tert-butyl ether	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:27	1634-04-4	
Naphthalene	<0.20	mg/kg	0.20	0.044	1	05/18/18 08:58	05/22/18 02:27	91-20-3	
n-Propylbenzene	<0.050	mg/kg	0.050	0.012	1	05/18/18 08:58	05/22/18 02:27	103-65-1	
Styrene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	100-42-5	
1,1,1,2-Tetrachloroethane	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:27	630-20-6	
1,1,2,2-Tetrachloroethane	<0.050	mg/kg	0.050	0.023	1	05/18/18 08:58	05/22/18 02:27	79-34-5	
Tetrachloroethene	<0.050	mg/kg	0.050	0.021	1	05/18/18 08:58	05/22/18 02:27	127-18-4	
Tetrahydrofuran	<2.0	mg/kg	2.0	0.52	1	05/18/18 08:58	05/22/18 02:27	109-99-9	
Toluene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	108-88-3	
1,2,3-Trichlorobenzene	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:27	87-61-6	
1,2,4-Trichlorobenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	120-82-1	
1,1,1-Trichloroethane	<0.050	mg/kg	0.050	0.011	1	05/18/18 08:58	05/22/18 02:27	71-55-6	
1,1,2-Trichloroethane	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:27	79-00-5	
Trichloroethene	<0.050	mg/kg	0.050	0.0085	1	05/18/18 08:58	05/22/18 02:27	79-01-6	
Trichlorofluoromethane	<0.20	mg/kg	0.20	0.074	1	05/18/18 08:58	05/22/18 02:27	75-69-4	
1,2,3-Trichloropropane	<0.20	mg/kg	0.20	0.040	1	05/18/18 08:58	05/22/18 02:27	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.20	mg/kg	0.20	0.026	1	05/18/18 08:58	05/22/18 02:27	76-13-1	
1,2,4-Trimethylbenzene	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:27	95-63-6	
1,3,5-Trimethylbenzene	<0.050	mg/kg	0.050	0.0097	1	05/18/18 08:58	05/22/18 02:27	108-67-8	
Vinyl chloride	<0.020	mg/kg	0.020	0.0084	1	05/18/18 08:58	05/22/18 02:27	75-01-4	
Xylene (Total)	<0.15	mg/kg	0.15	0.027	1	05/18/18 08:58	05/22/18 02:27	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	91	%	75-125		1	05/18/18 08:58	05/22/18 02:27	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 02:27	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 02:27	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch:	539093	Analysis Method:	WI MOD GRO
QC Batch Method:	EPA 5030 Medium Soil	Analysis Description:	WIGRO Solid GCV
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006, 10431124007			

METHOD BLANK:	2931309	Matrix:	Solid
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006, 10431124007			

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<10.0	10.0	1.3	05/18/18 13:39	
a,a,a-Trifluorotoluene (S)	%.	99	80-150		05/18/18 13:39	

LABORATORY CONTROL SAMPLE & LCSD: 2931310		2931311									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Gasoline Range Organics	mg/kg	50	47.3	47.7	95	95	80-120	1	20		
a,a,a-Trifluorotoluene (S)	%.				98	99	80-150				

MATRIX SPIKE SAMPLE: 2932420		10430961003	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Parameter	Units	Result						
Gasoline Range Organics	mg/kg	ND	55.5	57.7	101	80-120		
a,a,a-Trifluorotoluene (S)	%.				99	80-150		

SAMPLE DUPLICATE: 2932419		10430961005	Dup Result	RPD	Max RPD	Qualifiers	
Parameter	Units	Result					
Gasoline Range Organics	mg/kg	ND	<11.0		20		
a,a,a-Trifluorotoluene (S)	%.	100	100	4			

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch: 538234 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006

METHOD BLANK: 2926423 Matrix: Solid
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.018	0.018	0.0085	05/15/18 15:43	

LABORATORY CONTROL SAMPLE: 2926424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.43	0.46	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2926425 2926426

Parameter	Units	10431126001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	.58	.6	0.63	0.63	106	103	75-125	0	20	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch:	538228	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050	Analysis Description:	6010D Solids
Associated Lab Samples:	10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006		

METHOD BLANK:	2926399	Matrix:	Solid
Associated Lab Samples:	10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/kg	<0.50	0.50	0.027	05/15/18 16:40	
Cadmium	mg/kg	<0.15	0.15	0.015	05/15/18 16:40	
Chromium	mg/kg	<0.50	0.50	0.064	05/15/18 16:40	
Lead	mg/kg	<0.50	0.50	0.11	05/15/18 16:40	
Silver	mg/kg	<0.50	0.50	0.039	05/15/18 16:40	

LABORATORY CONTROL SAMPLE: 2926400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/kg	48.5	48.4	100	80-120	
Cadmium	mg/kg	48.5	45.0	93	80-120	
Chromium	mg/kg	48.5	48.2	99	80-120	
Lead	mg/kg	48.5	46.7	96	80-120	
Silver	mg/kg	24.3	22.2	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2926401 2926402

Parameter	Units	10431126001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	168	58.8	57.1	158	225	-16	101	75-125	35	20	M1,R1
Cadmium	mg/kg	0.19	58.8	57.1	48.8	46.4	83	81	75-125	5	20	
Chromium	mg/kg	11.7	58.8	57.1	66.6	60.4	93	85	75-125	10	20	
Lead	mg/kg	7.5	58.8	57.1	55.4	53.7	81	81	75-125	3	20	
Silver	mg/kg	ND	29.4	28.5	24.2	22.9	82	80	75-125	6	20	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch:	538529	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3050	Analysis Description:	6020B Solids UPD5
Associated Lab Samples:	10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006		

METHOD BLANK:	2928202	Matrix:	Solid
Associated Lab Samples:	10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<0.49	0.49	0.22	05/21/18 23:05	
Selenium	mg/kg	<0.49	0.49	0.25	05/21/18 23:05	

LABORATORY CONTROL SAMPLE: 2928203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	49	46.6	95	80-120	
Selenium	mg/kg	49	49.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2928204 2928205

Parameter	Units	10431124001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	6.8	58.6	58.6	60.7	61.3	92	93	75-125	1	20	
Selenium	mg/kg	<0.59	58.6	58.6	60.1	56.1	102	95	75-125	7	20	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch: 538643 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006

SAMPLE DUPLICATE: 2928757

Parameter	Units	50195665005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.1	20.3	1	30	

SAMPLE DUPLICATE: 2928758

Parameter	Units	10431127009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.0	10.2	2	30	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch:	538721	Analysis Method:	EPA 8260B
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260B MSV 5030 Med Level
Associated Lab Samples:	10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006, 10431124007		

METHOD BLANK:	2929162	Matrix:	Solid
Associated Lab Samples:	10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006, 10431124007		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,1,1-Trichloroethane	mg/kg	<0.050	0.050	0.011	05/22/18 02:12	
1,1,2,2-Tetrachloroethane	mg/kg	<0.050	0.050	0.023	05/22/18 02:12	
1,1,2-Trichloroethane	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.20	0.20	0.026	05/22/18 02:12	
1,1-Dichloroethane	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,1-Dichloroethene	mg/kg	<0.050	0.050	0.022	05/22/18 02:12	
1,1-Dichloropropene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
1,2,3-Trichlorobenzene	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,2,3-Trichloropropane	mg/kg	<0.20	0.20	0.040	05/22/18 02:12	
1,2,4-Trichlorobenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
1,2,4-Trimethylbenzene	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,2-Dibromo-3-chloropropane	mg/kg	<1.2	1.2	0.087	05/22/18 02:12	MN
1,2-Dibromoethane (EDB)	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
1,2-Dichlorobenzene	mg/kg	<0.050	0.050	0.011	05/22/18 02:12	
1,2-Dichloroethane	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
1,2-Dichloropropane	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
1,3,5-Trimethylbenzene	mg/kg	<0.050	0.050	0.0097	05/22/18 02:12	
1,3-Dichlorobenzene	mg/kg	<0.050	0.050	0.017	05/22/18 02:12	
1,3-Dichloropropane	mg/kg	<0.050	0.050	0.019	05/22/18 02:12	
1,4-Dichlorobenzene	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
2,2-Dichloropropane	mg/kg	<0.20	0.20	0.049	05/22/18 02:12	
2-Butanone (MEK)	mg/kg	<0.25	0.25	0.090	05/22/18 02:12	
2-Chlorotoluene	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	
4-Chlorotoluene	mg/kg	<0.050	0.050	0.012	05/22/18 02:12	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.25	0.25	0.066	05/22/18 02:12	
Acetone	mg/kg	<1.0	1.0	0.48	05/22/18 02:12	
Allyl chloride	mg/kg	<0.20	0.20	0.047	05/22/18 02:12	
Benzene	mg/kg	<0.020	0.020	0.0074	05/22/18 02:12	
Bromobenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
Bromochloromethane	mg/kg	<0.050	0.050	0.024	05/22/18 02:12	
Bromodichloromethane	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
Bromoform	mg/kg	<0.50	0.50	0.036	05/22/18 02:12	MN
Bromomethane	mg/kg	<0.50	0.50	0.053	05/22/18 02:12	
Carbon tetrachloride	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
Chlorobenzene	mg/kg	<0.050	0.050	0.015	05/22/18 02:12	
Chloroethane	mg/kg	<0.50	0.50	0.077	05/22/18 02:12	
Chloroform	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
Chloromethane	mg/kg	<0.20	0.20	0.032	05/22/18 02:12	
cis-1,2-Dichloroethene	mg/kg	<0.050	0.050	0.0090	05/22/18 02:12	
cis-1,3-Dichloropropene	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

METHOD BLANK: 2929162

Matrix: Solid

Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006, 10431124007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	mg/kg	<0.20	0.20	0.050	05/22/18 02:12	
Dibromomethane	mg/kg	<0.050	0.050	0.017	05/22/18 02:12	
Dichlorodifluoromethane	mg/kg	<0.20	0.20	0.078	05/22/18 02:12	
Dichlorofluoromethane	mg/kg	<0.50	0.50	0.047	05/22/18 02:12	
Diethyl ether (Ethyl ether)	mg/kg	<0.20	0.20	0.042	05/22/18 02:12	
Ethylbenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
Hexachloro-1,3-butadiene	mg/kg	<0.25	0.25	0.052	05/22/18 02:12	
Isopropylbenzene (Cumene)	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	
Methyl-tert-butyl ether	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	
Methylene Chloride	mg/kg	<0.20	0.20	0.026	05/22/18 02:12	
n-Butylbenzene	mg/kg	<0.050	0.050	0.012	05/22/18 02:12	
n-Propylbenzene	mg/kg	<0.050	0.050	0.012	05/22/18 02:12	
Naphthalene	mg/kg	<0.20	0.20	0.044	05/22/18 02:12	
p-Isopropyltoluene	mg/kg	<0.050	0.050	0.010	05/22/18 02:12	
sec-Butylbenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
Styrene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
tert-Butylbenzene	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
Tetrachloroethene	mg/kg	<0.050	0.050	0.021	05/22/18 02:12	
Tetrahydrofuran	mg/kg	<2.0	2.0	0.52	05/22/18 02:12	
Toluene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
trans-1,2-Dichloroethene	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
trans-1,3-Dichloropropene	mg/kg	<0.050	0.050	0.036	05/22/18 02:12	
Trichloroethene	mg/kg	<0.050	0.050	0.0085	05/22/18 02:12	
Trichlorofluoromethane	mg/kg	<0.20	0.20	0.074	05/22/18 02:12	
Vinyl chloride	mg/kg	<0.020	0.020	0.0084	05/22/18 02:12	
Xylene (Total)	mg/kg	<0.15	0.15	0.027	05/22/18 02:12	
1,2-Dichloroethane-d4 (S)	%	92	75-125		05/22/18 02:12	
4-Bromofluorobenzene (S)	%	103	75-125		05/22/18 02:12	
Toluene-d8 (S)	%	101	75-125		05/22/18 02:12	

LABORATORY CONTROL SAMPLE & LCSD: 2929163

LABORATORY CONTROL SAMPLE & LCSD: 2929163			2929164							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	1	1.2	1.1	122	112	59-125	8	20	
1,1,1-Trichloroethane	mg/kg	1	1.1	1.0	112	101	59-125	10	20	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.99	0.92	99	92	58-125	7	20	
1,1,2-Trichloroethane	mg/kg	1	1.0	0.92	102	92	64-125	10	20	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.92	0.85	92	85	65-125	8	20	
1,1-Dichloroethane	mg/kg	1	1.0	0.90	100	90	63-125	10	20	
1,1-Dichloroethene	mg/kg	1	0.97	0.88	97	88	59-125	9	20	
1,1-Dichloropropene	mg/kg	1	0.90	0.83	90	83	64-125	8	20	
1,2,3-Trichlorobenzene	mg/kg	1	0.98	0.89	98	89	55-126	9	20	
1,2,3-Trichloropropane	mg/kg	1	0.90	0.83	90	83	62-125	8	20	
1,2,4-Trichlorobenzene	mg/kg	1	1.0	0.93	101	93	62-125	8	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

LABORATORY CONTROL SAMPLE & LCSD: 2929163			2929164							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	1	1.1	0.99	111	99	59-125	11	20	
1,2-Dibromo-3-chloropropane	mg/kg	2.5	2.1	2.0	86	81	54-125	6	20	
1,2-Dibromoethane (EDB)	mg/kg	1	0.97	0.87	97	87	64-125	11	20	
1,2-Dichlorobenzene	mg/kg	1	1.0	0.94	103	94	63-125	9	20	
1,2-Dichloroethane	mg/kg	1	0.81	0.74	81	74	57-125	8	20	
1,2-Dichloropropane	mg/kg	1	0.96	0.88	96	88	67-125	9	20	
1,3,5-Trimethylbenzene	mg/kg	1	1.1	0.99	111	99	59-125	12	20	
1,3-Dichlorobenzene	mg/kg	1	1.1	0.98	110	98	64-125	11	20	
1,3-Dichloropropane	mg/kg	1	0.91	0.88	91	88	64-125	3	20	
1,4-Dichlorobenzene	mg/kg	1	1.0	0.91	101	91	63-125	10	20	
2,2-Dichloropropane	mg/kg	1	1.0	0.93	102	93	37-126	9	20	
2-Butanone (MEK)	mg/kg	5	3.5	3.3	70	66	48-125	6	20	
2-Chlorotoluene	mg/kg	1	1.1	0.97	108	97	62-125	11	20	
4-Chlorotoluene	mg/kg	1	1.1	0.98	109	98	63-125	11	20	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	4.0	3.8	80	75	52-135	6	20	
Acetone	mg/kg	5	5.4	4.7	108	95	65-125	14	20	
Allyl chloride	mg/kg	1	0.84	0.77	84	77	52-125	9	20	
Benzene	mg/kg	1	0.90	0.83	90	83	61-125	8	20	
Bromobenzene	mg/kg	1	1.0	0.95	105	95	64-125	10	20	
Bromochloromethane	mg/kg	1	0.94	0.86	94	86	65-125	9	20	
Bromodichloromethane	mg/kg	1	1.2	1.1	116	106	57-125	9	20	
Bromoform	mg/kg	1	0.97	0.91	97	91	57-125	7	20	
Bromomethane	mg/kg	1	1.2	1.0	116	104	60-125	10	20	
Carbon tetrachloride	mg/kg	1	1.1	1.0	111	100	58-125	10	20	
Chlorobenzene	mg/kg	1	0.99	0.91	99	91	66-125	8	20	
Chloroethane	mg/kg	1	1.1	0.99	110	99	62-125	11	20	
Chloroform	mg/kg	1	0.99	0.91	99	91	59-125	8	20	
Chloromethane	mg/kg	1	0.78	0.75	78	75	50-125	4	20	
cis-1,2-Dichloroethene	mg/kg	1	0.91	0.83	91	83	61-125	8	20	
cis-1,3-Dichloropropene	mg/kg	1	1.0	0.95	103	95	61-125	8	20	
Dibromochloromethane	mg/kg	1	1.2	1.1	120	111	60-125	8	20	
Dibromomethane	mg/kg	1	0.96	0.87	96	87	69-125	10	20	
Dichlorodifluoromethane	mg/kg	1	0.58	0.54	58	54	38-125	7	20	
Dichlorofluoromethane	mg/kg	1	1.4	1.2	136	123	67-125	10	20	L3
Diethyl ether (Ethyl ether)	mg/kg	1	2.5	1.5	251	151	60-125	50	20	L3,R1
Ethylbenzene	mg/kg	1	1.0	0.91	100	91	62-125	10	20	
Hexachloro-1,3-butadiene	mg/kg	1	1.1	0.97	109	97	56-125	12	20	
Isopropylbenzene (Cumene)	mg/kg	1	1.1	1.0	109	100	65-125	9	20	
Methyl-tert-butyl ether	mg/kg	1	0.87	0.80	87	80	59-125	8	20	
Methylene Chloride	mg/kg	1	0.80	0.75	80	75	64-125	7	20	
n-Butylbenzene	mg/kg	1	1.1	1.0	112	101	59-125	11	20	
n-Propylbenzene	mg/kg	1	1.1	1.0	114	102	61-125	11	20	
Naphthalene	mg/kg	1	0.91	0.85	91	85	53-125	7	20	
p-Isopropyltoluene	mg/kg	1	1.2	1.0	115	104	63-125	10	20	
sec-Butylbenzene	mg/kg	1	1.2	1.1	118	106	62-125	11	20	
Styrene	mg/kg	1	1.1	0.97	106	97	66-125	9	20	
tert-Butylbenzene	mg/kg	1	1.1	1.0	113	103	64-125	9	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

LABORATORY CONTROL SAMPLE & LCSD: 2929163			2929164							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrachloroethene	mg/kg	1	0.98	0.89	98	89	67-125	10	20	
Tetrahydrofuran	mg/kg	10	9.2	8.0	92	80	62-125	14	20	
Toluene	mg/kg	1	0.92	0.83	92	83	61-125	11	20	
trans-1,2-Dichloroethene	mg/kg	1	0.80	0.76	80	76	64-125	5	20	
trans-1,3-Dichloropropene	mg/kg	1	1.0	0.93	103	93	56-125	10	20	
Trichloroethene	mg/kg	1	0.97	0.87	97	87	67-125	11	20	
Trichlorofluoromethane	mg/kg	1	1.1	1.0	109	103	65-125	6	20	
Vinyl chloride	mg/kg	1	0.83	0.77	83	77	57-125	7	20	
Xylene (Total)	mg/kg	3	3.0	2.8	101	93	62-125	9	20	
1,2-Dichloroethane-d4 (S)	%				90	91	75-125			
4-Bromofluorobenzene (S)	%				100	100	75-125			
Toluene-d8 (S)	%				100	101	75-125			

MATRIX SPIKE SAMPLE: 2929165		10431124002		Spike Conc.		MS Result		MS % Rec		% Rec Limits		Qualifiers	
Parameter	Units	Result											
1,1,1,2-Tetrachloroethane	mg/kg	<0.056	1.1			1.2		103		64-146			
1,1,1-Trichloroethane	mg/kg	<0.056	1.1			1.0		88		56-148			
1,1,2,2-Tetrachloroethane	mg/kg	<0.056	1.1			0.98		83		36-150			
1,1,2-Trichloroethane	mg/kg	<0.056	1.1			0.97		82		67-148			
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.22	1.1			0.88		74		60-142			
1,1-Dichloroethane	mg/kg	<0.056	1.1			0.95		80		57-140			
1,1-Dichloroethene	mg/kg	<0.056	1.1			0.91		77		59-139			
1,1-Dichloropropene	mg/kg	<0.056	1.1			0.86		73		61-142			
1,2,3-Trichlorobenzene	mg/kg	<0.056	1.1			0.97		82		69-150			
1,2,3-Trichloropropane	mg/kg	<0.22	1.1			0.86		73		64-150			
1,2,4-Trichlorobenzene	mg/kg	<0.056	1.1			0.98		83		71-149			
1,2,4-Trimethylbenzene	mg/kg	<0.056	1.1			1.1		95		67-149			
1,2-Dibromo-3-chloropropane	mg/kg	<1.4	2.9			2.1		70		61-150			
1,2-Dibromoethane (EDB)	mg/kg	<0.056	1.1			0.92		78		67-147			
1,2-Dichlorobenzene	mg/kg	<0.056	1.1			1.0		86		70-142			
1,2-Dichloroethane	mg/kg	<0.056	1.1			0.80		68		58-132			
1,2-Dichloropropane	mg/kg	<0.056	1.1			0.97		82		64-144			
1,3,5-Trimethylbenzene	mg/kg	<0.056	1.1			1.1		94		71-146			
1,3-Dichlorobenzene	mg/kg	<0.056	1.1			1.0		89		71-142			
1,3-Dichloropropane	mg/kg	<0.056	1.1			0.93		78		68-140			
1,4-Dichlorobenzene	mg/kg	<0.056	1.1			0.99		84		68-142			
2,2-Dichloropropane	mg/kg	<0.22	1.1			0.98		83		34-150			
2-Butanone (MEK)	mg/kg	<0.28	5.9			3.5		59		51-150			
2-Chlorotoluene	mg/kg	<0.056	1.1			1.1		91		66-144			
4-Chlorotoluene	mg/kg	<0.056	1.1			1.1		92		66-140			
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.28	5.9			4.2		70		63-150			
Acetone	mg/kg	<1.1	5.9			5.2		88		54-150			
Allyl chloride	mg/kg	<0.22	1.1			0.79		67		53-135			
Benzene	mg/kg	<0.022	1.1			0.87		74		65-135			

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

MATRIX SPIKE SAMPLE:		2929165					
Parameter	Units	10431124002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	mg/kg	<0.056	1.1	1.0	87	71-141	
Bromochloromethane	mg/kg	<0.056	1.1	0.86	73	62-145	
Bromodichloromethane	mg/kg	<0.056	1.1	1.1	97	59-148	
Bromoform	mg/kg	<0.56	1.1	0.92	78	57-145	
Bromomethane	mg/kg	<0.56	1.1	1.2	97	51-129	
Carbon tetrachloride	mg/kg	<0.056	1.1	1.1	91	55-144	
Chlorobenzene	mg/kg	<0.056	1.1	0.96	81	70-142	
Chloroethane	mg/kg	<0.56	1.1	1.0	88	61-135	
Chloroform	mg/kg	<0.056	1.1	0.95	80	58-135	
Chloromethane	mg/kg	<0.22	1.1	0.81	68	37-125	
cis-1,2-Dichloroethene	mg/kg	<0.056	1.1	0.87	74	60-138	
cis-1,3-Dichloropropene	mg/kg	<0.056	1.1	1.0	87	62-142	
Dibromochloromethane	mg/kg	<0.22	1.1	1.2	100	65-141	
Dibromomethane	mg/kg	<0.056	1.1	0.89	76	72-150	
Dichlorodifluoromethane	mg/kg	<0.22	1.1	0.52	44	30-125	
Dichlorofluoromethane	mg/kg	<0.56	1.1	1.2	105	62-148	
Diethyl ether (Ethyl ether)	mg/kg	<0.22	1.1	6.6	560	62-135	MO
Ethylbenzene	mg/kg	<0.056	1.1	0.99	84	72-138	
Hexachloro-1,3-butadiene	mg/kg	<0.28	1.1	1.1	95	38-150	
Isopropylbenzene (Cumene)	mg/kg	<0.056	1.1	1.1	92	75-148	
Methyl-tert-butyl ether	mg/kg	<0.056	1.1	0.85	72	63-139	
Methylene Chloride	mg/kg	<0.22	1.1	0.78	65	58-135	
n-Butylbenzene	mg/kg	<0.056	1.1	1.1	96	63-150	
n-Propylbenzene	mg/kg	<0.056	1.1	1.2	98	70-146	
Naphthalene	mg/kg	<0.22	1.1	0.92	77	63-150	
p-Isopropyltoluene	mg/kg	<0.056	1.1	1.2	100	72-150	
sec-Butylbenzene	mg/kg	<0.056	1.1	1.2	102	66-150	
Styrene	mg/kg	<0.056	1.1	1.0	88	72-146	
tert-Butylbenzene	mg/kg	<0.056	1.1	1.2	99	71-148	
Tetrachloroethene	mg/kg	<0.056	1.1	0.92	78	70-150	
Tetrahydrofuran	mg/kg	<2.2	11.9	9.0	76	62-150	
Toluene	mg/kg	<0.056	1.1	0.90	75	65-142	
trans-1,2-Dichloroethene	mg/kg	<0.056	1.1	0.77	65	55-141	
trans-1,3-Dichloropropene	mg/kg	<0.056	1.1	1.0	86	57-147	
Trichloroethene	mg/kg	<0.056	1.1	0.94	79	62-150	
Trichlorofluoromethane	mg/kg	<0.22	1.1	1.1	93	51-150	
Vinyl chloride	mg/kg	<0.022	1.1	0.84	71	45-132	
Xylene (Total)	mg/kg	<0.17	3.5	3.0	85	75-140	
1,2-Dichloroethane-d4 (S)	%				92	75-125	
4-Bromofluorobenzene (S)	%				102	75-125	
Toluene-d8 (S)	%				100	75-125	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

SAMPLE DUPLICATE: 2929166

Parameter	Units	10431124001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	<0.061	<0.058		30	
1,1,1-Trichloroethane	mg/kg	<0.061	<0.058		30	
1,1,2,2-Tetrachloroethane	mg/kg	<0.061	<0.058		30	
1,1,2-Trichloroethane	mg/kg	<0.061	<0.058		30	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.25	<0.23		30	
1,1-Dichloroethane	mg/kg	<0.061	<0.058		30	
1,1-Dichloroethene	mg/kg	<0.061	<0.058		30	
1,1-Dichloropropene	mg/kg	<0.061	<0.058		30	
1,2,3-Trichlorobenzene	mg/kg	<0.061	<0.058		30	
1,2,3-Trichloropropane	mg/kg	<0.25	<0.23		30	
1,2,4-Trichlorobenzene	mg/kg	<0.061	<0.058		30	
1,2,4-Trimethylbenzene	mg/kg	<0.061	<0.058		30	
1,2-Dibromo-3-chloropropane	mg/kg	<1.5	<1.4		30	
1,2-Dibromoethane (EDB)	mg/kg	<0.061	<0.058		30	
1,2-Dichlorobenzene	mg/kg	<0.061	<0.058		30	
1,2-Dichloroethane	mg/kg	<0.061	<0.058		30	
1,2-Dichloropropane	mg/kg	<0.061	<0.058		30	
1,3,5-Trimethylbenzene	mg/kg	<0.061	<0.058		30	
1,3-Dichlorobenzene	mg/kg	<0.061	<0.058		30	
1,3-Dichloropropane	mg/kg	<0.061	<0.058		30	
1,4-Dichlorobenzene	mg/kg	<0.061	<0.058		30	
2,2-Dichloropropane	mg/kg	<0.25	<0.23		30	
2-Butanone (MEK)	mg/kg	<0.31	<0.29		30	
2-Chlorotoluene	mg/kg	<0.061	<0.058		30	
4-Chlorotoluene	mg/kg	<0.061	<0.058		30	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.31	<0.29		30	
Acetone	mg/kg	<1.2	<1.2		30	
Allyl chloride	mg/kg	<0.25	<0.23		30	
Benzene	mg/kg	<0.025	<0.023		30	
Bromobenzene	mg/kg	<0.061	<0.058		30	
Bromochloromethane	mg/kg	<0.061	<0.058		30	
Bromodichloromethane	mg/kg	<0.061	<0.058		30	
Bromoform	mg/kg	<0.61	<0.58		30	
Bromomethane	mg/kg	<0.61	<0.58		30	
Carbon tetrachloride	mg/kg	<0.061	<0.058		30	
Chlorobenzene	mg/kg	<0.061	<0.058		30	
Chloroethane	mg/kg	<0.61	<0.58		30	
Chloroform	mg/kg	<0.061	<0.058		30	
Chloromethane	mg/kg	<0.25	<0.23		30	
cis-1,2-Dichloroethene	mg/kg	<0.061	<0.058		30	
cis-1,3-Dichloropropene	mg/kg	<0.061	<0.058		30	
Dibromochloromethane	mg/kg	<0.25	<0.23		30	
Dibromomethane	mg/kg	<0.061	<0.058		30	
Dichlorodifluoromethane	mg/kg	<0.25	<0.23		30	
Dichlorofluoromethane	mg/kg	<0.61	<0.58		30	
Diethyl ether (Ethyl ether)	mg/kg	<0.25	<0.23		30	
Ethylbenzene	mg/kg	<0.061	<0.058		30	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

SAMPLE DUPLICATE: 2929166

Parameter	Units	10431124001 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	mg/kg	<0.31	<0.29		30	
Isopropylbenzene (Cumene)	mg/kg	<0.061	<0.058		30	
Methyl-tert-butyl ether	mg/kg	<0.061	<0.058		30	
Methylene Chloride	mg/kg	<0.25	<0.23		30	
n-Butylbenzene	mg/kg	<0.061	<0.058		30	
n-Propylbenzene	mg/kg	<0.061	<0.058		30	
Naphthalene	mg/kg	<0.25	<0.23		30	
p-Isopropyltoluene	mg/kg	<0.061	<0.058		30	
sec-Butylbenzene	mg/kg	<0.061	<0.058		30	
Styrene	mg/kg	<0.061	<0.058		30	
tert-Butylbenzene	mg/kg	<0.061	<0.058		30	
Tetrachloroethene	mg/kg	<0.061	<0.058		30	
Tetrahydrofuran	mg/kg	<2.5	<2.3		30	
Toluene	mg/kg	<0.061	<0.058		30	
trans-1,2-Dichloroethene	mg/kg	<0.061	<0.058		30	
trans-1,3-Dichloropropene	mg/kg	<0.061	<0.058		30	
Trichloroethene	mg/kg	<0.061	<0.058		30	
Trichlorofluoromethane	mg/kg	<0.25	<0.23		30	
Vinyl chloride	mg/kg	<0.025	<0.023		30	
Xylene (Total)	mg/kg	<0.18	<0.17		30	
1,2-Dichloroethane-d4 (S)	%.	93	92	7		
4-Bromofluorobenzene (S)	%.	99	99	5		
Toluene-d8 (S)	%.	98	98	5		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch: 538391 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA 3550 Analysis Description: 8270D Solid PAH by SIM MSSV
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006

METHOD BLANK: 2927082 Matrix: Solid
Associated Lab Samples: 10431124001, 10431124002, 10431124003, 10431124004, 10431124005, 10431124006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acenaphthene	mg/kg	<0.010	0.010	0.00059	05/16/18 10:05	
Acenaphthylene	mg/kg	<0.010	0.010	0.00065	05/16/18 10:05	
Anthracene	mg/kg	<0.010	0.010	0.00053	05/16/18 10:05	
Benzo(a)anthracene	mg/kg	<0.010	0.010	0.0015	05/16/18 10:05	
Benzo(a)pyrene	mg/kg	<0.010	0.010	0.0010	05/16/18 10:05	
Benzo(b)fluoranthene	mg/kg	<0.010	0.010	0.00056	05/16/18 10:05	
Benzo(g,h,i)perylene	mg/kg	<0.010	0.010	0.00094	05/16/18 10:05	
Benzo(k)fluoranthene	mg/kg	<0.010	0.010	0.0012	05/16/18 10:05	
Chrysene	mg/kg	<0.010	0.010	0.00030	05/16/18 10:05	
Dibenz(a,h)anthracene	mg/kg	<0.010	0.010	0.00046	05/16/18 10:05	
Fluoranthene	mg/kg	<0.010	0.010	0.00031	05/16/18 10:05	
Fluorene	mg/kg	<0.010	0.010	0.00025	05/16/18 10:05	
Indeno(1,2,3-cd)pyrene	mg/kg	<0.010	0.010	0.0010	05/16/18 10:05	
Naphthalene	mg/kg	<0.010	0.010	0.0010	05/16/18 10:05	
Phenanthrene	mg/kg	<0.010	0.010	0.0014	05/16/18 10:05	
Pyrene	mg/kg	<0.010	0.010	0.00035	05/16/18 10:05	
2-Fluorobiphenyl (S)	%	78	42-125		05/16/18 10:05	
p-Terphenyl-d14 (S)	%	97	57-125		05/16/18 10:05	

LABORATORY CONTROL SAMPLE: 2927083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	mg/kg	.033	0.022	67	52-125	
Acenaphthylene	mg/kg	.033	0.024	71	50-125	
Anthracene	mg/kg	.033	0.028	85	65-125	
Benzo(a)anthracene	mg/kg	.033	0.024	71	60-125	
Benzo(a)pyrene	mg/kg	.033	0.028	84	69-125	
Benzo(b)fluoranthene	mg/kg	.033	0.025	75	61-125	
Benzo(g,h,i)perylene	mg/kg	.033	0.028	84	60-125	
Benzo(k)fluoranthene	mg/kg	.033	0.030	89	67-125	
Chrysene	mg/kg	.033	0.030	89	67-125	
Dibenz(a,h)anthracene	mg/kg	.033	0.028	83	63-125	
Fluoranthene	mg/kg	.033	0.027	82	75-125	
Fluorene	mg/kg	.033	0.023	69	54-125	
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.028	84	63-125	
Naphthalene	mg/kg	.033	0.023	70	49-125	
Phenanthrene	mg/kg	.033	0.025	74	65-125	
Pyrene	mg/kg	.033	0.027	80	64-125	
2-Fluorobiphenyl (S)	%			80	42-125	
p-Terphenyl-d14 (S)	%			96	57-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2927084											
2927085											
Parameter	Units	10431124001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	mg/kg	<0.024	.039	.039	0.033	0.033	83	82	30-125	1	30
Acenaphthylene	mg/kg	<0.024	.039	.039	0.042	0.054	105	135	30-133	25	30 M1
Anthracene	mg/kg	<0.024	.039	.039	0.048	0.064	122	161	30-150	28	30 M1
Benzo(a)anthracene	mg/kg	0.062	.039	.039	0.087	0.13	64	165	30-150	38	30 M1, R1
Benzo(a)pyrene	mg/kg	0.090	.039	.039	0.086	0.15	-10	142	30-150	52	30 M1, R1
Benzo(b)fluoranthene	mg/kg	0.12	.039	.039	0.13	0.20	9	192	30-150	44	30 M1, R1
Benzo(g,h,i)perylene	mg/kg	0.11	.039	.039	0.073	0.11	-97	-4	30-150	41	30 M1, R1
Benzo(k)fluoranthene	mg/kg	0.041	.039	.039	0.061	0.087	50	114	30-150	34	30 R1
Chrysene	mg/kg	0.14	.039	.039	0.092	0.17	-110	94	30-150	61	30 M1, R1
Dibenz(a,h)anthracene	mg/kg	<0.024	.039	.039	0.041	0.055	103	139	30-131	30	30 M1
Fluoranthene	mg/kg	0.13	.039	.039	0.14	0.27	19	343	30-150	64	30 M1, R1
Fluorene	mg/kg	<0.024	.039	.039	0.031	0.033	79	83	30-147	6	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.045	.039	.039	0.066	0.096	53	127	30-150	37	30 R1
Naphthalene	mg/kg	<0.024	.039	.039	0.031	0.032	79	80	30-131	2	30
Phenanthrene	mg/kg	0.067	.039	.039	0.062	0.12	-11	140	30-150	65	30 M1, R1
Pyrene	mg/kg	0.16	.039	.039	0.12	0.22	-83	174	30-150	59	30 M1, R1
2-Fluorobiphenyl (S)	%.						91	91	42-125		D3
p-Terphenyl-d14 (S)	%.						103	100	57-125		

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

QC Batch: 538751 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO Solid GCV
Associated Lab Samples: 10431124001, 10431124004, 10431124005, 10431124006

METHOD BLANK: 2929451 Matrix: Solid
Associated Lab Samples: 10431124001, 10431124004, 10431124005, 10431124006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	<10.0	10.0	2.0	05/19/18 17:25	
n-Triacontane (S)	%.	78	59-133		05/19/18 17:25	

LABORATORY CONTROL SAMPLE & LCSD: 2929452

LABORATORY CONTROL SAMPLE & LCSD: 2929452			2929453							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	68.8	70.6	86	88	54-125	3	20	
n-Triacontane (S)	%.				91	89	59-133			

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QUALIFIERS

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

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.

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.

BATCH QUALIFIERS

Batch: 539272

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

MN The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.

R1 RPD value was outside control limits.

T6 High boiling point hydrocarbons are present in the sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10431124001	B-8 (0-2)	WI MOD DRO	538751	WI MOD DRO	539451
10431124002	B-10 (1-3)	WI MOD DRO	539451		
10431124003	B-11 (7-9)	WI MOD DRO	539451		
10431124004	B-13 (13-15)	WI MOD DRO	538751	WI MOD DRO	539451
10431124005	B-14 (8-10)	WI MOD DRO	538751	WI MOD DRO	539451
10431124006	B-20 (13-15)	WI MOD DRO	538751	WI MOD DRO	539451
10431124001	B-8 (0-2)	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124002	B-10 (1-3)	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124003	B-11 (7-9)	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124004	B-13 (13-15)	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124005	B-14 (8-10)	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124006	B-20 (13-15)	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124007	Trip Blank	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431124001	B-8 (0-2)	EPA 3050	538228	EPA 6010D	538476
10431124002	B-10 (1-3)	EPA 3050	538228	EPA 6010D	538476
10431124003	B-11 (7-9)	EPA 3050	538228	EPA 6010D	538476
10431124004	B-13 (13-15)	EPA 3050	538228	EPA 6010D	538476
10431124005	B-14 (8-10)	EPA 3050	538228	EPA 6010D	538476
10431124006	B-20 (13-15)	EPA 3050	538228	EPA 6010D	538476
10431124001	B-8 (0-2)	EPA 3050	538529	EPA 6020B	539753
10431124002	B-10 (1-3)	EPA 3050	538529	EPA 6020B	539753
10431124003	B-11 (7-9)	EPA 3050	538529	EPA 6020B	539753
10431124004	B-13 (13-15)	EPA 3050	538529	EPA 6020B	539753
10431124005	B-14 (8-10)	EPA 3050	538529	EPA 6020B	539753
10431124006	B-20 (13-15)	EPA 3050	538529	EPA 6020B	539753
10431124001	B-8 (0-2)	EPA 7471B	538234	EPA 7471B	538410
10431124002	B-10 (1-3)	EPA 7471B	538234	EPA 7471B	538410
10431124003	B-11 (7-9)	EPA 7471B	538234	EPA 7471B	538410
10431124004	B-13 (13-15)	EPA 7471B	538234	EPA 7471B	538410
10431124005	B-14 (8-10)	EPA 7471B	538234	EPA 7471B	538410
10431124006	B-20 (13-15)	EPA 7471B	538234	EPA 7471B	538410
10431124001	B-8 (0-2)	ASTM D2974	538643		
10431124002	B-10 (1-3)	ASTM D2974	538643		
10431124003	B-11 (7-9)	ASTM D2974	538643		
10431124004	B-13 (13-15)	ASTM D2974	538643		
10431124005	B-14 (8-10)	ASTM D2974	538643		
10431124006	B-20 (13-15)	ASTM D2974	538643		
10431124001	B-8 (0-2)	EPA 3550	538391	EPA 8270D by SIM	538618
10431124002	B-10 (1-3)	EPA 3550	538391	EPA 8270D by SIM	538618
10431124003	B-11 (7-9)	EPA 3550	538391	EPA 8270D by SIM	538618
10431124004	B-13 (13-15)	EPA 3550	538391	EPA 8270D by SIM	538618
10431124005	B-14 (8-10)	EPA 3550	538391	EPA 8270D by SIM	538618
10431124006	B-20 (13-15)	EPA 3550	538391	EPA 8270D by SIM	538618
10431124001	B-8 (0-2)	EPA 5035/5030B	538721	EPA 8260B	539988

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MP185083 City of Shakopee Par.

