

PHASE II INVESTIGATION REPORT

Industrial Park: Parcel A
505 Airport Road Northeast
Pine City, Minnesota 55063

Carlson McCain Project No. 7687-00

Prepared for:



The City of Pine City
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July 8, 2019



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1.0 INTRODUCTION

On behalf of the City of Pine City (Pine City), Carlson McCain, Inc. (Carlson McCain) has prepared this Phase II Investigation Report for the property located at 505 Airport Road Northeast, in Pine City, Minnesota (Property).

1.1 Site Description

The Property is located at 505 Airport Road Northeast, within a mostly industrial area of Pine City, Pine County, Minnesota (Figure 1). The Property is currently undeveloped and vacant. It is located in the northwest quarter of the northwest quarter of Section 27, Township 39 North, Range 21 West on the United States Geological Survey (USGS) Pine City 7.5-minute topographic quadrangle.

1.2 Background

The Property consisted of a farmstead and fields from at least 1939 until 1962 when it was purchased by Pine City, along with the site located adjacent to the northern boundary, for the construction of the wastewater treatment ponds that are currently located just north of the Property. The Property was used as snowmobile track, a rifle range, and housed aircraft hangars and a fueling tank between the years 1968 and 1999. A Phase I ESA completed by Carlson McCain (dated February 14, 2019) identified several RECs on the Property. The identified RECs include:

- The former rifle range located on the Property is a REC due to the remaining lead contamination in the subsurface soil. A Phase II ESA completed in 2002 by Short Elliot Hendrickson (SEH), identified several locations where lead concentrations exceeded the MPCA Industrial screening limit of 700 mg/kg. According to interviews and observations, the impact soil berms are still present on the Property.
- The former presence of hangars and re-fueling above-ground storage tank (AST) located on the Property is a REC due to the potential for leaks and spills of aircraft fuel impacting subsurface soils and the high water table which is present at the site.
- The City of Pine City Public Works currently utilizes a portion of the Property as a staging ground for stockpiles of street sweepings, gravel, wood chips, fill material of unknown origin, and potentially other materials. Due to the potential for these materials to have originated from a contaminated source, these stockpiles are a REC.

2.0 PHASE II FIELD INVESTIGATION ACTIVITIES

2.1 Purpose and Objectives

The purpose of this Phase II Investigation (the Investigation) was to characterize soil, groundwater, and soil vapor conditions on the site in an effort to investigate the previously-mentioned environmental concerns. The primary objectives of the investigation were to:

- Characterize the soil and groundwater conditions near the former aircraft hangars and fuel AST to determine if there are any impacts to the environment from those historic structures.
- Determine if there are soil vapor impacts due to the former presence of aircraft hangars and a fuel AST which could necessitate the installation of sub-slab soil vapor mitigation in potential future buildings on the Property.
- Characterize the soil stockpiles currently located on the Property and determine if any consist of contaminated soil.
- Investigate the extent and magnitude of lead concentrations in the surficial soil on the former rifle range.

The scope of this work was altered to address MPCA workplan comments provided in email correspondence dated April 12, 2019. It should also be noted that XRF readings are affected by the presence of moisture. Due to the extensive snow cover in the winter of 2019, long spring thaw, and wet weather early summer 2019, it was necessary to delay the start of this Phase II work

2.2 Soil Borings

Soil boring advancement was completed by Range Environmental, a licensed and registered well contractor in the State of Minnesota, in accordance with Minnesota Department of Health (MDH) Well Construction Code (Minnesota Rules 4725). Field screening, soil logging and sample collection were conducted by Carlson McCain.

Eight soil borings were advanced to a depth of 5-10 feet bgs to provide information on site geology, and to collect soil and groundwater samples. DP-1 through DP-4 were advanced within the historic footprints of the fuel AST and aircraft hangars. DP-5 through DP-8 were advanced approximately 20-25 feet southeast (downgradient) from the historic footprints of the fuel AST and aircraft hangars. One groundwater sample (MW GW) was also collected from the existing monitoring well located near the southern boundary of the Property. The boring locations are shown on Figure 2. Samples were collected in accordance with the Carlson McCain SOPs (Appendix A).

2.2.1 Field Screening

To determine if contamination was present in soil, visual and olfactory observations, as well as vapor monitoring using a photoionization detector (PID), were conducted on the recovered soil. No anthropogenic debris, staining, odors, or elevated PID readings were observed.

2.2.2 Soil Sampling

Six soil samples were collected from the test holes as part of this investigation. Soil samples were collected from intervals ranging from 1-2' bgs to 5-7' bgs.

2.2.3 Groundwater Sampling

Seven groundwater samples were collected during the Investigation. Groundwater was encountered from 0.5' bgs to 6.5' bgs. A one-inch diameter temporary polyvinyl chloride (PVC) well with a five-foot-long screen was installed in each of the boreholes. Groundwater was recovered from the temporary wells and the permanent monitoring well with dedicated tubing and a check valve.

2.3 Soil Vapor Sampling

Four soil vapor samples were collected from soil borings advanced within the historic footprints of the fuel AST and aircraft hangars. VP-1 through VP-4 locations are shown on Figure 2. Samples were collected in accordance with the Carlson McCain Standard Operating Procedures (Appendix A).

2.4 Stockpile Sampling

The outline of each stockpile and its height was measured using a Trimble GPS unit and using these values, the volume of each stockpile was estimated. Stockpile One was estimated to contain approximately 981 cubic yards of soil and consisted of mainly 10 YR 3/2 (very dark greyish brown) fine to medium grained sand, poorly graded, sub-angular, fill. Stockpile Two was estimated to contain approximately 607 cubic yards of soil and consisted of mainly 10 YR 3/3 (dark brown) sandy clay, with low cohesion and plasticity. Organic material and windblown trash were observed on, and within, both stockpiles.

According to Table A of the MPCA's guidance document "Soil Sample Collection and Analysis Procedures," three samples were required from each stockpile. When analyzing for gasoline range organics (GRO) and volatile organic compounds (VOCs), a grab sample was taken from the second composite sub-sample location, since VOCs and GRO analyses must be performed on grab, not composite, samples. Figure 2 shows the extent of each stockpile and location of each composite sub-sample.

2.5 Laboratory Analysis

Fourteen soil, seven groundwater, and four soil vapor samples were collected and submitted to Pace Analytical Services, LLC. (Pace) for chemical analysis. Pace is certified in the State of Minnesota and all samples were prepared and analyzed in accordance with /or U.S. Environmental Protection Agency (EPA) methods and procedures.

Soil and groundwater samples were analyzed for diesel range organics (DRO), gasoline range organics (GRO), volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) metals. When analyzing for DRO, a "silica gel cleanup" was performed to remove naturally-occurring compounds that could increase the DRO value and result in false positives. The soil vapor samples were analyzed for VOCs using EPA method TO-15.

After the data were received from the laboratory, the individual reports were reviewed for accuracy and completeness to make sure that specific data quality objectives had been met (i.e., verification that holding times were met, reviewing detection limits, trip/equipment blank results, etc.). Copies of the analytical reports are included in Appendix C.

2.6 XRF Screening

A Delta Professional Alloy Plus XRF Analyzer (XRF) was used on the former rifle range to identify areas of surficial soil with elevated lead concentrations present. A previous Phase II completed in 2002 by Short Elliot Hendrickson (SEH), identified several locations of elevated lead concentrations. These areas were analyzed in a 10-foot by 10-foot grid, while the remainder of the former rifle range footprint was analyzed in a 20-foot by 20-foot grid.

The concentrations at each location were recorded and surveyed using Global Positioning Units (GPS) to the nearest 0.01 foot (horizontal measurements will be made in reference to the Pine County Coordinate System). The sample locations are shown on Figures 3-5.

Following the recommendations detailed in the XRF User Manual, calibration checks (which ensure the XRF is calibrated correctly) were performed daily. These checks are performed automatically when the XRF is docked. In addition, at the beginning of each day, a precision test is performed. Seven tests of the same sample were performed to ensure that the XRF is providing precise, repeatable measurements. And finally, at the beginning of, and throughout, each day a blank sample (filled with silica sand) was tested to ensure that there was no contamination within the equipment that would be causing biased readings.

A confirmation soil sample was collected at least once per every 20 XRF readings. These samples were submitted to Pace for analysis. The results of these samples were used to calculate a correction factor to apply to the XRF readings, as the XRF can be affected by site-specific and instrument specific factors. Appendix D details how the correction factor was calculated.

3.0 PHASE II INVESTIGATION RESULTS

A discussion of the results associated with the Phase II Investigation is presented in this Section.

3.1 Analytical Results

3.1.1 Soil

Soil analytical results were compared to various screening limits developed by the Minnesota Pollution Control Agency (MPCA). Soil Reference Values (SRVs) represent the concentration of a contaminant in soil below which normal dermal contact, inhalation and/or ingestion does not generally present a risk to human health. Short-Term Worker SRVs are limits that would present a risk specifically to human health of those who would work in and around impacted soil. Soil Leaching Values (SLVs) represent the concentration of a contaminant in soil above which it is able to leach into groundwater at levels in excess of drinking water standards. Soil analytical results for this Investigation were compared to Tier 1 Residential SRVs, Tier 2 Industrial SRVs, Tier 1 SLVs, and Short-Term Worker SRVs. Certain PAHs are carcinogenic and their toxicity is evaluated relative to the reference chemical Benzo(a)pyrene. Carcinogenic Benzo(a)pyrene (cBaP) Equivalents are calculated using the MPCA Remediation Soil Reference Spreadsheet and compared to the screening limits for Benzo(a)pyrene. Table 1 provides a summary of detected soil analytes and their associated MPCA Screening Limits.

Arsenic, barium, chromium, and lead were identified all samples; however, all concentrations were below their respective screening limits. Mercury was detected in sample SP-5 at a concentration of 0.025 milligrams per kilogram (mg/kg), one magnitude below its lowest screening limit of 0.4 mg/kg.

Numerous PAHs were detected in all samples collected from the soil piles, except SP-5. None of the detections, including the calculated cBaP Equivalents, exceeded their respective screening limits.

DRO was detected in the soil samples SP-1, SP-2, and SP-3 at concentrations below the screening limit of 100 mg/kg. No other concentrations of DRO above laboratory reporting limits were identified.

There were no detections of GRO or VOCs above the laboratory reporting limit in any sample.

3.1.2 Groundwater

Detected groundwater analytes were compared to the MDH-derived Health Risk Limits (HRLs). The HRLs represent the concentration of a chemical in drinking water that, based on the current level of scientific understanding, is likely to pose little or no health risk to humans, including vulnerable subpopulations. Table 2 provides a summary of detected groundwater analytes and their associated HRLs.

Barium was detected in all groundwater samples, at concentrations below its screening limit of 2,000 micrograms per liter ($\mu\text{g/L}$).

There were no detections of DRO, GRO, VOCs, or PAHs above the laboratory reporting limit in any groundwater sample.

3.1.1 Soil Vapor

Soil vapor sample results were compared to their MPCA Screening Limits (the *Industrial Intrusion Screening Value* (ISV) and the *33X Industrial ISV*, published May, 29, 2019). ISVs are numerical values representing the safe amount of a chemical in indoor air for people who use a building. 33X accounts for EPA's default vapor intrusion attenuation factor of 0.03.

Table 3 provides a summary of compounds detected in soil vapor as well as their corresponding MPCA Intrusion Screening Values (ISVs).

Tetrachloroethene (PCE) was identified in the soil vapor samples VP-2 and VP-3, at concentrations of 349 micrograms per square meter ($\mu\text{g}/\text{m}^3$). Both concentrations exceed the ISV of $33 \mu\text{g}/\text{m}^3$, but not the 33X ISV of $1,100 \mu\text{g}/\text{m}^3$ for PCE. PCE was not detected above laboratory reporting limits in either of the other two samples.

Several other VOCs were detected in all four samples; however, none exceeded their respective ISVs.

3.2 XRF Screening Results

Lead concentrations exceeding 700 mg/kg (the Industrial Land-Use SRV) were detected mainly in the northwest corner, southeast corner, and middle of the former rifle range. Table 5, which contains the results of the XRF screening, displays both the actual reading in the field, and the adjusted value (based on the analytical results). Figures 3-5 illustrate locations where the adjusted XRF concentrations exceed the screening limit. See Appendix D for more information concerning the calculation of the adjusted values.

4.0 CONCLUSIONS

4.1 Subsurface Soil Impacts

The low levels of metals detected in the soil borings are indicative of naturally-occurring concentrations. No other impacts were identified in the samples collected from the soil borings. As long as no anthropogenic material, elevated PID readings, odors, or soil staining are encountered during excavation, this soil may be considered “unregulated fill,” and may be used on or off-site without issue.

4.2 Groundwater Impacts

With the exception of barium (detected at concentrations far below its screening limit), there were no impacts detected in the groundwater samples collected during this Investigation.

4.3 Soil Vapor Impacts

The detections of PCE above MPCA risk-based screening levels in the soil vapor constitute a release and should be reported to the Minnesota Duty Officer. According to MPCA guidance, a second round of vapor sampling (completed during the *heating season* (November 1st-March 31st)) is required to determine if there is a need for sub-slab soil vapor mitigation on any future potential buildings constructed at the Property. After completion of this second round of sampling various MPCA liability assurances regarding the soil vapor impacts may be obtained from the MPCA including: (Retroactive) No Association Determination, Completion of Vapor Assessment, and No Further Action.

4.4 Soil Stockpiles

Limited DRO, PAHs, and metals impacts were identified from the six composite samples taken from the two soil piles. The soil stockpiles should be field-screened during re-use, whether on- or off-site.

4.5 Former Rifle Range

Elevated concentrations of lead were detected in the surficial soil of the northwestern corner, center, and southeastern corner of the former rifle range. This soil will need to be properly managed before and redevelopment of the site can occur. During cleanup of the contaminated soil, it is recommended that trained personnel be on-site with an XRF machine to ensure that the full extent of contaminated soil is properly managed.

5.0 CERTIFICATION

Carlson McCain has prepared this Phase II Investigation Report for the exclusive use of the City of Pine City and its agents, for specific application to the Property located at 505 Airport Road Northeast in Pine City, Minnesota. The services performed by Carlson McCain for this Project have been conducted in a manner consistent with the level of skill and care ordinarily exercised by other members of the profession currently practicing in this area. No other warranty, expressed or implied, is made.