Pace Project No.: 10431124

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10431124002	B-10 (1-3)	EPA 5035/5030B	538721	EPA 8260B	539988
10431124003	B-11 (7-9)	EPA 5035/5030B	538721	EPA 8260B	539988
10431124004	B-13 (13-15)	EPA 5035/5030B	538721	EPA 8260B	539988
10431124005	B-14 (8-10)	EPA 5035/5030B	538721	EPA 8260B	539988
10431124006	B-20 (13-15)	EPA 5035/5030B	538721	EPA 8260B	539988
10431124007	Trip Blank	EPA 5035/5030B	538721	EPA 8260B	539988

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Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Penacum-WPIS	Report To: Eric Stammers	Company Name: Acct.	Attention:	Company Name:	Invoice Number: 10431124
Address: 13400 15th Ave N	Copy To: Jocelyn Blase	Address:		Address:	Regulatory Agency: 2280705
Email To: Phyllis		Purchase Order No.:		Pace Quote Reference:	☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
Phone: 703 489 3100		Project Name: WPIS083		Pace Project Manager:	☐ UST ☐ RCRA ☐ OTHER
Requested Due Date/TAT: NTAT		Project Number: City of Shakopee Parcels		Site Location STATE: MN	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Tissue Other	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test ↑ Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.										
					COMPOSITE START	COMPOSITE END/GRAB	DATE			TIME	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH					Na ₂ S ₂ O ₃	Methanol	Other							
1	B-8 (8-2)		DL	G	5/14/18	1450			9	S																					001
2	B-10 (1-3)					1520			9	S																					002
3	B-11 (7-9)					1200			9	S																					003
4	B-13 (13-15)					1030			9	S																					004
5	B-14 (8-10)					1100			9	S																					005
6	B-20 (13-15)					1340			9	S																					006
7	trip blank																														007
8	temp blank																														
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	
							Temp in °C	Received on
2 coolers	Jocelyn Blase/Tennant	5/14/18	17:18	Jocelyn Blase	5/14/18	17:17	6.8	Y
				Jocelyn Blase	5/14/18	17:17	6.8	Y
								Y
								Y

Section E Sampler Information:		Section F Chain of Custody:	
SAMPLER NAME AND SIGNATURE	PRINT Name of SAMPLER: Jocelyn Blase	DATE Signed (MM/DD/YYYY): 5/14/18	Sealed Cooler (Y/N)
	SIGNATURE of SAMPLER: <i>Jocelyn Blase</i>		Custody (Y/N)
			Samples Intact (Y/N)

ORIGINAL

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 02May2018 Page 1 of 2
	Document No.: F-MN-L-213-rev.23	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name: <u>Terracon-MPIS</u>	Project #: WO# : 10431124
	Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Speedee ☐ Other: _____	PM: AA1 Due Date: 05/22/18 CLIENT: TERRACON-M/P

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No

Thermometer ☐ G87A9170600254 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted
 Used: ☒ G87A9155100842

Cooler Temp Read (°C): 6.8, 7.1 Cooler Temp Corrected (°C): 6.8, 7.1 Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A
 Temp should be above freezing to 6°C Correction Factor: true Date and Initials of Person Examining Contents: ME 5-14-18

USDA Regulated Soil (☐ N/A, water sample)
 Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☒ No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? ☒ Yes ☐ No	1.
Chain of Custody Filled Out? ☒ Yes ☐ No	2.
Chain of Custody Relinquished? ☒ Yes ☐ No	3.
Sampler Name and/or Signature on COC? ☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time? ☒ Yes ☐ No	5.
Short Hold Time Analysis (<72 hr)? ☐ Yes ☒ No	6.
Rush Turn Around Time Requested? ☐ Yes ☒ No	7.
Sufficient Volume? ☒ Yes ☐ No	8.
Correct Containers Used? ☒ Yes ☐ No	9.
-Pace Containers Used? ☒ Yes ☐ No	
Containers Intact? ☒ Yes ☐ No	10.
Filtered Volume Received for Dissolved Tests? ☐ Yes ☐ No ☒ N/A	11. Note if sediment is visible in the dissolved container
Is sufficient information available to reconcile the samples to the COC? ☒ Yes ☐ No Matrix: <u>SL</u>	12.
All containers needing acid/base preservation have been checked? ☐ Yes ☐ No ☒ N/A	13. ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? ☐ Yes ☐ No ☒ N/A	Sample #
(HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS ☐ Yes ☐ No ☒ N/A	Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)? ☐ Yes ☐ No ☒ N/A	14.
Trip Blank Present? ☒ Yes ☐ No ☐ N/A	15.
Trip Blank Custody Seals Present? ☒ Yes ☐ No ☐ N/A	
Pace Trip Blank Lot # (if purchased): <u>010118-3</u>	

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Amanda J Albrecht Date: 5/14/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Date : 19-MAY-2018 17:45

Client ID: B-8 (0-2)

Sample Info: 10431124001

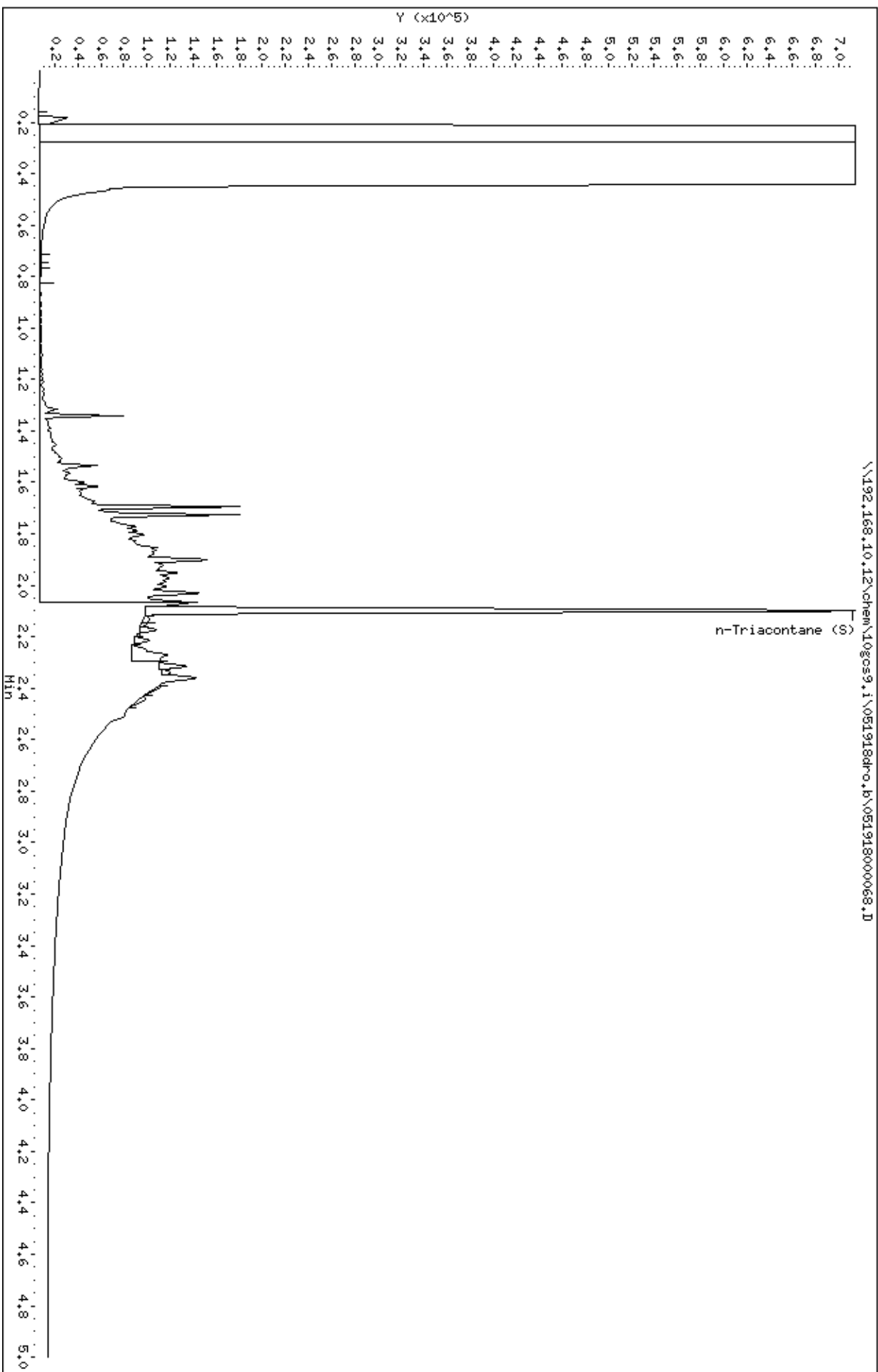
Volume Injected (uL): 1.0

Column phase: DB-5-MS/7520020

Instrument: 10gcs9.i

Operator: JRH

Column diameter: 0.32



Date : 19-MAY-2018 18:20

Client ID: B-10 (1-3)

Sample Info: 10431124002

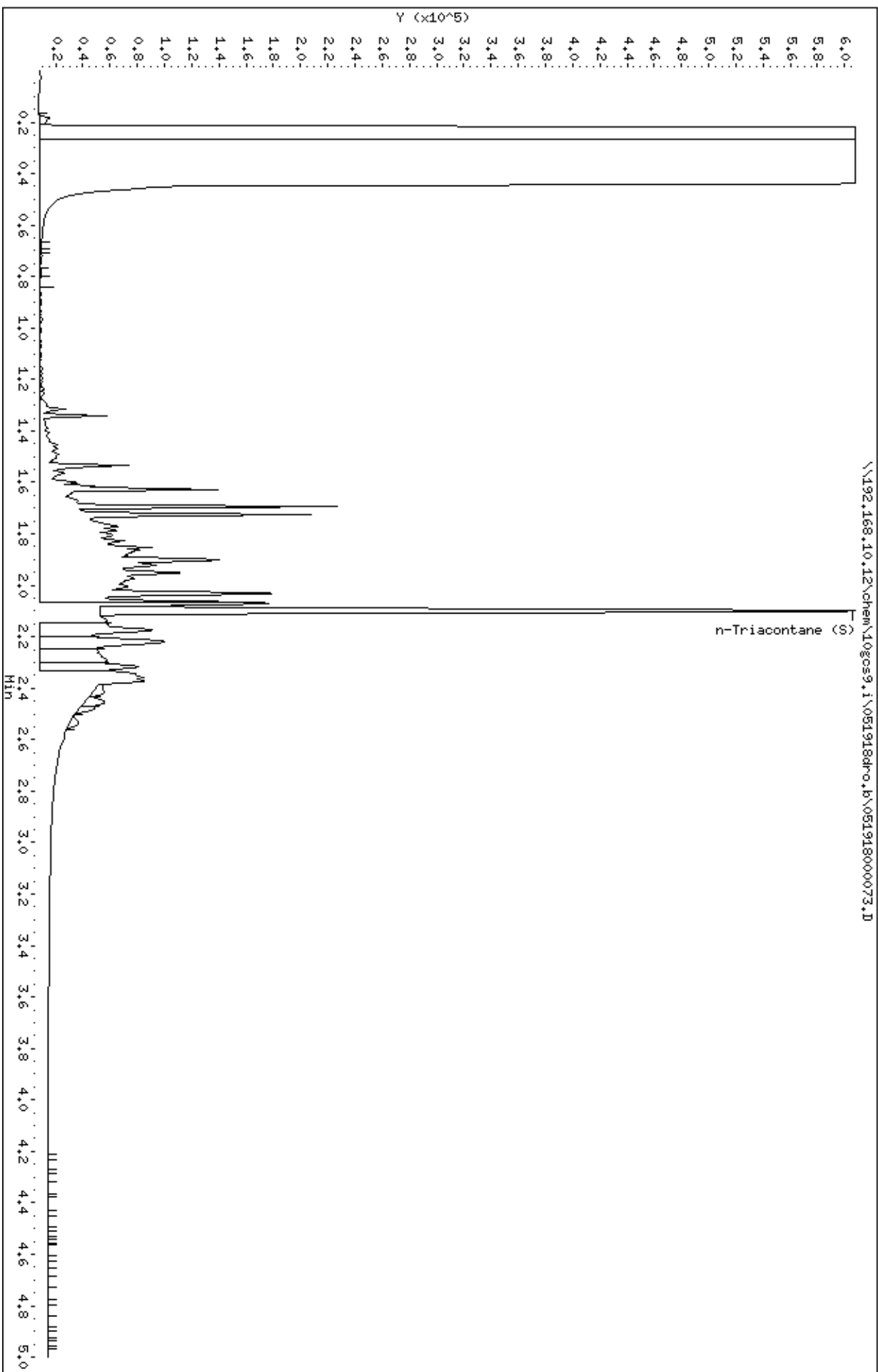
Volume Injected (uL): 1.0

Column phase: DB-5-MS17520020

Instrument: 10gcs9.i

Operator: JRH

Column diameter: 0.32



Date : 19-MAY-2018 17:52

Client ID: B-11 (7-9)

Sample Info: 10431124003

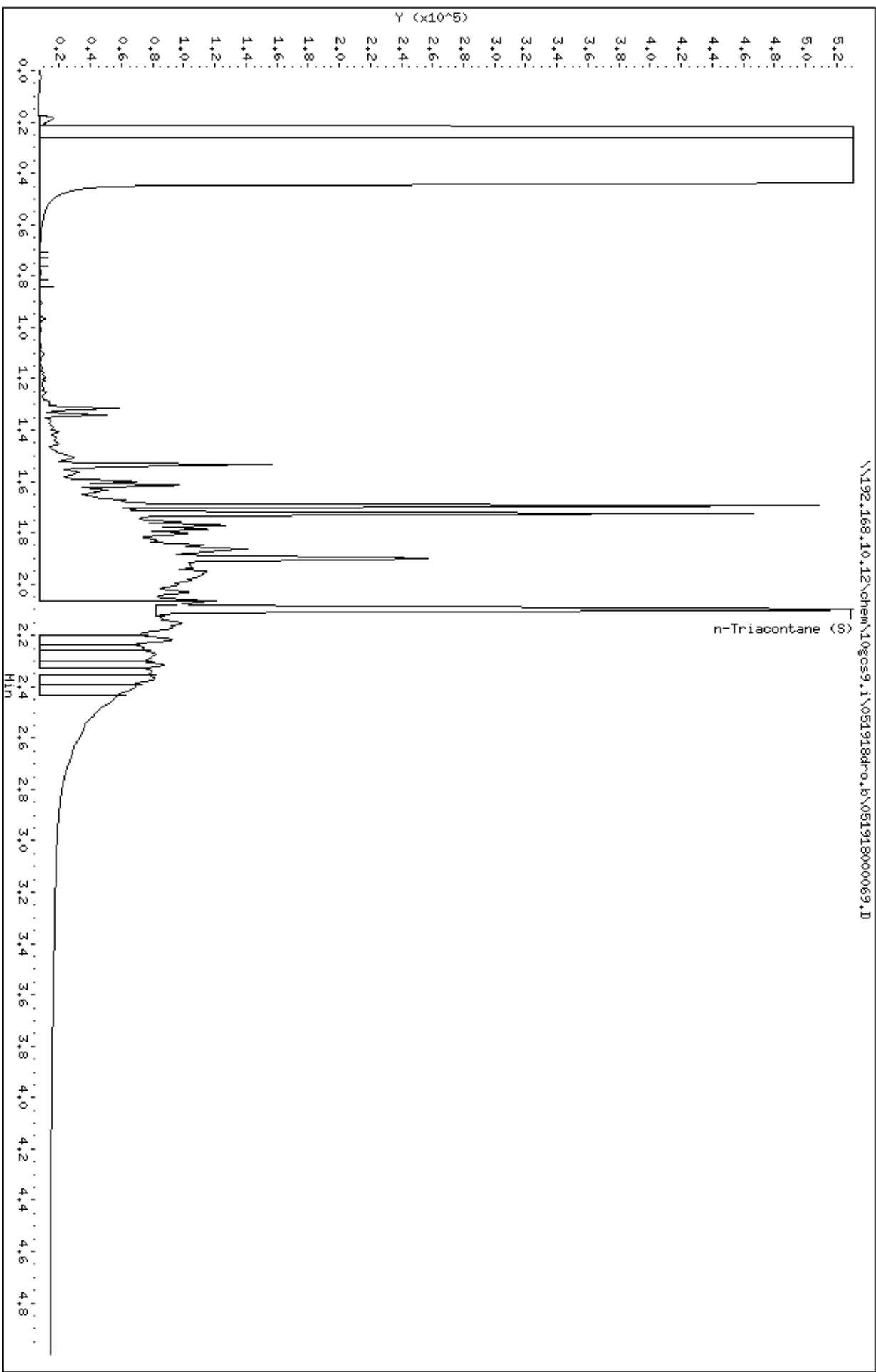
Volume Injected (uL): 1.0

Column phase: DB-5-MS/7520020

Instrument: 10gcs9.i

Operator: JRH

Column diameter: 0.32



Date : 19-MAY-2018 18:29

Client ID: B-13 (13-15)

Sample Info: 10431124004X5

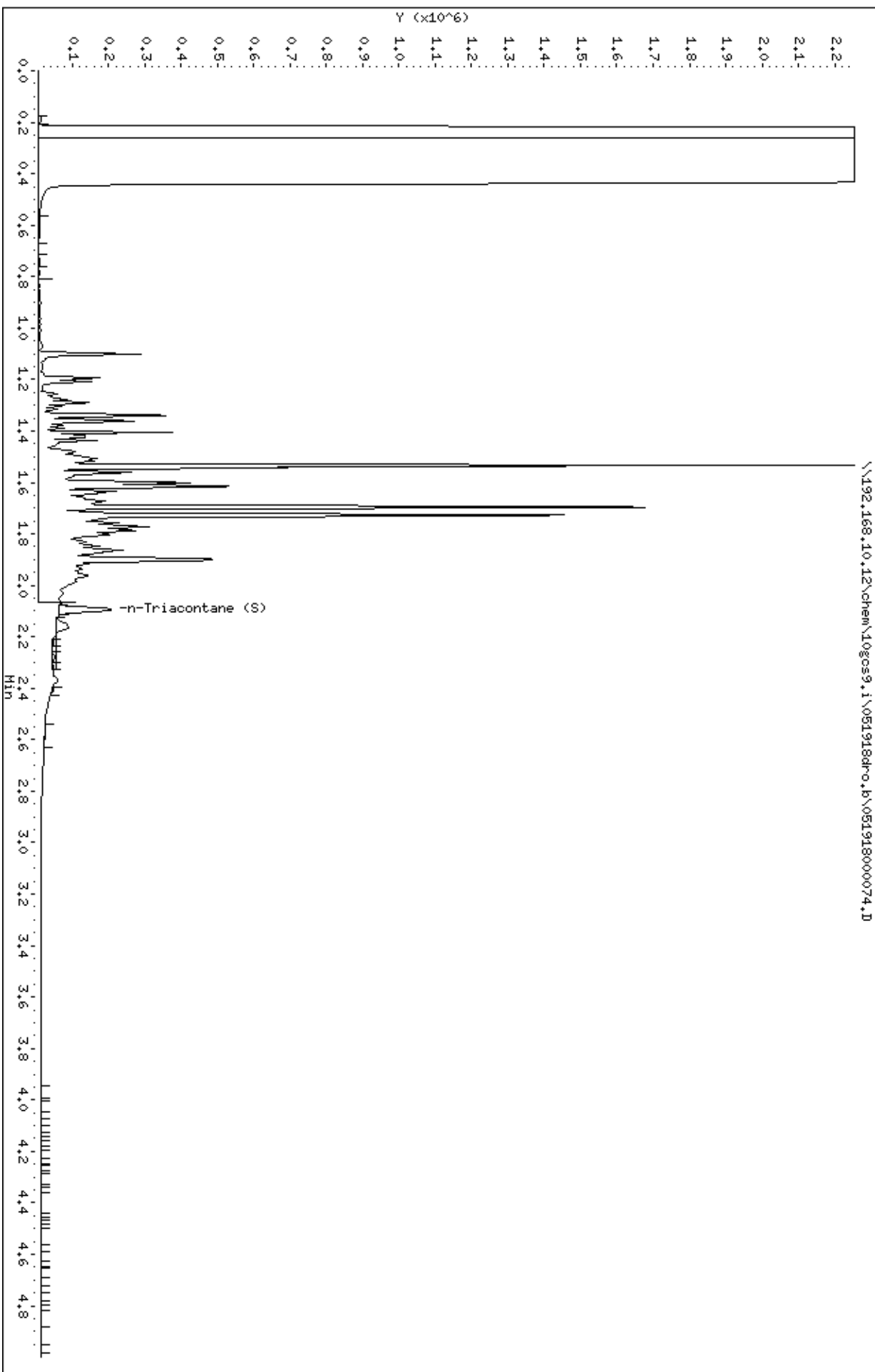
Volume Injected (uL): 1.0

Column phase: DB-5-MS17520020

Instrument: 10gcs9.i

Operator: JRH

Column diameter: 0.32



Date : 19-MAY-2018 18:13

Client ID: B-14 (8-10)

Sample Info: 10431124005

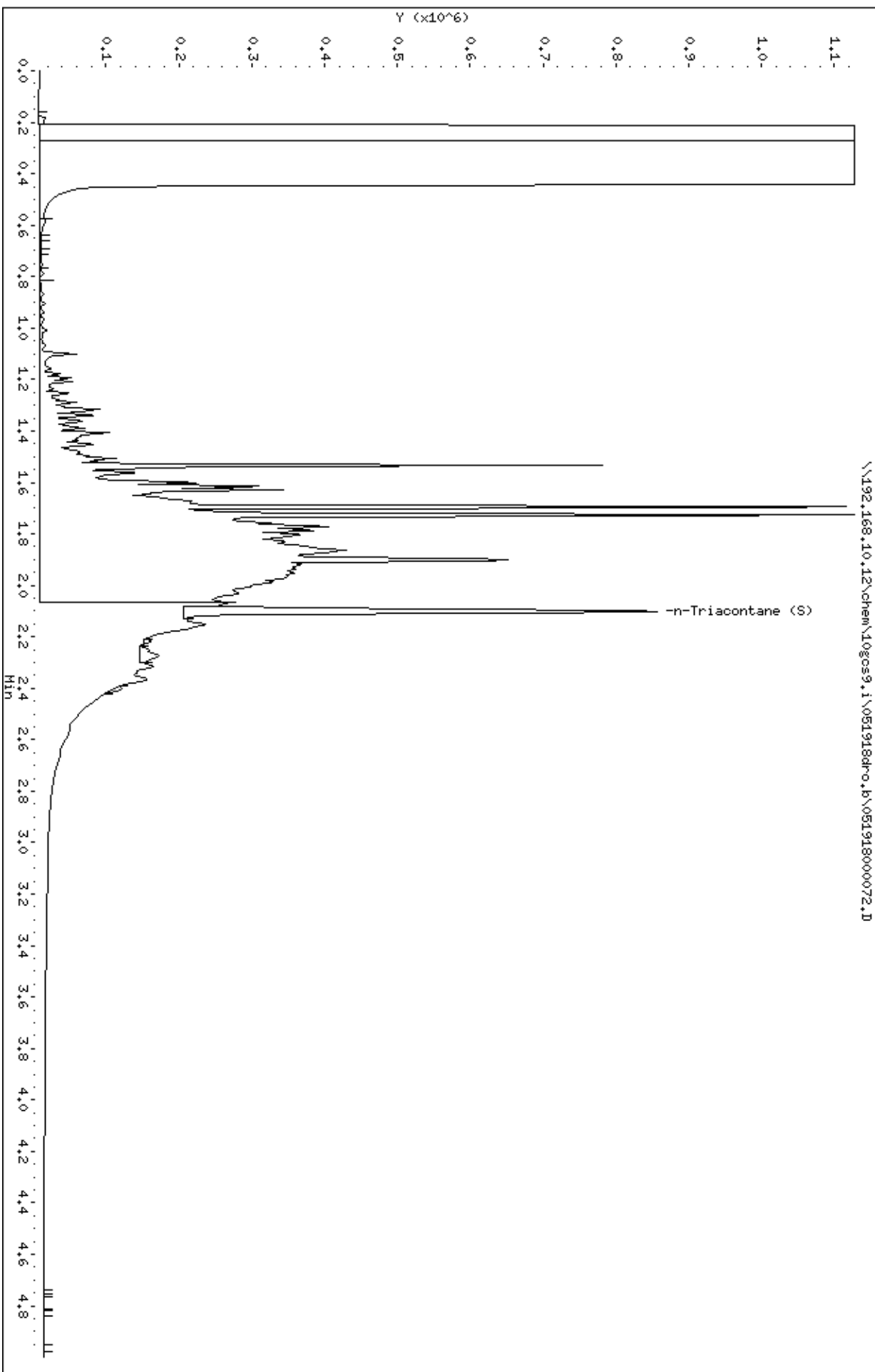
Volume Injected (uL): 1.0

Column phase: DB-5-MS/7520020

Instrument: 10gcs9.i

Operator: JRH

Column diameter: 0.32



Date : 19-MAY-2018 17:59

Client ID: B-20 (13-15)

Sample Info: 10431124006

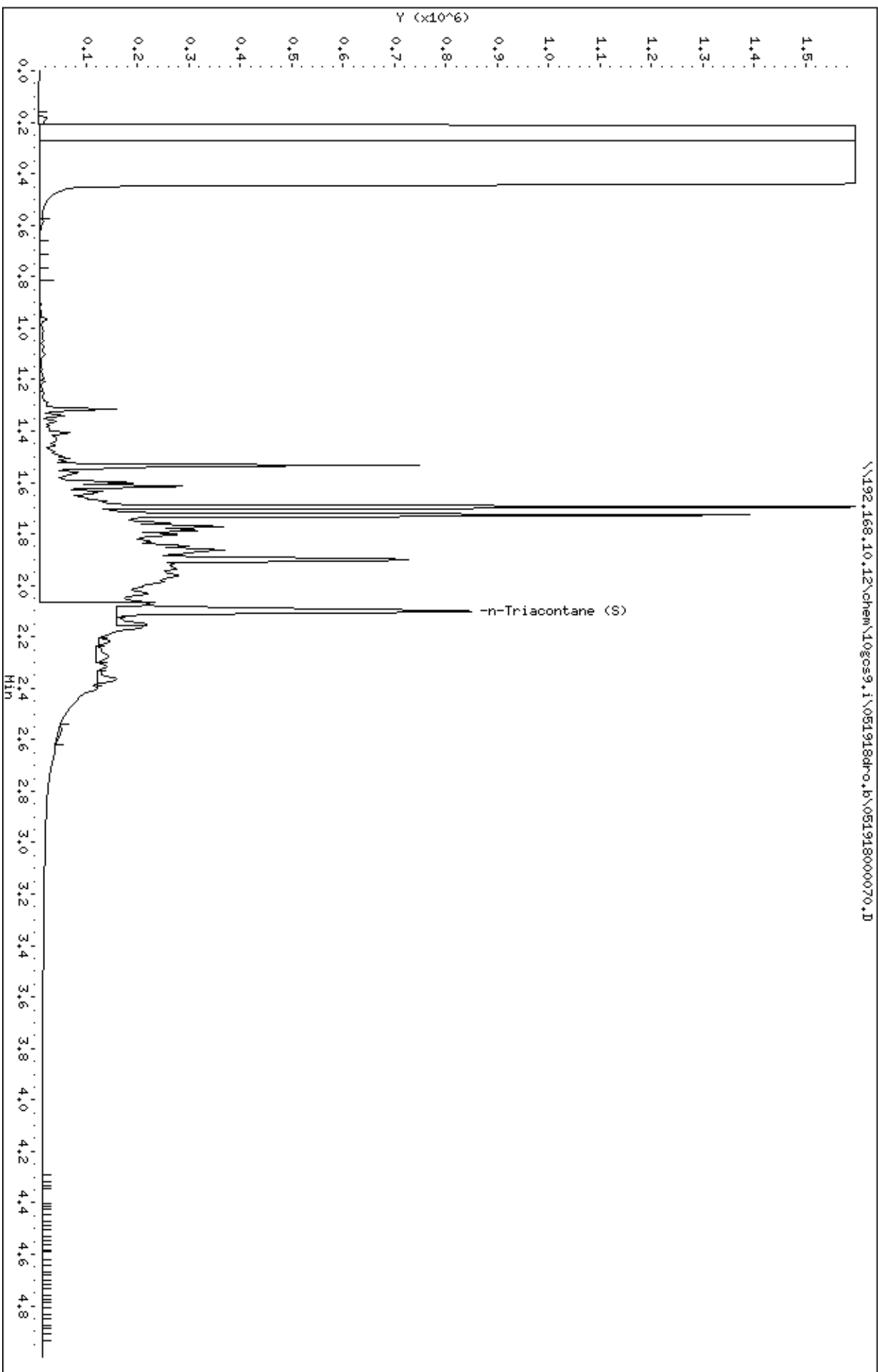
Volume Injected (uL): 1.0

Column phase: DB-5-MS17520020

Instrument: 10gcs9.i

Operator: JRH

Column diameter: 0.32



Date : 18-MAY-2018 17:49

Client ID: B-8 (0-2)

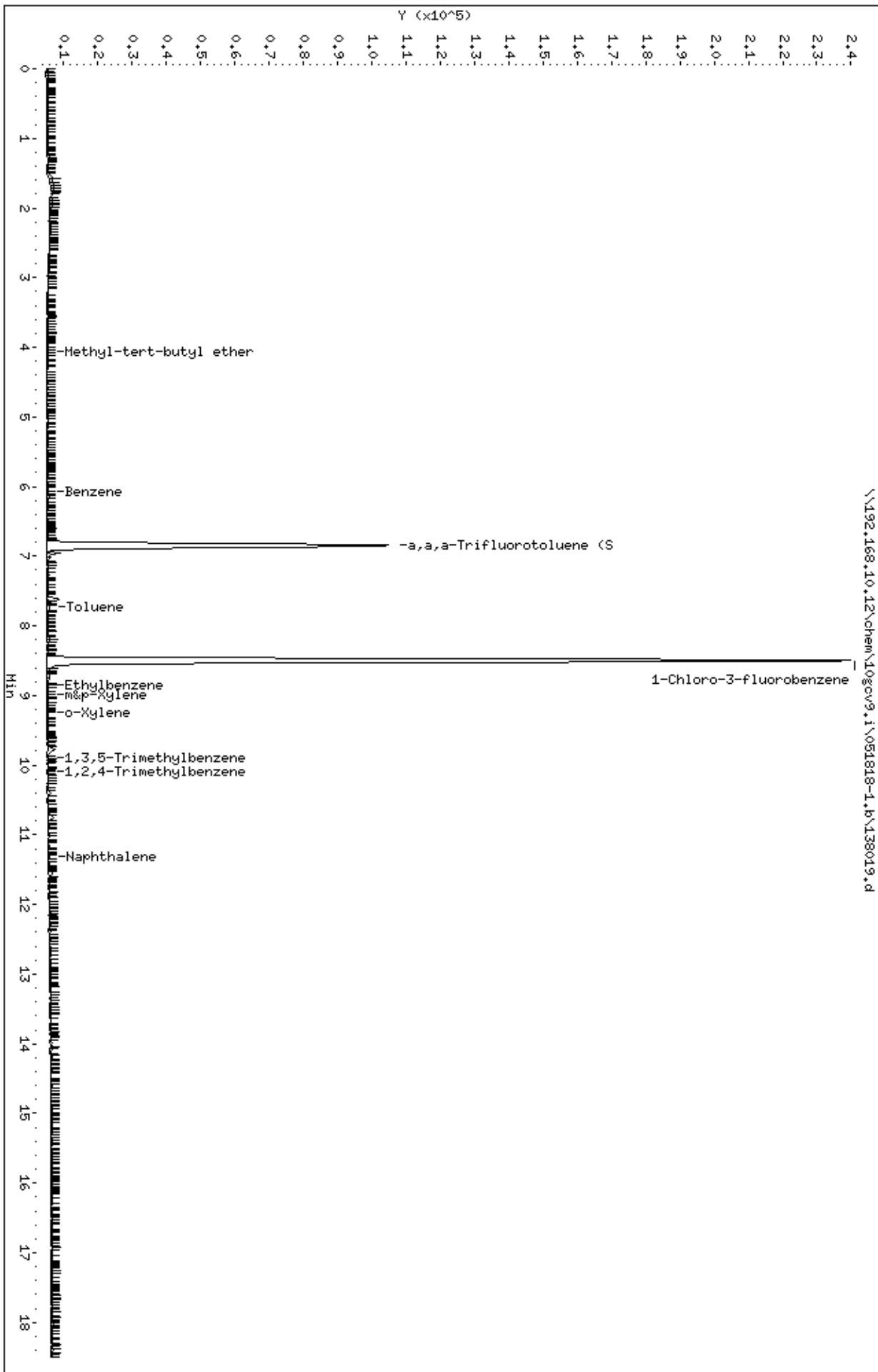
Sample Info: 10431124001,

Instrument: 10gc\9.i

Operator: AJR

Column phase: RTX-WRX SML047335

Column diameter: 0.53



Date : 18-MAY-2018 17:49

Client ID: B-8 (0-2)

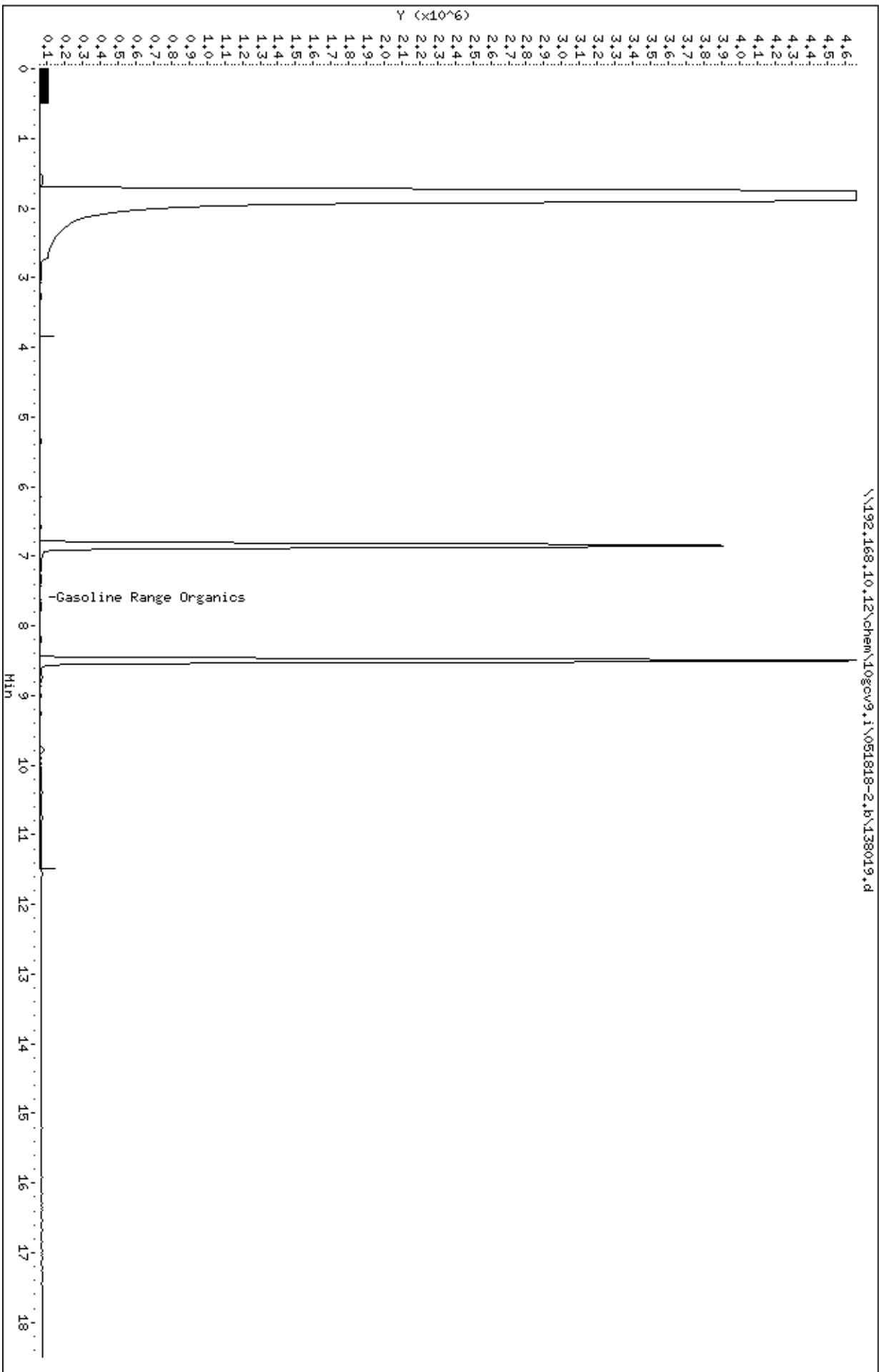
Sample Info: 10431124001,

Instrument: 10gc\9.i

Operator: AJR

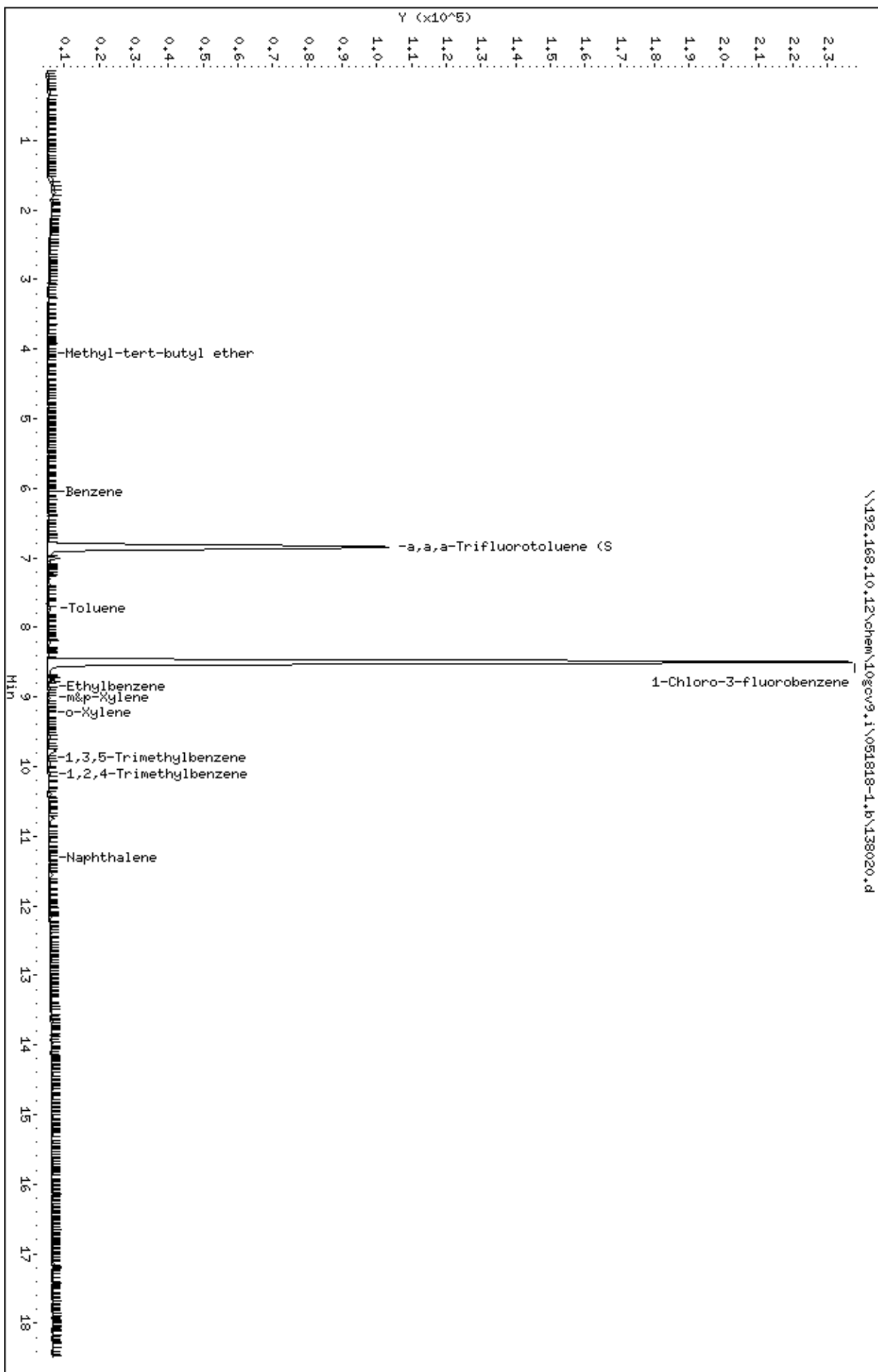
Column diameter: 0.53

Column phase: RTX-WRX SML047335



Data File: \\192.168.10.12\chem\10gc\9.i\051818-1.b\138020.d
Date : 18-MAY-2018 18:15
Client ID: B-10 (1-3)
Sample Info: 10431124002,
Column phase: RTX-WRX SMI047335

Instrument: 10gc\9.i
Operator: AJR
Column diameter: 0.53



Date : 18-MAY-2018 18:15

Client ID: B-10 (1-3)

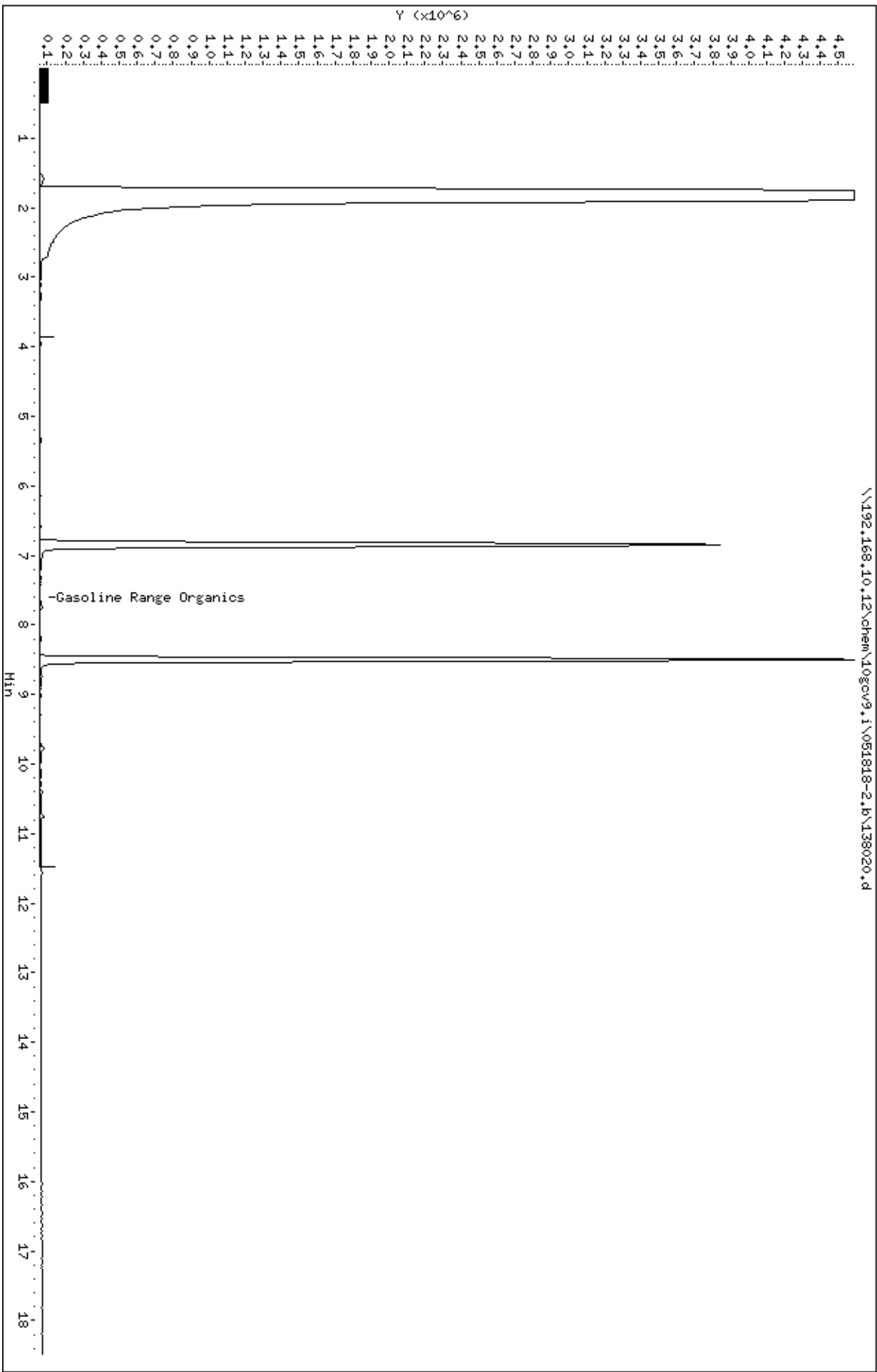
Sample Info: 10431124002,

Instrument: 10gc\9.i

Operator: AJR

Column diameter: 0.53

Column phase: RTX-WRX SMT047335



Date : 19-MAY-2018 00:02

Client ID: B-11 (7-9)

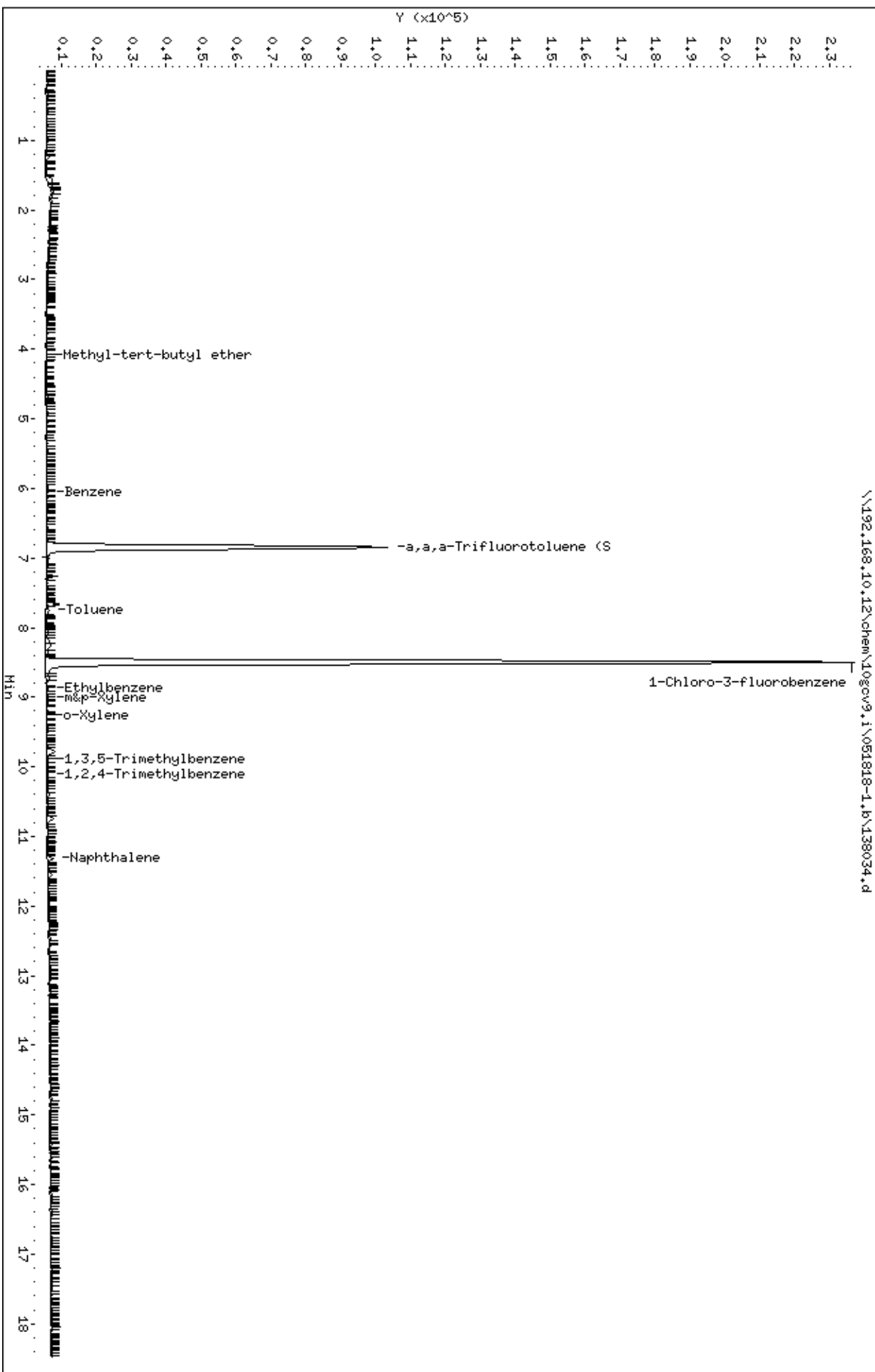
Sample Info: 10431124003,

Instrument: 10gc\9.i

Operator: AJR

Column diameter: 0.53

Column phase: RTX-WRX SML047335



Date : 19-MAY-2018 00:02

Client ID: B-11 (7-9)