Name and Title:

Signature:

Danny Margarit -Environmental Scientist



John Lichter, P.E. - Senior Environmental Engineer



Wade Carlson, P.G. - President



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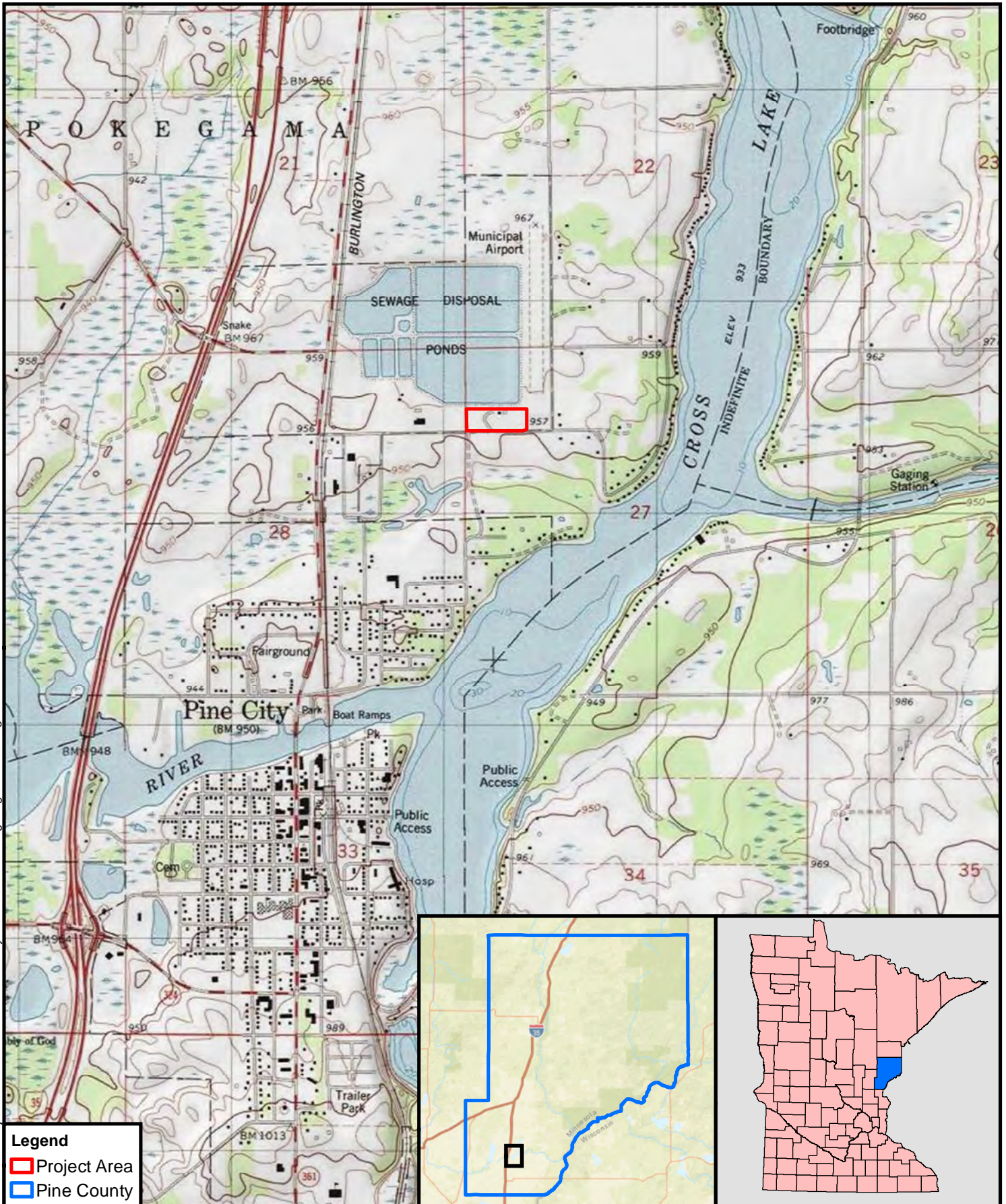
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Figures



Legend

- Project Area
- Pine County



1:24,000

0 2,000 Feet

Basemap: USGS 7.5 Min Quadrangle

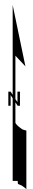
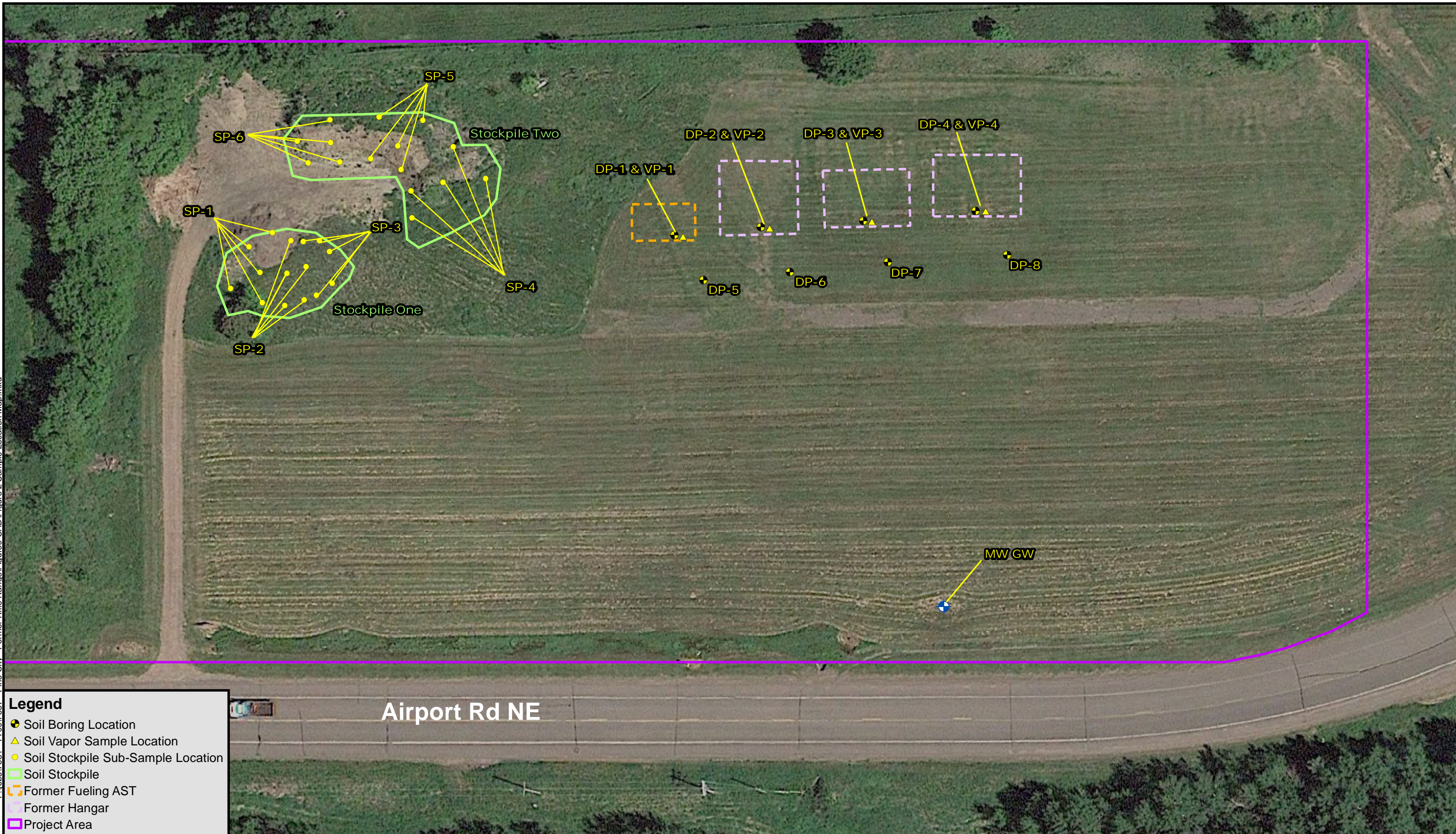