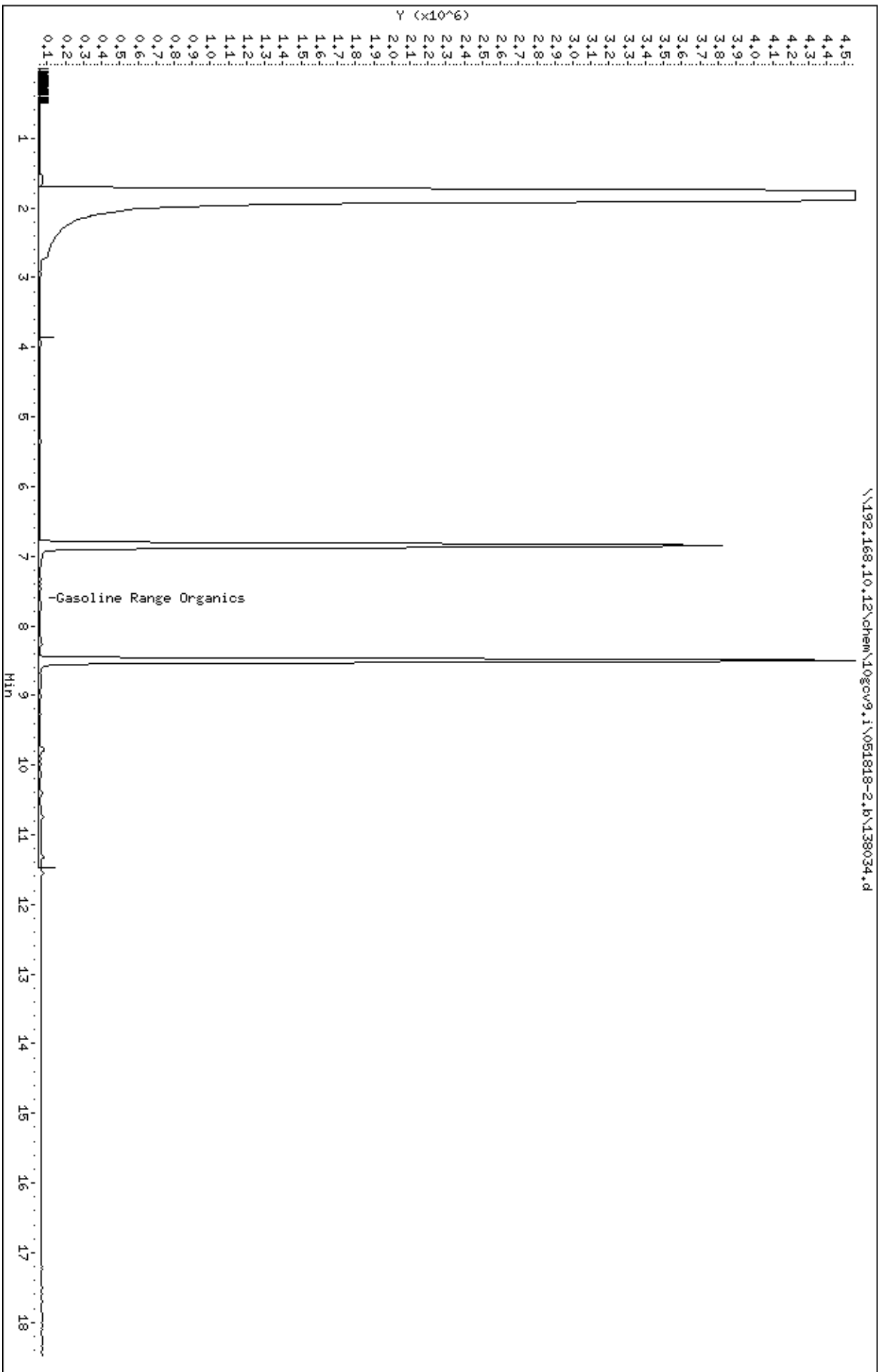
Sample Info: 10431124003,

Instrument: 10gc\9.i

Operator: AJR

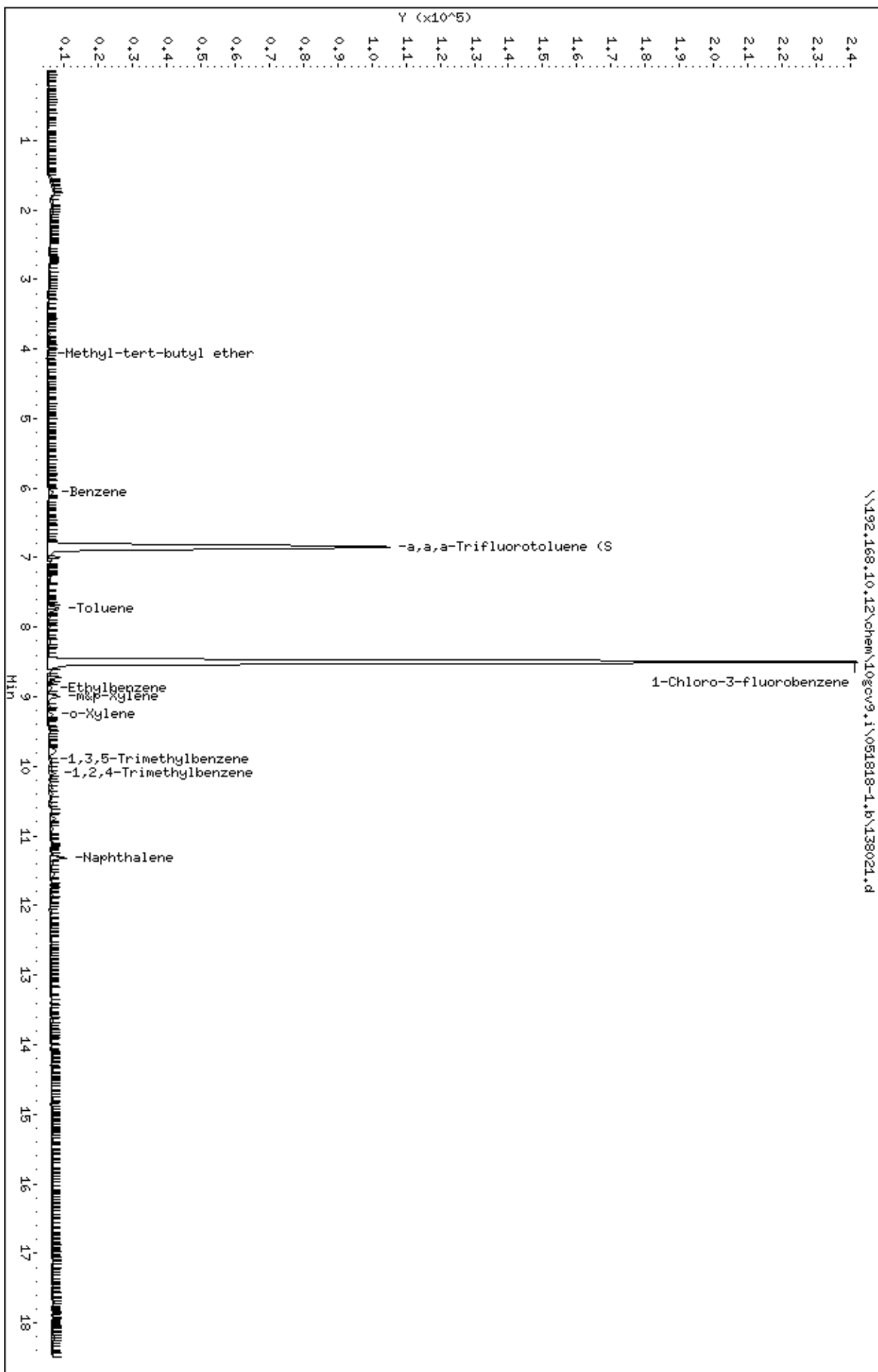
Column diameter: 0.53

Column phase: RTX-WRX SM1047335



Data File: \\192.168.10.12\chem\10gc\9.i\051818-1.b\138021.d
Date : 18-MAY-2018 18:40
Client ID: B-13 (13-15)
Sample Info: 10431124004,
Column phase: RTX-WRX SM1047335

Instrument: 10gc\9.i
Operator: AJR
Column diameter: 0.53



Date : 18-MAY-2018 18:40

Client ID: B-13 (13-15)

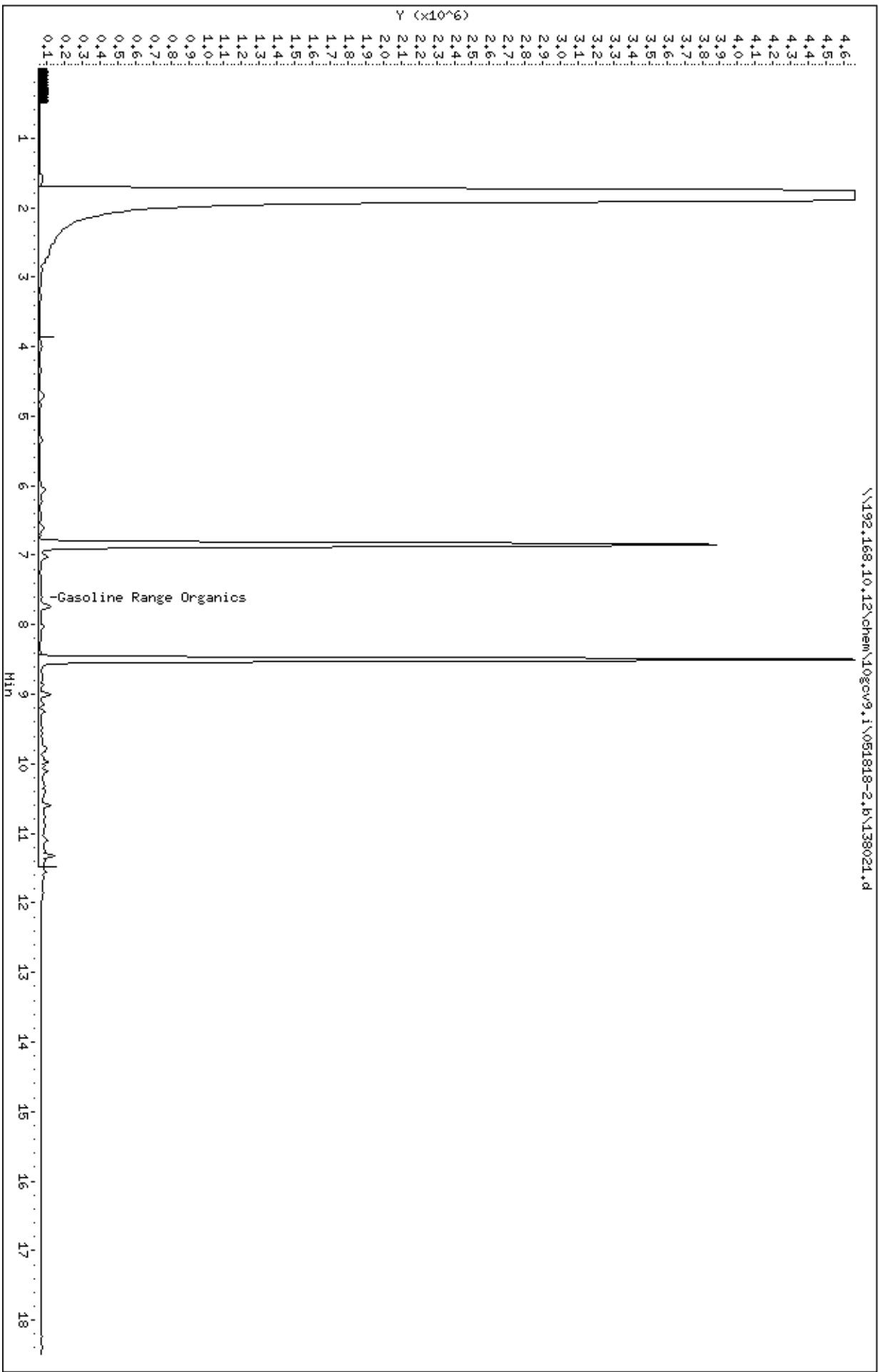
Sample Info: 10431124004,

Instrument: 10gc\9.i

Operator: AJR

Column diameter: 0.53

Column phase: RTX-WRX SMT047335



Date : 18-MAY-2018 19:04

Client ID: B-14 (8-10)

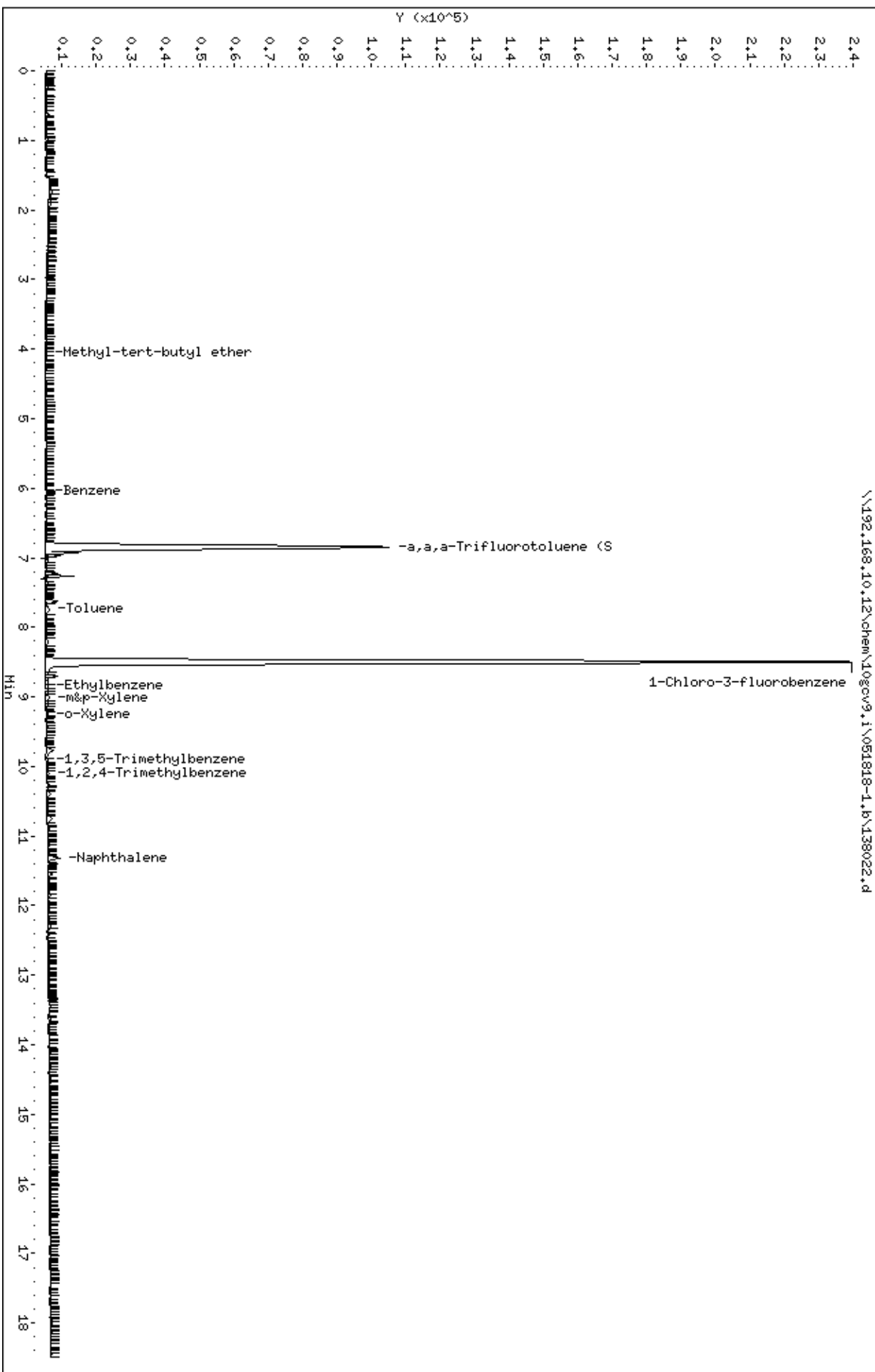
Sample Info: 10431124005,

Instrument: 10gcov9.i

Operator: AJR

Column diameter: 0.53

Column phase: RTX-WRX SML047335



Date : 18-MAY-2018 19:04

Client ID: B-14 (8-10)

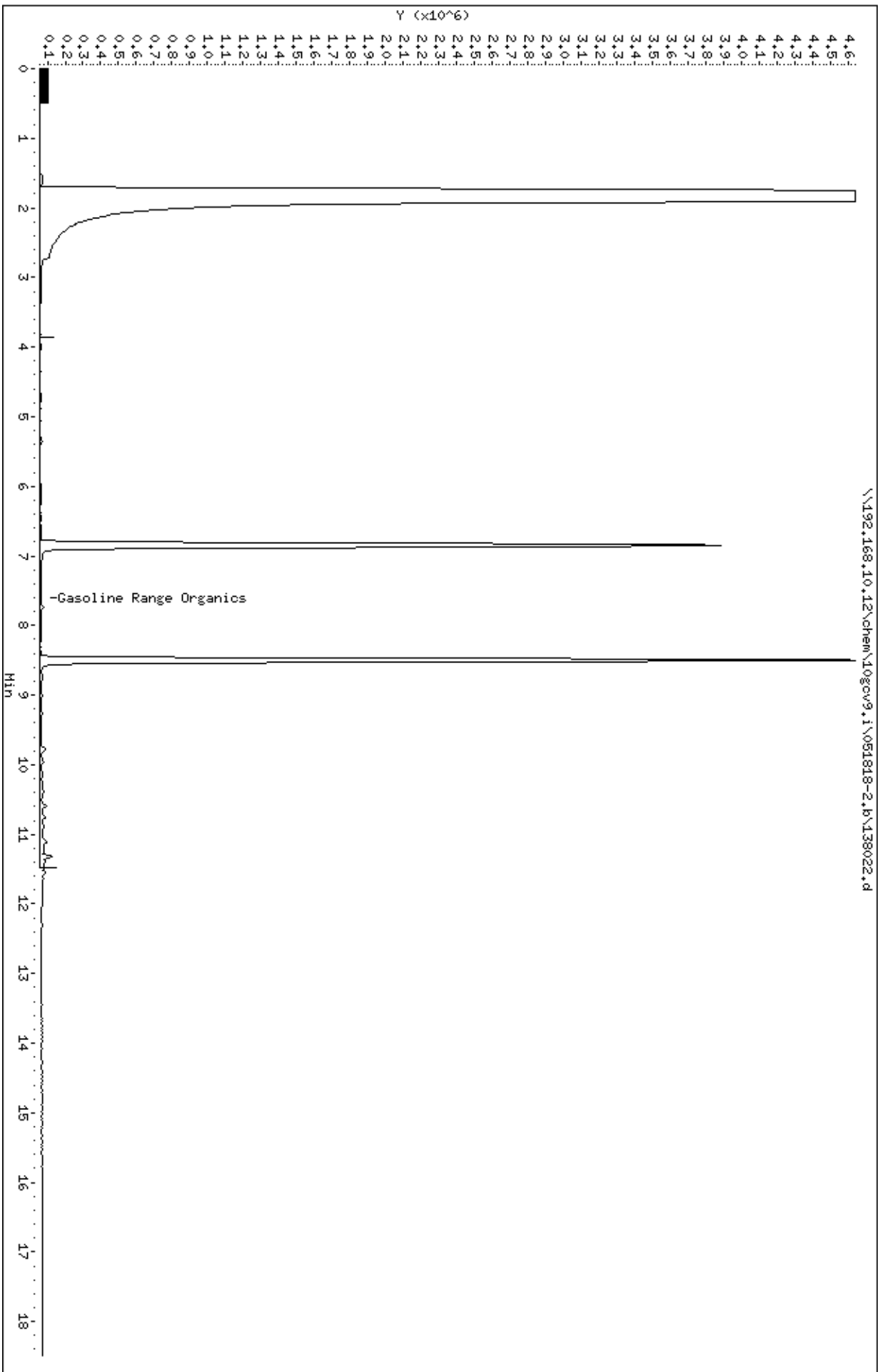
Sample Info: 10431124005,

Instrument: 10gc\9.i

Operator: AJR

Column diameter: 0.53

Column phase: RTX-WRX SML047335



Date : 18-MAY-2018 19:29

Client ID: B-20 (13-15)

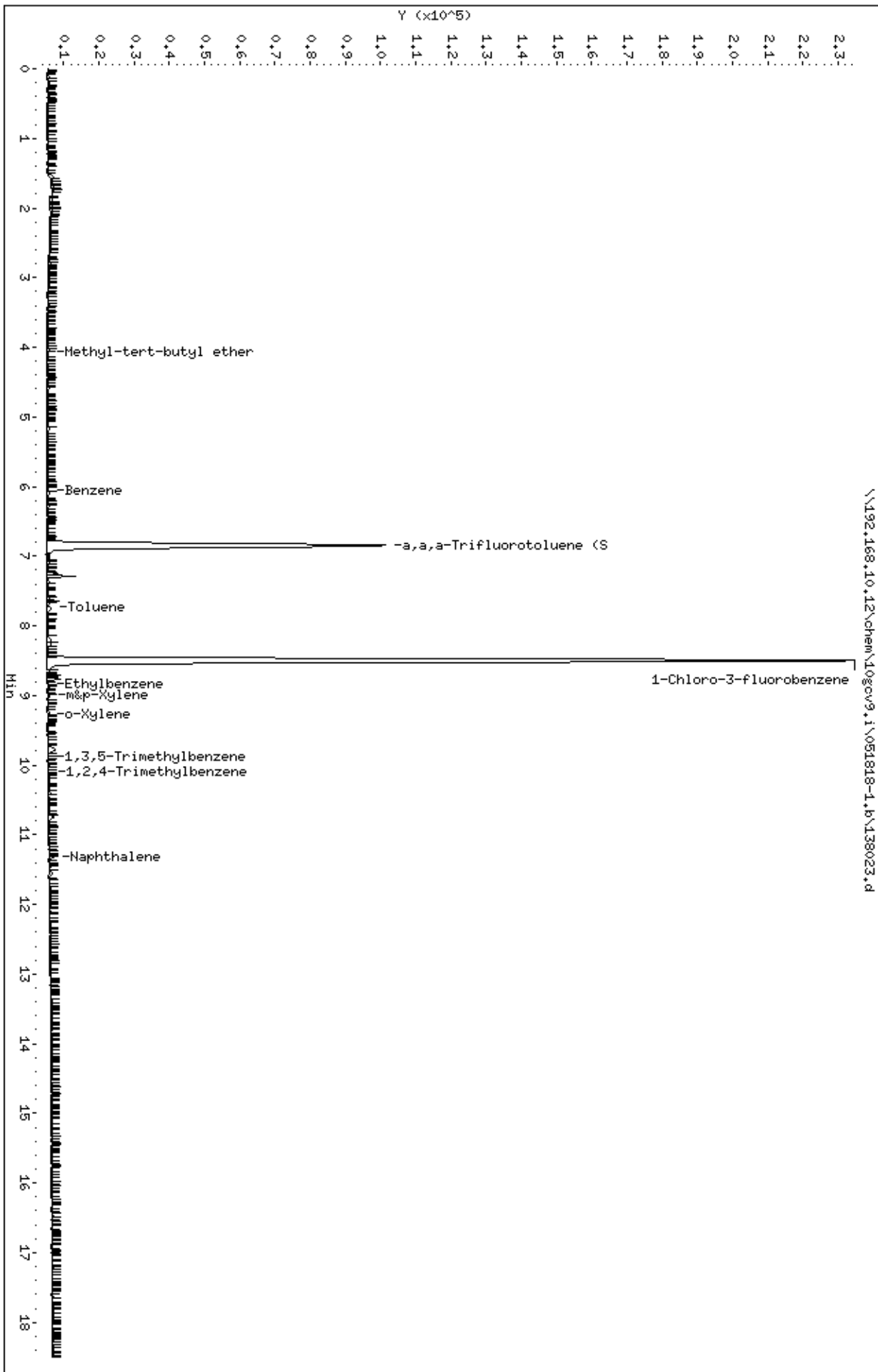
Sample Info: 10431124006,

Column phase: RTX-WRX SML047335

Instrument: 10gc\9.i

Operator: AJR

Column diameter: 0.53



Date : 18-MAY-2018 19:29

Client ID: B-20 (13-15)

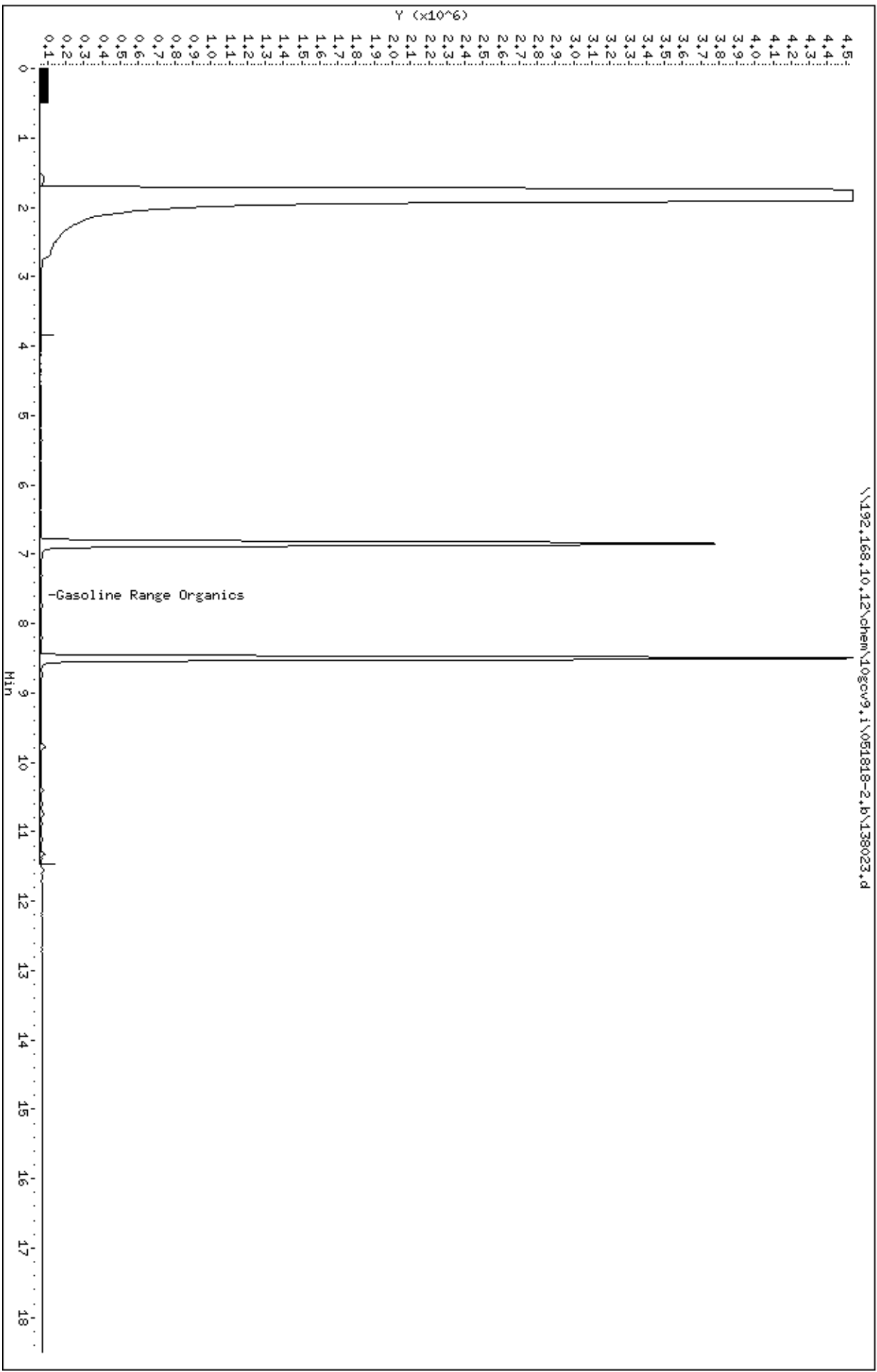
Sample Info: 10431124006,

Instrument: 10gc\9.i

Operator: AJR

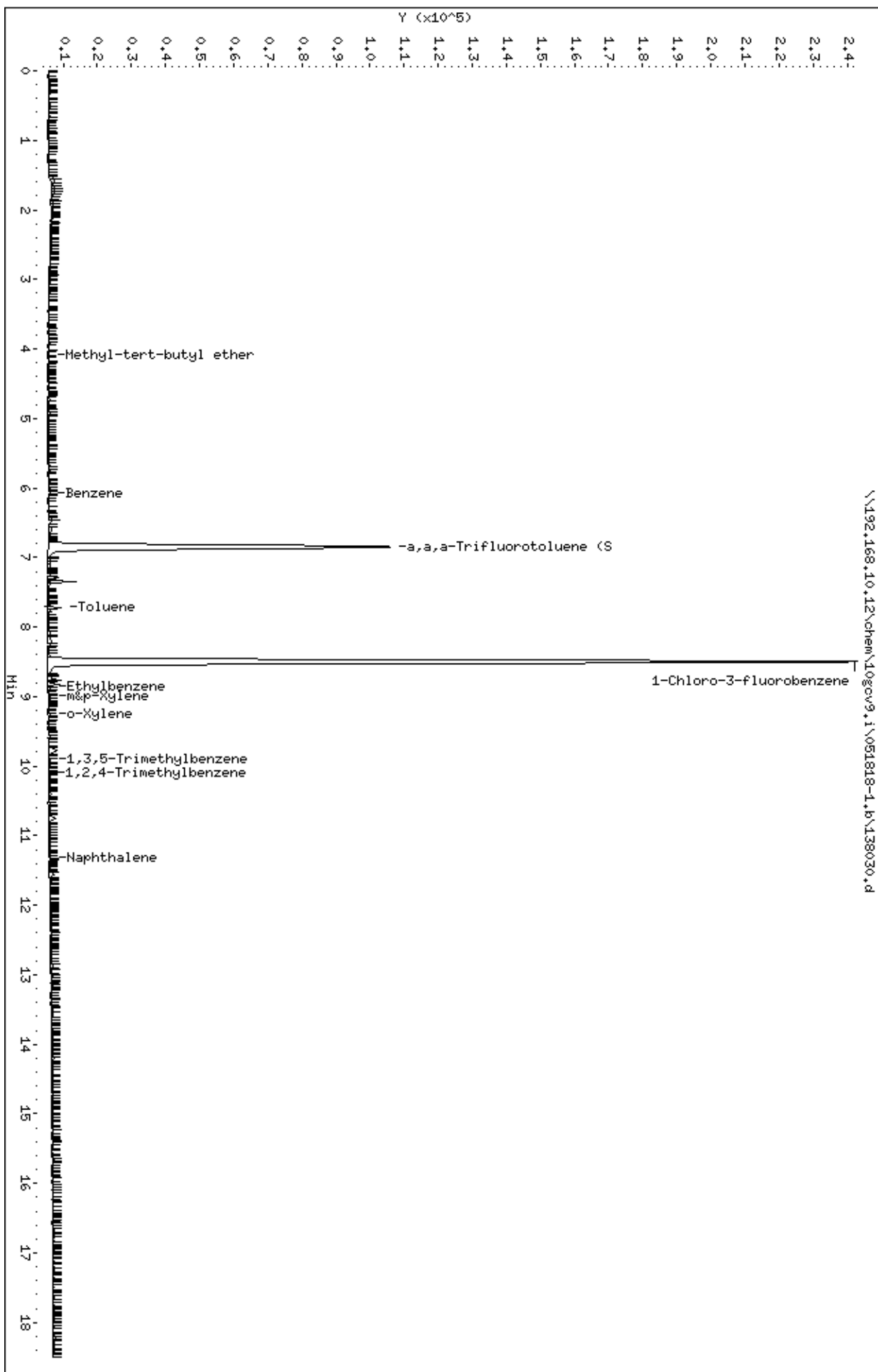
Column diameter: 0.53

Column phase: RTX-WRX SML047335



Data File: \\192.168.10.12\chem\10gc\9.i\051818-1.b\138030.d
Date : 18-MAY-2018 22:23
Client ID: Trip Blank
Sample Info: 10431124007,
Column phase: RTX-VRX SM1047335

Instrument: 10gc\9.i
Operator: AJR
Column diameter: 0.53



Date : 18-MAY-2018 22:23

Client ID: Trip Blank

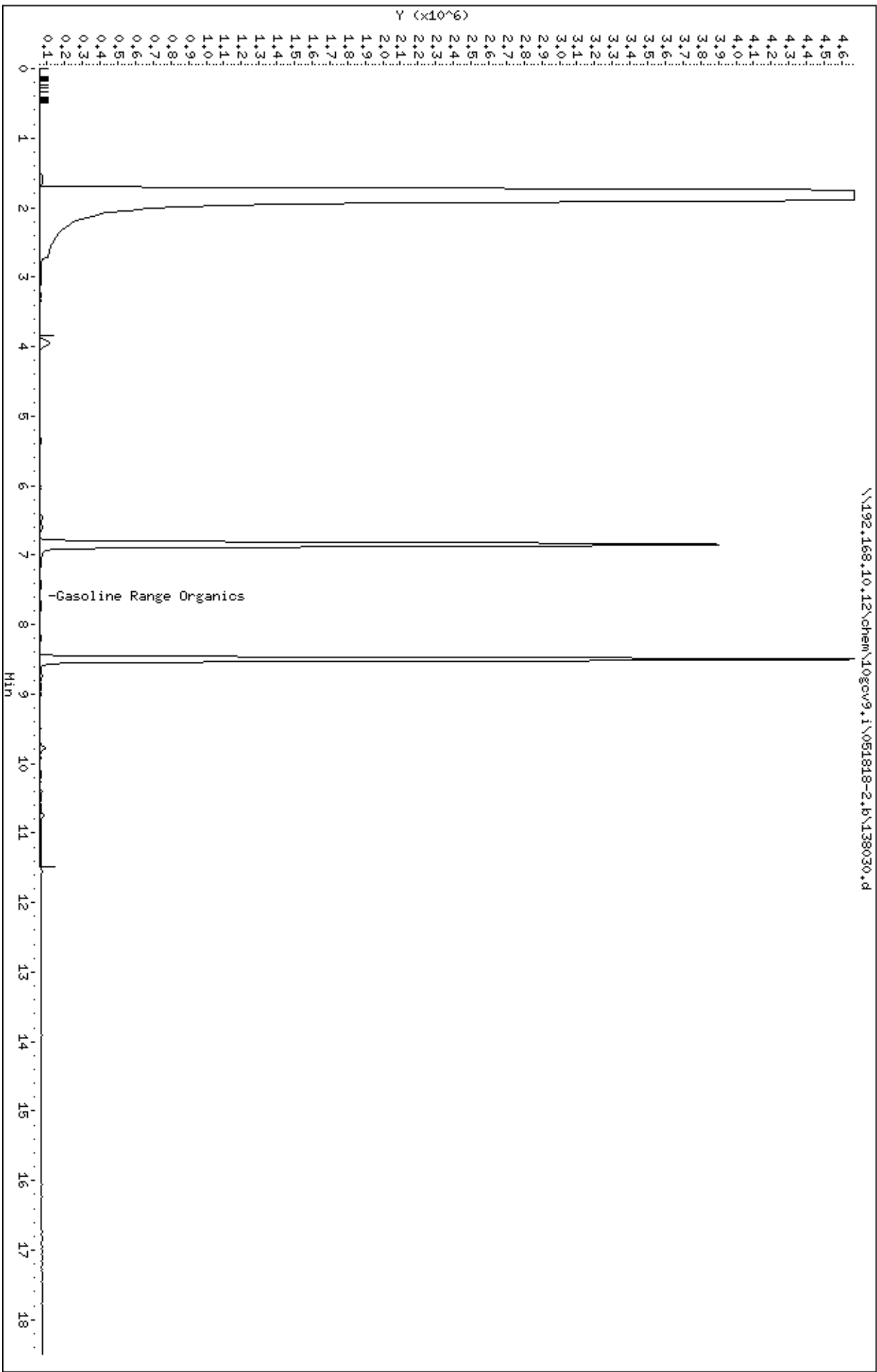
Sample Info: 10431124007,

Instrument: 10gc\9.i

Operator: AJR

Column diameter: 0.53

Column phase: RTX-WRX SML047335



May 24, 2018

Eric Stommes
Liesch Associates, Inc.
13400 15th Ave. N.
Minneapolis, MN 55441

RE: Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

Dear Eric Stommes:

Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2018. 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: Jocelyn Blase, Liesch-A Terracon Company
Kirsten Thompson, Terracon Minneapolis/Plymouth



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10431317001	B-2	Solid	05/15/18 10:00	05/15/18 14:48
10431317002	B-3	Solid	05/15/18 09:00	05/15/18 14:48
10431317003	HA-1	Solid	05/15/18 11:30	05/15/18 14:48
10431317004	HA-2	Solid	05/15/18 12:00	05/15/18 14:48
10431317005	TRIP BLANK	Solid	05/15/18 00:00	05/15/18 14:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10431317001	B-2	WI MOD DRO	EC2	2
		WI MOD GRO	AJR	2
		EPA 6010D	IP	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431317002	B-3	WI MOD DRO	EC2	2
		WI MOD GRO	AJR	2
		EPA 6010D	IP	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431317003	HA-1	WI MOD DRO	EC2	2
		WI MOD GRO	AJR	2
		EPA 6010D	IP	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431317004	HA-2	WI MOD DRO	EC2	2
		WI MOD GRO	AJR	2
		EPA 6010D	IP	5
		EPA 6020B	WBS	2
		EPA 7471B	LMW	1
		ASTM D2974	JDL	1
		EPA 8270D by SIM	STB	19
		EPA 8260B	CD2	70
10431317005	TRIP BLANK	WI MOD GRO	AJR	2
		EPA 8260B	CD2	70

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431317001	B-2					
WI MOD DRO	WDRO C10-C28	14.6	mg/kg	9.6	05/17/18 09:50	T6
EPA 6010D	Barium	71.4	mg/kg	0.55	05/16/18 19:13	
EPA 6010D	Cadmium	0.36	mg/kg	0.16	05/16/18 19:13	
EPA 6010D	Chromium	71.3	mg/kg	0.55	05/16/18 19:13	
EPA 6010D	Lead	79.9	mg/kg	0.55	05/16/18 19:13	
EPA 6020B	Arsenic	7.1	mg/kg	0.52	05/21/18 23:52	
EPA 7471B	Mercury	0.034	mg/kg	0.020	05/17/18 14:55	
ASTM D2974	Percent Moisture	9.2	%	0.10	05/17/18 10:16	
EPA 8270D by SIM	Acenaphthene	0.014	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Anthracene	0.035	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Benzo(a)anthracene	0.13	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Benzo(a)pyrene	0.21	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Benzo(b)fluoranthene	0.27	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.17	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.080	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Chrysene	0.14	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Dibenz(a,h)anthracene	0.037	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Fluoranthene	0.19	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Fluorene	0.011	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.14	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Phenanthrene	0.12	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Pyrene	0.16	mg/kg	0.011	05/17/18 14:01	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.30	mg/kg	0.011	05/17/18 14:01	
10431317002	B-3					
EPA 6010D	Barium	82.9	mg/kg	0.56	05/16/18 19:17	
EPA 6010D	Chromium	10.6	mg/kg	0.56	05/16/18 19:17	
EPA 6010D	Lead	43.7	mg/kg	0.56	05/16/18 19:17	
EPA 6020B	Arsenic	2.8	mg/kg	0.53	05/21/18 23:54	
EPA 7471B	Mercury	0.022	mg/kg	0.022	05/17/18 14:57	
ASTM D2974	Percent Moisture	12.2	%	0.10	05/17/18 10:16	
EPA 8270D by SIM	Acenaphthylene	0.014	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Anthracene	0.016	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Benzo(a)anthracene	0.061	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Benzo(a)pyrene	0.069	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Benzo(b)fluoranthene	0.088	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Benzo(g,h,i)perylene	0.039	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Benzo(k)fluoranthene	0.031	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Chrysene	0.065	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Fluoranthene	0.11	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	0.030	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Phenanthrene	0.038	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Pyrene	0.094	mg/kg	0.011	05/18/18 10:47	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	0.091	mg/kg	0.011	05/18/18 10:47	
10431317003	HA-1					
EPA 6010D	Barium	38.9	mg/kg	0.54	05/16/18 19:29	
EPA 6010D	Chromium	4.9	mg/kg	0.54	05/16/18 19:29	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431317003	HA-1					
EPA 6010D	Lead	1.6	mg/kg	0.54	05/16/18 19:29	
EPA 6020B	Arsenic	1.9	mg/kg	0.54	05/21/18 23:57	
ASTM D2974	Percent Moisture	11.2	%	0.10	05/17/18 10:17	
10431317004	HA-2					
EPA 6010D	Barium	53.1	mg/kg	0.55	05/16/18 19:33	
EPA 6010D	Chromium	10.7	mg/kg	0.55	05/16/18 19:33	
EPA 6010D	Lead	4.0	mg/kg	0.55	05/16/18 19:33	
EPA 6020B	Arsenic	2.8	mg/kg	0.53	05/22/18 00:00	
ASTM D2974	Percent Moisture	10.2	%	0.10	05/17/18 10:17	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