Figure 1
 Site Location Map
 Phase II Investigation Report
 Industrial Park: Parcel A
 Pine City, Minnesota

F:\jobs\7681 - Pine City - Former Rifle Range\Figures-CAD\Figure 2 Sample Location Map.mxd

July 2019



Legend

- Soil Boring Location
- ▲ Soil Vapor Sample Location
- Soil Stockpile Sub-Sample Location
- ▭ Soil Stockpile
- ▭ Former Fueling AST
- ▭ Former Hangar
- ▭ Project Area



1:600

0 60 Feet

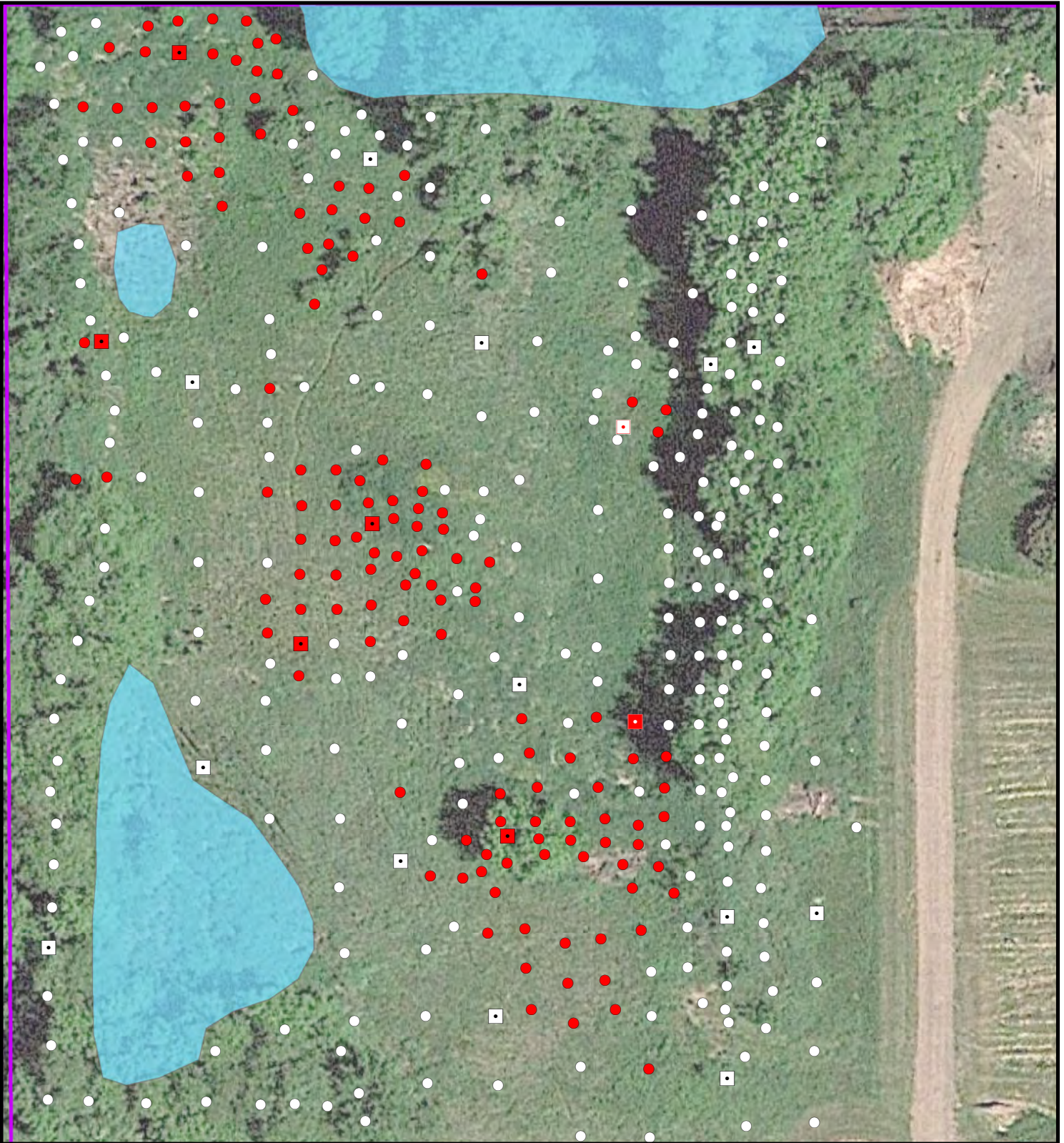
Basemap: Google Earth, 2019.

Phase II Investigation

Industrial Park: Parcel A
Pine City, Minnesota

Figure 2
East Parcel
Sample Location Map

F:\jobs\7681 - Pine City - Former Rifle Range\Figures-CAD\Figure 3 XRF overview.mxd



Legend

- Adjusted XRF Value Below Screening Limit
- Adjusted XRF Value Above Screening Limit
- Adjusted XRF Value and Analytical Results Below Screening Limit
- Adjusted XRF Value and Analytical Results Above Screening Limit
- Adjusted XRF Value Below, but Analytical Results Above Screening Limit
- Adjusted XRF Value Over, but Analytical Results Below Screening Limit
- Standing Water
- Project Area

July 2019



1:480



Basemap: Google Earth, 2019.