Sample: B-2 **Lab ID: 10431317001** Collected: 05/15/18 10:00 Received: 05/15/18 14:48 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	14.6	mg/kg	9.6	1.9	1	05/16/18 19:40	05/17/18 09:50		T6
Surrogates									
n-Triacontane (S)	115	%	59-133		1	05/16/18 19:40	05/17/18 09:50	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<11.1	mg/kg	11.1	1.4	1	05/18/18 10:37	05/18/18 23:37		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-150		1	05/18/18 10:37	05/18/18 23:37	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	71.4	mg/kg	0.55	0.029	1	05/16/18 05:28	05/16/18 19:13	7440-39-3	
Cadmium	0.36	mg/kg	0.16	0.017	1	05/16/18 05:28	05/16/18 19:13	7440-43-9	
Chromium	71.3	mg/kg	0.55	0.069	1	05/16/18 05:28	05/16/18 19:13	7440-47-3	
Lead	79.9	mg/kg	0.55	0.12	1	05/16/18 05:28	05/16/18 19:13	7439-92-1	
Silver	<0.55	mg/kg	0.55	0.043	1	05/16/18 05:28	05/16/18 19:13	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	7.1	mg/kg	0.52	0.23	20	05/16/18 07:00	05/21/18 23:52	7440-38-2	
Selenium	<0.52	mg/kg	0.52	0.26	20	05/16/18 07:00	05/21/18 23:52	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.034	mg/kg	0.020	0.0093	1	05/17/18 05:42	05/17/18 14:55	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	9.2	%	0.10	0.10	1		05/17/18 10:16		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	0.014	mg/kg	0.011	0.00065	1	05/16/18 15:48	05/17/18 14:01	83-32-9	
Acenaphthylene	<0.011	mg/kg	0.011	0.00072	1	05/16/18 15:48	05/17/18 14:01	208-96-8	
Anthracene	0.035	mg/kg	0.011	0.00058	1	05/16/18 15:48	05/17/18 14:01	120-12-7	
Benzo(a)anthracene	0.13	mg/kg	0.011	0.0017	1	05/16/18 15:48	05/17/18 14:01	56-55-3	
Benzo(a)pyrene	0.21	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/17/18 14:01	50-32-8	
Benzo(b)fluoranthene	0.27	mg/kg	0.011	0.00061	1	05/16/18 15:48	05/17/18 14:01	205-99-2	
Benzo(g,h,i)perylene	0.17	mg/kg	0.011	0.0010	1	05/16/18 15:48	05/17/18 14:01	191-24-2	
Benzo(k)fluoranthene	0.080	mg/kg	0.011	0.0013	1	05/16/18 15:48	05/17/18 14:01	207-08-9	
Chrysene	0.14	mg/kg	0.011	0.00033	1	05/16/18 15:48	05/17/18 14:01	218-01-9	
Dibenz(a,h)anthracene	0.037	mg/kg	0.011	0.00051	1	05/16/18 15:48	05/17/18 14:01	53-70-3	
Fluoranthene	0.19	mg/kg	0.011	0.00034	1	05/16/18 15:48	05/17/18 14:01	206-44-0	
Fluorene	0.011	mg/kg	0.011	0.00028	1	05/16/18 15:48	05/17/18 14:01	86-73-7	
Indeno(1,2,3-cd)pyrene	0.14	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/17/18 14:01	193-39-5	
Naphthalene	<0.011	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/17/18 14:01	91-20-3	
Phenanthrene	0.12	mg/kg	0.011	0.0016	1	05/16/18 15:48	05/17/18 14:01	85-01-8	
Pyrene	0.16	mg/kg	0.011	0.00038	1	05/16/18 15:48	05/17/18 14:01	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	0.30	mg/kg	0.011		1	05/16/18 15:48	05/17/18 14:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: B-2 **Lab ID: 10431317001** Collected: 05/15/18 10:00 Received: 05/15/18 14:48 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	65	%.	42-125		1	05/16/18 15:48	05/17/18 14:01	321-60-8	
p-Terphenyl-d14 (S)	90	%.	57-125		1	05/16/18 15:48	05/17/18 14:01	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.1	mg/kg	1.1	0.52	1	05/18/18 08:58	05/22/18 06:30	67-64-1	
Allyl chloride	<0.21	mg/kg	0.21	0.050	1	05/18/18 08:58	05/22/18 06:30	107-05-1	
Benzene	<0.021	mg/kg	0.021	0.0079	1	05/18/18 08:58	05/22/18 06:30	71-43-2	
Bromobenzene	<0.054	mg/kg	0.054	0.015	1	05/18/18 08:58	05/22/18 06:30	108-86-1	
Bromochloromethane	<0.054	mg/kg	0.054	0.026	1	05/18/18 08:58	05/22/18 06:30	74-97-5	
Bromodichloromethane	<0.054	mg/kg	0.054	0.019	1	05/18/18 08:58	05/22/18 06:30	75-27-4	
Bromoform	<0.54	mg/kg	0.54	0.039	1	05/18/18 08:58	05/22/18 06:30	75-25-2	
Bromomethane	<0.54	mg/kg	0.54	0.057	1	05/18/18 08:58	05/22/18 06:30	74-83-9	
2-Butanone (MEK)	<0.27	mg/kg	0.27	0.096	1	05/18/18 08:58	05/22/18 06:30	78-93-3	
n-Butylbenzene	<0.054	mg/kg	0.054	0.013	1	05/18/18 08:58	05/22/18 06:30	104-51-8	
sec-Butylbenzene	<0.054	mg/kg	0.054	0.015	1	05/18/18 08:58	05/22/18 06:30	135-98-8	
tert-Butylbenzene	<0.054	mg/kg	0.054	0.014	1	05/18/18 08:58	05/22/18 06:30	98-06-6	
Carbon tetrachloride	<0.054	mg/kg	0.054	0.021	1	05/18/18 08:58	05/22/18 06:30	56-23-5	
Chlorobenzene	<0.054	mg/kg	0.054	0.016	1	05/18/18 08:58	05/22/18 06:30	108-90-7	
Chloroethane	<0.54	mg/kg	0.54	0.082	1	05/18/18 08:58	05/22/18 06:30	75-00-3	
Chloroform	<0.054	mg/kg	0.054	0.022	1	05/18/18 08:58	05/22/18 06:30	67-66-3	
Chloromethane	<0.21	mg/kg	0.21	0.035	1	05/18/18 08:58	05/22/18 06:30	74-87-3	
2-Chlorotoluene	<0.054	mg/kg	0.054	0.017	1	05/18/18 08:58	05/22/18 06:30	95-49-8	
4-Chlorotoluene	<0.054	mg/kg	0.054	0.013	1	05/18/18 08:58	05/22/18 06:30	106-43-4	
1,2-Dibromo-3-chloropropane	<1.3	mg/kg	1.3	0.094	1	05/18/18 08:58	05/22/18 06:30	96-12-8	
Dibromochloromethane	<0.21	mg/kg	0.21	0.054	1	05/18/18 08:58	05/22/18 06:30	124-48-1	
1,2-Dibromoethane (EDB)	<0.054	mg/kg	0.054	0.021	1	05/18/18 08:58	05/22/18 06:30	106-93-4	
Dibromomethane	<0.054	mg/kg	0.054	0.018	1	05/18/18 08:58	05/22/18 06:30	74-95-3	
1,2-Dichlorobenzene	<0.054	mg/kg	0.054	0.012	1	05/18/18 08:58	05/22/18 06:30	95-50-1	
1,3-Dichlorobenzene	<0.054	mg/kg	0.054	0.018	1	05/18/18 08:58	05/22/18 06:30	541-73-1	
1,4-Dichlorobenzene	<0.054	mg/kg	0.054	0.020	1	05/18/18 08:58	05/22/18 06:30	106-46-7	
Dichlorodifluoromethane	<0.21	mg/kg	0.21	0.084	1	05/18/18 08:58	05/22/18 06:30	75-71-8	
1,1-Dichloroethane	<0.054	mg/kg	0.054	0.014	1	05/18/18 08:58	05/22/18 06:30	75-34-3	
1,2-Dichloroethane	<0.054	mg/kg	0.054	0.020	1	05/18/18 08:58	05/22/18 06:30	107-06-2	
1,1-Dichloroethene	<0.054	mg/kg	0.054	0.023	1	05/18/18 08:58	05/22/18 06:30	75-35-4	
cis-1,2-Dichloroethene	<0.054	mg/kg	0.054	0.0097	1	05/18/18 08:58	05/22/18 06:30	156-59-2	
trans-1,2-Dichloroethene	<0.054	mg/kg	0.054	0.022	1	05/18/18 08:58	05/22/18 06:30	156-60-5	
Dichlorofluoromethane	<0.54	mg/kg	0.54	0.050	1	05/18/18 08:58	05/22/18 06:30	75-43-4	
1,2-Dichloropropane	<0.054	mg/kg	0.054	0.019	1	05/18/18 08:58	05/22/18 06:30	78-87-5	
1,3-Dichloropropane	<0.054	mg/kg	0.054	0.020	1	05/18/18 08:58	05/22/18 06:30	142-28-9	
2,2-Dichloropropane	<0.21	mg/kg	0.21	0.053	1	05/18/18 08:58	05/22/18 06:30	594-20-7	
1,1-Dichloropropene	<0.054	mg/kg	0.054	0.015	1	05/18/18 08:58	05/22/18 06:30	563-58-6	
cis-1,3-Dichloropropene	<0.054	mg/kg	0.054	0.017	1	05/18/18 08:58	05/22/18 06:30	10061-01-5	
trans-1,3-Dichloropropene	<0.054	mg/kg	0.054	0.038	1	05/18/18 08:58	05/22/18 06:30	10061-02-6	
Diethyl ether (Ethyl ether)	<0.21	mg/kg	0.21	0.045	1	05/18/18 08:58	05/22/18 06:30	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: B-2 **Lab ID: 10431317001** Collected: 05/15/18 10:00 Received: 05/15/18 14:48 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.054	mg/kg	0.054	0.016	1	05/18/18 08:58	05/22/18 06:30	100-41-4	
Hexachloro-1,3-butadiene	<0.27	mg/kg	0.27	0.055	1	05/18/18 08:58	05/22/18 06:30	87-68-3	
Isopropylbenzene (Cumene)	<0.054	mg/kg	0.054	0.017	1	05/18/18 08:58	05/22/18 06:30	98-82-8	
p-Isopropyltoluene	<0.054	mg/kg	0.054	0.011	1	05/18/18 08:58	05/22/18 06:30	99-87-6	
Methylene Chloride	<0.21	mg/kg	0.21	0.028	1	05/18/18 08:58	05/22/18 06:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.27	mg/kg	0.27	0.071	1	05/18/18 08:58	05/22/18 06:30	108-10-1	
Methyl-tert-butyl ether	<0.054	mg/kg	0.054	0.017	1	05/18/18 08:58	05/22/18 06:30	1634-04-4	
Naphthalene	<0.21	mg/kg	0.21	0.047	1	05/18/18 08:58	05/22/18 06:30	91-20-3	
n-Propylbenzene	<0.054	mg/kg	0.054	0.013	1	05/18/18 08:58	05/22/18 06:30	103-65-1	
Styrene	<0.054	mg/kg	0.054	0.014	1	05/18/18 08:58	05/22/18 06:30	100-42-5	
1,1,1,2-Tetrachloroethane	<0.054	mg/kg	0.054	0.014	1	05/18/18 08:58	05/22/18 06:30	630-20-6	
1,1,2,2-Tetrachloroethane	<0.054	mg/kg	0.054	0.024	1	05/18/18 08:58	05/22/18 06:30	79-34-5	
Tetrachloroethene	<0.054	mg/kg	0.054	0.022	1	05/18/18 08:58	05/22/18 06:30	127-18-4	
Tetrahydrofuran	<2.1	mg/kg	2.1	0.56	1	05/18/18 08:58	05/22/18 06:30	109-99-9	
Toluene	<0.054	mg/kg	0.054	0.015	1	05/18/18 08:58	05/22/18 06:30	108-88-3	
1,2,3-Trichlorobenzene	<0.054	mg/kg	0.054	0.014	1	05/18/18 08:58	05/22/18 06:30	87-61-6	
1,2,4-Trichlorobenzene	<0.054	mg/kg	0.054	0.015	1	05/18/18 08:58	05/22/18 06:30	120-82-1	
1,1,1-Trichloroethane	<0.054	mg/kg	0.054	0.012	1	05/18/18 08:58	05/22/18 06:30	71-55-6	
1,1,2-Trichloroethane	<0.054	mg/kg	0.054	0.015	1	05/18/18 08:58	05/22/18 06:30	79-00-5	
Trichloroethene	<0.054	mg/kg	0.054	0.0091	1	05/18/18 08:58	05/22/18 06:30	79-01-6	
Trichlorofluoromethane	<0.21	mg/kg	0.21	0.080	1	05/18/18 08:58	05/22/18 06:30	75-69-4	
1,2,3-Trichloropropane	<0.21	mg/kg	0.21	0.042	1	05/18/18 08:58	05/22/18 06:30	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.21	mg/kg	0.21	0.028	1	05/18/18 08:58	05/22/18 06:30	76-13-1	
1,2,4-Trimethylbenzene	<0.054	mg/kg	0.054	0.014	1	05/18/18 08:58	05/22/18 06:30	95-63-6	
1,3,5-Trimethylbenzene	<0.054	mg/kg	0.054	0.010	1	05/18/18 08:58	05/22/18 06:30	108-67-8	
Vinyl chloride	<0.021	mg/kg	0.021	0.0090	1	05/18/18 08:58	05/22/18 06:30	75-01-4	
Xylene (Total)	<0.16	mg/kg	0.16	0.029	1	05/18/18 08:58	05/22/18 06:30	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%	75-125		1	05/18/18 08:58	05/22/18 06:30	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1	05/18/18 08:58	05/22/18 06:30	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	05/18/18 08:58	05/22/18 06:30	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

Sample: B-3 **Lab ID: 10431317002** Collected: 05/15/18 09:00 Received: 05/15/18 14:48 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<7.6	mg/kg	7.6	1.5	1	05/16/18 19:40	05/17/18 10:18		
Surrogates									
n-Triacontane (S)	96	%	59-133		1	05/16/18 19:40	05/17/18 10:18	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<11.7	mg/kg	11.7	1.5	1	05/18/18 10:37	05/18/18 19:55		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	80-150		1	05/18/18 10:37	05/18/18 19:55	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	82.9	mg/kg	0.56	0.030	1	05/16/18 05:28	05/16/18 19:17	7440-39-3	
Cadmium	<0.17	mg/kg	0.17	0.017	1	05/16/18 05:28	05/16/18 19:17	7440-43-9	
Chromium	10.6	mg/kg	0.56	0.071	1	05/16/18 05:28	05/16/18 19:17	7440-47-3	
Lead	43.7	mg/kg	0.56	0.13	1	05/16/18 05:28	05/16/18 19:17	7439-92-1	
Silver	<0.56	mg/kg	0.56	0.044	1	05/16/18 05:28	05/16/18 19:17	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	2.8	mg/kg	0.53	0.24	20	05/16/18 07:00	05/21/18 23:54	7440-38-2	
Selenium	<0.53	mg/kg	0.53	0.27	20	05/16/18 07:00	05/21/18 23:54	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.022	mg/kg	0.022	0.010	1	05/17/18 05:42	05/17/18 14:57	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	12.2	%	0.10	0.10	1		05/17/18 10:16		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.011	mg/kg	0.011	0.00067	1	05/16/18 15:48	05/18/18 10:47	83-32-9	
Acenaphthylene	0.014	mg/kg	0.011	0.00074	1	05/16/18 15:48	05/18/18 10:47	208-96-8	
Anthracene	0.016	mg/kg	0.011	0.00060	1	05/16/18 15:48	05/18/18 10:47	120-12-7	
Benzo(a)anthracene	0.061	mg/kg	0.011	0.0018	1	05/16/18 15:48	05/18/18 10:47	56-55-3	
Benzo(a)pyrene	0.069	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/18/18 10:47	50-32-8	
Benzo(b)fluoranthene	0.088	mg/kg	0.011	0.00063	1	05/16/18 15:48	05/18/18 10:47	205-99-2	
Benzo(g,h,i)perylene	0.039	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/18/18 10:47	191-24-2	
Benzo(k)fluoranthene	0.031	mg/kg	0.011	0.0013	1	05/16/18 15:48	05/18/18 10:47	207-08-9	
Chrysene	0.065	mg/kg	0.011	0.00034	1	05/16/18 15:48	05/18/18 10:47	218-01-9	
Dibenz(a,h)anthracene	<0.011	mg/kg	0.011	0.00052	1	05/16/18 15:48	05/18/18 10:47	53-70-3	
Fluoranthene	0.11	mg/kg	0.011	0.00035	1	05/16/18 15:48	05/18/18 10:47	206-44-0	
Fluorene	<0.011	mg/kg	0.011	0.00029	1	05/16/18 15:48	05/18/18 10:47	86-73-7	
Indeno(1,2,3-cd)pyrene	0.030	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/18/18 10:47	193-39-5	
Naphthalene	<0.011	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/18/18 10:47	91-20-3	
Phenanthrene	0.038	mg/kg	0.011	0.0016	1	05/16/18 15:48	05/18/18 10:47	85-01-8	
Pyrene	0.094	mg/kg	0.011	0.00039	1	05/16/18 15:48	05/18/18 10:47	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	0.091	mg/kg	0.011		1	05/16/18 15:48	05/18/18 10:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: B-3 **Lab ID: 10431317002** Collected: 05/15/18 09:00 Received: 05/15/18 14:48 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	74	%.	42-125		1	05/16/18 15:48	05/18/18 10:47	321-60-8	
p-Terphenyl-d14 (S)	97	%.	57-125		1	05/16/18 15:48	05/18/18 10:47	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.2	mg/kg	1.2	0.57	1	05/18/18 08:58	05/22/18 08:01	67-64-1	
Allyl chloride	<0.24	mg/kg	0.24	0.056	1	05/18/18 08:58	05/22/18 08:01	107-05-1	
Benzene	<0.024	mg/kg	0.024	0.0087	1	05/18/18 08:58	05/22/18 08:01	71-43-2	
Bromobenzene	<0.059	mg/kg	0.059	0.016	1	05/18/18 08:58	05/22/18 08:01	108-86-1	
Bromochloromethane	<0.059	mg/kg	0.059	0.029	1	05/18/18 08:58	05/22/18 08:01	74-97-5	
Bromodichloromethane	<0.059	mg/kg	0.059	0.021	1	05/18/18 08:58	05/22/18 08:01	75-27-4	
Bromoform	<0.59	mg/kg	0.59	0.043	1	05/18/18 08:58	05/22/18 08:01	75-25-2	
Bromomethane	<0.59	mg/kg	0.59	0.063	1	05/18/18 08:58	05/22/18 08:01	74-83-9	
2-Butanone (MEK)	<0.30	mg/kg	0.30	0.11	1	05/18/18 08:58	05/22/18 08:01	78-93-3	
n-Butylbenzene	<0.059	mg/kg	0.059	0.014	1	05/18/18 08:58	05/22/18 08:01	104-51-8	
sec-Butylbenzene	<0.059	mg/kg	0.059	0.017	1	05/18/18 08:58	05/22/18 08:01	135-98-8	
tert-Butylbenzene	<0.059	mg/kg	0.059	0.016	1	05/18/18 08:58	05/22/18 08:01	98-06-6	
Carbon tetrachloride	<0.059	mg/kg	0.059	0.024	1	05/18/18 08:58	05/22/18 08:01	56-23-5	
Chlorobenzene	<0.059	mg/kg	0.059	0.018	1	05/18/18 08:58	05/22/18 08:01	108-90-7	
Chloroethane	<0.59	mg/kg	0.59	0.091	1	05/18/18 08:58	05/22/18 08:01	75-00-3	
Chloroform	<0.059	mg/kg	0.059	0.024	1	05/18/18 08:58	05/22/18 08:01	67-66-3	
Chloromethane	<0.24	mg/kg	0.24	0.038	1	05/18/18 08:58	05/22/18 08:01	74-87-3	
2-Chlorotoluene	<0.059	mg/kg	0.059	0.019	1	05/18/18 08:58	05/22/18 08:01	95-49-8	
4-Chlorotoluene	<0.059	mg/kg	0.059	0.015	1	05/18/18 08:58	05/22/18 08:01	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	mg/kg	1.5	0.10	1	05/18/18 08:58	05/22/18 08:01	96-12-8	
Dibromochloromethane	<0.24	mg/kg	0.24	0.059	1	05/18/18 08:58	05/22/18 08:01	124-48-1	
1,2-Dibromoethane (EDB)	<0.059	mg/kg	0.059	0.024	1	05/18/18 08:58	05/22/18 08:01	106-93-4	
Dibromomethane	<0.059	mg/kg	0.059	0.020	1	05/18/18 08:58	05/22/18 08:01	74-95-3	
1,2-Dichlorobenzene	<0.059	mg/kg	0.059	0.013	1	05/18/18 08:58	05/22/18 08:01	95-50-1	
1,3-Dichlorobenzene	<0.059	mg/kg	0.059	0.020	1	05/18/18 08:58	05/22/18 08:01	541-73-1	
1,4-Dichlorobenzene	<0.059	mg/kg	0.059	0.022	1	05/18/18 08:58	05/22/18 08:01	106-46-7	
Dichlorodifluoromethane	<0.24	mg/kg	0.24	0.092	1	05/18/18 08:58	05/22/18 08:01	75-71-8	
1,1-Dichloroethane	<0.059	mg/kg	0.059	0.015	1	05/18/18 08:58	05/22/18 08:01	75-34-3	
1,2-Dichloroethane	<0.059	mg/kg	0.059	0.022	1	05/18/18 08:58	05/22/18 08:01	107-06-2	
1,1-Dichloroethene	<0.059	mg/kg	0.059	0.025	1	05/18/18 08:58	05/22/18 08:01	75-35-4	
cis-1,2-Dichloroethene	<0.059	mg/kg	0.059	0.011	1	05/18/18 08:58	05/22/18 08:01	156-59-2	
trans-1,2-Dichloroethene	<0.059	mg/kg	0.059	0.024	1	05/18/18 08:58	05/22/18 08:01	156-60-5	
Dichlorofluoromethane	<0.59	mg/kg	0.59	0.056	1	05/18/18 08:58	05/22/18 08:01	75-43-4	
1,2-Dichloropropane	<0.059	mg/kg	0.059	0.021	1	05/18/18 08:58	05/22/18 08:01	78-87-5	
1,3-Dichloropropane	<0.059	mg/kg	0.059	0.022	1	05/18/18 08:58	05/22/18 08:01	142-28-9	
2,2-Dichloropropane	<0.24	mg/kg	0.24	0.058	1	05/18/18 08:58	05/22/18 08:01	594-20-7	
1,1-Dichloropropene	<0.059	mg/kg	0.059	0.017	1	05/18/18 08:58	05/22/18 08:01	563-58-6	
cis-1,3-Dichloropropene	<0.059	mg/kg	0.059	0.019	1	05/18/18 08:58	05/22/18 08:01	10061-01-5	
trans-1,3-Dichloropropene	<0.059	mg/kg	0.059	0.042	1	05/18/18 08:58	05/22/18 08:01	10061-02-6	
Diethyl ether (Ethyl ether)	<0.24	mg/kg	0.24	0.050	1	05/18/18 08:58	05/22/18 08:01	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: B-3 **Lab ID: 10431317002** Collected: 05/15/18 09:00 Received: 05/15/18 14:48 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.059	mg/kg	0.059	0.017	1	05/18/18 08:58	05/22/18 08:01	100-41-4	
Hexachloro-1,3-butadiene	<0.30	mg/kg	0.30	0.061	1	05/18/18 08:58	05/22/18 08:01	87-68-3	
Isopropylbenzene (Cumene)	<0.059	mg/kg	0.059	0.019	1	05/18/18 08:58	05/22/18 08:01	98-82-8	
p-Isopropyltoluene	<0.059	mg/kg	0.059	0.012	1	05/18/18 08:58	05/22/18 08:01	99-87-6	
Methylene Chloride	<0.24	mg/kg	0.24	0.031	1	05/18/18 08:58	05/22/18 08:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.30	mg/kg	0.30	0.078	1	05/18/18 08:58	05/22/18 08:01	108-10-1	
Methyl-tert-butyl ether	<0.059	mg/kg	0.059	0.018	1	05/18/18 08:58	05/22/18 08:01	1634-04-4	
Naphthalene	<0.24	mg/kg	0.24	0.052	1	05/18/18 08:58	05/22/18 08:01	91-20-3	
n-Propylbenzene	<0.059	mg/kg	0.059	0.015	1	05/18/18 08:58	05/22/18 08:01	103-65-1	
Styrene	<0.059	mg/kg	0.059	0.016	1	05/18/18 08:58	05/22/18 08:01	100-42-5	
1,1,1,2-Tetrachloroethane	<0.059	mg/kg	0.059	0.016	1	05/18/18 08:58	05/22/18 08:01	630-20-6	
1,1,2,2-Tetrachloroethane	<0.059	mg/kg	0.059	0.027	1	05/18/18 08:58	05/22/18 08:01	79-34-5	
Tetrachloroethene	<0.059	mg/kg	0.059	0.025	1	05/18/18 08:58	05/22/18 08:01	127-18-4	
Tetrahydrofuran	<2.4	mg/kg	2.4	0.62	1	05/18/18 08:58	05/22/18 08:01	109-99-9	
Toluene	<0.059	mg/kg	0.059	0.017	1	05/18/18 08:58	05/22/18 08:01	108-88-3	
1,2,3-Trichlorobenzene	<0.059	mg/kg	0.059	0.015	1	05/18/18 08:58	05/22/18 08:01	87-61-6	
1,2,4-Trichlorobenzene	<0.059	mg/kg	0.059	0.017	1	05/18/18 08:58	05/22/18 08:01	120-82-1	
1,1,1-Trichloroethane	<0.059	mg/kg	0.059	0.013	1	05/18/18 08:58	05/22/18 08:01	71-55-6	
1,1,2-Trichloroethane	<0.059	mg/kg	0.059	0.016	1	05/18/18 08:58	05/22/18 08:01	79-00-5	
Trichloroethene	<0.059	mg/kg	0.059	0.010	1	05/18/18 08:58	05/22/18 08:01	79-01-6	
Trichlorofluoromethane	<0.24	mg/kg	0.24	0.088	1	05/18/18 08:58	05/22/18 08:01	75-69-4	
1,2,3-Trichloropropane	<0.24	mg/kg	0.24	0.047	1	05/18/18 08:58	05/22/18 08:01	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.24	mg/kg	0.24	0.031	1	05/18/18 08:58	05/22/18 08:01	76-13-1	
1,2,4-Trimethylbenzene	<0.059	mg/kg	0.059	0.015	1	05/18/18 08:58	05/22/18 08:01	95-63-6	
1,3,5-Trimethylbenzene	<0.059	mg/kg	0.059	0.011	1	05/18/18 08:58	05/22/18 08:01	108-67-8	
Vinyl chloride	<0.024	mg/kg	0.024	0.0099	1	05/18/18 08:58	05/22/18 08:01	75-01-4	
Xylene (Total)	<0.18	mg/kg	0.18	0.032	1	05/18/18 08:58	05/22/18 08:01	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%	75-125		1	05/18/18 08:58	05/22/18 08:01	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	05/18/18 08:58	05/22/18 08:01	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 08:01	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

Sample: HA-1 **Lab ID: 10431317003** Collected: 05/15/18 11:30 Received: 05/15/18 14:48 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<10.1	mg/kg	10.1	2.0	1	05/16/18 19:40	05/17/18 09:57		
Surrogates									
n-Triacontane (S)	107	%	59-133		1	05/16/18 19:40	05/17/18 09:57	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<11.2	mg/kg	11.2	1.4	1	05/18/18 10:37	05/18/18 20:19		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/18/18 20:19	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	38.9	mg/kg	0.54	0.029	1	05/16/18 05:28	05/16/18 19:29	7440-39-3	
Cadmium	<0.16	mg/kg	0.16	0.016	1	05/16/18 05:28	05/16/18 19:29	7440-43-9	
Chromium	4.9	mg/kg	0.54	0.068	1	05/16/18 05:28	05/16/18 19:29	7440-47-3	
Lead	1.6	mg/kg	0.54	0.12	1	05/16/18 05:28	05/16/18 19:29	7439-92-1	
Silver	<0.54	mg/kg	0.54	0.042	1	05/16/18 05:28	05/16/18 19:29	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	1.9	mg/kg	0.54	0.24	20	05/16/18 07:00	05/21/18 23:57	7440-38-2	
Selenium	<0.54	mg/kg	0.54	0.27	20	05/16/18 07:00	05/21/18 23:57	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	<0.021	mg/kg	0.021	0.0098	1	05/17/18 05:42	05/17/18 14:59	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	11.2	%	0.10	0.10	1		05/17/18 10:17		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.011	mg/kg	0.011	0.00066	1	05/16/18 15:48	05/17/18 14:21	83-32-9	
Acenaphthylene	<0.011	mg/kg	0.011	0.00073	1	05/16/18 15:48	05/17/18 14:21	208-96-8	
Anthracene	<0.011	mg/kg	0.011	0.00059	1	05/16/18 15:48	05/17/18 14:21	120-12-7	
Benzo(a)anthracene	<0.011	mg/kg	0.011	0.0017	1	05/16/18 15:48	05/17/18 14:21	56-55-3	
Benzo(a)pyrene	<0.011	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/17/18 14:21	50-32-8	
Benzo(b)fluoranthene	<0.011	mg/kg	0.011	0.00062	1	05/16/18 15:48	05/17/18 14:21	205-99-2	
Benzo(g,h,i)perylene	<0.011	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/17/18 14:21	191-24-2	
Benzo(k)fluoranthene	<0.011	mg/kg	0.011	0.0013	1	05/16/18 15:48	05/17/18 14:21	207-08-9	
Chrysene	<0.011	mg/kg	0.011	0.00034	1	05/16/18 15:48	05/17/18 14:21	218-01-9	
Dibenz(a,h)anthracene	<0.011	mg/kg	0.011	0.00052	1	05/16/18 15:48	05/17/18 14:21	53-70-3	
Fluoranthene	<0.011	mg/kg	0.011	0.00035	1	05/16/18 15:48	05/17/18 14:21	206-44-0	
Fluorene	<0.011	mg/kg	0.011	0.00028	1	05/16/18 15:48	05/17/18 14:21	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.011	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/17/18 14:21	193-39-5	
Naphthalene	<0.011	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/17/18 14:21	91-20-3	
Phenanthrene	<0.011	mg/kg	0.011	0.0016	1	05/16/18 15:48	05/17/18 14:21	85-01-8	
Pyrene	<0.011	mg/kg	0.011	0.00039	1	05/16/18 15:48	05/17/18 14:21	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	<0.011	mg/kg	0.011		1	05/16/18 15:48	05/17/18 14:21		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: HA-1 Lab ID: 10431317003 Collected: 05/15/18 11:30 Received: 05/15/18 14:48 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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	75	%.	42-125		1	05/16/18 15:48	05/17/18 14:21	321-60-8	
p-Terphenyl-d14 (S)	86	%.	57-125		1	05/16/18 15:48	05/17/18 14:21	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.1	mg/kg	1.1	0.56	1	05/18/18 08:58	05/22/18 08:16	67-64-1	
Allyl chloride	<0.23	mg/kg	0.23	0.054	1	05/18/18 08:58	05/22/18 08:16	107-05-1	
Benzene	<0.023	mg/kg	0.023	0.0085	1	05/18/18 08:58	05/22/18 08:16	71-43-2	
Bromobenzene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:16	108-86-1	
Bromochloromethane	<0.057	mg/kg	0.057	0.028	1	05/18/18 08:58	05/22/18 08:16	74-97-5	
Bromodichloromethane	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:16	75-27-4	
Bromoform	<0.57	mg/kg	0.57	0.041	1	05/18/18 08:58	05/22/18 08:16	75-25-2	
Bromomethane	<0.57	mg/kg	0.57	0.061	1	05/18/18 08:58	05/22/18 08:16	74-83-9	
2-Butanone (MEK)	<0.29	mg/kg	0.29	0.10	1	05/18/18 08:58	05/22/18 08:16	78-93-3	
n-Butylbenzene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:16	104-51-8	
sec-Butylbenzene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:16	135-98-8	
tert-Butylbenzene	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:16	98-06-6	
Carbon tetrachloride	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:16	56-23-5	
Chlorobenzene	<0.057	mg/kg	0.057	0.017	1	05/18/18 08:58	05/22/18 08:16	108-90-7	
Chloroethane	<0.57	mg/kg	0.57	0.088	1	05/18/18 08:58	05/22/18 08:16	75-00-3	
Chloroform	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:16	67-66-3	
Chloromethane	<0.23	mg/kg	0.23	0.037	1	05/18/18 08:58	05/22/18 08:16	74-87-3	
2-Chlorotoluene	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:16	95-49-8	
4-Chlorotoluene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:16	106-43-4	
1,2-Dibromo-3-chloropropane	<1.4	mg/kg	1.4	0.10	1	05/18/18 08:58	05/22/18 08:16	96-12-8	
Dibromochloromethane	<0.23	mg/kg	0.23	0.057	1	05/18/18 08:58	05/22/18 08:16	124-48-1	
1,2-Dibromoethane (EDB)	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:16	106-93-4	
Dibromomethane	<0.057	mg/kg	0.057	0.019	1	05/18/18 08:58	05/22/18 08:16	74-95-3	
1,2-Dichlorobenzene	<0.057	mg/kg	0.057	0.012	1	05/18/18 08:58	05/22/18 08:16	95-50-1	
1,3-Dichlorobenzene	<0.057	mg/kg	0.057	0.019	1	05/18/18 08:58	05/22/18 08:16	541-73-1	
1,4-Dichlorobenzene	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:16	106-46-7	
Dichlorodifluoromethane	<0.23	mg/kg	0.23	0.089	1	05/18/18 08:58	05/22/18 08:16	75-71-8	
1,1-Dichloroethane	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:16	75-34-3	
1,2-Dichloroethane	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:16	107-06-2	
1,1-Dichloroethene	<0.057	mg/kg	0.057	0.025	1	05/18/18 08:58	05/22/18 08:16	75-35-4	
cis-1,2-Dichloroethene	<0.057	mg/kg	0.057	0.010	1	05/18/18 08:58	05/22/18 08:16	156-59-2	
trans-1,2-Dichloroethene	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:16	156-60-5	
Dichlorofluoromethane	<0.57	mg/kg	0.57	0.054	1	05/18/18 08:58	05/22/18 08:16	75-43-4	
1,2-Dichloropropane	<0.057	mg/kg	0.057	0.020	1	05/18/18 08:58	05/22/18 08:16	78-87-5	
1,3-Dichloropropane	<0.057	mg/kg	0.057	0.022	1	05/18/18 08:58	05/22/18 08:16	142-28-9	
2,2-Dichloropropane	<0.23	mg/kg	0.23	0.057	1	05/18/18 08:58	05/22/18 08:16	594-20-7	
1,1-Dichloropropene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:16	563-58-6	
cis-1,3-Dichloropropene	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:16	10061-01-5	
trans-1,3-Dichloropropene	<0.057	mg/kg	0.057	0.041	1	05/18/18 08:58	05/22/18 08:16	10061-02-6	
Diethyl ether (Ethyl ether)	<0.23	mg/kg	0.23	0.048	1	05/18/18 08:58	05/22/18 08:16	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: HA-1 **Lab ID: 10431317003** Collected: 05/15/18 11:30 Received: 05/15/18 14:48 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.057	mg/kg	0.057	0.017	1	05/18/18 08:58	05/22/18 08:16	100-41-4	
Hexachloro-1,3-butadiene	<0.29	mg/kg	0.29	0.059	1	05/18/18 08:58	05/22/18 08:16	87-68-3	
Isopropylbenzene (Cumene)	<0.057	mg/kg	0.057	0.019	1	05/18/18 08:58	05/22/18 08:16	98-82-8	
p-Isopropyltoluene	<0.057	mg/kg	0.057	0.012	1	05/18/18 08:58	05/22/18 08:16	99-87-6	
Methylene Chloride	<0.23	mg/kg	0.23	0.030	1	05/18/18 08:58	05/22/18 08:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.29	mg/kg	0.29	0.076	1	05/18/18 08:58	05/22/18 08:16	108-10-1	
Methyl-tert-butyl ether	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:16	1634-04-4	
Naphthalene	<0.23	mg/kg	0.23	0.050	1	05/18/18 08:58	05/22/18 08:16	91-20-3	
n-Propylbenzene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:16	103-65-1	
Styrene	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:16	100-42-5	
1,1,1,2-Tetrachloroethane	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:16	630-20-6	
1,1,2,2-Tetrachloroethane	<0.057	mg/kg	0.057	0.026	1	05/18/18 08:58	05/22/18 08:16	79-34-5	
Tetrachloroethene	<0.057	mg/kg	0.057	0.024	1	05/18/18 08:58	05/22/18 08:16	127-18-4	
Tetrahydrofuran	<2.3	mg/kg	2.3	0.60	1	05/18/18 08:58	05/22/18 08:16	109-99-9	
Toluene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:16	108-88-3	
1,2,3-Trichlorobenzene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:16	87-61-6	
1,2,4-Trichlorobenzene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:16	120-82-1	
1,1,1-Trichloroethane	<0.057	mg/kg	0.057	0.013	1	05/18/18 08:58	05/22/18 08:16	71-55-6	
1,1,2-Trichloroethane	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:16	79-00-5	
Trichloroethene	<0.057	mg/kg	0.057	0.0097	1	05/18/18 08:58	05/22/18 08:16	79-01-6	
Trichlorofluoromethane	<0.23	mg/kg	0.23	0.085	1	05/18/18 08:58	05/22/18 08:16	75-69-4	
1,2,3-Trichloropropane	<0.23	mg/kg	0.23	0.045	1	05/18/18 08:58	05/22/18 08:16	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.23	mg/kg	0.23	0.030	1	05/18/18 08:58	05/22/18 08:16	76-13-1	
1,2,4-Trimethylbenzene	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:16	95-63-6	
1,3,5-Trimethylbenzene	<0.057	mg/kg	0.057	0.011	1	05/18/18 08:58	05/22/18 08:16	108-67-8	
Vinyl chloride	<0.023	mg/kg	0.023	0.0096	1	05/18/18 08:58	05/22/18 08:16	75-01-4	
Xylene (Total)	<0.17	mg/kg	0.17	0.031	1	05/18/18 08:58	05/22/18 08:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%	75-125		1	05/18/18 08:58	05/22/18 08:16	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 08:16	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 08:16	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

Sample: HA-2 **Lab ID: 10431317004** Collected: 05/15/18 12:00 Received: 05/15/18 14:48 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
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<11.1	mg/kg	11.1	2.2	1	05/16/18 19:40	05/17/18 10:04		
Surrogates									
n-Triacontane (S)	91	%	59-133		1	05/16/18 19:40	05/17/18 10:04	638-68-6	D5
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<11.4	mg/kg	11.4	1.4	1	05/18/18 10:37	05/18/18 20:44		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/18/18 20:44	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Barium	53.1	mg/kg	0.55	0.029	1	05/16/18 05:28	05/16/18 19:33	7440-39-3	
Cadmium	<0.16	mg/kg	0.16	0.017	1	05/16/18 05:28	05/16/18 19:33	7440-43-9	
Chromium	10.7	mg/kg	0.55	0.070	1	05/16/18 05:28	05/16/18 19:33	7440-47-3	
Lead	4.0	mg/kg	0.55	0.12	1	05/16/18 05:28	05/16/18 19:33	7439-92-1	
Silver	<0.55	mg/kg	0.55	0.043	1	05/16/18 05:28	05/16/18 19:33	7440-22-4	
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3050									
Arsenic	2.8	mg/kg	0.53	0.24	20	05/16/18 07:00	05/22/18 00:00	7440-38-2	
Selenium	<0.53	mg/kg	0.53	0.27	20	05/16/18 07:00	05/22/18 00:00	7782-49-2	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	<0.022	mg/kg	0.022	0.010	1	05/17/18 05:42	05/17/18 15:06	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974									
Percent Moisture	10.2	%	0.10	0.10	1		05/17/18 10:17		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.011	mg/kg	0.011	0.00065	1	05/16/18 15:48	05/17/18 15:24	83-32-9	
Acenaphthylene	<0.011	mg/kg	0.011	0.00072	1	05/16/18 15:48	05/17/18 15:24	208-96-8	
Anthracene	<0.011	mg/kg	0.011	0.00059	1	05/16/18 15:48	05/17/18 15:24	120-12-7	
Benzo(a)anthracene	<0.011	mg/kg	0.011	0.00017	1	05/16/18 15:48	05/17/18 15:24	56-55-3	
Benzo(a)pyrene	<0.011	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/17/18 15:24	50-32-8	
Benzo(b)fluoranthene	<0.011	mg/kg	0.011	0.00062	1	05/16/18 15:48	05/17/18 15:24	205-99-2	
Benzo(g,h,i)perylene	<0.011	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/17/18 15:24	191-24-2	
Benzo(k)fluoranthene	<0.011	mg/kg	0.011	0.0013	1	05/16/18 15:48	05/17/18 15:24	207-08-9	
Chrysene	<0.011	mg/kg	0.011	0.00034	1	05/16/18 15:48	05/17/18 15:24	218-01-9	
Dibenz(a,h)anthracene	<0.011	mg/kg	0.011	0.00051	1	05/16/18 15:48	05/17/18 15:24	53-70-3	
Fluoranthene	<0.011	mg/kg	0.011	0.00034	1	05/16/18 15:48	05/17/18 15:24	206-44-0	
Fluorene	<0.011	mg/kg	0.011	0.00028	1	05/16/18 15:48	05/17/18 15:24	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.011	mg/kg	0.011	0.0012	1	05/16/18 15:48	05/17/18 15:24	193-39-5	
Naphthalene	<0.011	mg/kg	0.011	0.0011	1	05/16/18 15:48	05/17/18 15:24	91-20-3	
Phenanthrene	<0.011	mg/kg	0.011	0.0016	1	05/16/18 15:48	05/17/18 15:24	85-01-8	
Pyrene	<0.011	mg/kg	0.011	0.00039	1	05/16/18 15:48	05/17/18 15:24	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	<0.011	mg/kg	0.011		1	05/16/18 15:48	05/17/18 15:24		

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: HA-2 **Lab ID:** 10431317004 **Collected:** 05/15/18 12:00 **Received:** 05/15/18 14:48 **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
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Surrogates									
2-Fluorobiphenyl (S)	60	%.	42-125		1	05/16/18 15:48	05/17/18 15:24	321-60-8	
p-Terphenyl-d14 (S)	85	%.	57-125		1	05/16/18 15:48	05/17/18 15:24	1718-51-0	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.1	mg/kg	1.1	0.55	1	05/18/18 08:58	05/22/18 08:31	67-64-1	
Allyl chloride	<0.23	mg/kg	0.23	0.054	1	05/18/18 08:58	05/22/18 08:31	107-05-1	
Benzene	<0.023	mg/kg	0.023	0.0084	1	05/18/18 08:58	05/22/18 08:31	71-43-2	
Bromobenzene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:31	108-86-1	
Bromochloromethane	<0.057	mg/kg	0.057	0.028	1	05/18/18 08:58	05/22/18 08:31	74-97-5	
Bromodichloromethane	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:31	75-27-4	
Bromoform	<0.57	mg/kg	0.57	0.041	1	05/18/18 08:58	05/22/18 08:31	75-25-2	
Bromomethane	<0.57	mg/kg	0.57	0.061	1	05/18/18 08:58	05/22/18 08:31	74-83-9	
2-Butanone (MEK)	<0.29	mg/kg	0.29	0.10	1	05/18/18 08:58	05/22/18 08:31	78-93-3	
n-Butylbenzene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:31	104-51-8	
sec-Butylbenzene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:31	135-98-8	
tert-Butylbenzene	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:31	98-06-6	
Carbon tetrachloride	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:31	56-23-5	
Chlorobenzene	<0.057	mg/kg	0.057	0.017	1	05/18/18 08:58	05/22/18 08:31	108-90-7	
Chloroethane	<0.57	mg/kg	0.57	0.087	1	05/18/18 08:58	05/22/18 08:31	75-00-3	
Chloroform	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:31	67-66-3	
Chloromethane	<0.23	mg/kg	0.23	0.037	1	05/18/18 08:58	05/22/18 08:31	74-87-3	
2-Chlorotoluene	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:31	95-49-8	
4-Chlorotoluene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:31	106-43-4	
1,2-Dibromo-3-chloropropane	<1.4	mg/kg	1.4	0.10	1	05/18/18 08:58	05/22/18 08:31	96-12-8	
Dibromochloromethane	<0.23	mg/kg	0.23	0.057	1	05/18/18 08:58	05/22/18 08:31	124-48-1	
1,2-Dibromoethane (EDB)	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:31	106-93-4	
Dibromomethane	<0.057	mg/kg	0.057	0.019	1	05/18/18 08:58	05/22/18 08:31	74-95-3	
1,2-Dichlorobenzene	<0.057	mg/kg	0.057	0.012	1	05/18/18 08:58	05/22/18 08:31	95-50-1	
1,3-Dichlorobenzene	<0.057	mg/kg	0.057	0.019	1	05/18/18 08:58	05/22/18 08:31	541-73-1	
1,4-Dichlorobenzene	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:31	106-46-7	
Dichlorodifluoromethane	<0.23	mg/kg	0.23	0.089	1	05/18/18 08:58	05/22/18 08:31	75-71-8	
1,1-Dichloroethane	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:31	75-34-3	
1,2-Dichloroethane	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:31	107-06-2	
1,1-Dichloroethene	<0.057	mg/kg	0.057	0.025	1	05/18/18 08:58	05/22/18 08:31	75-35-4	
cis-1,2-Dichloroethene	<0.057	mg/kg	0.057	0.010	1	05/18/18 08:58	05/22/18 08:31	156-59-2	
trans-1,2-Dichloroethene	<0.057	mg/kg	0.057	0.023	1	05/18/18 08:58	05/22/18 08:31	156-60-5	
Dichlorofluoromethane	<0.57	mg/kg	0.57	0.054	1	05/18/18 08:58	05/22/18 08:31	75-43-4	
1,2-Dichloropropane	<0.057	mg/kg	0.057	0.020	1	05/18/18 08:58	05/22/18 08:31	78-87-5	
1,3-Dichloropropane	<0.057	mg/kg	0.057	0.021	1	05/18/18 08:58	05/22/18 08:31	142-28-9	
2,2-Dichloropropane	<0.23	mg/kg	0.23	0.056	1	05/18/18 08:58	05/22/18 08:31	594-20-7	
1,1-Dichloropropene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:31	563-58-6	
cis-1,3-Dichloropropene	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:31	10061-01-5	
trans-1,3-Dichloropropene	<0.057	mg/kg	0.057	0.041	1	05/18/18 08:58	05/22/18 08:31	10061-02-6	
Diethyl ether (Ethyl ether)	<0.23	mg/kg	0.23	0.048	1	05/18/18 08:58	05/22/18 08:31	60-29-7	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: HA-2 **Lab ID: 10431317004** Collected: 05/15/18 12:00 Received: 05/15/18 14:48 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
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.057	mg/kg	0.057	0.017	1	05/18/18 08:58	05/22/18 08:31	100-41-4	
Hexachloro-1,3-butadiene	<0.29	mg/kg	0.29	0.059	1	05/18/18 08:58	05/22/18 08:31	87-68-3	
Isopropylbenzene (Cumene)	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:31	98-82-8	
p-Isopropyltoluene	<0.057	mg/kg	0.057	0.012	1	05/18/18 08:58	05/22/18 08:31	99-87-6	
Methylene Chloride	<0.23	mg/kg	0.23	0.029	1	05/18/18 08:58	05/22/18 08:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.29	mg/kg	0.29	0.076	1	05/18/18 08:58	05/22/18 08:31	108-10-1	
Methyl-tert-butyl ether	<0.057	mg/kg	0.057	0.018	1	05/18/18 08:58	05/22/18 08:31	1634-04-4	
Naphthalene	<0.23	mg/kg	0.23	0.050	1	05/18/18 08:58	05/22/18 08:31	91-20-3	
n-Propylbenzene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:31	103-65-1	
Styrene	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:31	100-42-5	
1,1,1,2-Tetrachloroethane	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:31	630-20-6	
1,1,2,2-Tetrachloroethane	<0.057	mg/kg	0.057	0.026	1	05/18/18 08:58	05/22/18 08:31	79-34-5	
Tetrachloroethene	<0.057	mg/kg	0.057	0.024	1	05/18/18 08:58	05/22/18 08:31	127-18-4	
Tetrahydrofuran	<2.3	mg/kg	2.3	0.59	1	05/18/18 08:58	05/22/18 08:31	109-99-9	
Toluene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:31	108-88-3	
1,2,3-Trichlorobenzene	<0.057	mg/kg	0.057	0.014	1	05/18/18 08:58	05/22/18 08:31	87-61-6	
1,2,4-Trichlorobenzene	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:31	120-82-1	
1,1,1-Trichloroethane	<0.057	mg/kg	0.057	0.013	1	05/18/18 08:58	05/22/18 08:31	71-55-6	
1,1,2-Trichloroethane	<0.057	mg/kg	0.057	0.016	1	05/18/18 08:58	05/22/18 08:31	79-00-5	
Trichloroethene	<0.057	mg/kg	0.057	0.0097	1	05/18/18 08:58	05/22/18 08:31	79-01-6	
Trichlorofluoromethane	<0.23	mg/kg	0.23	0.085	1	05/18/18 08:58	05/22/18 08:31	75-69-4	
1,2,3-Trichloropropane	<0.23	mg/kg	0.23	0.045	1	05/18/18 08:58	05/22/18 08:31	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.23	mg/kg	0.23	0.030	1	05/18/18 08:58	05/22/18 08:31	76-13-1	
1,2,4-Trimethylbenzene	<0.057	mg/kg	0.057	0.015	1	05/18/18 08:58	05/22/18 08:31	95-63-6	
1,3,5-Trimethylbenzene	<0.057	mg/kg	0.057	0.011	1	05/18/18 08:58	05/22/18 08:31	108-67-8	
Vinyl chloride	<0.023	mg/kg	0.023	0.0096	1	05/18/18 08:58	05/22/18 08:31	75-01-4	
Xylene (Total)	<0.17	mg/kg	0.17	0.031	1	05/18/18 08:58	05/22/18 08:31	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%	75-125		1	05/18/18 08:58	05/22/18 08:31	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	05/18/18 08:58	05/22/18 08:31	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 08:31	460-00-4	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: TRIP BLANK **Lab ID: 10431317005** Collected: 05/15/18 00:00 Received: 05/15/18 14:48 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil									
Gasoline Range Organics	<10.0	mg/kg	10.0	1.3	1	05/18/18 10:37	05/19/18 01:16		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%	80-150		1	05/18/18 10:37	05/19/18 01:16	98-08-8	
8260B MSV 5030 Med Level Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Acetone	<1.0	mg/kg	1.0	0.48	1	05/18/18 08:58	05/22/18 02:42	67-64-1	
Allyl chloride	<0.20	mg/kg	0.20	0.047	1	05/18/18 08:58	05/22/18 02:42	107-05-1	
Benzene	<0.020	mg/kg	0.020	0.0074	1	05/18/18 08:58	05/22/18 02:42	71-43-2	
Bromobenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	108-86-1	
Bromochloromethane	<0.050	mg/kg	0.050	0.024	1	05/18/18 08:58	05/22/18 02:42	74-97-5	
Bromodichloromethane	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:42	75-27-4	
Bromoform	<0.50	mg/kg	0.50	0.036	1	05/18/18 08:58	05/22/18 02:42	75-25-2	
Bromomethane	<0.50	mg/kg	0.50	0.053	1	05/18/18 08:58	05/22/18 02:42	74-83-9	
2-Butanone (MEK)	<0.25	mg/kg	0.25	0.090	1	05/18/18 08:58	05/22/18 02:42	78-93-3	
n-Butylbenzene	<0.050	mg/kg	0.050	0.012	1	05/18/18 08:58	05/22/18 02:42	104-51-8	
sec-Butylbenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	135-98-8	
tert-Butylbenzene	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:42	98-06-6	
Carbon tetrachloride	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:42	56-23-5	
Chlorobenzene	<0.050	mg/kg	0.050	0.015	1	05/18/18 08:58	05/22/18 02:42	108-90-7	
Chloroethane	<0.50	mg/kg	0.50	0.077	1	05/18/18 08:58	05/22/18 02:42	75-00-3	
Chloroform	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:42	67-66-3	
Chloromethane	<0.20	mg/kg	0.20	0.032	1	05/18/18 08:58	05/22/18 02:42	74-87-3	
2-Chlorotoluene	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:42	95-49-8	
4-Chlorotoluene	<0.050	mg/kg	0.050	0.012	1	05/18/18 08:58	05/22/18 02:42	106-43-4	
1,2-Dibromo-3-chloropropane	<1.2	mg/kg	1.2	0.087	1	05/18/18 08:58	05/22/18 02:42	96-12-8	
Dibromochloromethane	<0.20	mg/kg	0.20	0.050	1	05/18/18 08:58	05/22/18 02:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:42	106-93-4	
Dibromomethane	<0.050	mg/kg	0.050	0.017	1	05/18/18 08:58	05/22/18 02:42	74-95-3	
1,2-Dichlorobenzene	<0.050	mg/kg	0.050	0.011	1	05/18/18 08:58	05/22/18 02:42	95-50-1	
1,3-Dichlorobenzene	<0.050	mg/kg	0.050	0.017	1	05/18/18 08:58	05/22/18 02:42	541-73-1	
1,4-Dichlorobenzene	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:42	106-46-7	
Dichlorodifluoromethane	<0.20	mg/kg	0.20	0.078	1	05/18/18 08:58	05/22/18 02:42	75-71-8	
1,1-Dichloroethane	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:42	75-34-3	
1,2-Dichloroethane	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:42	107-06-2	
1,1-Dichloroethene	<0.050	mg/kg	0.050	0.022	1	05/18/18 08:58	05/22/18 02:42	75-35-4	
cis-1,2-Dichloroethene	<0.050	mg/kg	0.050	0.0090	1	05/18/18 08:58	05/22/18 02:42	156-59-2	
trans-1,2-Dichloroethene	<0.050	mg/kg	0.050	0.020	1	05/18/18 08:58	05/22/18 02:42	156-60-5	
Dichlorofluoromethane	<0.50	mg/kg	0.50	0.047	1	05/18/18 08:58	05/22/18 02:42	75-43-4	
1,2-Dichloropropane	<0.050	mg/kg	0.050	0.018	1	05/18/18 08:58	05/22/18 02:42	78-87-5	
1,3-Dichloropropane	<0.050	mg/kg	0.050	0.019	1	05/18/18 08:58	05/22/18 02:42	142-28-9	
2,2-Dichloropropane	<0.20	mg/kg	0.20	0.049	1	05/18/18 08:58	05/22/18 02:42	594-20-7	
1,1-Dichloropropene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	563-58-6	
cis-1,3-Dichloropropene	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:42	10061-01-5	
trans-1,3-Dichloropropene	<0.050	mg/kg	0.050	0.036	1	05/18/18 08:58	05/22/18 02:42	10061-02-6	
Diethyl ether (Ethyl ether)	<0.20	mg/kg	0.20	0.042	1	05/18/18 08:58	05/22/18 02:42	60-29-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Sample: TRIP BLANK **Lab ID: 10431317005** Collected: 05/15/18 00:00 Received: 05/15/18 14:48 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Ethylbenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	100-41-4	
Hexachloro-1,3-butadiene	<0.25	mg/kg	0.25	0.052	1	05/18/18 08:58	05/22/18 02:42	87-68-3	
Isopropylbenzene (Cumene)	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:42	98-82-8	
p-Isopropyltoluene	<0.050	mg/kg	0.050	0.010	1	05/18/18 08:58	05/22/18 02:42	99-87-6	
Methylene Chloride	<0.20	mg/kg	0.20	0.026	1	05/18/18 08:58	05/22/18 02:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.25	mg/kg	0.25	0.066	1	05/18/18 08:58	05/22/18 02:42	108-10-1	
Methyl-tert-butyl ether	<0.050	mg/kg	0.050	0.016	1	05/18/18 08:58	05/22/18 02:42	1634-04-4	
Naphthalene	<0.20	mg/kg	0.20	0.044	1	05/18/18 08:58	05/22/18 02:42	91-20-3	
n-Propylbenzene	<0.050	mg/kg	0.050	0.012	1	05/18/18 08:58	05/22/18 02:42	103-65-1	
Styrene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.050	mg/kg	0.050	0.023	1	05/18/18 08:58	05/22/18 02:42	79-34-5	
Tetrachloroethene	<0.050	mg/kg	0.050	0.021	1	05/18/18 08:58	05/22/18 02:42	127-18-4	
Tetrahydrofuran	<2.0	mg/kg	2.0	0.52	1	05/18/18 08:58	05/22/18 02:42	109-99-9	
Toluene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	108-88-3	
1,2,3-Trichlorobenzene	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:42	87-61-6	
1,2,4-Trichlorobenzene	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	120-82-1	
1,1,1-Trichloroethane	<0.050	mg/kg	0.050	0.011	1	05/18/18 08:58	05/22/18 02:42	71-55-6	
1,1,2-Trichloroethane	<0.050	mg/kg	0.050	0.014	1	05/18/18 08:58	05/22/18 02:42	79-00-5	
Trichloroethene	<0.050	mg/kg	0.050	0.0085	1	05/18/18 08:58	05/22/18 02:42	79-01-6	
Trichlorofluoromethane	<0.20	mg/kg	0.20	0.074	1	05/18/18 08:58	05/22/18 02:42	75-69-4	
1,2,3-Trichloropropane	<0.20	mg/kg	0.20	0.040	1	05/18/18 08:58	05/22/18 02:42	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.20	mg/kg	0.20	0.026	1	05/18/18 08:58	05/22/18 02:42	76-13-1	
1,2,4-Trimethylbenzene	<0.050	mg/kg	0.050	0.013	1	05/18/18 08:58	05/22/18 02:42	95-63-6	
1,3,5-Trimethylbenzene	<0.050	mg/kg	0.050	0.0097	1	05/18/18 08:58	05/22/18 02:42	108-67-8	
Vinyl chloride	<0.020	mg/kg	0.020	0.0084	1	05/18/18 08:58	05/22/18 02:42	75-01-4	
Xylene (Total)	<0.15	mg/kg	0.15	0.027	1	05/18/18 08:58	05/22/18 02:42	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%	75-125		1	05/18/18 08:58	05/22/18 02:42	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	05/18/18 08:58	05/22/18 02:42	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1	05/18/18 08:58	05/22/18 02:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

QC Batch: 539093 Analysis Method: WI MOD GRO
QC Batch Method: EPA 5030 Medium Soil Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004, 10431317005

METHOD BLANK: 2931309 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004, 10431317005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<10.0	10.0	1.3	05/18/18 13:39	
a,a,a-Trifluorotoluene (S)	%.	99	80-150		05/18/18 13:39	

LABORATORY CONTROL SAMPLE & LCSD: 2931310

LABORATORY CONTROL SAMPLE & LCSD: 2931310			2931311							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	50	47.3	47.7	95	95	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				98	99	80-150			

MATRIX SPIKE SAMPLE: 2932420

Parameter	Units	10430961003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	ND	55.5	57.7	101	80-120	
a,a,a-Trifluorotoluene (S)	%.				99	80-150	

SAMPLE DUPLICATE: 2932419

Parameter	Units	10430961005 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	ND	<11.0		20	
a,a,a-Trifluorotoluene (S)	%.	100	100	4		

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

QC Batch: 538765 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

METHOD BLANK: 2929597 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.019	0.019	0.0090	05/17/18 14:49	

LABORATORY CONTROL SAMPLE: 2929598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.47	0.55	117	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2929599 2929600

Parameter	Units	10431317003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.021	.56	.56	0.59	0.60	104	104	75-125	0	20	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

QC Batch: 538531 Analysis Method: EPA 6010D
QC Batch Method: EPA 3050 Analysis Description: 6010D Solids
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

METHOD BLANK: 2928209 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/kg	<0.50	0.50	0.027	05/16/18 18:46	
Cadmium	mg/kg	<0.15	0.15	0.015	05/16/18 18:46	
Chromium	mg/kg	<0.50	0.50	0.064	05/16/18 18:46	
Lead	mg/kg	<0.50	0.50	0.11	05/16/18 18:46	
Silver	mg/kg	<0.50	0.50	0.039	05/16/18 18:46	

LABORATORY CONTROL SAMPLE: 2928210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/kg	50	49.0	98	80-120	
Cadmium	mg/kg	50	47.0	94	80-120	
Chromium	mg/kg	50	49.5	99	80-120	
Lead	mg/kg	50	47.8	96	80-120	
Silver	mg/kg	25	23.1	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2928211 2928212

Parameter	Units	10431579001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	582	49.5	49.5	645	701	126	239	75-125	8	20	P6
Cadmium	mg/kg	49.1	49.5	49.5	98.4	103	99	109	75-125	5	20	
Chromium	mg/kg	810	49.5	49.5	1260	1190	914	773	75-125	6	20	P6
Lead	mg/kg	895	49.5	49.5	930	984	71	180	75-125	6	20	P6
Silver	mg/kg	174	24.8	24.8	126	154	-193	-82	75-125	20	20	M1, P6

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

QC Batch: 538529 Analysis Method: EPA 6020B
QC Batch Method: EPA 3050 Analysis Description: 6020B Solids UPD5
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

METHOD BLANK: 2928202 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<0.49	0.49	0.22	05/21/18 23:05	
Selenium	mg/kg	<0.49	0.49	0.25	05/21/18 23:05	

LABORATORY CONTROL SAMPLE: 2928203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	49	46.6	95	80-120	
Selenium	mg/kg	49	49.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2928204 2928205

Parameter	Units	10431124001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	6.8	58.6	58.6	60.7	61.3	92	93	75-125	1	20	
Selenium	mg/kg	<0.59	58.6	58.6	60.1	56.1	102	95	75-125	7	20	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

QC Batch: 538903

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

SAMPLE DUPLICATE: 2930364

Parameter	Units	10431351002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.3	18.4	1	30	

SAMPLE DUPLICATE: 2930542

Parameter	Units	10431416001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.4	15.5	0	30	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

QC Batch: 538721 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004, 10431317005

METHOD BLANK: 2929162 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004, 10431317005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,1,1-Trichloroethane	mg/kg	<0.050	0.050	0.011	05/22/18 02:12	
1,1,2,2-Tetrachloroethane	mg/kg	<0.050	0.050	0.023	05/22/18 02:12	
1,1,2-Trichloroethane	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.20	0.20	0.026	05/22/18 02:12	
1,1-Dichloroethane	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,1-Dichloroethene	mg/kg	<0.050	0.050	0.022	05/22/18 02:12	
1,1-Dichloropropene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
1,2,3-Trichlorobenzene	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,2,3-Trichloropropane	mg/kg	<0.20	0.20	0.040	05/22/18 02:12	
1,2,4-Trichlorobenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
1,2,4-Trimethylbenzene	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
1,2-Dibromo-3-chloropropane	mg/kg	<1.2	1.2	0.087	05/22/18 02:12	MN
1,2-Dibromoethane (EDB)	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
1,2-Dichlorobenzene	mg/kg	<0.050	0.050	0.011	05/22/18 02:12	
1,2-Dichloroethane	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
1,2-Dichloropropane	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
1,3,5-Trimethylbenzene	mg/kg	<0.050	0.050	0.0097	05/22/18 02:12	
1,3-Dichlorobenzene	mg/kg	<0.050	0.050	0.017	05/22/18 02:12	
1,3-Dichloropropane	mg/kg	<0.050	0.050	0.019	05/22/18 02:12	
1,4-Dichlorobenzene	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
2,2-Dichloropropane	mg/kg	<0.20	0.20	0.049	05/22/18 02:12	
2-Butanone (MEK)	mg/kg	<0.25	0.25	0.090	05/22/18 02:12	
2-Chlorotoluene	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	
4-Chlorotoluene	mg/kg	<0.050	0.050	0.012	05/22/18 02:12	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.25	0.25	0.066	05/22/18 02:12	
Acetone	mg/kg	<1.0	1.0	0.48	05/22/18 02:12	
Allyl chloride	mg/kg	<0.20	0.20	0.047	05/22/18 02:12	
Benzene	mg/kg	<0.020	0.020	0.0074	05/22/18 02:12	
Bromobenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
Bromochloromethane	mg/kg	<0.050	0.050	0.024	05/22/18 02:12	
Bromodichloromethane	mg/kg	<0.050	0.050	0.018	05/22/18 02:12	
Bromoform	mg/kg	<0.50	0.50	0.036	05/22/18 02:12	MN
Bromomethane	mg/kg	<0.50	0.50	0.053	05/22/18 02:12	
Carbon tetrachloride	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
Chlorobenzene	mg/kg	<0.050	0.050	0.015	05/22/18 02:12	
Chloroethane	mg/kg	<0.50	0.50	0.077	05/22/18 02:12	
Chloroform	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
Chloromethane	mg/kg	<0.20	0.20	0.032	05/22/18 02:12	
cis-1,2-Dichloroethene	mg/kg	<0.050	0.050	0.0090	05/22/18 02:12	
cis-1,3-Dichloropropene	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

METHOD BLANK: 2929162

Matrix: Solid

Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004, 10431317005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	mg/kg	<0.20	0.20	0.050	05/22/18 02:12	
Dibromomethane	mg/kg	<0.050	0.050	0.017	05/22/18 02:12	
Dichlorodifluoromethane	mg/kg	<0.20	0.20	0.078	05/22/18 02:12	
Dichlorofluoromethane	mg/kg	<0.50	0.50	0.047	05/22/18 02:12	
Diethyl ether (Ethyl ether)	mg/kg	<0.20	0.20	0.042	05/22/18 02:12	
Ethylbenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
Hexachloro-1,3-butadiene	mg/kg	<0.25	0.25	0.052	05/22/18 02:12	
Isopropylbenzene (Cumene)	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	
Methyl-tert-butyl ether	mg/kg	<0.050	0.050	0.016	05/22/18 02:12	
Methylene Chloride	mg/kg	<0.20	0.20	0.026	05/22/18 02:12	
n-Butylbenzene	mg/kg	<0.050	0.050	0.012	05/22/18 02:12	
n-Propylbenzene	mg/kg	<0.050	0.050	0.012	05/22/18 02:12	
Naphthalene	mg/kg	<0.20	0.20	0.044	05/22/18 02:12	
p-Isopropyltoluene	mg/kg	<0.050	0.050	0.010	05/22/18 02:12	
sec-Butylbenzene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
Styrene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
tert-Butylbenzene	mg/kg	<0.050	0.050	0.013	05/22/18 02:12	
Tetrachloroethene	mg/kg	<0.050	0.050	0.021	05/22/18 02:12	
Tetrahydrofuran	mg/kg	<2.0	2.0	0.52	05/22/18 02:12	
Toluene	mg/kg	<0.050	0.050	0.014	05/22/18 02:12	
trans-1,2-Dichloroethene	mg/kg	<0.050	0.050	0.020	05/22/18 02:12	
trans-1,3-Dichloropropene	mg/kg	<0.050	0.050	0.036	05/22/18 02:12	
Trichloroethene	mg/kg	<0.050	0.050	0.0085	05/22/18 02:12	
Trichlorofluoromethane	mg/kg	<0.20	0.20	0.074	05/22/18 02:12	
Vinyl chloride	mg/kg	<0.020	0.020	0.0084	05/22/18 02:12	
Xylene (Total)	mg/kg	<0.15	0.15	0.027	05/22/18 02:12	
1,2-Dichloroethane-d4 (S)	%	92	75-125		05/22/18 02:12	
4-Bromofluorobenzene (S)	%	103	75-125		05/22/18 02:12	
Toluene-d8 (S)	%	101	75-125		05/22/18 02:12	

LABORATORY CONTROL SAMPLE & LCSD: 2929163

2929164

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	1	1.2	1.1	122	112	59-125	8	20	
1,1,1-Trichloroethane	mg/kg	1	1.1	1.0	112	101	59-125	10	20	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.99	0.92	99	92	58-125	7	20	
1,1,2-Trichloroethane	mg/kg	1	1.0	0.92	102	92	64-125	10	20	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.92	0.85	92	85	65-125	8	20	
1,1-Dichloroethane	mg/kg	1	1.0	0.90	100	90	63-125	10	20	
1,1-Dichloroethene	mg/kg	1	0.97	0.88	97	88	59-125	9	20	
1,1-Dichloropropene	mg/kg	1	0.90	0.83	90	83	64-125	8	20	
1,2,3-Trichlorobenzene	mg/kg	1	0.98	0.89	98	89	55-126	9	20	
1,2,3-Trichloropropane	mg/kg	1	0.90	0.83	90	83	62-125	8	20	
1,2,4-Trichlorobenzene	mg/kg	1	1.0	0.93	101	93	62-125	8	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

LABORATORY CONTROL SAMPLE & LCSD: 2929163			2929164							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	1	1.1	0.99	111	99	59-125	11	20	
1,2-Dibromo-3-chloropropane	mg/kg	2.5	2.1	2.0	86	81	54-125	6	20	
1,2-Dibromoethane (EDB)	mg/kg	1	0.97	0.87	97	87	64-125	11	20	
1,2-Dichlorobenzene	mg/kg	1	1.0	0.94	103	94	63-125	9	20	
1,2-Dichloroethane	mg/kg	1	0.81	0.74	81	74	57-125	8	20	
1,2-Dichloropropane	mg/kg	1	0.96	0.88	96	88	67-125	9	20	
1,3,5-Trimethylbenzene	mg/kg	1	1.1	0.99	111	99	59-125	12	20	
1,3-Dichlorobenzene	mg/kg	1	1.1	0.98	110	98	64-125	11	20	
1,3-Dichloropropane	mg/kg	1	0.91	0.88	91	88	64-125	3	20	
1,4-Dichlorobenzene	mg/kg	1	1.0	0.91	101	91	63-125	10	20	
2,2-Dichloropropane	mg/kg	1	1.0	0.93	102	93	37-126	9	20	
2-Butanone (MEK)	mg/kg	5	3.5	3.3	70	66	48-125	6	20	
2-Chlorotoluene	mg/kg	1	1.1	0.97	108	97	62-125	11	20	
4-Chlorotoluene	mg/kg	1	1.1	0.98	109	98	63-125	11	20	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	4.0	3.8	80	75	52-135	6	20	
Acetone	mg/kg	5	5.4	4.7	108	95	65-125	14	20	
Allyl chloride	mg/kg	1	0.84	0.77	84	77	52-125	9	20	
Benzene	mg/kg	1	0.90	0.83	90	83	61-125	8	20	
Bromobenzene	mg/kg	1	1.0	0.95	105	95	64-125	10	20	
Bromochloromethane	mg/kg	1	0.94	0.86	94	86	65-125	9	20	
Bromodichloromethane	mg/kg	1	1.2	1.1	116	106	57-125	9	20	
Bromoform	mg/kg	1	0.97	0.91	97	91	57-125	7	20	
Bromomethane	mg/kg	1	1.2	1.0	116	104	60-125	10	20	
Carbon tetrachloride	mg/kg	1	1.1	1.0	111	100	58-125	10	20	
Chlorobenzene	mg/kg	1	0.99	0.91	99	91	66-125	8	20	
Chloroethane	mg/kg	1	1.1	0.99	110	99	62-125	11	20	
Chloroform	mg/kg	1	0.99	0.91	99	91	59-125	8	20	
Chloromethane	mg/kg	1	0.78	0.75	78	75	50-125	4	20	
cis-1,2-Dichloroethene	mg/kg	1	0.91	0.83	91	83	61-125	8	20	
cis-1,3-Dichloropropene	mg/kg	1	1.0	0.95	103	95	61-125	8	20	
Dibromochloromethane	mg/kg	1	1.2	1.1	120	111	60-125	8	20	
Dibromomethane	mg/kg	1	0.96	0.87	96	87	69-125	10	20	
Dichlorodifluoromethane	mg/kg	1	0.58	0.54	58	54	38-125	7	20	
Dichlorofluoromethane	mg/kg	1	1.4	1.2	136	123	67-125	10	20	L3
Diethyl ether (Ethyl ether)	mg/kg	1	2.5	1.5	251	151	60-125	50	20	L3,R1
Ethylbenzene	mg/kg	1	1.0	0.91	100	91	62-125	10	20	
Hexachloro-1,3-butadiene	mg/kg	1	1.1	0.97	109	97	56-125	12	20	
Isopropylbenzene (Cumene)	mg/kg	1	1.1	1.0	109	100	65-125	9	20	
Methyl-tert-butyl ether	mg/kg	1	0.87	0.80	87	80	59-125	8	20	
Methylene Chloride	mg/kg	1	0.80	0.75	80	75	64-125	7	20	
n-Butylbenzene	mg/kg	1	1.1	1.0	112	101	59-125	11	20	
n-Propylbenzene	mg/kg	1	1.1	1.0	114	102	61-125	11	20	
Naphthalene	mg/kg	1	0.91	0.85	91	85	53-125	7	20	
p-Isopropyltoluene	mg/kg	1	1.2	1.0	115	104	63-125	10	20	
sec-Butylbenzene	mg/kg	1	1.2	1.1	118	106	62-125	11	20	
Styrene	mg/kg	1	1.1	0.97	106	97	66-125	9	20	
tert-Butylbenzene	mg/kg	1	1.1	1.0	113	103	64-125	9	20	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

LABORATORY CONTROL SAMPLE & LCSD: 2929163			2929164							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrachloroethene	mg/kg	1	0.98	0.89	98	89	67-125	10	20	
Tetrahydrofuran	mg/kg	10	9.2	8.0	92	80	62-125	14	20	
Toluene	mg/kg	1	0.92	0.83	92	83	61-125	11	20	
trans-1,2-Dichloroethene	mg/kg	1	0.80	0.76	80	76	64-125	5	20	
trans-1,3-Dichloropropene	mg/kg	1	1.0	0.93	103	93	56-125	10	20	
Trichloroethene	mg/kg	1	0.97	0.87	97	87	67-125	11	20	
Trichlorofluoromethane	mg/kg	1	1.1	1.0	109	103	65-125	6	20	
Vinyl chloride	mg/kg	1	0.83	0.77	83	77	57-125	7	20	
Xylene (Total)	mg/kg	3	3.0	2.8	101	93	62-125	9	20	
1,2-Dichloroethane-d4 (S)	%				90	91	75-125			
4-Bromofluorobenzene (S)	%				100	100	75-125			
Toluene-d8 (S)	%				100	101	75-125			

MATRIX SPIKE SAMPLE: 2929165		10431124002		Spike Conc.		MS Result		MS % Rec		% Rec Limits		Qualifiers	
Parameter	Units	Result											
1,1,1,2-Tetrachloroethane	mg/kg	<0.056	1.1			1.2		103		64-146			
1,1,1-Trichloroethane	mg/kg	<0.056	1.1			1.0		88		56-148			
1,1,2,2-Tetrachloroethane	mg/kg	<0.056	1.1			0.98		83		36-150			
1,1,2-Trichloroethane	mg/kg	<0.056	1.1			0.97		82		67-148			
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.22	1.1			0.88		74		60-142			
1,1-Dichloroethane	mg/kg	<0.056	1.1			0.95		80		57-140			
1,1-Dichloroethene	mg/kg	<0.056	1.1			0.91		77		59-139			
1,1-Dichloropropene	mg/kg	<0.056	1.1			0.86		73		61-142			
1,2,3-Trichlorobenzene	mg/kg	<0.056	1.1			0.97		82		69-150			
1,2,3-Trichloropropane	mg/kg	<0.22	1.1			0.86		73		64-150			
1,2,4-Trichlorobenzene	mg/kg	<0.056	1.1			0.98		83		71-149			
1,2,4-Trimethylbenzene	mg/kg	<0.056	1.1			1.1		95		67-149			
1,2-Dibromo-3-chloropropane	mg/kg	<1.4	2.9			2.1		70		61-150			
1,2-Dibromoethane (EDB)	mg/kg	<0.056	1.1			0.92		78		67-147			
1,2-Dichlorobenzene	mg/kg	<0.056	1.1			1.0		86		70-142			
1,2-Dichloroethane	mg/kg	<0.056	1.1			0.80		68		58-132			
1,2-Dichloropropane	mg/kg	<0.056	1.1			0.97		82		64-144			
1,3,5-Trimethylbenzene	mg/kg	<0.056	1.1			1.1		94		71-146			
1,3-Dichlorobenzene	mg/kg	<0.056	1.1			1.0		89		71-142			
1,3-Dichloropropane	mg/kg	<0.056	1.1			0.93		78		68-140			
1,4-Dichlorobenzene	mg/kg	<0.056	1.1			0.99		84		68-142			
2,2-Dichloropropane	mg/kg	<0.22	1.1			0.98		83		34-150			
2-Butanone (MEK)	mg/kg	<0.28	5.9			3.5		59		51-150			
2-Chlorotoluene	mg/kg	<0.056	1.1			1.1		91		66-144			
4-Chlorotoluene	mg/kg	<0.056	1.1			1.1		92		66-140			
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.28	5.9			4.2		70		63-150			
Acetone	mg/kg	<1.1	5.9			5.2		88		54-150			
Allyl chloride	mg/kg	<0.22	1.1			0.79		67		53-135			
Benzene	mg/kg	<0.022	1.1			0.87		74		65-135			

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

MATRIX SPIKE SAMPLE:		2929165					
Parameter	Units	10431124002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	mg/kg	<0.056	1.1	1.0	87	71-141	
Bromochloromethane	mg/kg	<0.056	1.1	0.86	73	62-145	
Bromodichloromethane	mg/kg	<0.056	1.1	1.1	97	59-148	
Bromoform	mg/kg	<0.56	1.1	0.92	78	57-145	
Bromomethane	mg/kg	<0.56	1.1	1.2	97	51-129	
Carbon tetrachloride	mg/kg	<0.056	1.1	1.1	91	55-144	
Chlorobenzene	mg/kg	<0.056	1.1	0.96	81	70-142	
Chloroethane	mg/kg	<0.56	1.1	1.0	88	61-135	
Chloroform	mg/kg	<0.056	1.1	0.95	80	58-135	
Chloromethane	mg/kg	<0.22	1.1	0.81	68	37-125	
cis-1,2-Dichloroethene	mg/kg	<0.056	1.1	0.87	74	60-138	
cis-1,3-Dichloropropene	mg/kg	<0.056	1.1	1.0	87	62-142	
Dibromochloromethane	mg/kg	<0.22	1.1	1.2	100	65-141	
Dibromomethane	mg/kg	<0.056	1.1	0.89	76	72-150	
Dichlorodifluoromethane	mg/kg	<0.22	1.1	0.52	44	30-125	
Dichlorofluoromethane	mg/kg	<0.56	1.1	1.2	105	62-148	
Diethyl ether (Ethyl ether)	mg/kg	<0.22	1.1	6.6	560	62-135	MO
Ethylbenzene	mg/kg	<0.056	1.1	0.99	84	72-138	
Hexachloro-1,3-butadiene	mg/kg	<0.28	1.1	1.1	95	38-150	
Isopropylbenzene (Cumene)	mg/kg	<0.056	1.1	1.1	92	75-148	
Methyl-tert-butyl ether	mg/kg	<0.056	1.1	0.85	72	63-139	
Methylene Chloride	mg/kg	<0.22	1.1	0.78	65	58-135	
n-Butylbenzene	mg/kg	<0.056	1.1	1.1	96	63-150	
n-Propylbenzene	mg/kg	<0.056	1.1	1.2	98	70-146	
Naphthalene	mg/kg	<0.22	1.1	0.92	77	63-150	
p-Isopropyltoluene	mg/kg	<0.056	1.1	1.2	100	72-150	
sec-Butylbenzene	mg/kg	<0.056	1.1	1.2	102	66-150	
Styrene	mg/kg	<0.056	1.1	1.0	88	72-146	
tert-Butylbenzene	mg/kg	<0.056	1.1	1.2	99	71-148	
Tetrachloroethene	mg/kg	<0.056	1.1	0.92	78	70-150	
Tetrahydrofuran	mg/kg	<2.2	11.9	9.0	76	62-150	
Toluene	mg/kg	<0.056	1.1	0.90	75	65-142	
trans-1,2-Dichloroethene	mg/kg	<0.056	1.1	0.77	65	55-141	
trans-1,3-Dichloropropene	mg/kg	<0.056	1.1	1.0	86	57-147	
Trichloroethene	mg/kg	<0.056	1.1	0.94	79	62-150	
Trichlorofluoromethane	mg/kg	<0.22	1.1	1.1	93	51-150	
Vinyl chloride	mg/kg	<0.022	1.1	0.84	71	45-132	
Xylene (Total)	mg/kg	<0.17	3.5	3.0	85	75-140	
1,2-Dichloroethane-d4 (S)	%				92	75-125	
4-Bromofluorobenzene (S)	%				102	75-125	
Toluene-d8 (S)	%				100	75-125	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

SAMPLE DUPLICATE: 2929166

Parameter	Units	10431124001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	<0.061	<0.058		30	
1,1,1-Trichloroethane	mg/kg	<0.061	<0.058		30	
1,1,2,2-Tetrachloroethane	mg/kg	<0.061	<0.058		30	
1,1,2-Trichloroethane	mg/kg	<0.061	<0.058		30	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.25	<0.23		30	
1,1-Dichloroethane	mg/kg	<0.061	<0.058		30	
1,1-Dichloroethene	mg/kg	<0.061	<0.058		30	
1,1-Dichloropropene	mg/kg	<0.061	<0.058		30	
1,2,3-Trichlorobenzene	mg/kg	<0.061	<0.058		30	
1,2,3-Trichloropropane	mg/kg	<0.25	<0.23		30	
1,2,4-Trichlorobenzene	mg/kg	<0.061	<0.058		30	
1,2,4-Trimethylbenzene	mg/kg	<0.061	<0.058		30	
1,2-Dibromo-3-chloropropane	mg/kg	<1.5	<1.4		30	
1,2-Dibromoethane (EDB)	mg/kg	<0.061	<0.058		30	
1,2-Dichlorobenzene	mg/kg	<0.061	<0.058		30	
1,2-Dichloroethane	mg/kg	<0.061	<0.058		30	
1,2-Dichloropropane	mg/kg	<0.061	<0.058		30	
1,3,5-Trimethylbenzene	mg/kg	<0.061	<0.058		30	
1,3-Dichlorobenzene	mg/kg	<0.061	<0.058		30	
1,3-Dichloropropane	mg/kg	<0.061	<0.058		30	
1,4-Dichlorobenzene	mg/kg	<0.061	<0.058		30	
2,2-Dichloropropane	mg/kg	<0.25	<0.23		30	
2-Butanone (MEK)	mg/kg	<0.31	<0.29		30	
2-Chlorotoluene	mg/kg	<0.061	<0.058		30	
4-Chlorotoluene	mg/kg	<0.061	<0.058		30	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.31	<0.29		30	
Acetone	mg/kg	<1.2	<1.2		30	
Allyl chloride	mg/kg	<0.25	<0.23		30	
Benzene	mg/kg	<0.025	<0.023		30	
Bromobenzene	mg/kg	<0.061	<0.058		30	
Bromochloromethane	mg/kg	<0.061	<0.058		30	
Bromodichloromethane	mg/kg	<0.061	<0.058		30	
Bromoform	mg/kg	<0.61	<0.58		30	
Bromomethane	mg/kg	<0.61	<0.58		30	
Carbon tetrachloride	mg/kg	<0.061	<0.058		30	
Chlorobenzene	mg/kg	<0.061	<0.058		30	
Chloroethane	mg/kg	<0.61	<0.58		30	
Chloroform	mg/kg	<0.061	<0.058		30	
Chloromethane	mg/kg	<0.25	<0.23		30	
cis-1,2-Dichloroethene	mg/kg	<0.061	<0.058		30	
cis-1,3-Dichloropropene	mg/kg	<0.061	<0.058		30	
Dibromochloromethane	mg/kg	<0.25	<0.23		30	
Dibromomethane	mg/kg	<0.061	<0.058		30	
Dichlorodifluoromethane	mg/kg	<0.25	<0.23		30	
Dichlorofluoromethane	mg/kg	<0.61	<0.58		30	
Diethyl ether (Ethyl ether)	mg/kg	<0.25	<0.23		30	
Ethylbenzene	mg/kg	<0.061	<0.058		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

SAMPLE DUPLICATE: 2929166

Parameter	Units	10431124001 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	mg/kg	<0.31	<0.29		30	
Isopropylbenzene (Cumene)	mg/kg	<0.061	<0.058		30	
Methyl-tert-butyl ether	mg/kg	<0.061	<0.058		30	
Methylene Chloride	mg/kg	<0.25	<0.23		30	
n-Butylbenzene	mg/kg	<0.061	<0.058		30	
n-Propylbenzene	mg/kg	<0.061	<0.058		30	
Naphthalene	mg/kg	<0.25	<0.23		30	
p-Isopropyltoluene	mg/kg	<0.061	<0.058		30	
sec-Butylbenzene	mg/kg	<0.061	<0.058		30	
Styrene	mg/kg	<0.061	<0.058		30	
tert-Butylbenzene	mg/kg	<0.061	<0.058		30	
Tetrachloroethene	mg/kg	<0.061	<0.058		30	
Tetrahydrofuran	mg/kg	<2.5	<2.3		30	
Toluene	mg/kg	<0.061	<0.058		30	
trans-1,2-Dichloroethene	mg/kg	<0.061	<0.058		30	
trans-1,3-Dichloropropene	mg/kg	<0.061	<0.058		30	
Trichloroethene	mg/kg	<0.061	<0.058		30	
Trichlorofluoromethane	mg/kg	<0.25	<0.23		30	
Vinyl chloride	mg/kg	<0.025	<0.023		30	
Xylene (Total)	mg/kg	<0.18	<0.17		30	
1,2-Dichloroethane-d4 (S)	%.	93	92	7		
4-Bromofluorobenzene (S)	%.	99	99	5		
Toluene-d8 (S)	%.	98	98	5		

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

QC Batch: 538671 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA 3550 Analysis Description: 8270D Solid PAH by SIM MSSV
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

METHOD BLANK: 2928881 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acenaphthene	mg/kg	<0.010	0.010	0.00059	05/17/18 10:13	
Acenaphthylene	mg/kg	<0.010	0.010	0.00065	05/17/18 10:13	
Anthracene	mg/kg	<0.010	0.010	0.00053	05/17/18 10:13	
Benzo(a)anthracene	mg/kg	<0.010	0.010	0.0015	05/17/18 10:13	
Benzo(a)pyrene	mg/kg	<0.010	0.010	0.0010	05/17/18 10:13	
Benzo(b)fluoranthene	mg/kg	<0.010	0.010	0.00056	05/17/18 10:13	
Benzo(g,h,i)perylene	mg/kg	<0.010	0.010	0.00094	05/17/18 10:13	
Benzo(k)fluoranthene	mg/kg	<0.010	0.010	0.0012	05/17/18 10:13	
Chrysene	mg/kg	<0.010	0.010	0.00030	05/17/18 10:13	
Dibenz(a,h)anthracene	mg/kg	<0.010	0.010	0.00046	05/17/18 10:13	
Fluoranthene	mg/kg	<0.010	0.010	0.00031	05/17/18 10:13	
Fluorene	mg/kg	<0.010	0.010	0.00025	05/17/18 10:13	
Indeno(1,2,3-cd)pyrene	mg/kg	<0.010	0.010	0.0010	05/17/18 10:13	
Naphthalene	mg/kg	<0.010	0.010	0.0010	05/17/18 10:13	
Phenanthrene	mg/kg	<0.010	0.010	0.0014	05/17/18 10:13	
Pyrene	mg/kg	<0.010	0.010	0.00035	05/17/18 10:13	
2-Fluorobiphenyl (S)	%	77	42-125		05/17/18 10:13	
p-Terphenyl-d14 (S)	%	90	57-125		05/17/18 10:13	

LABORATORY CONTROL SAMPLE: 2928882

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	mg/kg	.033	0.021	62	52-125	
Acenaphthylene	mg/kg	.033	0.019	57	50-125	
Anthracene	mg/kg	.033	0.028	83	65-125	
Benzo(a)anthracene	mg/kg	.033	0.023	70	60-125	
Benzo(a)pyrene	mg/kg	.033	0.026	79	69-125	
Benzo(b)fluoranthene	mg/kg	.033	0.024	72	61-125	
Benzo(g,h,i)perylene	mg/kg	.033	0.026	78	60-125	
Benzo(k)fluoranthene	mg/kg	.033	0.026	79	67-125	
Chrysene	mg/kg	.033	0.027	82	67-125	
Dibenz(a,h)anthracene	mg/kg	.033	0.026	79	63-125	
Fluoranthene	mg/kg	.033	0.028	83	75-125	
Fluorene	mg/kg	.033	0.020	61	54-125	
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.027	80	63-125	
Naphthalene	mg/kg	.033	0.022	65	49-125	
Phenanthrene	mg/kg	.033	0.026	77	65-125	
Pyrene	mg/kg	.033	0.026	77	64-125	
2-Fluorobiphenyl (S)	%			70	42-125	
p-Terphenyl-d14 (S)	%			90	57-125	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2928958											
2928959											
Parameter	Units	10431317003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	mg/kg	<0.011	.037	.037	0.023	0.023	62	62	30-125	1	30
Acenaphthylene	mg/kg	<0.011	.037	.037	0.023	0.023	62	60	30-133	2	30
Anthracene	mg/kg	<0.011	.037	.037	0.030	0.030	80	81	30-150	1	30
Benzo(a)anthracene	mg/kg	<0.011	.037	.037	0.028	0.029	74	77	30-150	4	30
Benzo(a)pyrene	mg/kg	<0.011	.037	.037	0.030	0.030	79	81	30-150	2	30
Benzo(b)fluoranthene	mg/kg	<0.011	.037	.037	0.028	0.029	75	77	30-150	2	30
Benzo(g,h,i)perylene	mg/kg	<0.011	.037	.037	0.029	0.030	78	80	30-150	2	30
Benzo(k)fluoranthene	mg/kg	<0.011	.037	.037	0.025	0.026	68	70	30-150	3	30
Chrysene	mg/kg	<0.011	.037	.037	0.029	0.030	78	79	30-150	1	30
Dibenz(a,h)anthracene	mg/kg	<0.011	.037	.037	0.029	0.030	78	80	30-131	3	30
Fluoranthene	mg/kg	<0.011	.037	.037	0.030	0.030	81	81	30-150	0	30
Fluorene	mg/kg	<0.011	.037	.037	0.023	0.023	61	61	30-147	1	30
Indeno(1,2,3-cd)pyrene	mg/kg	<0.011	.037	.037	0.030	0.030	79	80	30-150	1	30
Naphthalene	mg/kg	<0.011	.037	.037	0.025	0.023	66	63	30-131	5	30
Phenanthrene	mg/kg	<0.011	.037	.037	0.027	0.027	72	73	30-150	2	30
Pyrene	mg/kg	<0.011	.037	.037	0.027	0.027	72	72	30-150	0	30
2-Fluorobiphenyl (S)	%.						71	70	42-125		
p-Terphenyl-d14 (S)	%.						85	87	57-125		

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

QC Batch: 538758 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO Solid GCV
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

METHOD BLANK: 2929516 Matrix: Solid
Associated Lab Samples: 10431317001, 10431317002, 10431317003, 10431317004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	<10.0	10.0	2.0	05/17/18 09:21	
n-Triacontane (S)	%.	99	59-133		05/17/18 09:21	

LABORATORY CONTROL SAMPLE & LCSD: 2929518		2929519								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	69.1	78.6	86	98	54-125	13	20	
n-Triacontane (S)	%.				98	98	59-133			

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QUALIFIERS

Project: MP185083 City of Shakopee Parc
Pace Project No.: 10431317

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.
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.