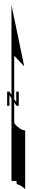
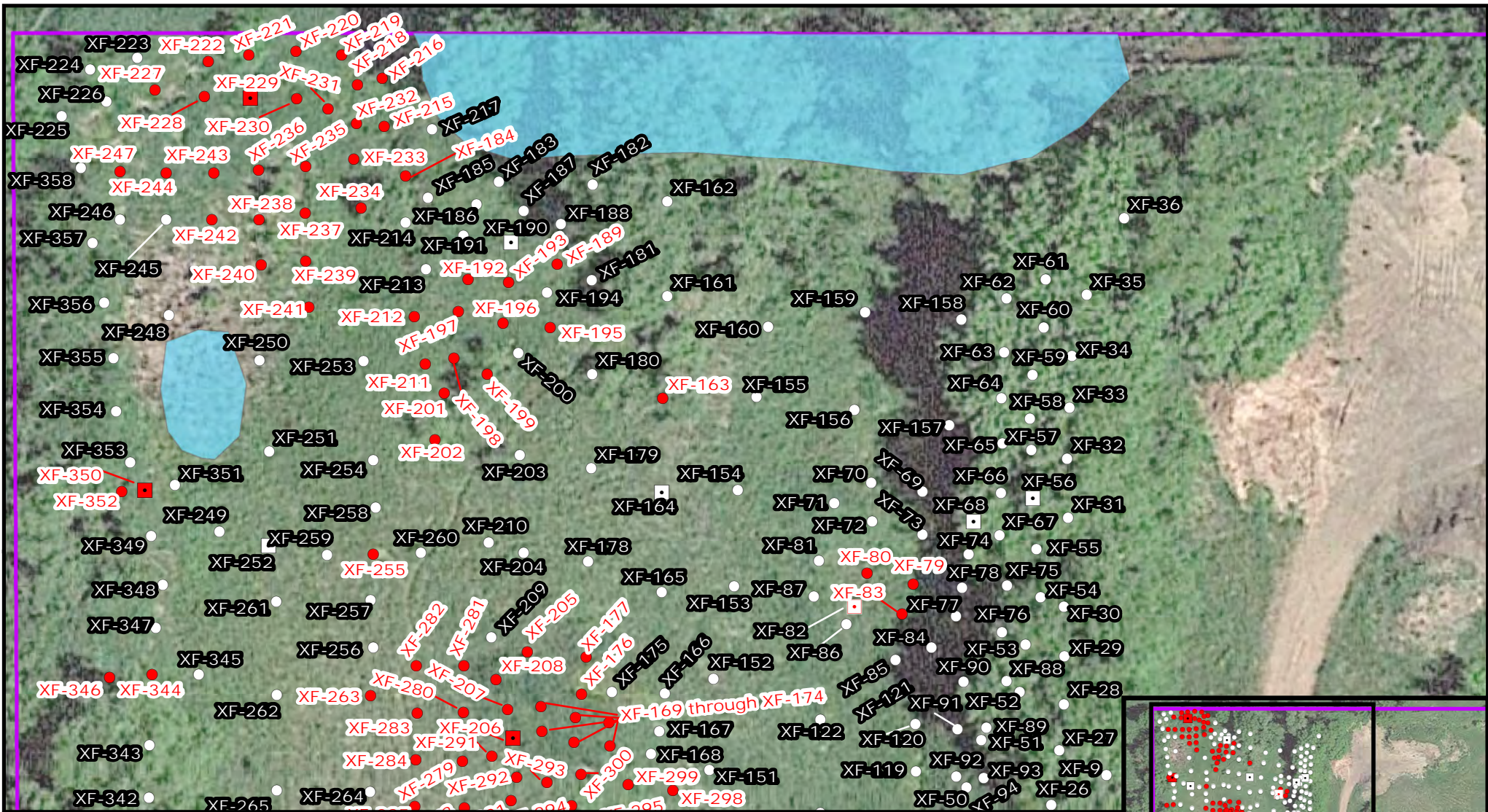


Figure 3- Former Rifle Range
 Sample Location Map
 Phase II Investigation Report
 Industrial Park: Parcel A
 Pine City, Minnesota



- Legend**
- Adjusted XRF Value Below Screening Limit
 - Adjusted XRF Value Above Screening Limit
 - Adjusted XRF Value and Analytical Results Below Screening Limit
 - Adjusted XRF Value and Analytical Results Above Screening Limit
 - Adjusted XRF Value Below, but Analytical Results Above Screening Limit
 - Adjusted XRF Value Over, but Analytical Results Below Screening Limit
 - Standing Water
 - Project Area



1:360



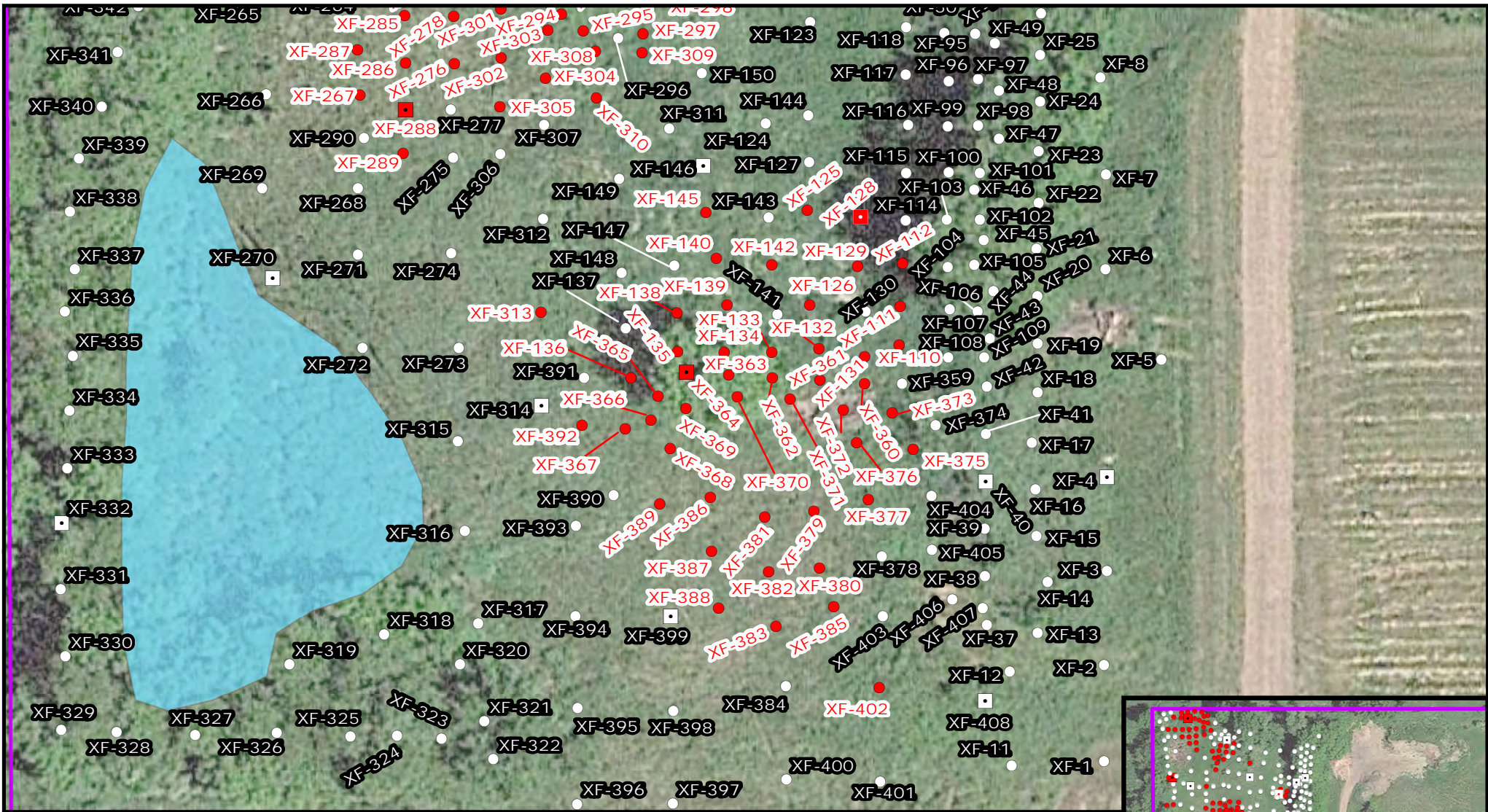
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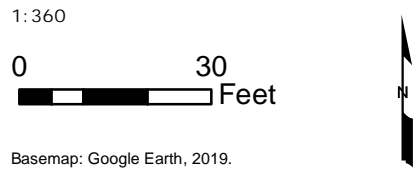
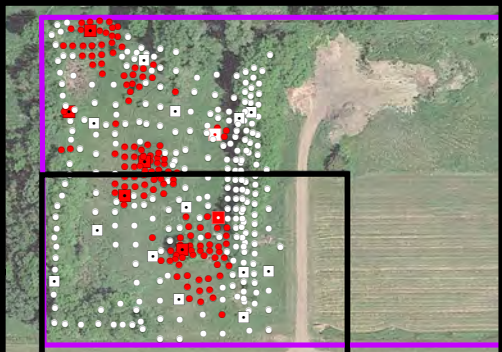
Phase II Investigation Report
Industrial Park: Parcel A
Pine City, Minnesota