BATCH QUALIFIERS

Batch: 539272

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D5 The sample was re-weighed into a new container because the sample weight in the original container exceeded the method specifications.
L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1 RPD value was outside control limits.
T6 High boiling point hydrocarbons are present in the sample.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MP185083 City of Shakopee Parc

Pace Project No.: 10431317

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10431317001	B-2	WI MOD DRO	538758	WI MOD DRO	538929
10431317002	B-3	WI MOD DRO	538758	WI MOD DRO	538929
10431317003	HA-1	WI MOD DRO	538758	WI MOD DRO	538929
10431317004	HA-2	WI MOD DRO	538758	WI MOD DRO	538929
10431317001	B-2	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431317002	B-3	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431317003	HA-1	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431317004	HA-2	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431317005	TRIP BLANK	EPA 5030 Medium Soil	539093	WI MOD GRO	539272
10431317001	B-2	EPA 3050	538531	EPA 6010D	538696
10431317002	B-3	EPA 3050	538531	EPA 6010D	538696
10431317003	HA-1	EPA 3050	538531	EPA 6010D	538696
10431317004	HA-2	EPA 3050	538531	EPA 6010D	538696
10431317001	B-2	EPA 3050	538529	EPA 6020B	539753
10431317002	B-3	EPA 3050	538529	EPA 6020B	539753
10431317003	HA-1	EPA 3050	538529	EPA 6020B	539753
10431317004	HA-2	EPA 3050	538529	EPA 6020B	539753
10431317001	B-2	EPA 7471B	538765	EPA 7471B	539043
10431317002	B-3	EPA 7471B	538765	EPA 7471B	539043
10431317003	HA-1	EPA 7471B	538765	EPA 7471B	539043
10431317004	HA-2	EPA 7471B	538765	EPA 7471B	539043
10431317001	B-2	ASTM D2974	538903		
10431317002	B-3	ASTM D2974	538903		
10431317003	HA-1	ASTM D2974	538903		
10431317004	HA-2	ASTM D2974	538903		
10431317001	B-2	EPA 3550	538671	EPA 8270D by SIM	538948
10431317002	B-3	EPA 3550	538671	EPA 8270D by SIM	538948
10431317003	HA-1	EPA 3550	538671	EPA 8270D by SIM	538948
10431317004	HA-2	EPA 3550	538671	EPA 8270D by SIM	538948
10431317001	B-2	EPA 5035/5030B	538721	EPA 8260B	539988
10431317002	B-3	EPA 5035/5030B	538721	EPA 8260B	539988
10431317003	HA-1	EPA 5035/5030B	538721	EPA 8260B	539988
10431317004	HA-2	EPA 5035/5030B	538721	EPA 8260B	539988
10431317005	TRIP BLANK	EPA 5035/5030B	538721	EPA 8260B	539988

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CHAIN-OF-CUSTODY / A

WO#: 10431317



Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Report To:	Company Name:	Attention:	Invoice #	
Address:	Copy To:	Address:	Company Name:	2280706	
Phone:	Purchase Order No.:	Project Name:	Project Manager:	REGULATORY AGENCY	
Requested Due Date/TAT:	Project Number:	Project Profile #:	Site Location:	NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐	
			STATE:	UST ☐ RCRA ☐ OTHER ☐	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE ID (A-Z, 0-9 / -)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)												Pace Project No. / Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB																
1	B-2	Drinking Water	SLG	5-15-18 10:00			9	Unpreserved	↑	X	X	X	X	X	X	X	X	X	X	X	X	001
2	B-3	Water	SLG	5-15-18 09:00			9	NaOH	4	X	X	X	X	X	X	X	X	X	X	X	X	002
3	HA-1	Waste Water	SLG	5-15-18 11:30			9	HCl	4	X	X	X	X	X	X	X	X	X	X	X	X	003
4	HA-2	Product	SLG	5-15-18 12:00			9	HNO ₃	4	X	X	X	X	X	X	X	X	X	X	X	X	004
5	TRIP BLANK	Soil/Solid						H ₂ SO ₄														005
6	TRIP BLANK	Oil						Other														
7		Wipe						Methanol														
8		Air						Na ₂ S ₂ O ₃														
9		Tissue						Other														
10		Other																				
11																						
12																						

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on	Custody	Sealed Cooler	Samples Intact
Deepa Bhattarai		Deepa Bhattarai	5/15/18	11:48	Deepa Bhattarai	5/15/18	14:48	21.4	Y	Y	Y	Y

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 02May2018 Page 1 of 2
	Document No.: F-MIN-L-213-rev.23	Issuing Authority: Pace Minnesota Quality Office



Client Name:

Project #:

WO# : 10431317

PM: AA1

Due Date: 05/22/18

CLIENT: TERRACON-M/P

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client

☐ Commercial ☐ Pace ☐ SpeedDee ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box: Present? ☐ Yes ☒ No

Seals Intact? ☐ Yes ☒ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:

Temp Blank? ☒ Yes ☐ No

Thermometer ☐ G87A9170600254

Used: ☒ G87A9155100842

Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Cooler Temp Read (°C): 2.4

Cooler Temp Corrected (°C): 2.4

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C

Correction Factor: True

Date and Initials of Person Examining Contents: HFS-15-18
USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MIN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? ☒ Yes ☐ No	1.
Chain of Custody Filled Out? ☒ Yes ☐ No	2.
Chain of Custody Relinquished? ☒ Yes ☐ No	3.
Sampler Name and/or Signature on COC? ☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time? ☒ Yes ☐ No	5.
Short Hold Time Analysis (<72 hr)? ☐ Yes ☒ No	6.
Rush Turn Around Time Requested? ☐ Yes ☒ No	7.
Sufficient Volume? ☒ Yes ☐ No	8.
Correct Containers Used? ☒ Yes ☐ No	9.
-Pace Containers Used? ☒ Yes ☐ No	
Containers Intact? ☒ Yes ☐ No	10.
Filtered Volume Received for Dissolved Tests? ☐ Yes ☐ No ☒ N/A	11. Note if sediment is visible in the dissolved container
Is sufficient information available to reconcile the samples to the COC? ☒ Yes ☐ No Matrix: <u>SL</u>	12.
All containers needing acid/base preservation have been checked? ☐ Yes ☐ No ☒ N/A	13. ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide)	Sample #
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS ☐ Yes ☐ No ☒ N/A	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)? ☐ Yes ☐ No ☒ N/A	14.
Trip Blank Present? ☒ Yes ☐ No ☒ N/A	15.
Trip Blank Custody Seals Present? ☒ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased): <u>041618-3</u>	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted:

Date/Time:

Comments/Resolution:

Project Manager Review:

Amanda J. Albrecht

Date: 5/16/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Date : 17-MAY-2018 09:50

Client ID: B-2

Sample Info: 10431317001

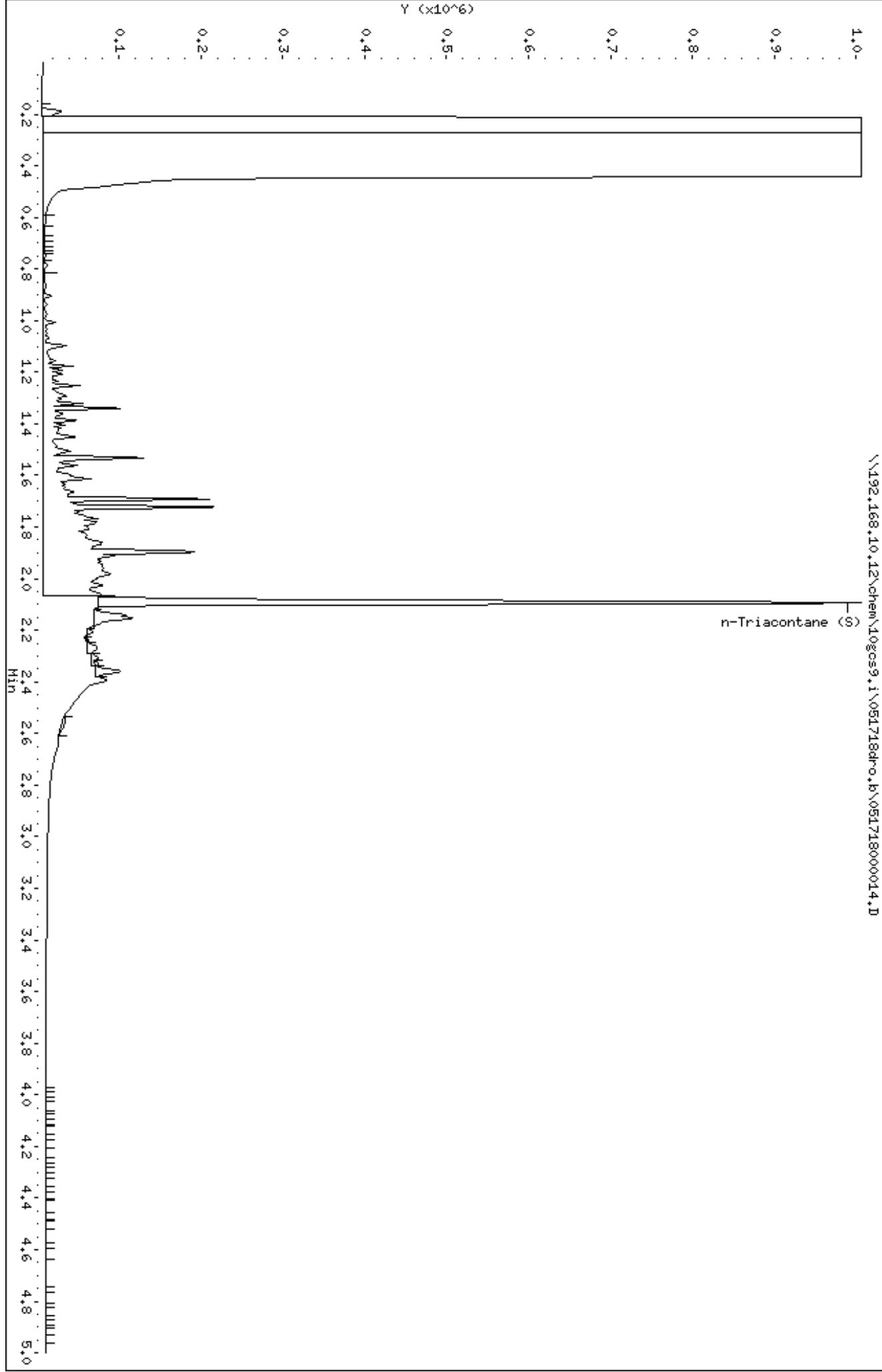
Volume Injected (uL): 1.0

Column phase: DB-5-MS17520020

Instrument: 10gcs9.i

Operator: EC2

Column diameter: 0.32



Date : 17-MAY-2018 10:18

Client ID: B-3

Instrument: 10gcs9.i

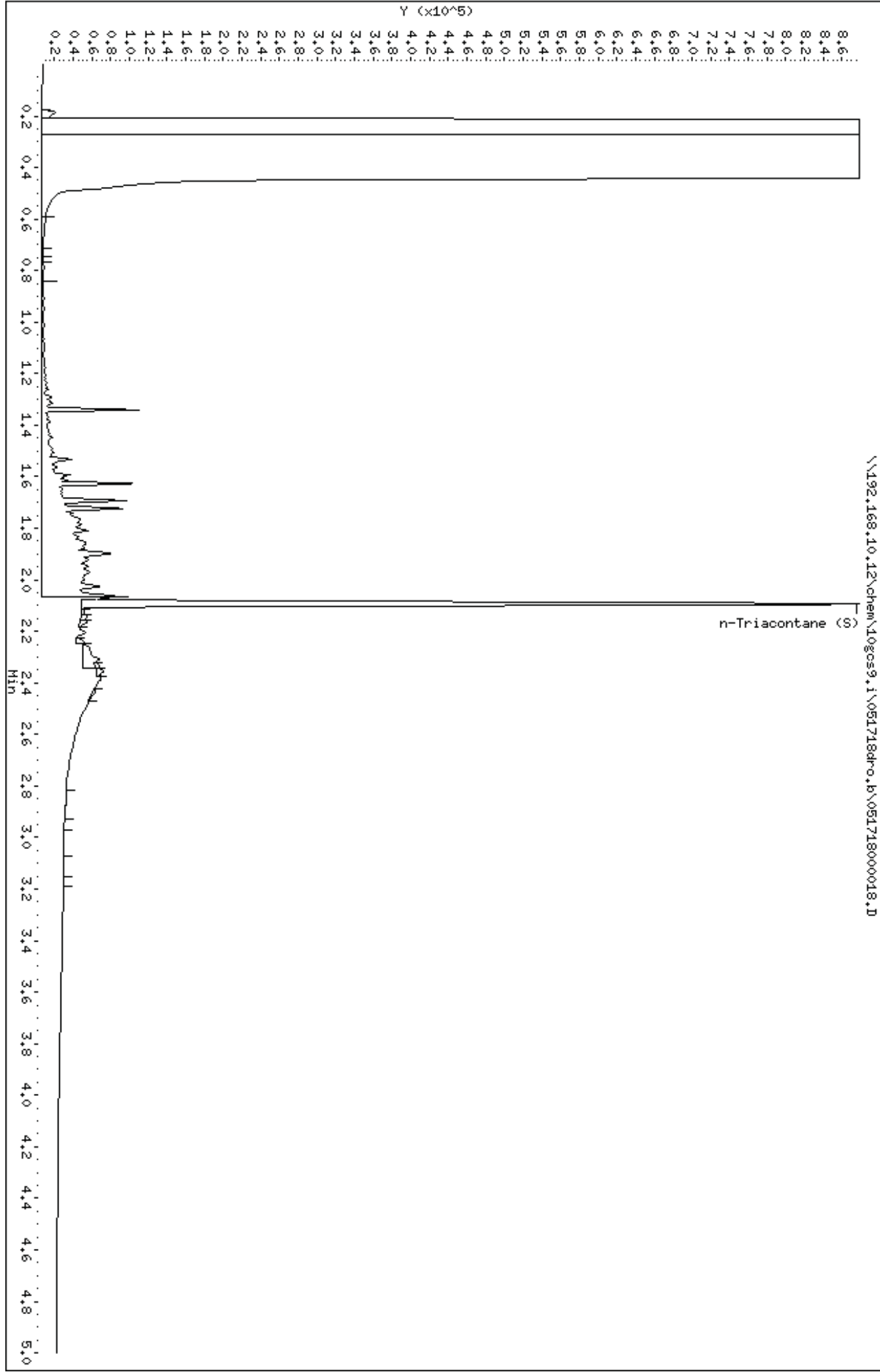
Sample Info: 10431317002

Volume Injected (uL): 1.0

Operator: EC2

Column phase: DB-5-MS17520020

Column diameter: 0.32



Date : 17-MAY-2018 09:57

Client ID: HA-1

Sample Info: 10431317003

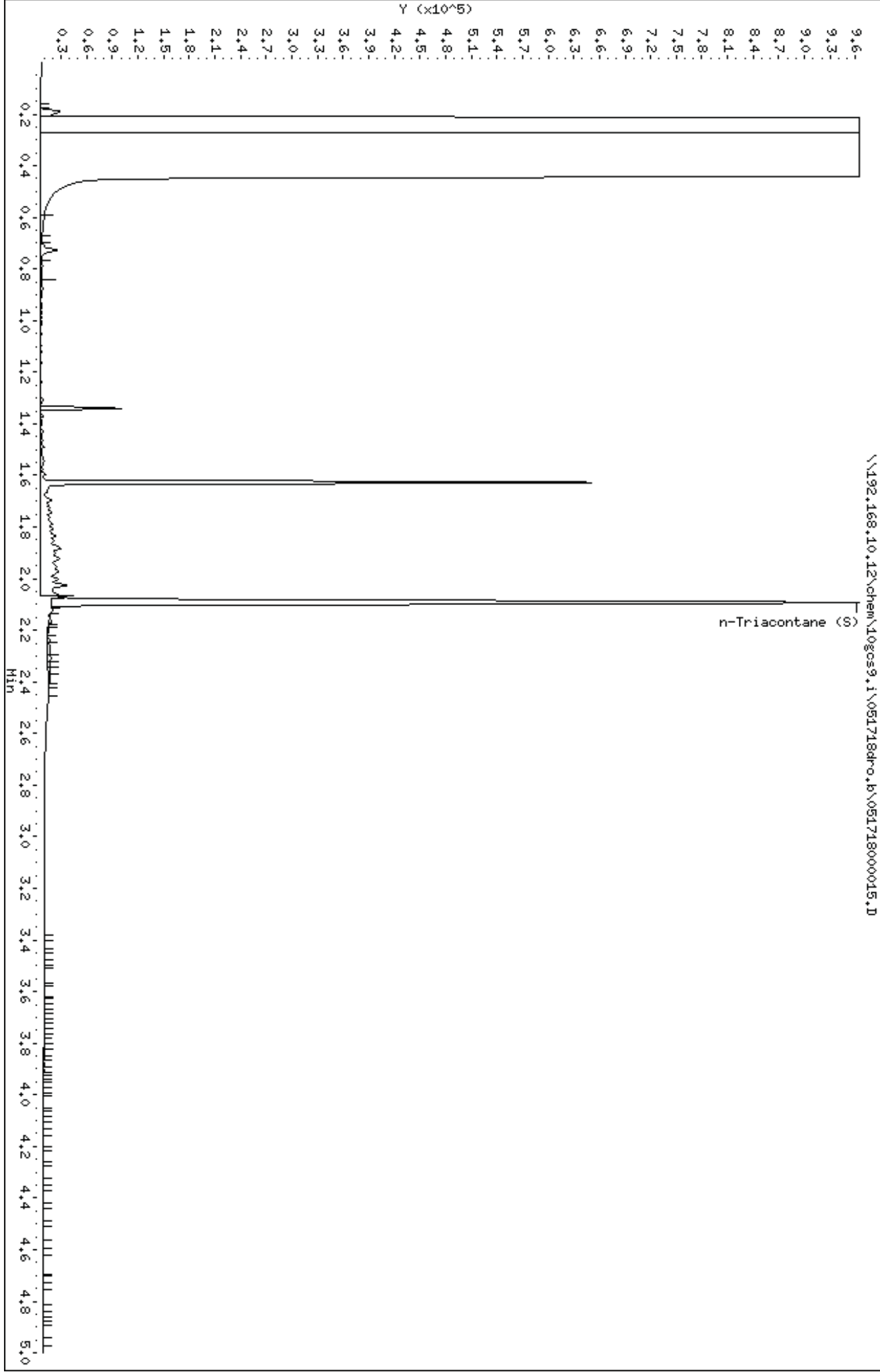
Volume Injected (uL): 1.0

Column phase: DB-5-MS17520020

Instrument: 10gcs9.i

Operator: EC2

Column diameter: 0.32



Date : 17-MAY-2018 10:04

Client ID: HQ-2

Sample Info: 10431317004

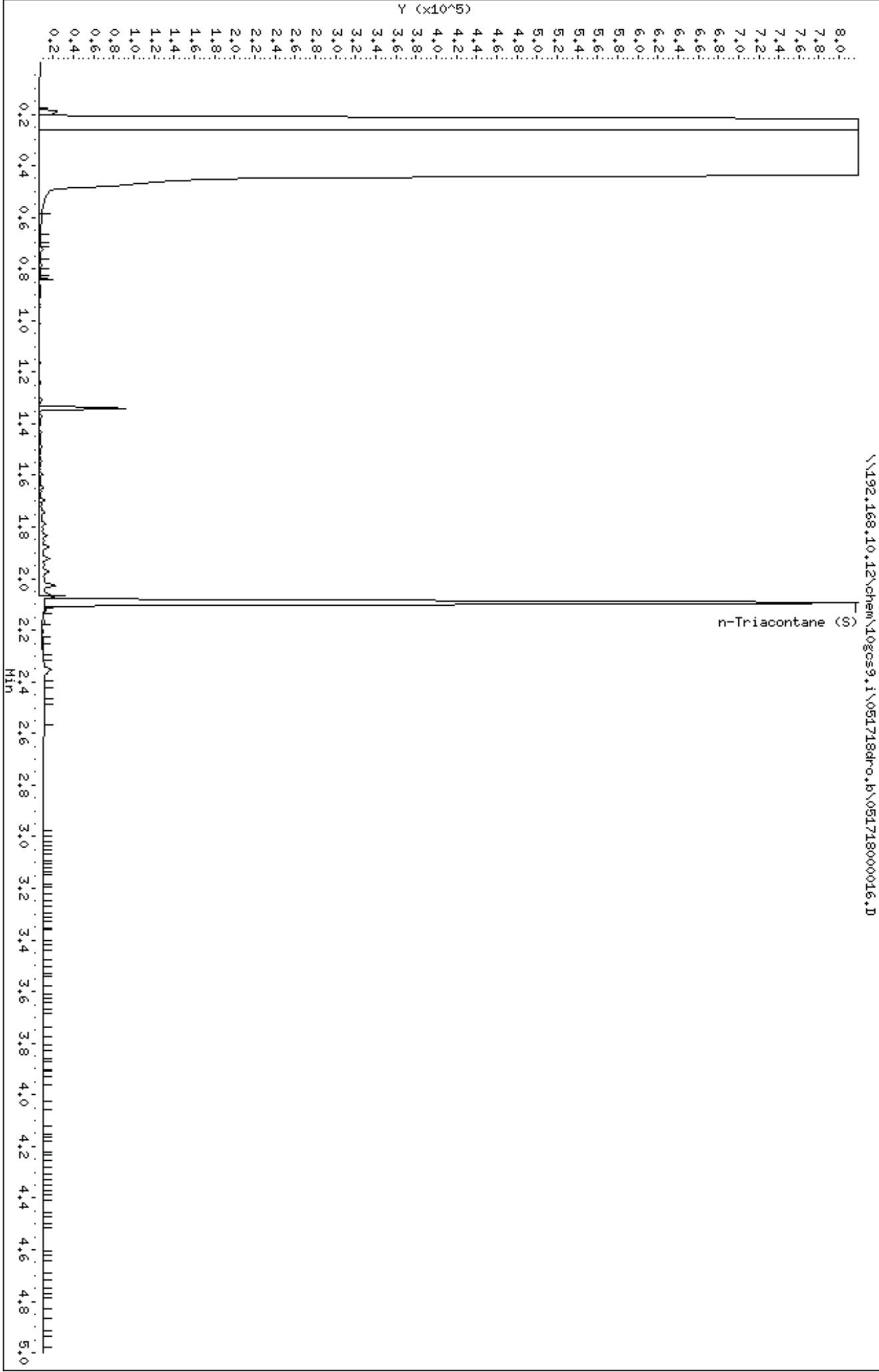
Volume Injected (uL): 1.0

Column phase: DB-5-MS17520020

Instrument: 10gcs9.i

Operator: EC2

Column diameter: 0.32



May 21, 2018

Eric Stommes
Liesch Associates, Inc.
13400 15th Ave. N.
Minneapolis, MN 55441

RE: Project: MP185083 City of Shakopee Air
Pace Project No.: 10431263

Dear Eric Stommes:

Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2018. 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: Jocelyn Blase, Liesch-A Terracon Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10431263001	SV-1	Air	05/15/18 11:15	05/15/18 14:48
10431263002	SV-2	Air	05/15/18 12:34	05/15/18 14:48
10431263003	SV-3	Air	05/15/18 13:07	05/15/18 14:48
10431263004	SV-4	Air	05/15/18 13:27	05/15/18 14:48
10431263005	SV-5	Air	05/15/18 13:52	05/15/18 14:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10431263001	SV-1	TO-15	MG2	61
10431263002	SV-2	TO-15	MG2	61
10431263003	SV-3	TO-15	MG2	61
10431263004	SV-4	TO-15	MG2	61
10431263005	SV-5	TO-15	MG2	61

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431263001	SV-1					
TO-15	Acetone	135	ug/m3	5.9	05/19/18 00:04	
TO-15	Benzene	13.7	ug/m3	0.80	05/19/18 00:04	
TO-15	2-Butanone (MEK)	184	ug/m3	7.4	05/19/18 00:04	
TO-15	Carbon disulfide	3.8	ug/m3	1.6	05/19/18 00:04	
TO-15	Chloromethane	2.7	ug/m3	1.0	05/19/18 00:04	
TO-15	1,3-Dichlorobenzene	3.5	ug/m3	3.0	05/19/18 00:04	
TO-15	Dichlorodifluoromethane	3.8	ug/m3	2.5	05/19/18 00:04	
TO-15	Ethanol	38.8	ug/m3	2.3	05/19/18 00:04	
TO-15	Ethylbenzene	2.2	ug/m3	2.2	05/19/18 00:04	
TO-15	n-Hexane	9.7	ug/m3	1.8	05/19/18 00:04	
TO-15	2-Hexanone	11.8	ug/m3	10.2	05/19/18 00:04	
TO-15	Methylene Chloride	19.6	ug/m3	8.6	05/19/18 00:04	
TO-15	2-Propanol	11.6	ug/m3	6.1	05/19/18 00:04	
TO-15	Propylene	139	ug/m3	0.86	05/19/18 00:04	
TO-15	Tetrachloroethene	2.0	ug/m3	1.7	05/19/18 00:04	
TO-15	Tetrahydrofuran	5.1	ug/m3	1.5	05/19/18 00:04	
TO-15	Toluene	13.5	ug/m3	1.9	05/19/18 00:04	
TO-15	Trichlorofluoromethane	3.3	ug/m3	2.8	05/19/18 00:04	
10431263002	SV-2					
TO-15	Acetone	172	ug/m3	6.0	05/19/18 00:39	
TO-15	Benzene	16.8	ug/m3	0.82	05/19/18 00:39	
TO-15	2-Butanone (MEK)	39.9	ug/m3	7.5	05/19/18 00:39	
TO-15	Carbon disulfide	2.9	ug/m3	1.6	05/19/18 00:39	
TO-15	Chloromethane	1.4	ug/m3	1.1	05/19/18 00:39	
TO-15	Cyclohexane	3.8	ug/m3	1.8	05/19/18 00:39	
TO-15	1,3-Dichlorobenzene	8.7	ug/m3	3.1	05/19/18 00:39	
TO-15	Dichlorodifluoromethane	3.1	ug/m3	2.5	05/19/18 00:39	
TO-15	Ethanol	55.5	ug/m3	2.4	05/19/18 00:39	
TO-15	Ethylbenzene	8.5	ug/m3	2.2	05/19/18 00:39	
TO-15	n-Hexane	7.5	ug/m3	1.8	05/19/18 00:39	
TO-15	Methylene Chloride	13.2	ug/m3	8.9	05/19/18 00:39	
TO-15	Naphthalene	136	ug/m3	6.7	05/19/18 00:39	
TO-15	2-Propanol	18.8	ug/m3	6.3	05/19/18 00:39	
TO-15	Propylene	147	ug/m3	0.88	05/19/18 00:39	
TO-15	Tetrachloroethene	2.7	ug/m3	1.7	05/19/18 00:39	
TO-15	Tetrahydrofuran	11.5	ug/m3	1.5	05/19/18 00:39	
TO-15	Toluene	19.1	ug/m3	1.9	05/19/18 00:39	
TO-15	1,2,4-Trimethylbenzene	4.9	ug/m3	2.5	05/19/18 00:39	
TO-15	m&p-Xylene	16.4	ug/m3	4.4	05/19/18 00:39	
TO-15	o-Xylene	5.1	ug/m3	2.2	05/19/18 00:39	
10431263003	SV-3					
TO-15	Acetone	297	ug/m3	7.3	05/19/18 01:15	
TO-15	Benzene	2.9	ug/m3	0.98	05/19/18 01:15	
TO-15	2-Butanone (MEK)	29.0	ug/m3	9.1	05/19/18 01:15	
TO-15	1,3-Dichlorobenzene	7.2	ug/m3	3.7	05/19/18 01:15	
TO-15	Dichlorodifluoromethane	6.1	ug/m3	3.1	05/19/18 01:15	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Air
Pace Project No.: 10431263

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431263003	SV-3					
TO-15	Ethanol	70.0	ug/m3	2.9	05/19/18 01:15	
TO-15	Ethylbenzene	22.1	ug/m3	2.7	05/19/18 01:15	
TO-15	4-Ethyltoluene	3.6	ug/m3	3.0	05/19/18 01:15	
TO-15	n-Hexane	21.4	ug/m3	2.2	05/19/18 01:15	
TO-15	Methylene Chloride	280	ug/m3	10.7	05/19/18 01:15	
TO-15	Naphthalene	51.6	ug/m3	8.0	05/19/18 01:15	
TO-15	2-Propanol	12.8	ug/m3	7.6	05/19/18 01:15	
TO-15	Propylene	17.1	ug/m3	1.1	05/19/18 01:15	
TO-15	Tetrachloroethene	45.7	ug/m3	2.1	05/19/18 01:15	
TO-15	Tetrahydrofuran	2.7	ug/m3	1.8	05/19/18 01:15	
TO-15	Toluene	24.6	ug/m3	2.3	05/19/18 01:15	
TO-15	1,2,4-Trimethylbenzene	9.2	ug/m3	3.0	05/19/18 01:15	
TO-15	1,3,5-Trimethylbenzene	3.9	ug/m3	3.0	05/19/18 01:15	
TO-15	m&p-Xylene	41.5	ug/m3	5.3	05/19/18 01:15	
TO-15	o-Xylene	11.6	ug/m3	2.7	05/19/18 01:15	
10431263004	SV-4					
TO-15	Acetone	593	ug/m3	5.7	05/19/18 01:50	
TO-15	Benzene	11.7	ug/m3	0.77	05/19/18 01:50	
TO-15	2-Butanone (MEK)	57.4	ug/m3	7.1	05/19/18 01:50	
TO-15	Carbon disulfide	7.4	ug/m3	1.5	05/19/18 01:50	
TO-15	Chloromethane	6.4	ug/m3	1.0	05/19/18 01:50	
TO-15	1,3-Dichlorobenzene	9.5	ug/m3	2.9	05/19/18 01:50	
TO-15	Dichlorodifluoromethane	6.2	ug/m3	2.4	05/19/18 01:50	
TO-15	Ethanol	37.5	ug/m3	2.3	05/19/18 01:50	
TO-15	Ethylbenzene	13.5	ug/m3	2.1	05/19/18 01:50	
TO-15	4-Ethyltoluene	2.8	ug/m3	2.4	05/19/18 01:50	
TO-15	n-Heptane	21.5	ug/m3	2.0	05/19/18 01:50	
TO-15	n-Hexane	37.8	ug/m3	1.7	05/19/18 01:50	
TO-15	Methylene Chloride	14.2	ug/m3	8.4	05/19/18 01:50	
TO-15	Naphthalene	85.3	ug/m3	6.3	05/19/18 01:50	
TO-15	Propylene	399	ug/m3	0.83	05/19/18 01:50	E
TO-15	Tetrachloroethene	7.9	ug/m3	1.6	05/19/18 01:50	
TO-15	Tetrahydrofuran	4.3	ug/m3	1.4	05/19/18 01:50	
TO-15	Toluene	22.3	ug/m3	1.8	05/19/18 01:50	
TO-15	Trichlorofluoromethane	6.2	ug/m3	2.7	05/19/18 01:50	
TO-15	1,2,4-Trimethylbenzene	7.0	ug/m3	2.4	05/19/18 01:50	
TO-15	1,3,5-Trimethylbenzene	2.9	ug/m3	2.4	05/19/18 01:50	
TO-15	m&p-Xylene	25.6	ug/m3	4.2	05/19/18 01:50	
TO-15	o-Xylene	7.6	ug/m3	2.1	05/19/18 01:50	
10431263005	SV-5					
TO-15	Acetone	438	ug/m3	5.8	05/19/18 02:26	
TO-15	Benzene	45.6	ug/m3	0.78	05/19/18 02:26	
TO-15	2-Butanone (MEK)	46.6	ug/m3	7.2	05/19/18 02:26	
TO-15	Carbon disulfide	21.2	ug/m3	1.5	05/19/18 02:26	
TO-15	Chloromethane	9.5	ug/m3	1.0	05/19/18 02:26	
TO-15	Cyclohexane	134	ug/m3	1.7	05/19/18 02:26	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10431263005	SV-5					
TO-15	1,3-Dichlorobenzene	11.4	ug/m3	2.9	05/19/18 02:26	
TO-15	Dichlorodifluoromethane	3.4	ug/m3	2.4	05/19/18 02:26	
TO-15	Ethanol	48.7	ug/m3	2.3	05/19/18 02:26	
TO-15	Ethylbenzene	20.3	ug/m3	2.1	05/19/18 02:26	
TO-15	4-Ethyltoluene	3.0	ug/m3	2.4	05/19/18 02:26	
TO-15	n-Heptane	60.4	ug/m3	2.0	05/19/18 02:26	
TO-15	n-Hexane	119	ug/m3	1.7	05/19/18 02:26	
TO-15	Methylene Chloride	16.5	ug/m3	8.5	05/19/18 02:26	
TO-15	Naphthalene	49.2	ug/m3	6.4	05/19/18 02:26	
TO-15	2-Propanol	16.7	ug/m3	6.0	05/19/18 02:26	
TO-15	Propylene	687	ug/m3	0.84	05/19/18 02:26	E
TO-15	Tetrachloroethene	13.1	ug/m3	1.7	05/19/18 02:26	
TO-15	Tetrahydrofuran	4.6	ug/m3	1.4	05/19/18 02:26	
TO-15	Toluene	54.7	ug/m3	1.8	05/19/18 02:26	
TO-15	1,2,4-Trimethylbenzene	7.0	ug/m3	2.4	05/19/18 02:26	
TO-15	1,3,5-Trimethylbenzene	3.3	ug/m3	2.4	05/19/18 02:26	
TO-15	m&p-Xylene	37.0	ug/m3	4.3	05/19/18 02:26	
TO-15	o-Xylene	12.6	ug/m3	2.1	05/19/18 02:26	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-1 **Lab ID: 10431263001** Collected: 05/15/18 11:15 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	135	ug/m3	5.9	3.7	2.45		05/19/18 00:04	67-64-1	
Benzene	13.7	ug/m3	0.80	0.37	2.45		05/19/18 00:04	71-43-2	
Benzyl chloride	<6.4	ug/m3	6.4	0.58	2.45		05/19/18 00:04	100-44-7	
Bromodichloromethane	<3.3	ug/m3	3.3	0.87	2.45		05/19/18 00:04	75-27-4	
Bromoform	<5.1	ug/m3	5.1	1.7	2.45		05/19/18 00:04	75-25-2	
Bromomethane	<1.9	ug/m3	1.9	0.51	2.45		05/19/18 00:04	74-83-9	
1,3-Butadiene	<1.1	ug/m3	1.1	0.50	2.45		05/19/18 00:04	106-99-0	
2-Butanone (MEK)	184	ug/m3	7.4	0.50	2.45		05/19/18 00:04	78-93-3	
Carbon disulfide	3.8	ug/m3	1.6	0.44	2.45		05/19/18 00:04	75-15-0	
Carbon tetrachloride	<1.6	ug/m3	1.6	0.78	2.45		05/19/18 00:04	56-23-5	
Chlorobenzene	<2.3	ug/m3	2.3	0.44	2.45		05/19/18 00:04	108-90-7	
Chloroethane	<1.3	ug/m3	1.3	0.50	2.45		05/19/18 00:04	75-00-3	
Chloroform	<1.2	ug/m3	1.2	0.57	2.45		05/19/18 00:04	67-66-3	
Chloromethane	2.7	ug/m3	1.0	0.33	2.45		05/19/18 00:04	74-87-3	
Cyclohexane	<1.7	ug/m3	1.7	0.56	2.45		05/19/18 00:04	110-82-7	
Dibromochloromethane	<4.2	ug/m3	4.2	1.1	2.45		05/19/18 00:04	124-48-1	
1,2-Dibromoethane (EDB)	<3.8	ug/m3	3.8	0.82	2.45		05/19/18 00:04	106-93-4	
1,2-Dichlorobenzene	<3.0	ug/m3	3.0	0.80	2.45		05/19/18 00:04	95-50-1	
1,3-Dichlorobenzene	3.5	ug/m3	3.0	1.1	2.45		05/19/18 00:04	541-73-1	
1,4-Dichlorobenzene	<3.0	ug/m3	3.0	0.54	2.45		05/19/18 00:04	106-46-7	
Dichlorodifluoromethane	3.8	ug/m3	2.5	1.0	2.45		05/19/18 00:04	75-71-8	
1,1-Dichloroethane	<2.0	ug/m3	2.0	0.52	2.45		05/19/18 00:04	75-34-3	
1,2-Dichloroethane	<1.0	ug/m3	1.0	0.49	2.45		05/19/18 00:04	107-06-2	
1,1-Dichloroethene	<2.0	ug/m3	2.0	0.58	2.45		05/19/18 00:04	75-35-4	
cis-1,2-Dichloroethene	<2.0	ug/m3	2.0	0.84	2.45		05/19/18 00:04	156-59-2	
trans-1,2-Dichloroethene	<2.0	ug/m3	2.0	0.72	2.45		05/19/18 00:04	156-60-5	
1,2-Dichloropropane	<2.3	ug/m3	2.3	0.75	2.45		05/19/18 00:04	78-87-5	
cis-1,3-Dichloropropene	<2.3	ug/m3	2.3	0.60	2.45		05/19/18 00:04	10061-01-5	
trans-1,3-Dichloropropene	<2.3	ug/m3	2.3	1.0	2.45		05/19/18 00:04	10061-02-6	
Dichlorotetrafluoroethane	<3.5	ug/m3	3.5	1.1	2.45		05/19/18 00:04	76-14-2	
Ethanol	38.8	ug/m3	2.3	1.1	2.45		05/19/18 00:04	64-17-5	
Ethyl acetate	<1.8	ug/m3	1.8	0.48	2.45		05/19/18 00:04	141-78-6	
Ethylbenzene	2.2	ug/m3	2.2	0.42	2.45		05/19/18 00:04	100-41-4	
4-Ethyltoluene	<2.4	ug/m3	2.4	0.52	2.45		05/19/18 00:04	622-96-8	
n-Heptane	<2.0	ug/m3	2.0	0.51	2.45		05/19/18 00:04	142-82-5	
Hexachloro-1,3-butadiene	<5.3	ug/m3	5.3	2.1	2.45		05/19/18 00:04	87-68-3	
n-Hexane	9.7	ug/m3	1.8	0.82	2.45		05/19/18 00:04	110-54-3	
2-Hexanone	11.8	ug/m3	10.2	1.5	2.45		05/19/18 00:04	591-78-6	
Methylene Chloride	19.6	ug/m3	8.6	3.7	2.45		05/19/18 00:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	<10.2	ug/m3	10.2	0.87	2.45		05/19/18 00:04	108-10-1	
Methyl-tert-butyl ether	<9.0	ug/m3	9.0	1.6	2.45		05/19/18 00:04	1634-04-4	
Naphthalene	<6.5	ug/m3	6.5	1.5	2.45		05/19/18 00:04	91-20-3	
2-Propanol	11.6	ug/m3	6.1	3.1	2.45		05/19/18 00:04	67-63-0	
Propylene	139	ug/m3	0.86	0.38	2.45		05/19/18 00:04	115-07-1	
Styrene	<2.1	ug/m3	2.1	0.41	2.45		05/19/18 00:04	100-42-5	
1,1,2,2-Tetrachloroethane	<1.7	ug/m3	1.7	0.71	2.45		05/19/18 00:04	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-1 Lab ID: 10431263001 Collected: 05/15/18 11:15 Received: 05/15/18 14:48 Matrix: Air									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15									
Tetrachloroethene	2.0	ug/m3	1.7	0.70	2.45		05/19/18 00:04	127-18-4	
Tetrahydrofuran	5.1	ug/m3	1.5	0.67	2.45		05/19/18 00:04	109-99-9	
Toluene	13.5	ug/m3	1.9	0.39	2.45		05/19/18 00:04	108-88-3	
1,2,4-Trichlorobenzene	<9.2	ug/m3	9.2	2.3	2.45		05/19/18 00:04	120-82-1	
1,1,1-Trichloroethane	<2.7	ug/m3	2.7	0.84	2.45		05/19/18 00:04	71-55-6	
1,1,2-Trichloroethane	<1.4	ug/m3	1.4	0.55	2.45		05/19/18 00:04	79-00-5	
Trichloroethene	<1.3	ug/m3	1.3	0.66	2.45		05/19/18 00:04	79-01-6	
Trichlorofluoromethane	3.3	ug/m3	2.8	1.0	2.45		05/19/18 00:04	75-69-4	
1,1,2-Trichlorotrifluoroethane	<3.8	ug/m3	3.8	0.90	2.45		05/19/18 00:04	76-13-1	
1,2,4-Trimethylbenzene	<2.4	ug/m3	2.4	0.42	2.45		05/19/18 00:04	95-63-6	
1,3,5-Trimethylbenzene	<2.4	ug/m3	2.4	1.0	2.45		05/19/18 00:04	108-67-8	
Vinyl acetate	<1.8	ug/m3	1.8	0.41	2.45		05/19/18 00:04	108-05-4	
Vinyl chloride	<0.64	ug/m3	0.64	0.31	2.45		05/19/18 00:04	75-01-4	
m&p-Xylene	<4.3	ug/m3	4.3	0.86	2.45		05/19/18 00:04	179601-23-1	
o-Xylene	<2.2	ug/m3	2.2	0.91	2.45		05/19/18 00:04	95-47-6	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-2 **Lab ID: 10431263002** Collected: 05/15/18 12:34 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	172	ug/m3	6.0	3.8	2.51		05/19/18 00:39	67-64-1	
Benzene	16.8	ug/m3	0.82	0.38	2.51		05/19/18 00:39	71-43-2	
Benzyl chloride	<6.6	ug/m3	6.6	0.59	2.51		05/19/18 00:39	100-44-7	
Bromodichloromethane	<3.4	ug/m3	3.4	0.89	2.51		05/19/18 00:39	75-27-4	
Bromoform	<5.3	ug/m3	5.3	1.7	2.51		05/19/18 00:39	75-25-2	
Bromomethane	<2.0	ug/m3	2.0	0.52	2.51		05/19/18 00:39	74-83-9	
1,3-Butadiene	<1.1	ug/m3	1.1	0.52	2.51		05/19/18 00:39	106-99-0	
2-Butanone (MEK)	39.9	ug/m3	7.5	0.51	2.51		05/19/18 00:39	78-93-3	
Carbon disulfide	2.9	ug/m3	1.6	0.45	2.51		05/19/18 00:39	75-15-0	
Carbon tetrachloride	<1.6	ug/m3	1.6	0.80	2.51		05/19/18 00:39	56-23-5	
Chlorobenzene	<2.3	ug/m3	2.3	0.45	2.51		05/19/18 00:39	108-90-7	
Chloroethane	<1.3	ug/m3	1.3	0.51	2.51		05/19/18 00:39	75-00-3	
Chloroform	<1.2	ug/m3	1.2	0.58	2.51		05/19/18 00:39	67-66-3	
Chloromethane	1.4	ug/m3	1.1	0.34	2.51		05/19/18 00:39	74-87-3	
Cyclohexane	3.8	ug/m3	1.8	0.57	2.51		05/19/18 00:39	110-82-7	
Dibromochloromethane	<4.3	ug/m3	4.3	1.1	2.51		05/19/18 00:39	124-48-1	
1,2-Dibromoethane (EDB)	<3.9	ug/m3	3.9	0.84	2.51		05/19/18 00:39	106-93-4	
1,2-Dichlorobenzene	<3.1	ug/m3	3.1	0.82	2.51		05/19/18 00:39	95-50-1	
1,3-Dichlorobenzene	8.7	ug/m3	3.1	1.2	2.51		05/19/18 00:39	541-73-1	
1,4-Dichlorobenzene	<3.1	ug/m3	3.1	0.55	2.51		05/19/18 00:39	106-46-7	
Dichlorodifluoromethane	3.1	ug/m3	2.5	1.0	2.51		05/19/18 00:39	75-71-8	
1,1-Dichloroethane	<2.1	ug/m3	2.1	0.53	2.51		05/19/18 00:39	75-34-3	
1,2-Dichloroethane	<1.0	ug/m3	1.0	0.50	2.51		05/19/18 00:39	107-06-2	
1,1-Dichloroethene	<2.0	ug/m3	2.0	0.59	2.51		05/19/18 00:39	75-35-4	
cis-1,2-Dichloroethene	<2.0	ug/m3	2.0	0.86	2.51		05/19/18 00:39	156-59-2	
trans-1,2-Dichloroethene	<2.0	ug/m3	2.0	0.74	2.51		05/19/18 00:39	156-60-5	
1,2-Dichloropropane	<2.4	ug/m3	2.4	0.77	2.51		05/19/18 00:39	78-87-5	
cis-1,3-Dichloropropene	<2.3	ug/m3	2.3	0.61	2.51		05/19/18 00:39	10061-01-5	
trans-1,3-Dichloropropene	<2.3	ug/m3	2.3	1.1	2.51		05/19/18 00:39	10061-02-6	
Dichlorotetrafluoroethane	<3.6	ug/m3	3.6	1.1	2.51		05/19/18 00:39	76-14-2	
Ethanol	55.5	ug/m3	2.4	1.2	2.51		05/19/18 00:39	64-17-5	
Ethyl acetate	<1.8	ug/m3	1.8	0.49	2.51		05/19/18 00:39	141-78-6	
Ethylbenzene	8.5	ug/m3	2.2	0.43	2.51		05/19/18 00:39	100-41-4	
4-Ethyltoluene	<2.5	ug/m3	2.5	0.54	2.51		05/19/18 00:39	622-96-8	
n-Heptane	<2.1	ug/m3	2.1	0.53	2.51		05/19/18 00:39	142-82-5	
Hexachloro-1,3-butadiene	<5.4	ug/m3	5.4	2.2	2.51		05/19/18 00:39	87-68-3	
n-Hexane	7.5	ug/m3	1.8	0.84	2.51		05/19/18 00:39	110-54-3	
2-Hexanone	<10.4	ug/m3	10.4	1.5	2.51		05/19/18 00:39	591-78-6	
Methylene Chloride	13.2	ug/m3	8.9	3.8	2.51		05/19/18 00:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	<10.4	ug/m3	10.4	0.89	2.51		05/19/18 00:39	108-10-1	
Methyl-tert-butyl ether	<9.2	ug/m3	9.2	1.7	2.51		05/19/18 00:39	1634-04-4	
Naphthalene	136	ug/m3	6.7	1.5	2.51		05/19/18 00:39	91-20-3	
2-Propanol	18.8	ug/m3	6.3	3.1	2.51		05/19/18 00:39	67-63-0	
Propylene	147	ug/m3	0.88	0.39	2.51		05/19/18 00:39	115-07-1	
Styrene	<2.2	ug/m3	2.2	0.42	2.51		05/19/18 00:39	100-42-5	
1,1,2,2-Tetrachloroethane	<1.8	ug/m3	1.8	0.73	2.51		05/19/18 00:39	79-34-5	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-2 **Lab ID: 10431263002** Collected: 05/15/18 12:34 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Tetrachloroethene	2.7	ug/m3	1.7	0.72	2.51		05/19/18 00:39	127-18-4	
Tetrahydrofuran	11.5	ug/m3	1.5	0.69	2.51		05/19/18 00:39	109-99-9	
Toluene	19.1	ug/m3	1.9	0.40	2.51		05/19/18 00:39	108-88-3	
1,2,4-Trichlorobenzene	<9.5	ug/m3	9.5	2.4	2.51		05/19/18 00:39	120-82-1	
1,1,1-Trichloroethane	<2.8	ug/m3	2.8	0.86	2.51		05/19/18 00:39	71-55-6	
1,1,2-Trichloroethane	<1.4	ug/m3	1.4	0.56	2.51		05/19/18 00:39	79-00-5	
Trichloroethene	<1.4	ug/m3	1.4	0.67	2.51		05/19/18 00:39	79-01-6	
Trichlorofluoromethane	<2.9	ug/m3	2.9	1.0	2.51		05/19/18 00:39	75-69-4	
1,1,2-Trichlorotrifluoroethane	<3.9	ug/m3	3.9	0.93	2.51		05/19/18 00:39	76-13-1	
1,2,4-Trimethylbenzene	4.9	ug/m3	2.5	0.43	2.51		05/19/18 00:39	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/m3	2.5	1.0	2.51		05/19/18 00:39	108-67-8	
Vinyl acetate	<1.8	ug/m3	1.8	0.42	2.51		05/19/18 00:39	108-05-4	
Vinyl chloride	<0.65	ug/m3	0.65	0.32	2.51		05/19/18 00:39	75-01-4	
m&p-Xylene	16.4	ug/m3	4.4	0.88	2.51		05/19/18 00:39	179601-23-1	
o-Xylene	5.1	ug/m3	2.2	0.93	2.51		05/19/18 00:39	95-47-6	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-3 **Lab ID: 10431263003** Collected: 05/15/18 13:07 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	297	ug/m3	7.3	4.5	3.02		05/19/18 01:15	67-64-1	
Benzene	2.9	ug/m3	0.98	0.46	3.02		05/19/18 01:15	71-43-2	
Benzyl chloride	<7.9	ug/m3	7.9	0.71	3.02		05/19/18 01:15	100-44-7	
Bromodichloromethane	<4.1	ug/m3	4.1	1.1	3.02		05/19/18 01:15	75-27-4	
Bromoform	<6.3	ug/m3	6.3	2.1	3.02		05/19/18 01:15	75-25-2	
Bromomethane	<2.4	ug/m3	2.4	0.63	3.02		05/19/18 01:15	74-83-9	
1,3-Butadiene	<1.4	ug/m3	1.4	0.62	3.02		05/19/18 01:15	106-99-0	
2-Butanone (MEK)	29.0	ug/m3	9.1	0.61	3.02		05/19/18 01:15	78-93-3	
Carbon disulfide	<1.9	ug/m3	1.9	0.54	3.02		05/19/18 01:15	75-15-0	
Carbon tetrachloride	<1.9	ug/m3	1.9	0.96	3.02		05/19/18 01:15	56-23-5	
Chlorobenzene	<2.8	ug/m3	2.8	0.54	3.02		05/19/18 01:15	108-90-7	
Chloroethane	<1.6	ug/m3	1.6	0.62	3.02		05/19/18 01:15	75-00-3	
Chloroform	<1.5	ug/m3	1.5	0.70	3.02		05/19/18 01:15	67-66-3	
Chloromethane	<1.3	ug/m3	1.3	0.40	3.02		05/19/18 01:15	74-87-3	
Cyclohexane	<2.1	ug/m3	2.1	0.69	3.02		05/19/18 01:15	110-82-7	
Dibromochloromethane	<5.2	ug/m3	5.2	1.3	3.02		05/19/18 01:15	124-48-1	
1,2-Dibromoethane (EDB)	<4.7	ug/m3	4.7	1.0	3.02		05/19/18 01:15	106-93-4	
1,2-Dichlorobenzene	<3.7	ug/m3	3.7	0.98	3.02		05/19/18 01:15	95-50-1	
1,3-Dichlorobenzene	7.2	ug/m3	3.7	1.4	3.02		05/19/18 01:15	541-73-1	
1,4-Dichlorobenzene	<3.7	ug/m3	3.7	0.66	3.02		05/19/18 01:15	106-46-7	
Dichlorodifluoromethane	6.1	ug/m3	3.1	1.3	3.02		05/19/18 01:15	75-71-8	
1,1-Dichloroethane	<2.5	ug/m3	2.5	0.64	3.02		05/19/18 01:15	75-34-3	
1,2-Dichloroethane	<1.2	ug/m3	1.2	0.60	3.02		05/19/18 01:15	107-06-2	
1,1-Dichloroethene	<2.4	ug/m3	2.4	0.72	3.02		05/19/18 01:15	75-35-4	
cis-1,2-Dichloroethene	<2.4	ug/m3	2.4	1.0	3.02		05/19/18 01:15	156-59-2	
trans-1,2-Dichloroethene	<2.4	ug/m3	2.4	0.89	3.02		05/19/18 01:15	156-60-5	
1,2-Dichloropropane	<2.8	ug/m3	2.8	0.92	3.02		05/19/18 01:15	78-87-5	
cis-1,3-Dichloropropene	<2.8	ug/m3	2.8	0.74	3.02		05/19/18 01:15	10061-01-5	
trans-1,3-Dichloropropene	<2.8	ug/m3	2.8	1.3	3.02		05/19/18 01:15	10061-02-6	
Dichlorotetrafluoroethane	<4.3	ug/m3	4.3	1.3	3.02		05/19/18 01:15	76-14-2	
Ethanol	70.0	ug/m3	2.9	1.4	3.02		05/19/18 01:15	64-17-5	
Ethyl acetate	<2.2	ug/m3	2.2	0.59	3.02		05/19/18 01:15	141-78-6	
Ethylbenzene	22.1	ug/m3	2.7	0.52	3.02		05/19/18 01:15	100-41-4	
4-Ethyltoluene	3.6	ug/m3	3.0	0.65	3.02		05/19/18 01:15	622-96-8	
n-Heptane	<2.5	ug/m3	2.5	0.63	3.02		05/19/18 01:15	142-82-5	
Hexachloro-1,3-butadiene	<6.6	ug/m3	6.6	2.6	3.02		05/19/18 01:15	87-68-3	
n-Hexane	21.4	ug/m3	2.2	1.0	3.02		05/19/18 01:15	110-54-3	
2-Hexanone	<12.6	ug/m3	12.6	1.8	3.02		05/19/18 01:15	591-78-6	
Methylene Chloride	280	ug/m3	10.7	4.6	3.02		05/19/18 01:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	<12.6	ug/m3	12.6	1.1	3.02		05/19/18 01:15	108-10-1	
Methyl-tert-butyl ether	<11.1	ug/m3	11.1	2.0	3.02		05/19/18 01:15	1634-04-4	
Naphthalene	51.6	ug/m3	8.0	1.8	3.02		05/19/18 01:15	91-20-3	
2-Propanol	12.8	ug/m3	7.6	3.8	3.02		05/19/18 01:15	67-63-0	
Propylene	17.1	ug/m3	1.1	0.47	3.02		05/19/18 01:15	115-07-1	
Styrene	<2.6	ug/m3	2.6	0.50	3.02		05/19/18 01:15	100-42-5	
1,1,2,2-Tetrachloroethane	<2.1	ug/m3	2.1	0.88	3.02		05/19/18 01:15	79-34-5	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-3 **Lab ID: 10431263003** Collected: 05/15/18 13:07 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Tetrachloroethene	45.7	ug/m3	2.1	0.87	3.02		05/19/18 01:15	127-18-4	
Tetrahydrofuran	2.7	ug/m3	1.8	0.83	3.02		05/19/18 01:15	109-99-9	
Toluene	24.6	ug/m3	2.3	0.48	3.02		05/19/18 01:15	108-88-3	
1,2,4-Trichlorobenzene	<11.4	ug/m3	11.4	2.9	3.02		05/19/18 01:15	120-82-1	
1,1,1-Trichloroethane	<3.4	ug/m3	3.4	1.0	3.02		05/19/18 01:15	71-55-6	
1,1,2-Trichloroethane	<1.7	ug/m3	1.7	0.68	3.02		05/19/18 01:15	79-00-5	
Trichloroethene	<1.6	ug/m3	1.6	0.81	3.02		05/19/18 01:15	79-01-6	
Trichlorofluoromethane	<3.4	ug/m3	3.4	1.3	3.02		05/19/18 01:15	75-69-4	
1,1,2-Trichlorotrifluoroethane	<4.7	ug/m3	4.7	1.1	3.02		05/19/18 01:15	76-13-1	
1,2,4-Trimethylbenzene	9.2	ug/m3	3.0	0.52	3.02		05/19/18 01:15	95-63-6	
1,3,5-Trimethylbenzene	3.9	ug/m3	3.0	1.2	3.02		05/19/18 01:15	108-67-8	
Vinyl acetate	<2.2	ug/m3	2.2	0.50	3.02		05/19/18 01:15	108-05-4	
Vinyl chloride	<0.79	ug/m3	0.79	0.38	3.02		05/19/18 01:15	75-01-4	
m&p-Xylene	41.5	ug/m3	5.3	1.1	3.02		05/19/18 01:15	179601-23-1	
o-Xylene	11.6	ug/m3	2.7	1.1	3.02		05/19/18 01:15	95-47-6	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-4 **Lab ID: 10431263004** Collected: 05/15/18 13:27 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	593	ug/m3	5.7	3.6	2.38		05/19/18 01:50	67-64-1	
Benzene	11.7	ug/m3	0.77	0.36	2.38		05/19/18 01:50	71-43-2	
Benzyl chloride	<6.3	ug/m3	6.3	0.56	2.38		05/19/18 01:50	100-44-7	
Bromodichloromethane	<3.2	ug/m3	3.2	0.85	2.38		05/19/18 01:50	75-27-4	
Bromoform	<5.0	ug/m3	5.0	1.6	2.38		05/19/18 01:50	75-25-2	
Bromomethane	<1.9	ug/m3	1.9	0.50	2.38		05/19/18 01:50	74-83-9	
1,3-Butadiene	<1.1	ug/m3	1.1	0.49	2.38		05/19/18 01:50	106-99-0	
2-Butanone (MEK)	57.4	ug/m3	7.1	0.48	2.38		05/19/18 01:50	78-93-3	
Carbon disulfide	7.4	ug/m3	1.5	0.43	2.38		05/19/18 01:50	75-15-0	
Carbon tetrachloride	<1.5	ug/m3	1.5	0.76	2.38		05/19/18 01:50	56-23-5	
Chlorobenzene	<2.2	ug/m3	2.2	0.43	2.38		05/19/18 01:50	108-90-7	
Chloroethane	<1.3	ug/m3	1.3	0.49	2.38		05/19/18 01:50	75-00-3	
Chloroform	<1.2	ug/m3	1.2	0.55	2.38		05/19/18 01:50	67-66-3	
Chloromethane	6.4	ug/m3	1.0	0.32	2.38		05/19/18 01:50	74-87-3	
Cyclohexane	<1.7	ug/m3	1.7	0.54	2.38		05/19/18 01:50	110-82-7	
Dibromochloromethane	<4.1	ug/m3	4.1	1.1	2.38		05/19/18 01:50	124-48-1	
1,2-Dibromoethane (EDB)	<3.7	ug/m3	3.7	0.79	2.38		05/19/18 01:50	106-93-4	
1,2-Dichlorobenzene	<2.9	ug/m3	2.9	0.78	2.38		05/19/18 01:50	95-50-1	
1,3-Dichlorobenzene	9.5	ug/m3	2.9	1.1	2.38		05/19/18 01:50	541-73-1	
1,4-Dichlorobenzene	<2.9	ug/m3	2.9	0.52	2.38		05/19/18 01:50	106-46-7	
Dichlorodifluoromethane	6.2	ug/m3	2.4	0.99	2.38		05/19/18 01:50	75-71-8	
1,1-Dichloroethane	<2.0	ug/m3	2.0	0.50	2.38		05/19/18 01:50	75-34-3	
1,2-Dichloroethane	<0.98	ug/m3	0.98	0.47	2.38		05/19/18 01:50	107-06-2	
1,1-Dichloroethene	<1.9	ug/m3	1.9	0.56	2.38		05/19/18 01:50	75-35-4	
cis-1,2-Dichloroethene	<1.9	ug/m3	1.9	0.81	2.38		05/19/18 01:50	156-59-2	
trans-1,2-Dichloroethene	<1.9	ug/m3	1.9	0.70	2.38		05/19/18 01:50	156-60-5	
1,2-Dichloropropane	<2.2	ug/m3	2.2	0.73	2.38		05/19/18 01:50	78-87-5	
cis-1,3-Dichloropropene	<2.2	ug/m3	2.2	0.58	2.38		05/19/18 01:50	10061-01-5	
trans-1,3-Dichloropropene	<2.2	ug/m3	2.2	1.0	2.38		05/19/18 01:50	10061-02-6	
Dichlorotetrafluoroethane	<3.4	ug/m3	3.4	1.1	2.38		05/19/18 01:50	76-14-2	
Ethanol	37.5	ug/m3	2.3	1.1	2.38		05/19/18 01:50	64-17-5	
Ethyl acetate	<1.7	ug/m3	1.7	0.47	2.38		05/19/18 01:50	141-78-6	
Ethylbenzene	13.5	ug/m3	2.1	0.41	2.38		05/19/18 01:50	100-41-4	
4-Ethyltoluene	2.8	ug/m3	2.4	0.51	2.38		05/19/18 01:50	622-96-8	
n-Heptane	21.5	ug/m3	2.0	0.50	2.38		05/19/18 01:50	142-82-5	
Hexachloro-1,3-butadiene	<5.2	ug/m3	5.2	2.1	2.38		05/19/18 01:50	87-68-3	
n-Hexane	37.8	ug/m3	1.7	0.79	2.38		05/19/18 01:50	110-54-3	
2-Hexanone	<9.9	ug/m3	9.9	1.5	2.38		05/19/18 01:50	591-78-6	
Methylene Chloride	14.2	ug/m3	8.4	3.6	2.38		05/19/18 01:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	<9.9	ug/m3	9.9	0.85	2.38		05/19/18 01:50	108-10-1	
Methyl-tert-butyl ether	<8.7	ug/m3	8.7	1.6	2.38		05/19/18 01:50	1634-04-4	
Naphthalene	85.3	ug/m3	6.3	1.4	2.38		05/19/18 01:50	91-20-3	
2-Propanol	<6.0	ug/m3	6.0	3.0	2.38		05/19/18 01:50	67-63-0	
Propylene	399	ug/m3	0.83	0.37	2.38		05/19/18 01:50	115-07-1	E
Styrene	<2.1	ug/m3	2.1	0.40	2.38		05/19/18 01:50	100-42-5	
1,1,2,2-Tetrachloroethane	<1.7	ug/m3	1.7	0.69	2.38		05/19/18 01:50	79-34-5	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-4 **Lab ID: 10431263004** Collected: 05/15/18 13:27 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Tetrachloroethene	7.9	ug/m3	1.6	0.68	2.38		05/19/18 01:50	127-18-4	
Tetrahydrofuran	4.3	ug/m3	1.4	0.65	2.38		05/19/18 01:50	109-99-9	
Toluene	22.3	ug/m3	1.8	0.38	2.38		05/19/18 01:50	108-88-3	
1,2,4-Trichlorobenzene	<9.0	ug/m3	9.0	2.3	2.38		05/19/18 01:50	120-82-1	
1,1,1-Trichloroethane	<2.6	ug/m3	2.6	0.81	2.38		05/19/18 01:50	71-55-6	
1,1,2-Trichloroethane	<1.3	ug/m3	1.3	0.54	2.38		05/19/18 01:50	79-00-5	
Trichloroethene	<1.3	ug/m3	1.3	0.64	2.38		05/19/18 01:50	79-01-6	
Trichlorofluoromethane	6.2	ug/m3	2.7	0.99	2.38		05/19/18 01:50	75-69-4	
1,1,2-Trichlorotrifluoroethane	<3.7	ug/m3	3.7	0.88	2.38		05/19/18 01:50	76-13-1	
1,2,4-Trimethylbenzene	7.0	ug/m3	2.4	0.41	2.38		05/19/18 01:50	95-63-6	
1,3,5-Trimethylbenzene	2.9	ug/m3	2.4	0.98	2.38		05/19/18 01:50	108-67-8	
Vinyl acetate	<1.7	ug/m3	1.7	0.40	2.38		05/19/18 01:50	108-05-4	
Vinyl chloride	<0.62	ug/m3	0.62	0.30	2.38		05/19/18 01:50	75-01-4	
m&p-Xylene	25.6	ug/m3	4.2	0.83	2.38		05/19/18 01:50	179601-23-1	
o-Xylene	7.6	ug/m3	2.1	0.88	2.38		05/19/18 01:50	95-47-6	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-5 **Lab ID: 10431263005** Collected: 05/15/18 13:52 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Acetone	438	ug/m3	5.8	3.6	2.41		05/19/18 02:26	67-64-1	
Benzene	45.6	ug/m3	0.78	0.36	2.41		05/19/18 02:26	71-43-2	
Benzyl chloride	<6.3	ug/m3	6.3	0.57	2.41		05/19/18 02:26	100-44-7	
Bromodichloromethane	<3.3	ug/m3	3.3	0.86	2.41		05/19/18 02:26	75-27-4	
Bromoform	<5.1	ug/m3	5.1	1.7	2.41		05/19/18 02:26	75-25-2	
Bromomethane	<1.9	ug/m3	1.9	0.50	2.41		05/19/18 02:26	74-83-9	
1,3-Butadiene	<1.1	ug/m3	1.1	0.50	2.41		05/19/18 02:26	106-99-0	
2-Butanone (MEK)	46.6	ug/m3	7.2	0.49	2.41		05/19/18 02:26	78-93-3	
Carbon disulfide	21.2	ug/m3	1.5	0.43	2.41		05/19/18 02:26	75-15-0	
Carbon tetrachloride	<1.5	ug/m3	1.5	0.77	2.41		05/19/18 02:26	56-23-5	
Chlorobenzene	<2.3	ug/m3	2.3	0.43	2.41		05/19/18 02:26	108-90-7	
Chloroethane	<1.3	ug/m3	1.3	0.49	2.41		05/19/18 02:26	75-00-3	
Chloroform	<1.2	ug/m3	1.2	0.56	2.41		05/19/18 02:26	67-66-3	
Chloromethane	9.5	ug/m3	1.0	0.32	2.41		05/19/18 02:26	74-87-3	
Cyclohexane	134	ug/m3	1.7	0.55	2.41		05/19/18 02:26	110-82-7	
Dibromochloromethane	<4.2	ug/m3	4.2	1.1	2.41		05/19/18 02:26	124-48-1	
1,2-Dibromoethane (EDB)	<3.8	ug/m3	3.8	0.80	2.41		05/19/18 02:26	106-93-4	
1,2-Dichlorobenzene	<2.9	ug/m3	2.9	0.79	2.41		05/19/18 02:26	95-50-1	
1,3-Dichlorobenzene	11.4	ug/m3	2.9	1.1	2.41		05/19/18 02:26	541-73-1	
1,4-Dichlorobenzene	<2.9	ug/m3	2.9	0.53	2.41		05/19/18 02:26	106-46-7	
Dichlorodifluoromethane	3.4	ug/m3	2.4	1.0	2.41		05/19/18 02:26	75-71-8	
1,1-Dichloroethane	<2.0	ug/m3	2.0	0.51	2.41		05/19/18 02:26	75-34-3	
1,2-Dichloroethane	<0.99	ug/m3	0.99	0.48	2.41		05/19/18 02:26	107-06-2	
1,1-Dichloroethene	<1.9	ug/m3	1.9	0.57	2.41		05/19/18 02:26	75-35-4	
cis-1,2-Dichloroethene	<1.9	ug/m3	1.9	0.82	2.41		05/19/18 02:26	156-59-2	
trans-1,2-Dichloroethene	<1.9	ug/m3	1.9	0.71	2.41		05/19/18 02:26	156-60-5	
1,2-Dichloropropane	<2.3	ug/m3	2.3	0.74	2.41		05/19/18 02:26	78-87-5	
cis-1,3-Dichloropropene	<2.2	ug/m3	2.2	0.59	2.41		05/19/18 02:26	10061-01-5	
trans-1,3-Dichloropropene	<2.2	ug/m3	2.2	1.0	2.41		05/19/18 02:26	10061-02-6	
Dichlorotetrafluoroethane	<3.4	ug/m3	3.4	1.1	2.41		05/19/18 02:26	76-14-2	
Ethanol	48.7	ug/m3	2.3	1.1	2.41		05/19/18 02:26	64-17-5	
Ethyl acetate	<1.8	ug/m3	1.8	0.47	2.41		05/19/18 02:26	141-78-6	
Ethylbenzene	20.3	ug/m3	2.1	0.41	2.41		05/19/18 02:26	100-41-4	
4-Ethyltoluene	3.0	ug/m3	2.4	0.52	2.41		05/19/18 02:26	622-96-8	
n-Heptane	60.4	ug/m3	2.0	0.51	2.41		05/19/18 02:26	142-82-5	
Hexachloro-1,3-butadiene	<5.2	ug/m3	5.2	2.1	2.41		05/19/18 02:26	87-68-3	
n-Hexane	119	ug/m3	1.7	0.80	2.41		05/19/18 02:26	110-54-3	
2-Hexanone	<10.0	ug/m3	10.0	1.5	2.41		05/19/18 02:26	591-78-6	
Methylene Chloride	16.5	ug/m3	8.5	3.7	2.41		05/19/18 02:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	<10.0	ug/m3	10.0	0.86	2.41		05/19/18 02:26	108-10-1	
Methyl-tert-butyl ether	<8.8	ug/m3	8.8	1.6	2.41		05/19/18 02:26	1634-04-4	
Naphthalene	49.2	ug/m3	6.4	1.4	2.41		05/19/18 02:26	91-20-3	
2-Propanol	16.7	ug/m3	6.0	3.0	2.41		05/19/18 02:26	67-63-0	
Propylene	687	ug/m3	0.84	0.38	2.41		05/19/18 02:26	115-07-1	E
Styrene	<2.1	ug/m3	2.1	0.40	2.41		05/19/18 02:26	100-42-5	
1,1,2,2-Tetrachloroethane	<1.7	ug/m3	1.7	0.70	2.41		05/19/18 02:26	79-34-5	

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ANALYTICAL RESULTS

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Sample: SV-5 **Lab ID: 10431263005** Collected: 05/15/18 13:52 Received: 05/15/18 14:48 Matrix: Air

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15							
Tetrachloroethene	13.1	ug/m3	1.7	0.69	2.41		05/19/18 02:26	127-18-4	
Tetrahydrofuran	4.6	ug/m3	1.4	0.66	2.41		05/19/18 02:26	109-99-9	
Toluene	54.7	ug/m3	1.8	0.38	2.41		05/19/18 02:26	108-88-3	
1,2,4-Trichlorobenzene	<9.1	ug/m3	9.1	2.3	2.41		05/19/18 02:26	120-82-1	
1,1,1-Trichloroethane	<2.7	ug/m3	2.7	0.82	2.41		05/19/18 02:26	71-55-6	
1,1,2-Trichloroethane	<1.3	ug/m3	1.3	0.54	2.41		05/19/18 02:26	79-00-5	
Trichloroethene	<1.3	ug/m3	1.3	0.65	2.41		05/19/18 02:26	79-01-6	
Trichlorofluoromethane	<2.7	ug/m3	2.7	1.0	2.41		05/19/18 02:26	75-69-4	
1,1,2-Trichlorotrifluoroethane	<3.8	ug/m3	3.8	0.89	2.41		05/19/18 02:26	76-13-1	
1,2,4-Trimethylbenzene	7.0	ug/m3	2.4	0.41	2.41		05/19/18 02:26	95-63-6	
1,3,5-Trimethylbenzene	3.3	ug/m3	2.4	0.99	2.41		05/19/18 02:26	108-67-8	
Vinyl acetate	<1.7	ug/m3	1.7	0.40	2.41		05/19/18 02:26	108-05-4	
Vinyl chloride	<0.63	ug/m3	0.63	0.30	2.41		05/19/18 02:26	75-01-4	
m&p-Xylene	37.0	ug/m3	4.3	0.84	2.41		05/19/18 02:26	179601-23-1	
o-Xylene	12.6	ug/m3	2.1	0.89	2.41		05/19/18 02:26	95-47-6	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Air
Pace Project No.: 10431263

QC Batch: 539348 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10431263001, 10431263002, 10431263003, 10431263004, 10431263005

METHOD BLANK: 2933047 Matrix: Air
Associated Lab Samples: 10431263001, 10431263002, 10431263003, 10431263004, 10431263005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<1.1	1.1	0.34	05/18/18 13:10	
1,1,2,2-Tetrachloroethane	ug/m3	<0.70	0.70	0.29	05/18/18 13:10	
1,1,2-Trichloroethane	ug/m3	<0.56	0.56	0.22	05/18/18 13:10	
1,1,2-Trichlorotrifluoroethane	ug/m3	<1.6	1.6	0.37	05/18/18 13:10	
1,1-Dichloroethane	ug/m3	<0.82	0.82	0.21	05/18/18 13:10	
1,1-Dichloroethene	ug/m3	<0.81	0.81	0.24	05/18/18 13:10	
1,2,4-Trichlorobenzene	ug/m3	<3.8	3.8	0.96	05/18/18 13:10	
1,2,4-Trimethylbenzene	ug/m3	<1.0	1.0	0.17	05/18/18 13:10	
1,2-Dibromoethane (EDB)	ug/m3	<1.6	1.6	0.33	05/18/18 13:10	
1,2-Dichlorobenzene	ug/m3	<1.2	1.2	0.33	05/18/18 13:10	
1,2-Dichloroethane	ug/m3	<0.41	0.41	0.20	05/18/18 13:10	
1,2-Dichloropropane	ug/m3	<0.94	0.94	0.31	05/18/18 13:10	
1,3,5-Trimethylbenzene	ug/m3	<1.0	1.0	0.41	05/18/18 13:10	
1,3-Butadiene	ug/m3	<0.45	0.45	0.21	05/18/18 13:10	
1,3-Dichlorobenzene	ug/m3	<1.2	1.2	0.47	05/18/18 13:10	
1,4-Dichlorobenzene	ug/m3	<1.2	1.2	0.22	05/18/18 13:10	
2-Butanone (MEK)	ug/m3	<3.0	3.0	0.20	05/18/18 13:10	
2-Hexanone	ug/m3	<4.2	4.2	0.61	05/18/18 13:10	
2-Propanol	ug/m3	<2.5	2.5	1.2	05/18/18 13:10	
4-Ethyltoluene	ug/m3	<1.0	1.0	0.21	05/18/18 13:10	
4-Methyl-2-pentanone (MIBK)	ug/m3	<4.2	4.2	0.36	05/18/18 13:10	
Acetone	ug/m3	<2.4	2.4	1.5	05/18/18 13:10	
Benzene	ug/m3	<0.32	0.32	0.15	05/18/18 13:10	
Benzyl chloride	ug/m3	<2.6	2.6	0.24	05/18/18 13:10	MN
Bromodichloromethane	ug/m3	<1.4	1.4	0.36	05/18/18 13:10	
Bromoform	ug/m3	<2.1	2.1	0.69	05/18/18 13:10	
Bromomethane	ug/m3	<0.79	0.79	0.21	05/18/18 13:10	
Carbon disulfide	ug/m3	<0.63	0.63	0.18	05/18/18 13:10	
Carbon tetrachloride	ug/m3	<0.64	0.64	0.32	05/18/18 13:10	
Chlorobenzene	ug/m3	<0.94	0.94	0.18	05/18/18 13:10	
Chloroethane	ug/m3	<0.54	0.54	0.20	05/18/18 13:10	
Chloroform	ug/m3	<0.50	0.50	0.23	05/18/18 13:10	
Chloromethane	ug/m3	<0.42	0.42	0.13	05/18/18 13:10	
cis-1,2-Dichloroethene	ug/m3	<0.81	0.81	0.34	05/18/18 13:10	
cis-1,3-Dichloropropene	ug/m3	<0.92	0.92	0.24	05/18/18 13:10	
Cyclohexane	ug/m3	<0.70	0.70	0.23	05/18/18 13:10	
Dibromochloromethane	ug/m3	<1.7	1.7	0.44	05/18/18 13:10	
Dichlorodifluoromethane	ug/m3	<1.0	1.0	0.42	05/18/18 13:10	
Dichlorotetrafluoroethane	ug/m3	<1.4	1.4	0.44	05/18/18 13:10	
Ethanol	ug/m3	<0.96	0.96	0.46	05/18/18 13:10	
Ethyl acetate	ug/m3	<0.73	0.73	0.20	05/18/18 13:10	

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: MP185083 City of Shakopee Air
Pace Project No.: 10431263

METHOD BLANK: 2933047

Matrix: Air

Associated Lab Samples: 10431263001, 10431263002, 10431263003, 10431263004, 10431263005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethylbenzene	ug/m3	<0.88	0.88	0.17	05/18/18 13:10	
Hexachloro-1,3-butadiene	ug/m3	<2.2	2.2	0.87	05/18/18 13:10	
m&p-Xylene	ug/m3	<1.8	1.8	0.35	05/18/18 13:10	
Methyl-tert-butyl ether	ug/m3	<3.7	3.7	0.67	05/18/18 13:10	
Methylene Chloride	ug/m3	<3.5	3.5	1.5	05/18/18 13:10	
n-Heptane	ug/m3	<0.83	0.83	0.21	05/18/18 13:10	
n-Hexane	ug/m3	<0.72	0.72	0.33	05/18/18 13:10	
Naphthalene	ug/m3	<2.7	2.7	0.60	05/18/18 13:10	
o-Xylene	ug/m3	<0.88	0.88	0.37	05/18/18 13:10	
Propylene	ug/m3	<0.35	0.35	0.16	05/18/18 13:10	
Styrene	ug/m3	<0.87	0.87	0.17	05/18/18 13:10	
Tetrachloroethene	ug/m3	<0.69	0.69	0.29	05/18/18 13:10	
Tetrahydrofuran	ug/m3	<0.60	0.60	0.27	05/18/18 13:10	
Toluene	ug/m3	<0.77	0.77	0.16	05/18/18 13:10	
trans-1,2-Dichloroethene	ug/m3	<0.81	0.81	0.30	05/18/18 13:10	
trans-1,3-Dichloropropene	ug/m3	<0.92	0.92	0.42	05/18/18 13:10	
Trichloroethene	ug/m3	<0.55	0.55	0.27	05/18/18 13:10	
Trichlorofluoromethane	ug/m3	<1.1	1.1	0.42	05/18/18 13:10	
Vinyl acetate	ug/m3	<0.72	0.72	0.17	05/18/18 13:10	
Vinyl chloride	ug/m3	<0.26	0.26	0.13	05/18/18 13:10	

LABORATORY CONTROL SAMPLE: 2933048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	67.4	121	70-135	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	82.2	118	70-146	
1,1,2-Trichloroethane	ug/m3	55.5	70.4	127	70-135	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	89.2	114	63-139	
1,1-Dichloroethane	ug/m3	41.1	48.8	119	70-134	
1,1-Dichloroethene	ug/m3	40.3	47.0	117	70-137	
1,2,4-Trichlorobenzene	ug/m3	75.4	87.3	116	60-133	
1,2,4-Trimethylbenzene	ug/m3	50	59.6	119	70-137	
1,2-Dibromoethane (EDB)	ug/m3	78.1	101	129	70-140	
1,2-Dichlorobenzene	ug/m3	61.1	72.2	118	70-137	
1,2-Dichloroethane	ug/m3	41.1	50.5	123	70-136	
1,2-Dichloropropane	ug/m3	47	56.9	121	70-136	
1,3,5-Trimethylbenzene	ug/m3	50	60.0	120	70-133	
1,3-Butadiene	ug/m3	22.5	27.0	120	64-141	
1,3-Dichlorobenzene	ug/m3	61.1	72.2	118	70-137	
1,4-Dichlorobenzene	ug/m3	61.1	71.6	117	70-134	
2-Butanone (MEK)	ug/m3	30	36.6	122	65-143	
2-Hexanone	ug/m3	41.6	49.9	120	60-148	
2-Propanol	ug/m3	125	150	120	65-135	
4-Ethyltoluene	ug/m3	50	60.2	121	70-132	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Air
Pace Project No.: 10431263

LABORATORY CONTROL SAMPLE: 2933048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/m3	41.6	50.3	121	70-135	
Acetone	ug/m3	121	133	110	59-132	
Benzene	ug/m3	32.5	38.4	118	70-134	
Benzyl chloride	ug/m3	52.6	60.6	115	56-150	
Bromodichloromethane	ug/m3	68.1	87.3	128	70-142	
Bromoform	ug/m3	105	123	117	69-150	
Bromomethane	ug/m3	39.5	43.6	111	61-141	
Carbon disulfide	ug/m3	31.6	40.9	129	66-134	
Carbon tetrachloride	ug/m3	64	65.7	103	60-145	
Chlorobenzene	ug/m3	46.8	57.5	123	70-130	
Chloroethane	ug/m3	26.8	30.3	113	65-143	
Chloroform	ug/m3	49.6	59.4	120	70-132	
Chloromethane	ug/m3	21	24.9	119	58-140	
cis-1,2-Dichloroethene	ug/m3	40.3	49.0	122	70-136	
cis-1,3-Dichloropropene	ug/m3	46.1	56.2	122	70-136	
Cyclohexane	ug/m3	35	43.9	126	70-133	
Dibromochloromethane	ug/m3	86.6	102	118	68-149	
Dichlorodifluoromethane	ug/m3	50.3	57.7	115	69-130	
Dichlorotetrafluoroethane	ug/m3	71	86.8	122	68-130	
Ethanol	ug/m3	91.6	117	128	65-146	
Ethyl acetate	ug/m3	36.6	46.2	126	68-136	
Ethylbenzene	ug/m3	44.1	56.2	127	70-133	
Hexachloro-1,3-butadiene	ug/m3	108	129	119	59-140	
m&p-Xylene	ug/m3	88.3	112	127	70-133	
Methyl-tert-butyl ether	ug/m3	36.6	43.8	120	70-132	
Methylene Chloride	ug/m3	177	204	116	67-132	
n-Heptane	ug/m3	41.6	50.0	120	64-136	
n-Hexane	ug/m3	35.8	43.6	122	70-130	
Naphthalene	ug/m3	53.3	62.8	118	55-136	
o-Xylene	ug/m3	44.1	56.1	127	70-132	
Propylene	ug/m3	17.5	21.7	124	37-150	
Styrene	ug/m3	43.3	52.5	121	70-139	
Tetrachloroethene	ug/m3	68.9	86.1	125	70-133	
Tetrahydrofuran	ug/m3	30	37.1	124	62-141	
Toluene	ug/m3	38.3	44.2	115	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	47.6	118	70-132	
trans-1,3-Dichloropropene	ug/m3	46.1	59.3	129	70-135	
Trichloroethene	ug/m3	54.6	65.5	120	70-135	
Trichlorofluoromethane	ug/m3	57.1	66.7	117	59-140	
Vinyl acetate	ug/m3	35.8	43.9	123	57-150	
Vinyl chloride	ug/m3	26	31.8	122	70-141	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

SAMPLE DUPLICATE: 2933804

Parameter	Units	10431840001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	<2.0		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	<1.3		25	
1,1,2-Trichloroethane	ug/m3	ND	<1.0		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	<2.9		25	
1,1-Dichloroethane	ug/m3	ND	<1.5		25	
1,1-Dichloroethene	ug/m3	ND	<1.5		25	
1,2,4-Trichlorobenzene	ug/m3	ND	<6.9		25	
1,2,4-Trimethylbenzene	ug/m3	ND	<1.8		25	
1,2-Dibromoethane (EDB)	ug/m3	ND	<2.9		25	
1,2-Dichlorobenzene	ug/m3	ND	<2.2		25	
1,2-Dichloroethane	ug/m3	ND	<0.75		25	
1,2-Dichloropropane	ug/m3	ND	<1.7		25	
1,3,5-Trimethylbenzene	ug/m3	ND	<1.8		25	
1,3-Butadiene	ug/m3	ND	<0.82		25	
1,3-Dichlorobenzene	ug/m3	ND	<2.2		25	
1,4-Dichlorobenzene	ug/m3	ND	<2.2		25	
2-Butanone (MEK)	ug/m3	7.7	5.9	27	25	R1
2-Hexanone	ug/m3	ND	<7.6		25	
2-Propanol	ug/m3	18.7	19.2	3	25	
4-Ethyltoluene	ug/m3	ND	<1.8		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	<7.6		25	
Acetone	ug/m3	58.6	60.9	4	25	
Benzene	ug/m3	1.6	1.6	1	25	
Benzyl chloride	ug/m3	ND	<4.8		25	
Bromodichloromethane	ug/m3	ND	<2.5		25	
Bromoform	ug/m3	ND	<3.8		25	
Bromomethane	ug/m3	ND	<1.4		25	
Carbon disulfide	ug/m3	ND	<1.2		25	
Carbon tetrachloride	ug/m3	ND	<1.2		25	
Chlorobenzene	ug/m3	ND	<1.7		25	
Chloroethane	ug/m3	ND	<0.98		25	
Chloroform	ug/m3	1.2	1.1	6	25	
Chloromethane	ug/m3	1.5	1.6	5	25	
cis-1,2-Dichloroethene	ug/m3	11.6	14.1	20	25	
cis-1,3-Dichloropropene	ug/m3	ND	<1.7		25	
Cyclohexane	ug/m3	ND	<1.3		25	
Dibromochloromethane	ug/m3	ND	<3.2		25	
Dichlorodifluoromethane	ug/m3	2.7	2.9	7	25	
Dichlorotetrafluoroethane	ug/m3	ND	<2.6		25	
Ethanol	ug/m3	419	423	1	25	
Ethyl acetate	ug/m3	2.8	3.0	4	25	
Ethylbenzene	ug/m3	ND	<1.6		25	
Hexachloro-1,3-butadiene	ug/m3	ND	<4.0		25	
m&p-Xylene	ug/m3	ND	<3.2		25	
Methyl-tert-butyl ether	ug/m3	ND	<6.7		25	
Methylene Chloride	ug/m3	ND	<6.5		25	
n-Heptane	ug/m3	ND	<1.5		25	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

SAMPLE DUPLICATE: 2933804

Parameter	Units	10431840001 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	1.8	2.0	11	25	
Naphthalene	ug/m3	ND	<4.9		25	
o-Xylene	ug/m3	ND	<1.6		25	
Propylene	ug/m3	ND	<0.64		25	
Styrene	ug/m3	2.8	2.8	1	25	
Tetrachloroethene	ug/m3	ND	<1.3		25	
Tetrahydrofuran	ug/m3	ND	<1.1		25	
Toluene	ug/m3	5.1	5.4	5	25	
trans-1,2-Dichloroethene	ug/m3	ND	<1.5		25	
trans-1,3-Dichloropropene	ug/m3	ND	<1.7		25	
Trichloroethene	ug/m3	ND	1.1		25	
Trichlorofluoromethane	ug/m3	ND	<2.1		25	
Vinyl acetate	ug/m3	ND	<1.3		25	
Vinyl chloride	ug/m3	ND	<0.48		25	

SAMPLE DUPLICATE: 2933808

Parameter	Units	10431840002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	<2.1		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	<1.3		25	
1,1,2-Trichloroethane	ug/m3	ND	<1.1		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	<3.0		25	
1,1-Dichloroethane	ug/m3	ND	<1.6		25	
1,1-Dichloroethene	ug/m3	ND	<1.5		25	
1,2,4-Trichlorobenzene	ug/m3	ND	<7.2		25	
1,2,4-Trimethylbenzene	ug/m3	ND	<1.9		25	
1,2-Dibromoethane (EDB)	ug/m3	ND	<3.0		25	
1,2-Dichlorobenzene	ug/m3	ND	<2.3		25	
1,2-Dichloroethane	ug/m3	ND	<0.79		25	
1,2-Dichloropropane	ug/m3	ND	<1.8		25	
1,3,5-Trimethylbenzene	ug/m3	ND	<1.9		25	
1,3-Butadiene	ug/m3	ND	<0.86		25	
1,3-Dichlorobenzene	ug/m3	ND	<2.3		25	
1,4-Dichlorobenzene	ug/m3	ND	<2.3		25	
2-Butanone (MEK)	ug/m3	ND	<5.8		25	
2-Hexanone	ug/m3	ND	<8.0		25	
2-Propanol	ug/m3	7.8	7.7	2	25	
4-Ethyltoluene	ug/m3	ND	<1.9		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	<8.0		25	
Acetone	ug/m3	16.7	15.3	9	25	
Benzene	ug/m3	1.4	1.4	2	25	
Benzyl chloride	ug/m3	ND	<5.1		25	
Bromodichloromethane	ug/m3	ND	<2.6		25	
Bromoform	ug/m3	ND	<4.0		25	
Bromomethane	ug/m3	ND	<1.5		25	

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QUALITY CONTROL DATA

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

SAMPLE DUPLICATE: 2933808

Parameter	Units	10431840002 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon disulfide	ug/m3	ND	<1.2		25	
Carbon tetrachloride	ug/m3	ND	<1.2		25	
Chlorobenzene	ug/m3	ND	<1.8		25	
Chloroethane	ug/m3	ND	<1.0		25	
Chloroform	ug/m3	ND	<0.95		25	
Chloromethane	ug/m3	1.5	1.3	10	25	
cis-1,2-Dichloroethene	ug/m3	ND	<1.5		25	
cis-1,3-Dichloropropene	ug/m3	ND	<1.8		25	
Cyclohexane	ug/m3	ND	<1.3		25	
Dibromochloromethane	ug/m3	ND	<3.3		25	
Dichlorodifluoromethane	ug/m3	3.1	3.1	3	25	
Dichlorotetrafluoroethane	ug/m3	ND	<2.7		25	
Ethanol	ug/m3	54.4	53.9	1	25	
Ethyl acetate	ug/m3	ND	<1.4		25	
Ethylbenzene	ug/m3	ND	<1.7		25	
Hexachloro-1,3-butadiene	ug/m3	ND	<4.2		25	
m&p-Xylene	ug/m3	ND	<3.4		25	
Methyl-tert-butyl ether	ug/m3	ND	<7.0		25	
Methylene Chloride	ug/m3	ND	<6.8		25	
n-Heptane	ug/m3	ND	<1.6		25	
n-Hexane	ug/m3	ND	1.6		25	
Naphthalene	ug/m3	ND	<5.1		25	
o-Xylene	ug/m3	ND	<1.7		25	
Propylene	ug/m3	ND	<0.67		25	
Styrene	ug/m3	ND	<1.7		25	
Tetrachloroethene	ug/m3	ND	<1.3		25	
Tetrahydrofuran	ug/m3	ND	<1.2		25	
Toluene	ug/m3	4.2	4.0	5	25	
trans-1,2-Dichloroethene	ug/m3	ND	<1.5		25	
trans-1,3-Dichloropropene	ug/m3	ND	<1.8		25	
Trichloroethene	ug/m3	ND	<1.0		25	
Trichlorofluoromethane	ug/m3	ND	<2.2		25	
Vinyl acetate	ug/m3	ND	<1.4		25	
Vinyl chloride	ug/m3	ND	<0.50		25	

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QUALIFIERS

Project: MP185083 City of Shakopee Air
Pace Project No.: 10431263

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.
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.