Figure 4
Former Rifle Range -
North Half



- Legend**
- Adjusted XRF Value Below Screening Limit
 - Adjusted XRF Value Above Screening Limit
 - Adjusted XRF Value and Analytical Results Below Screening Limit
 - Adjusted XRF Value and Analytical Results Above Screening Limit
 - Adjusted XRF Value Below, but Analytical Results Above Screening Limit
 - Adjusted XRF Value Over, but Analytical Results Below Screening Limit
 - Standing Water
 - Project Area



Phase II Investigation Report
 Industrial Park: Parcel A
 Pine City, Minnesota

Figure 5
 Former Rifle Range -
 South Half

Tables

Table 1
Summary of Detected Analytes in Soil
 Pine City Industrial Park: Parcel A
 Carlson McCain Project No. 7687-00

Analyte	CAS No.	Screening Limits				Analytical Results														
		MPCA SLVs	MPCA RES SRVs	MPCA IND SRVs	MPCA STW	DP-1 (1-3') 5/17/19	DP-2 (1-2') 5/17/19	DP-3 (1-3') 5/17/19	DP-4 (1-3') 5/17/19	DP-5 (3-5') 5/17/19	DP-6 (3-5') 5/17/19	DP-7 (4-6') 5/17/19	DP-8 (5-7') 5/17/19	SP-1 5/17/19	SP-2 5/17/19	SP-3 5/17/19	SP-4 5/17/19	SP-5 5/17/19	SP-6 5/17/19	Trip Blank 5/17/19
Metals																				
Arsenic	7440-38-2	5.8	9	20	70	2.2	1.9	2.1	2.8	2.5	1.9	<5.8	2.1	1.3	1.7	1.9	2.8	3.9	3.2	NS
Barium	7440-39-3	1,700	1,100	18,000	14,000	40.1	42.7	37.2	61.9	33.2	34	71.6	30.3	20.5	23.5	21.5	58.4	95.6	77.4	NS
Chromium	7440-47-3	1,000,000,040 ⁽²⁾	44,000 ⁽²⁾	100,000 ⁽²⁾	100,000 ⁽²⁾	17.5	15.7	13.6	26.9	16.6	15.4	35.8	19.9	12	14.2	10.5	15.5	18.8	37.8	NS
Lead	7439-92-1	2,700	300	700	700	5.9	2.9	5.9	4.6	2.6	3.1	5.1	2.5	3.2	4.1	5.4	6.2	9.6	6.2	NS
Mercury	7439-97-6	3.3	0.5	1.5	0.4	<0.023	<0.020	<0.021	<0.022	<0.022	<0.021	<0.022	<0.022	<0.019	<0.020	<0.021	<0.021	0.025	<0.023	NS
Volatile Organic Compounds (VOCs)																				
No Detections																				
Polynuclear Aromatic Hydrocarbons (PAHs)																				
No Detections																				
Calculated cBaP Equivalent	NE	1.4	2	3	14	<0.016	<0.016	<0.016	<0.017	<0.016	<0.017	<0.017	<0.016	0.148	0.006	0.064	0.052	<0.018	0.035	NS
<i>Benzo(a)anthracene</i>	56-55-3	See cBaP	See cBaP	See cBaP	See cBaP	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.0962	<0.0548	0.0354	0.0278	<0.0125	0.0225	NS
<i>Benzo(a)pyrene</i>	50-32-8	1.4	2	3	14	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.116	<0.0548	0.0505	0.0397	<0.0125	0.0254	NS
<i>Benzo(b)fluoranthene</i>	205-99-2	See cBaP	See cBaP	See cBaP	See cBaP	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.155	0.057	0.0655	0.0595	<0.0125	0.0395	NS
<i>Benzo(k)fluoranthene</i>	207-08-9	See cBaP	See cBaP	See cBaP	See cBaP	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.0546	<0.0548	0.0322	0.0271	<0.0125	0.015	NS
<i>Chrysene</i>	218-01-9	See cBaP	See cBaP	See cBaP	See cBaP	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.136	<0.0548	0.0657	0.0474	<0.0125	0.0286	NS
<i>Indeno(1,2,3-cd)pyrene</i>	193-39-5	See cBaP	See cBaP	See cBaP	See cBaP	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	<0.0528	<0.0548	<0.0111	<0.0114	<0.0125	0.0164	NS
Anthracene	120-12-7	1,300	7,880	45,400	100,000	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	<0.0528	<0.0548	0.0172	<0.0114	<0.0125	<0.0118	NS
Benzo(g,h,i)perylene	191-24-2	NE	NE	NE	NE	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.118	<0.0548	<0.0111	0.0419	<0.0125	0.0253	NS
Fluoranthene	206-44-0	670	1,080	6,800	48,600	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.312	0.0715	0.102	0.0876	<0.0125	0.0565	NS
Phenanthrene	85-01-8	NE	NE	NE	NE	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.197	<0.0548	0.0597	0.0409	<0.0125	0.0272	NS
Pyrene	129-00-0	440	890	5,800	43,000	<0.0117	<0.0114	<0.0113	<0.0119	<0.0113	<0.0119	<0.0121	<0.0114	0.245	0.0648	0.097	0.0754	<0.0125	0.0457	NS
Petroleum Hydrocarbons																				
Diesel Range Organics (DRO)	NE		100 ⁽¹⁾			<8.9	<7.7	<9.6	<8.6	<9.0	<8.6	<8.6	<8.2	56.7	81.4	43	<10.2	<11.0	<11.4	NS
Gasoline Range Organics (GRO)	NE		100 ⁽¹⁾			<12.2	<11.6	<11.6	<12.0	<10.8	<12.3	<12.0	<11.7	<11.2	<11.8	<11.2	<12.2	<13.7	<11.6	<10.0

Notes:

- Results in milligrams per kilogram (mg/kg), which is roughly equivalent to parts per million
- < = Less than
- **Bold** = result above laboratory reporting limit
- (1) Screening limit based on MPCA Best Management Practices for Off-Site Reuse of Excess Fill
- (2) Screening limit for trivalent chromium
- Screening limit exceeded