SAMPLE QUALIFIERS

Sample: 10431263001
[1] The Total Hydrocarbon (THC) pattern occurred in the first half of the chromatogram (before toluene).
Sample: 10431263002
[1] The Total Hydrocarbon (THC) pattern occurred in the second half of the chromatogram (after toluene).
Sample: 10431263003
[1] The Total Hydrocarbon (THC) pattern occurred in the second half of the chromatogram (after toluene).
Sample: 10431263004
[1] The Total Hydrocarbon (THC) pattern occurred in the first half of the chromatogram (before toluene).
Sample: 10431263005
[1] The Total Hydrocarbon (THC) pattern occurred in the first half of the chromatogram (before toluene).

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.
MN The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MP185083 City of Shakopee Air

Pace Project No.: 10431263

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10431263001	SV-1	TO-15	539348		
10431263002	SV-2	TO-15	539348		
10431263003	SV-3	TO-15	539348		
10431263004	SV-4	TO-15	539348		
10431263005	SV-5	TO-15	539348		

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ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

FC046Rev.01, 03Feb2010

Section A

Section B

Section C

Company: TENCAN MPIS

Address: 15400 15th Ave

City: Plymouth

State: MI

Zip: 48130

Phone: 734-483-1100

Fax: 734-483-1100

Report To: Eric Stammers

Copy To: Jody Blax/Tencan

Purchase Order No.: 1000000000

Project Name: City of Jackson Ave

Project Number: 1000000000

Report To: Eric Stammers

Copy To: Jody Blax

Purchase Order No.: 1000000000

Project Name: City of Jackson Ave

Project Number: 1000000000

Report To: Eric Stammers

Copy To: Jody Blax

Purchase Order No.: 1000000000

Project Name: City of Jackson Ave

Project Number: 1000000000

33014

Page: 1 of 1

Program

UST

Superfund

Emissions

Clean Air Act

Voluntary Clean Up

Dry Clean

RCRA

Other

Location of Sampling by State

MN

Reporting Units

ug/m³

ppmv

ppmv

Other

Report Level

II

III

IV

Other

Section D Required Client Information

AIR SAMPLE ID

Sample IDs MUST BE UNIQUE

Valid Media Codes

Media

1 Liter Summa Can

5 Liter Summa Can

Low Volume Puff

High Volume Puff

Other

Media Code

1LC

1LC

1LC

1LC

1LC

PID Reading (Client only)

0

0

0

0

0.5

DATE

5/15/18

1234

1327

1327

1352

TIME

1115

1234

1327

1327

1352

DATE

5/15/18

1234

1327

1327

1352

TIME

1115

1234

1327

1327

1352

COLLECTED

Canister Pressure (Initial Field - in Hg)

Canister Pressure (Final Field - in Hg)

Summa Can Number

Flow Control Number

Method

PM10

3C - Fixed Gas (%)

TO-3 BTEX

TO-14

TO-15 Full List VOCs

TO-15 Short List BTEX

TO-15 Short List Chlorinated

TO-15 Short List (Other)

Pace Lab ID

001

002

003

004

005

RELINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

Temp in °C

Received on ice

Custody Sealed Cooler

Samples Intact

5/15/18

1448

1448

5/15/18

SAMPLER NAME AND SIGNATURE

PRINT NAME OF SAMPLER:

SIGNATURE OF SAMPLER:

DATE SIGNED (MM/DD/YY)

5/15/18

ORIGINAL

	Document Name: Air Sample Condition Upon Receipt	Document Revised: 02May2018 Page 1 of 1
	Document No.: F-MN-A-106-rev.15	Issuing Authority: Pace Minnesota Quality Office

**Air Sample Condition
Upon Receipt**

Client Name:

Project #:

WO#: 10431263

PM: AA1

Due Date: 05/22/18

CLIENT: TERRACON-M/P

Courier: ☐ Fed Ex ☐ UPS ☐ Speedee ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No

Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Tin Can ☐ Other: _____

Temp Blank rec: ☐ Yes ☒ No

Temp. (TO17 and TO13 samples only) (°C): _____ Corrected Temp (°C): _____ Thermom. Used: _____

Temp should be above freezing to 6°C Correction Factor: _____

Date & Initials of Person Examining Contents: _____

☐ G87A9170600254
☐ G87A9155100842

Type of ice Received ☐ Blue ☐ Wet ☒ None

Comments:

Chain of Custody Present?	☒ Yes ☐ No	1.
Chain of Custody Filled Out?	☒ Yes ☐ No	2.
Chain of Custody Relinquished?	☒ Yes ☐ No	3.
Sampler Name and/or Signature on COC?	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes ☐ No	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes ☒ No	6.
Rush Turn Around Time Requested?	☐ Yes ☒ No	7.
Sufficient Volume?	☒ Yes ☐ No	8.
Correct Containers Used?	☒ Yes ☐ No	9.
-Pace Containers Used?	☒ Yes ☐ No	
Containers Intact?	☒ Yes ☐ No	10.
Media: <u>Air Can</u> Airbag Filter TDT Passive		11. Individually Certified Cans Y <u>N</u> (list which samples)
Is sufficient information available to reconcile samples to the COC?	☒ Yes ☐ No	12.

Samples Received:					Pressure Gauge # 10AIR26				
Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
SV-1			-2	-10					
" 2			-1	h					
" 3			-2	h					
" 4			-2	h					
" 5			-2	h					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review:

Awanda J. Albrecht

Date: 5/15/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13823.D
Report Date: 19-May-2018 15:01

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10air7.i\051818.b\13823.D
Lab Smp Id: 10431263001
Inj Date : 19-MAY-2018 00:04
Operator : MG2
Smp Info :
Misc Info : 30968
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\051818.b\TO15_137-18.m
Meth Date : 19-May-2018 14:57 mgrinstein Quant Type: ISTD
Cal Date : 17-MAY-2018 14:11
Als bottle: 23
Dil Factor: 2.45000
Integrator: HP RTE
Target Version: 4.14
Processing Host: 10MNAIRWKS09

Inst ID: 10air7.i

Compound Sublist: all.sub

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	2.450	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
=====	=====	=====	=====
2 1,1-Difluoroethane	2.923	384055	0.191
7 Chloromethane	3.042	34434	0.525
12 Ethanol	3.325	51285	8.266
16 Trichlorofluoromethane	3.508	549721	0.238
27 Carbon Disulfide	3.968	11850	0.487
40 Tetrahydrofuran	4.849	31123	0.689
* 47 1,4-Difluorobenzene	5.566	695202	10.000
63 n-Octane	7.511	37918	0.423
79 1,3,5-Trimethylbenzene	10.807	17845	0.095
89 1,2,3-Trimethylbenzene	11.758	44315	0.101

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13823.D
Report Date: 19-May-2018 15:01

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	=====	=====	====	=====	=====	=====
Unknown					CAS #:		
2.846	12265919	6.08662655	14.9	0		0	2
Unknown					CAS #:		
3.119	618083	9.42246317	23.1	0		0	7
Unknown					CAS #:		
3.231	109749	17.6895166	43.3	0		0	12
1,2-Pentadiene					CAS #: 591-95-7		
3.656	88527	0.03830804	0.0939	91	NBS75K.1	181	16
Unknown					CAS #:		
4.045	909332	37.3635476	91.5	0		0	27
Methane, bromochloro-					CAS #: 74-97-5		
4.739	395440	8.75352031	21.4	97	NBS75K.1	64996	40
Butanal, 3-methyl-					CAS #: 590-86-3		
5.788	105254	1.51400622	3.71	86	NBS75K.1	688	47
Arsenous acid, tris(trimethylsilyl) este					CAS #: 55429-29-3		
7.559	436024	4.86810486	11.9	78	NBS75K.1	48300	63
Cyclotetrasiloxane, octamethyl-					CAS #: 556-67-2		
10.463	1019726	5.44376987	13.3	78	NBS75K.1	41966	79
Benzoic acid, 2-[(trimethylsilyl)oxy]-,					CAS #: 3789-85-3		
12.668	2548359	5.83015158	14.3	80	NBS75K.1	72298	89

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13823.D
Report Date: 19-May-2018 15:01

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:

Lab Smp Id: 10431263001

Operator : MG2

Sample Location:

Sample Matrix: AIR

Analysis Type: VOA

Inj Date: 19-MAY-2018 00:04

Client SDG: 051818.b

Sample Date:

Sample Point:

Date Received:

Level: LOW

Number TICs found: 10

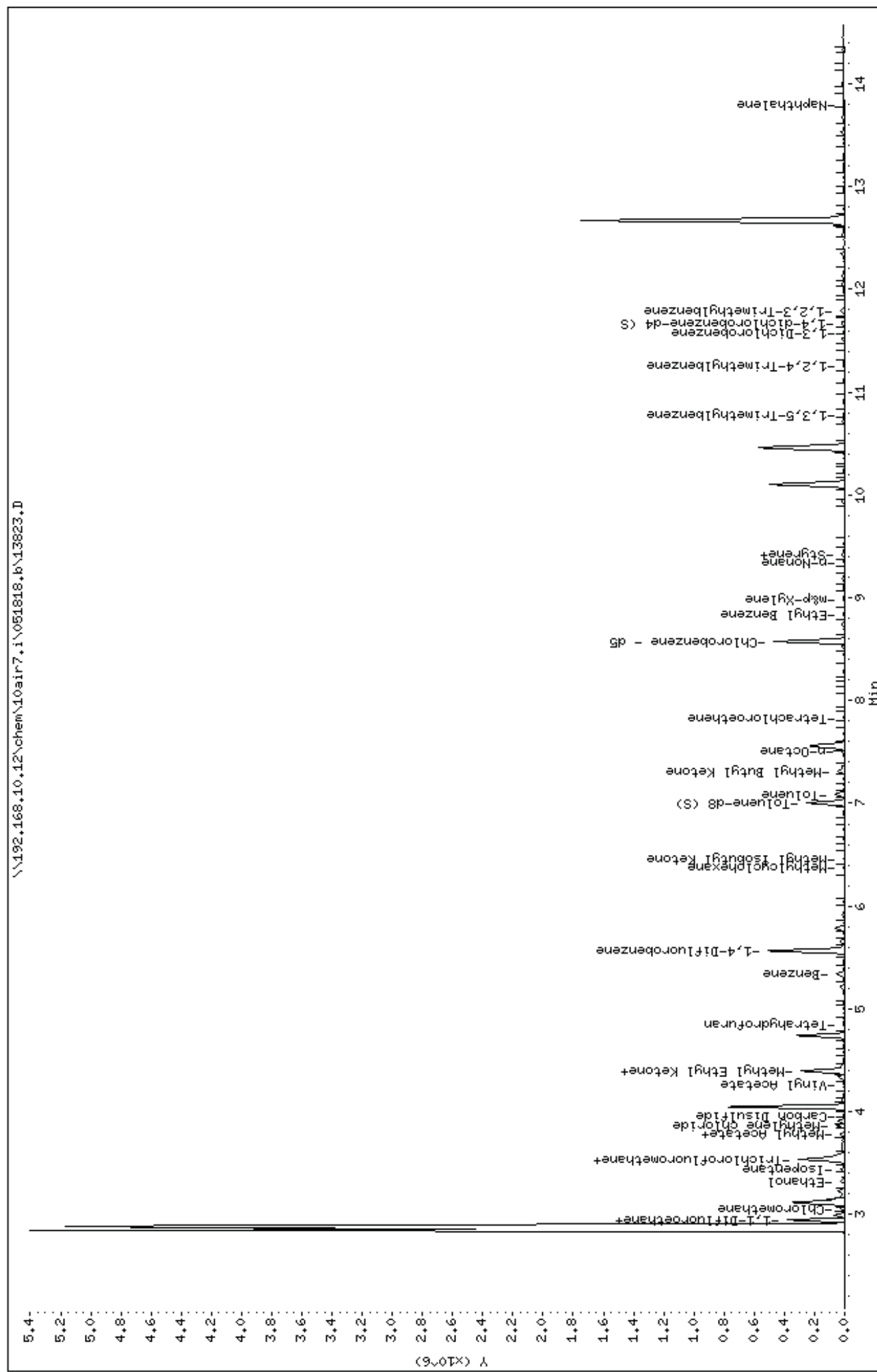
CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.846	14.9	J
2.	Unknown	3.119	23.1	J
3.	Unknown	3.231	43.3	J
4. 591-95-7	1,2-Pentadiene	3.656	0.0939	NJ
5.	Unknown	4.045	91.5	J
6. 74-97-5	Methane, bromochloro-	4.739	21.4	NJ
7. 590-86-3	Butanal, 3-methyl-	5.788	3.71	NJ
8. 55429-29-3	Arsenous acid, tris(trimeth	7.559	11.9	NJ
9. 556-67-2	Cyclotetrasiloxane, octamet	10.463	13.3	NJ
10. 3789-85-3	Benzoic acid, 2-[(trimethyl	12.668	14.3	NJ

Data File: \\192.168.10.12\\chem\\10air7.i\\051818.b\\13823.D
Date : 19-MAY-2018 00:04
Client ID:
Sample Info:

Instrument: 10air7.i
Operator: MG2
Column diameter: 0.32

Column phase: ZB-5MSplus SN340743



Data File: \\192.168.10.12\chem\10air7.i\051818.b\13824.D
Report Date: 19-May-2018 15:01

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)
Data file : \\192.168.10.12\chem\10air7.i\051818.b\13824.D
Lab Smp Id: 10431263002
Inj Date : 19-MAY-2018 00:39
Operator : MG2
Smp Info :
Misc Info : 30968
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\051818.b\TO15_137-18.m
Meth Date : 19-May-2018 14:57 mgrinstein Quant Type: ISTD
Cal Date : 17-MAY-2018 14:11
Als bottle: 24
Dil Factor: 2.51000
Integrator: HP RTE
Target Version: 4.14
Processing Host: 10MNAIRWKS09

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	2.510	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
3 Chlorodifluoromethane	2.939	400328	0.137
7 Chloromethane	3.042	34467	0.273
27 Carbon Disulfide	3.968	9810	0.369
35 n-Hexane	4.431	149919	0.837
63 n-Octane	7.508	15576	0.292
84 1,3-Dichlorobenzene	11.578	62626	0.566
89 1,2,3-Trimethylbenzene	11.758	154604	0.142

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
2.849	12398245	4.23490492	10.6	0		0	3
1-Propene, 2-methyl-					CAS #: 115-11-7		
3.122	432373	3.42279936	8.59	87	NBS75K.1	62306	7

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13824.D
Report Date: 19-May-2018 15:01

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
=====	=====	=====	=====	=====	=====	=====	=====
Unknown				CAS #:			
4.045	124595	4.68685019	11.8	0		0	27
1-Hexene				CAS #: 592-41-6			
4.344	139809	0.78026870	1.96	91	NBS75K.1	62754	35
Cyclotrisiloxane, hexamethyl-				CAS #: 541-05-9			
7.559	1693224	31.7095483	79.6	72	NBS75K.1	27918	63
Unknown				CAS #:			
11.521	133596	1.20788365	3.03	0		0	84
Unknown				CAS #:			
12.022	182538	0.16716368	0.420	0		0	89
Benzene, 1-ethynyl-4-methyl-				CAS #: 766-97-2			
12.157	155566	0.14246363	0.358	90	NBS75K.1	3388	89
Acetophenone				CAS #: 98-86-2			
12.350	303472	0.27791286	0.698	76	NBS75K.1	64533	89
Benzoic acid, 2-[(trimethylsilyl)oxy]-,				CAS #: 3789-85-3			
12.672	6611632	6.05477564	15.2	86	NBS75K.1	72298	89

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13824.D
Report Date: 19-May-2018 15:01

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:

Lab Smp Id: 10431263002

Operator : MG2

Sample Location:

Sample Matrix: AIR

Analysis Type: VOA

Inj Date: 19-MAY-2018 00:39

Client SDG: 051818.b

Sample Date:

Sample Point:

Date Received:

Level: LOW

Number TICs found: 10

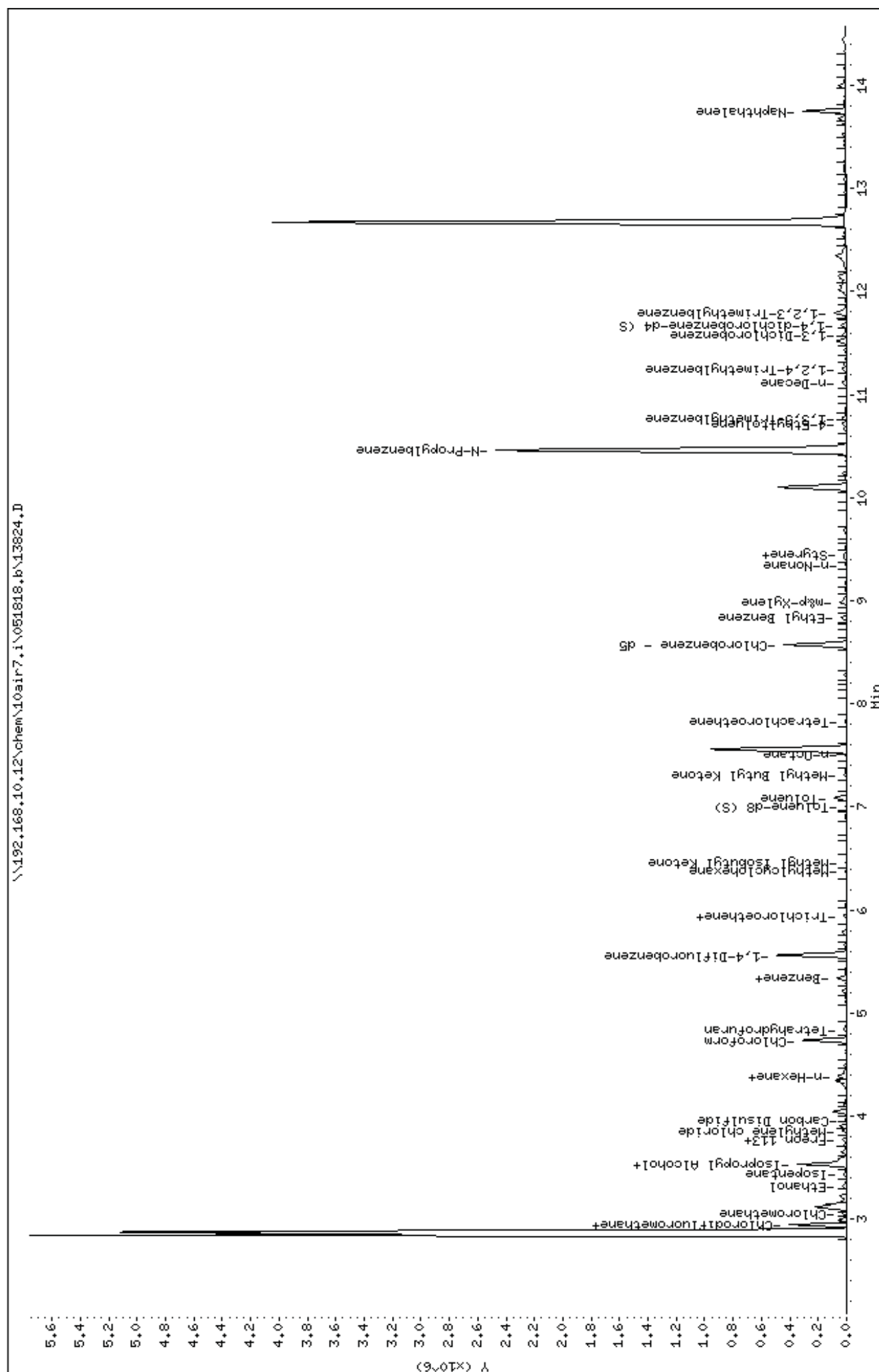
CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.849	10.6	_J_
2. 115-11-7	1-Propene, 2-methyl-	3.122	8.59	NJ_
3.	Unknown	4.045	11.8	_J_
4. 592-41-6	1-Hexene	4.344	1.96	NJ_
5. 541-05-9	Cyclotrisiloxane, hexamethy	7.559	79.6	NJ_
6.	Unknown	11.521	3.03	_J_
7.	Unknown	12.022	0.420	_J_
8. 766-97-2	Benzene, 1-ethynyl-4-methyl	12.157	0.358	NJ_
9. 98-86-2	Acetophenone	12.350	0.698	NJ_
10. 3789-85-3	Benzoic acid, 2-[(trimethyl	12.672	15.2	NJ_

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13824.D
Date : 19-MAY-2018 00:39
Client ID:
Sample Info:

Instrument: 10air7.i
Operator: MG2
Column diameter: 0.32

Column phase: ZB-5MSplus SN340743



Data File: \\192.168.10.12\chem\10air7.i\051818.b\13825.D
Report Date: 19-May-2018 15:02

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)
Data file : \\192.168.10.12\chem\10air7.i\051818.b\13825.D
Lab Smp Id: 10431263003
Inj Date : 19-MAY-2018 01:15
Operator : MG2
Smp Info :
Misc Info : 30968
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\051818.b\TO15_137-18.m
Meth Date : 19-May-2018 14:57 mgrinstein Quant Type: ISTD
Cal Date : 17-MAY-2018 14:11
Als bottle: 25
Dil Factor: 3.02000
Integrator: HP RTE
Target Version: 4.14
Processing Host: 10MNAIRWKS09

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	3.020	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
2 1,1-Difluoroethane	2.926	78302	0.244
7 Chloromethane	3.045	26876	0.158
40 Tetrahydrofuran	4.852	28046	0.301
77 N-Propylbenzene	10.556	12418	0.182
84 1,3-Dichlorobenzene	11.575	36812	0.392
91 N-Butylbenzene	12.180	129345	0.190
94 Naphthalene	13.755	99667	3.204

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
2.852	12373900	38.6031699	117	0		0	2
Unknown					CAS #:		
3.112	223230	1.31000246	3.96	0		0	7

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13825.D
Report Date: 19-May-2018 15:02

RT	CONCENTRATIONS				QUANT			CPND #
	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY		
====	====	=====	=====	====	=====	=====	=====	
Methane, bromochloro-					CAS #: 74-97-5			
4.739	393919	4.22918980	12.8	97	NBS75K.1	4820	40	
Cyclotetrasiloxane, octamethyl-					CAS #: 556-67-2			
10.463	2864275	42.0436848	127	78	NBS75K.1	41966	77	
Unknown					CAS #:			
11.520	70062	0.74624771	2.25	0		0	84	
Unknown					CAS #:			
12.022	166017	0.24350319	0.735	0		0	91	
Unknown					CAS #:			
12.318	320166	0.46959843	1.42	0		0	91	
Benzoic acid, 2-[(trimethylsilyl)oxy]-,					CAS #: 3789-85-3			
12.672	5518094	8.09358168	24.4	78	NBS75K.1	72299	91	
Unknown					CAS #:			
13.678	73723	2.36970236	7.16	0		0	94	
Unknown					CAS #:			
13.999	90436	2.90691084	8.78	0		0	94	

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13825.D
Report Date: 19-May-2018 15:02

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:

Lab Smp Id: 10431263003

Operator : MG2

Sample Location:

Sample Matrix: AIR

Analysis Type: VOA

Inj Date: 19-MAY-2018 01:15

Client SDG: 051818.b

Sample Date:

Sample Point:

Date Received:

Level: LOW

Number TICs found: 10

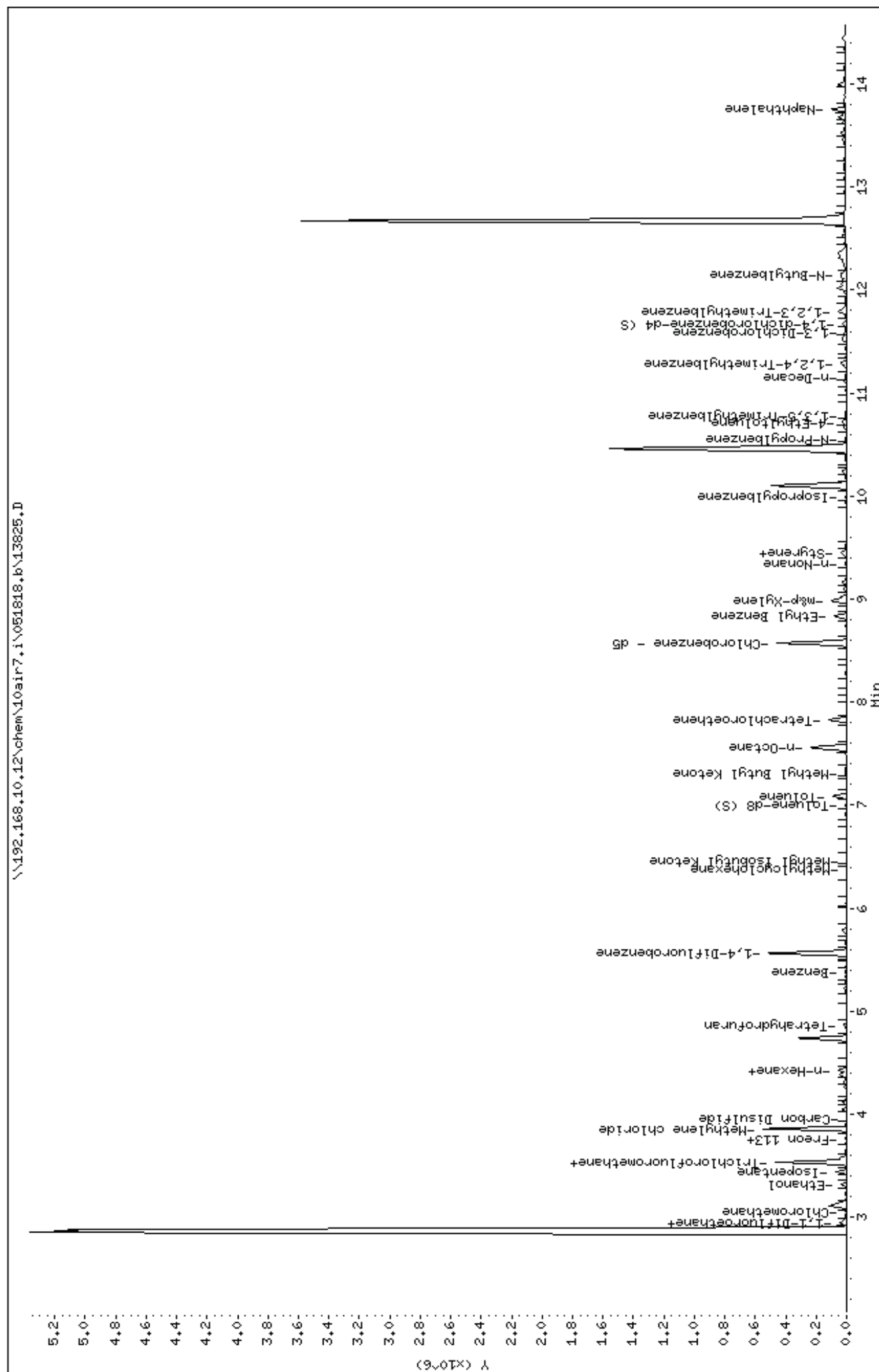
CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.852	117	_J_
2.	Unknown	3.112	3.96	_J_
3. 74-97-5	Methane, bromochloro-	4.739	12.8	NJ_
4. 556-67-2	Cyclotetrasiloxane, octamet	10.463	127	NJ_
5.	Unknown	11.520	2.25	_J_
6.	Unknown	12.022	0.735	_J_
7.	Unknown	12.318	1.42	_J_
8. 3789-85-3	Benzoic acid, 2-[(trimethyl	12.672	24.4	NJ_
9.	Unknown	13.678	7.16	_J_
10.	Unknown	13.999	8.78	_J_

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13825.D
Date : 19-MAY-2018 01:15
Client ID:
Sample Info:

Instrument: 10air7.i
Operator: MG2
Column diameter: 0.32

Column phase: ZB-5MSplus SN340743



Data File: \\192.168.10.12\chem\10air7.i\051818.b\13826.D
Report Date: 19-May-2018 15:02

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)
Data file : \\192.168.10.12\chem\10air7.i\051818.b\13826.D
Lab Smp Id: 10431263004
Inj Date : 19-MAY-2018 01:50
Operator : MG2
Smp Info :
Misc Info : 30968
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\051818.b\TO15_137-18.m
Meth Date : 19-May-2018 14:57 mgrinstein Quant Type: ISTD
Cal Date : 17-MAY-2018 14:11
Als bottle: 26
Dil Factor: 2.38000
Integrator: HP RTE
Target Version: 4.14
Processing Host: 10MNAIRWKS09

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	2.380	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
4 Propylene	2.948	1418907	95.840
7 Chloromethane	3.045	183601	1.274
12 Ethanol	3.325	77903	8.227
16 Trichlorofluoromethane	3.511	1365166	0.456
27 Carbon Disulfide	3.974	26297	0.984
40 Tetrahydrofuran	4.845	78840	0.596
63 n-Octane	7.511	32627	0.592
91 N-Butylbenzene	12.180	269928	0.190

CONCENTRATIONS				QUANT			
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	=====	=====	====	=====	=====	=====
Unknown				CAS #:			
2.849	12409303	838.187018	1990	0		0	4

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13826.D
Report Date: 19-May-2018 15:02

RT	CONCENTRATIONS				QUANT			CPND #
	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY		
=====	=====	=====	=====	=====	=====	=====	=====	
Unknown					CAS #:			
3.148	1641803	11.3918838	27.1	0		0	7	
Unknown					CAS #:			
3.231	299490	31.6273499	75.3	0		0	12	
Pentane					CAS #: 109-66-0			
3.582	575659	0.19247162	0.458	72	NBS75K.1	62515	16	
Pentane, 2-methyl-					CAS #: 107-83-5			
4.116	306910	11.4791552	27.3	87	NBS75K.1	62865	27	
Methane, bromochloro-					CAS #: 74-97-5			
4.739	413355	3.12710585	7.44	97	NBS75K.1	4820	40	
Cyclotrisiloxane, hexamethyl-					CAS #: 541-05-9			
7.559	1342801	24.3646661	58.0	72	NBS75K.1	27918	63	
Unknown					CAS #:			
12.019	327904	0.23126078	0.550	0		0	91	
Unknown					CAS #:			
12.347	530390	0.37406848	0.890	0		0	91	
Benzoic acid, 2-[(trimethylsilyl)oxy]-,					CAS #: 3789-85-3			
12.671	6886091	4.85655614	11.6	86	NBS75K.1	72298	91	

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13826.D
Report Date: 19-May-2018 15:02

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:

Lab Smp Id: 10431263004

Operator : MG2

Sample Location:

Sample Matrix: AIR

Analysis Type: VOA

Inj Date: 19-MAY-2018 01:50

Client SDG: 051818.b

Sample Date:

Sample Point:

Date Received:

Level: LOW

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.849	1990	J
2.	Unknown	3.148	27.1	J
3.	Unknown	3.231	75.3	J
4. 109-66-0	Pentane	3.582	0.458	NJ
5. 107-83-5	Pentane, 2-methyl-	4.116	27.3	NJ
6. 74-97-5	Methane, bromochloro-	4.739	7.44	NJ
7. 541-05-9	Cyclotrisiloxane, hexamethy	7.559	58.0	NJ
8.	Unknown	12.019	0.550	J
9.	Unknown	12.347	0.890	J
10. 3789-85-3	Benzoic acid, 2-[(trimethyl	12.671	11.6	NJ

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13826.D

Date : 19-MAY-2018 01:50

Client ID:

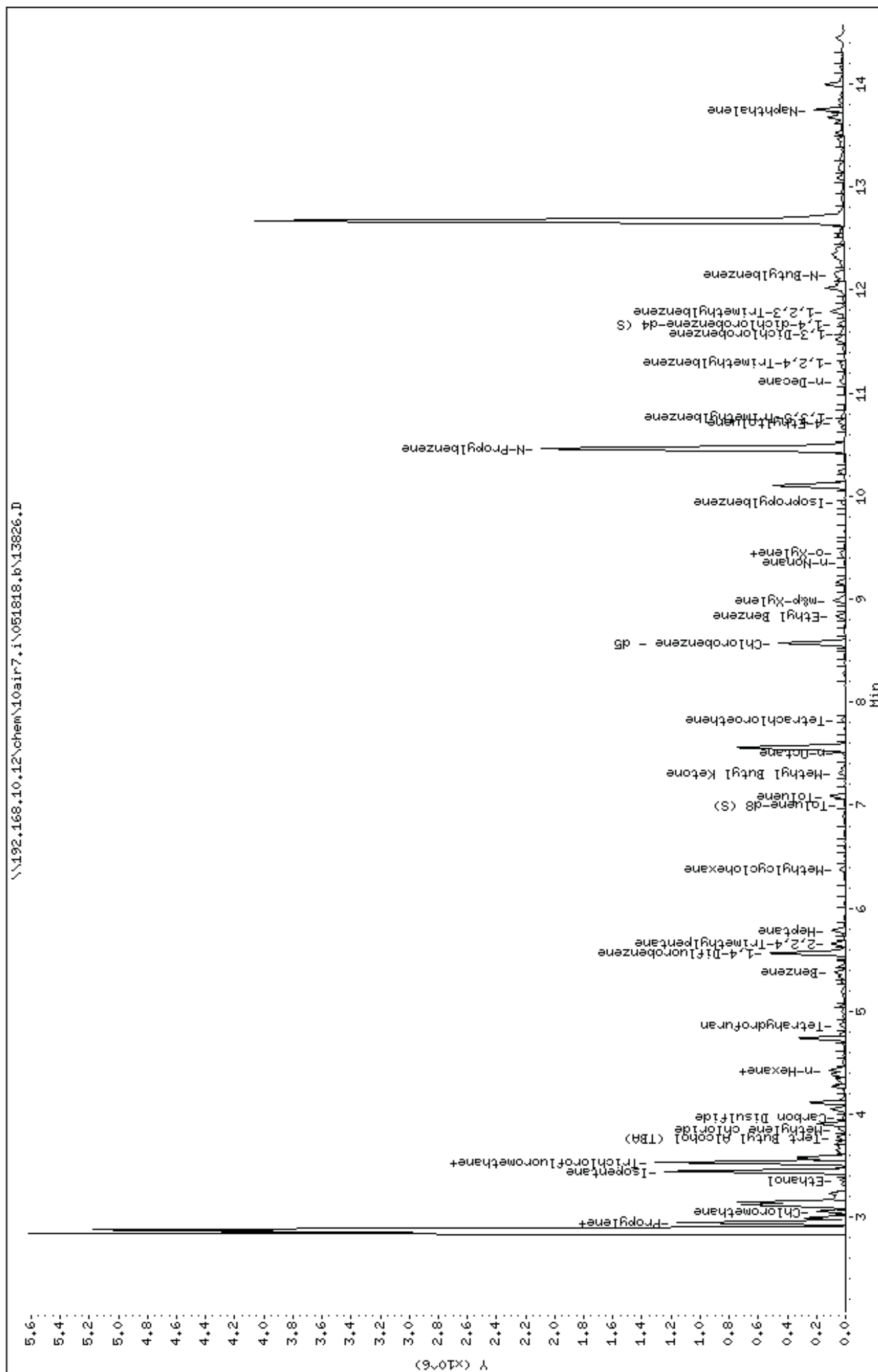
Sample Info:

Instrument: 10air7.i

Operator: MG2

Column diameter: 0.32

Column phase: ZB-5MSplus SN340743



Data File: \\192.168.10.12\chem\10air7.i\051818.b\13827.D
Report Date: 19-May-2018 15:02

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10air7.i\051818.b\13827.D
Lab Smp Id: 10431263005
Inj Date : 19-MAY-2018 02:26
Operator : MG2
Smp Info :
Misc Info : 30968
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\051818.b\TO15_137-18.m
Meth Date : 19-May-2018 14:57 mgrinstein Quant Type: ISTD
Cal Date : 17-MAY-2018 14:11
Als bottle: 27
Dil Factor: 2.41000
Integrator: HP RTE
Target Version: 4.14
Processing Host: 10MNAIRWKS09

Inst ID: 10air7.i

Compound Sublist: all.sub

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	2.410	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
4 Propylene	2.949	2642708	162.874
7 Chloromethane	3.042	1849139	1.869
19 Isopropyl Alcohol	3.553	1097797	2.781
27 Carbon Disulfide	3.974	58979	2.780
35 n-Hexane	4.431	594039	13.810
40 Tetrahydrofuran	4.846	453864	0.630
63 n-Octane	7.508	96976	2.563
91 N-Butylbenzene	12.180	235825	0.194

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	=====	=====	====	=====	=====	=====
Unknown					CAS #:		
2.849	12293663	757.675568	1830	0		0	4

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13827.D
Report Date: 19-May-2018 15:02

RT	CONCENTRATIONS			QUAL	QUANT			CPND #
	AREA	ON-COL(ppbv)	FINAL(ppbv)		LIBRARY	LIB ENTRY		
=====	=====	=====	=====	=====	=====	=====	=====	
Unknown					CAS #:			
3.148	2487017	2.51355776	6.06	0		0	7	
Unknown					CAS #:			
3.190	482566	0.48771547	1.18	0		0	7	
Pentane					CAS #: 109-66-0			
3.582	1110574	2.81357529	6.78	80	NBS75K.1	62516	19	
Silanol, trimethyl-					CAS #: 1066-40-6			
4.045	1447410	68.2179588	164	78	NBS75K.1	907	27	
Pentane, 2-methyl-					CAS #: 107-83-5			
4.116	1085636	51.1671699	123	91	NBS75K.1	62863	27	
Pentane, 3-methyl-					CAS #: 96-14-0			
4.273	639285	14.8616472	35.8	91	NBS75K.1	62867	35	
Methane, bromochloro-					CAS #: 74-97-5			
4.740	434137	0.60272489	1.45	97	NBS75K.1	4820	40	
Arsenous acid, tris(trimethylsilyl) este					CAS #: 55429-29-3			
7.559	3084151	81.5069066	196	72	NBS75K.1	48300	63	
Benzoic acid, 2-[(trimethylsilyl)oxy]-,					CAS #: 3789-85-3			
12.672	5337007	4.38388357	10.6	80	NBS75K.1	72298	91	

Data File: \\192.168.10.12\chem\10air7.i\051818.b\13827.D
Report Date: 19-May-2018 15:02

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:

Lab Smp Id: 10431263005

Operator : MG2

Sample Location:

Sample Matrix: AIR

Analysis Type: VOA

Inj Date: 19-MAY-2018 02:26

Client SDG: 051818.b

Sample Date:

Sample Point:

Date Received:

Level: LOW

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.849	1830	J
2.	Unknown	3.148	6.06	J
3.	Unknown	3.190	1.18	J
4. 109-66-0	Pentane	3.582	6.78	NJ
5. 1066-40-6	Silanol, trimethyl-	4.045	164	NJ
6. 107-83-5	Pentane, 2-methyl-	4.116	123	NJ
7. 96-14-0	Pentane, 3-methyl-	4.273	35.8	NJ
8. 74-97-5	Methane, bromochloro-	4.740	1.45	NJ
9. 55429-29-3	Arsenous acid, tris(trimeth	7.559	196	NJ
10. 3789-85-3	Benzoic acid, 2-[(trimethyl	12.672	10.6	NJ