- NS = Not Sampled
- NE = Not established
- IND = Industrial
- RES = Residential
- MPCA = Minnesota Pollution Control Agency
- SLV = MPCA Remediation Division Soil Leaching Pathway (6/13)
- SRV = MPCA Soil Reference Value - Risk Based Site Evaluation Guidance for Soil - Human Health Pathway (6/09 and 08/17)
- STW = Short Term Worker

- cBaP = Carcinogenic Benzo(a)pyrene
- cBaPs calculated using MPCA Remediation Soil Reference Spreadsheet

Table 2
Summary of Detected Analytes in Groundwater
Pine City Industrial Park: Parcel A
Carlson McCain Project No. 7687-00

Analyte	CAS No.	MDH HRL	DP-1 GW 5/17/19	DP-2 GW 5/17/19	DP-3 GW 5/17/19	DP-4 GW 5/17/19	DP-5 GW 5/17/19	DP-8 GW 5/17/19	MWGW 5/17/19	Trip Blank 5/17/19
Metals										
Barium	7440-39-3	2,000	57.3	53.8	68.4	27.7	56.4	16	73.8	NS
Volatile Organic Compounds (VOCs)										
No Detections			No Detections							
Polynuclear Aromatic Hydrocarbons (PAHs)										
No Detections			No Detections							
Petroleum Hydrocarbons										
Diesel Range Organics (DRO)	NE	50 ⁽¹⁾	<120	<110	<120	<120	<110	<120	<100	NS
Gasoline Range Organics (GRO)	NE	50 ⁽¹⁾	<100	<100	<100	<100	<100	<100	<100	<100

Notes:

- Results in micrograms per liter (µg/L), which is roughly equivalent to parts per billion (ppb)
- < = Less than the laboratory reporting limit
- **Bold** = result above laboratory reporting limit
- HRL Exceedance
- (1) In the absence of a HRL for DRO or GRO, the MDH draft "Drinking Water Criteria for Petroleum Constituents" level of 50 µg/L was used for screening purposes
- MDH HRL = Minnesota Department of Health, Health Risk Limit
- NE = Not Established
- NS = Not Sampled

Table 3
Summary of Detected Analytes in Soil Vapor
Pine City Industrial Park: Parcel A
Carlson McCain Project No. 7687-00

Analyte	CAS #			Analytical Results			
		COM/IND ISVs	COM/IND 33X ISVs	VP-1 05/17/2019	VP-2 05/17/2019	VP-3 05/17/2019	VP-4 05/17/2019
Acetone	67-64-1	110,000	3,700,000	23.7	64.7	15.7	14
Benzene	71-43-2	45	1,500	1.4	3.5	2	0.71
Chloromethane	74-87-3	320	11,000	1.4	<3.6	1.4	1.1
Dichlorodifluoromethane	75-71-8	NA	NA	2.8	<8.6	2.6	3
Ethanol	64-17-5	NA	NA	4.9	271	5.7	5.6
Ethylbenzene	100-41-4	39	1,300	2.1	<7.5	<1.6	<1.6
n-Hexane	110-54-3	2,500	83,000	1.5	15	3.2	1.3
Methylene Chloride	75-09-2	2,100	70,000	15	205	19	15.2
Propylene	115-07-1	11,000	370,000	21.3	68.7	121	15.2
Tetrachloroethene	127-18-4	33	1,100	<1.2	349	58.3	<1.2
Tetrahydrofuran	109-99-9	7,000	230,000	10.3	21.4	11.7	10.7
Toluene	108-88-3	14,000	470,000	3.5	11.4	5	3.1
Trichloroethene	79-01-6	7	230	<0.95	<4.6	2.4	<0.97
1,2,4-Trimethylbenzene	95-63-6	210	7,000	2.9	<8.5	<1.8	<1.8
m&p-Xylene	108-38-3	350	12,000	6.4	<15.0	<3.2	<3.1
o-Xylene	95-47-6	350	12,000	2.2	<7.5	<1.6	<1.6

Notes:

- Results in µg/m³ (micrograms per cubic meter)
- **Bold** = result above laboratory reporting limit
- < = Less than
- NE = Not Established
- Intrusion screening values (ISVs) are numerical values representing the safe amount of a chemical in indoor air for people who occupy a building, published May 29, 2019 by the MPCA.
- 33X accounts for the U.S. Environmental Protection Agency (EPA) default vapor intrusion attenuation factor of 0.03
- Result exceeded ISV
- Result exceeded 33x ISV

Table 4
Summary of Lead Sample Analytical Results
Pine City Industrial Park: Parcel A
Carlson McCain Project No. 7687-00

Sample Location	Lead Concentration	XRF Reading	Adjusted XRF Reading
XF-4	10.9	118	249
XF-40	26.2	42	51
XF-56	12.4	24	5
XF-68	40.4	46	62
XF-82	586	338	821
XF-111	1,720	867	2,196
XF-128	906	218	509
XF-146	696	170	384
XF-164	125	41	49
XF-190	170	160	358
XF-206	22,100	4,515	11,679
XF-229	25,100	6,437	16,675
XF-252	567	220	514
XF-270	167	55	85
XF-288	829	596	1,492
XF-314	401	195	449
XF-332	38	41	49
XF-350	3,950	676	1,700
XF-364	2,600	1,007	2,560
XF-399	301	224	525
XF-408	7.7	16	0

Notes:

- Screening limit of 700 parts-per-million exceeded
- XRF readings adjusted based on a linear regression "line of best fit," which was calculated using analytical results of confirmation samples. Details of these calculations are found in Appendix D.

Table 5
Summary of XRF Screening Results
Pine City Industrial Park: Parcel A
Carlson McCain Project No. 7687-00

Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)	Sample Location	XRF Reading (ppm)	Adjusted Value (ppm)
XF-1	13	-	XF-52	25	7	XF-103	91	179	XF-154	34	31	XF-205	372	909	XF-256	274	655	XF-307	209	486	XF-358	56	88
XF-2	15	-	XF-53	51	75	XF-104	159	356	XF-155	39	44	XF-206	4,515	11,679	XF-257	218	509	XF-308	1,263	3,225	XF-359	284	681
XF-3	17	-	XF-54	17	-	XF-105	90	176	XF-156	63	106	XF-207	1,160	2,958	XF-258	202	467	XF-309	320	774	XF-360	502	1,247
XF-4	118	249	XF-55	10	-	XF-106	59	96	XF-157	27	13	XF-208	433	1,068	XF-259	205	475	XF-310	390	956	XF-361	11,122	28,854
XF-5	10	-	XF-56	24	5	XF-107	121	257	XF-158	96	192	XF-209	281	673	XF-260	262	623	XF-311	177	402	XF-362	5,870	15,201
XF-6	26	10	XF-57	20	-	XF-108	196	452	XF-159	66	114	XF-210	237	558	XF-261	69	122	XF-312	225	527	XF-363	2,421	6,236
XF-7	31	23	XF-58	20	-	XF-109	54	83	XF-160	60	98	XF-211	634	1,590	XF-262	222	519	XF-313	418	1,029	XF-364	1,007	2,560
XF-8	14	-	XF-59	20	-	XF-110	492	1,221	XF-161	64	109	XF-212	385	943	XF-263	345	839	XF-314	195	449	XF-365	862	2,183
XF-9	0	-	XF-60	30	20	XF-111	867	2,196	XF-162	284	681	XF-213	88	171	XF-264	283	678	XF-315	95	189	XF-366	2,462	6,342
XF-10	0	-	XF-61	18	-	XF-112	575	1,437	XF-163	334	811	XF-214	85	163	XF-265	216	504	XF-316	74	135	XF-367	505	1,255
XF-11	16	-	XF-62	30	20	XF-113	141	309	XF-164	41	49	XF-215	1,163	2,966	XF-266	162	363	XF-317	65	111	XF-368	2,114	5,438
XF-12	14	-	XF-63	48	67	XF-114	78	145	XF-165	76	140	XF-216	406	998	XF-267	459	1,135	XF-318	23	2	XF-369	2,813	7,255
XF-13	15	-	XF-64	38	41	XF-115	121	257	XF-166	136	296	XF-217	152	337	XF-268	145	319	XF-319	24	5	XF-370	4,570	11,822
XF-14	16	-	XF-65	59	96	XF-116	110	228	XF-167	231	543	XF-218	867	2,196	XF-269	119	252	XF-320	40	46	XF-371	9,002	23,343
XF-15	13	-	XF-66	25	7	XF-117	54	83	XF-168	239	564	XF-219	393	964	XF-270	55	85	XF-321	50	72	XF-372	2,730	7,039
XF-16	11	-	XF-67	27	13	XF-118	99	200	XF-169	605	1,515	XF-220	884	2,240	XF-271	62	103	XF-322	11	-	XF-373	1,990	5,115
XF-17	16	-	XF-68	46	62	XF-119	56	88	XF-170	484	1,200	XF-221	298	717	XF-272	19	-	XF-323	24	5	XF-374	156	348
XF-18	29	18	XF-69	35	33	XF-120	98	197	XF-171	883	2,238	XF-222	841	2,128	XF-273	84	161	XF-324	30	20	XF-375	384	941
XF-19	21	-	XF-70	40	46	XF-121	-	-	XF-172	2,173	5,591	XF-223	174	395	XF-274	101	205	XF-325	33	28	XF-376	3,201	8,263
XF-20	14	-	XF-71	72	129	XF-122	76	140	XF-173	789	1,993	XF-224	73	132	XF-275	169	382	XF-326	13	-	XF-377	713	1,796
XF-21	18	-	XF-72	40	46	XF-123	235	553	XF-174	2,152	5,536	XF-225	68	119	XF-276	477	1,182	XF-327	9	-	XF-378	209	486
XF-22	28	15	XF-73	37	39	XF-124	112	233	XF-175	241	569	XF-226	201	465	XF-277	237	558	XF-328	23	2	XF-379	954	2,422
XF-23	43	54	XF-74	18	-	XF-125	410	1,008	XF-176	418	1,029	XF-227	523	1,302	XF-278	1,055	2,685	XF-329	17	-	XF-380	411	1,011
XF-24	31	23	XF-75	44	57	XF-126	371	907	XF-177	333	808	XF-228	2,108	5,422	XF-279	1,834	4,710	XF-330	17	-	XF-381	842	2,131
XF-25	41	49	XF-76	32	26	XF-127	191	439	XF-178	107	220	XF-229	6,437	16,675	XF-280	999	2,539	XF-331	11	-	XF-382	844	2,136
XF-26	24	5	XF-77	80	150	XF-128	218	509	XF-179	141	309	XF-230	8,890	23,052	XF-281	362	883	XF-332	41	49	XF-383	469	1,161
XF-27	59	96	XF-78	57	90	XF-129	460	1,138	XF-180	133	288	XF-231	1,206	3,077	XF-282	501	1,245	XF-333	23	2	XF-384	183	418
XF-28	36	36	XF-79	485	1,203	XF-130	159	356	XF-181	92	181	XF-232	3,355	8,664	XF-283	497	1,234	XF-334	22	-	XF-385	316	764
XF-29	21	-	XF-80	405	995	XF-131	1,540	3,946	XF-182	104	213	XF-233	931	2,362	XF-284	669	1,681	XF-335	21	-	XF-386	1,558	3,992
XF-30	30	20	XF-81	81	153	XF-132	947	2,404	XF-183	99	200	XF-234	324	785	XF-285	1,043	2,654	XF-336	32	26	XF-387	511	1,271
XF-31	30	20	XF-82	338	821	XF-133	1,270	3,244	XF-184	311	751	XF-235	979	2,487	XF-286	689	1,733	XF-337	44	57	XF-388	364	889
XF-32	38	41	XF-83	1,275	3,257	XF-134	1,652	4,237	XF-185	140	306	XF-236	1,535	3,933	XF-287	310	748	XF-338	39	44	XF-389	330	800
XF-33	15	-	XF-84	76	140	XF-135	665	1,671	XF-186	115	241	XF-237	776	1,960	XF-288	596	1,492	XF-339	39	44	XF-390	197	454
XF-34	15	-	XF-85	52	77	XF-136	600	1,502	XF-187	88	171	XF-238	1,435	3,673	XF-289	459	1,135	XF-340	21	-	XF-391	283	678
XF-35	0	-	XF-86	70	124	XF-137	236	556	XF-188	46	62	XF-239	634	1,590	XF-290	165	371	XF-341	32	26	XF-392	424	1,045
XF-36	0	-	XF-87	128	275	XF-138	501	1,245	XF-189	432	1,065	XF-240	330	800	XF-291	4,430	11,458	XF-342	41	49	XF-393	138	301
XF-37	31	23	XF-88	41	49	XF-139	1,040	2,646	XF-190	160	358	XF-241	313	756	XF-292	4,014	10,377	XF-343	15	-	XF-394	58	93
XF-38	28	15	XF-89	19	-	XF-140	308	743	XF-191	114	239	XF-242	455	1,125	XF-293	1,108	2,823	XF-344	737	1,858	XF-395	45	59
XF-39	9	-	XF-90	52	77	XF-141	255	605	XF-192	450	1,112	XF-243	1,013	2,576	XF-294	1,077	2,742	XF-345	76	140	XF-396	22	-
XF-40	42	51	XF-91	41	49	XF-142	320	774	XF-193	680	1,710	XF-244	2,676	6,899	XF-295	3,830	9,898	XF-346	373	912	XF-397	162	363
XF-41	55	85	XF-92	63	106	XF-143	188	431	XF-194	265	631	XF-245	199	460	XF-296	162	363	XF-347	79	148	XF-398	70	124
XF-42	53	80	XF-93	22	-	XF-144	47	64	XF-195	369	902	XF-246	115	241	XF-297	430	1,060	XF-348	57	90	XF-399	224	525
XF-43	105	215	XF-94	60	98	XF-145	748	1,887	XF-196	1,351	3,454	XF-247	715	1,801	XF-298	292	701	XF-349	55	85	XF-400	12	-
XF-44	57	90	XF-95	57	90	XF-146	170	384	XF-197	834	2,110	XF-248	106	218	XF-299	493	1,224	XF-350	676	1,700	XF-401	23	2
XF-45	46	62	XF-96	93	184	XF-147	147	324	XF-198	1,350	3,452	XF-249	59	96	XF-300	1,313	3,355	XF-351	113	236	XF-402	316	764
XF-46	22	-	XF-97	51	75	XF-148	218	509	XF-199	374	915	XF-250	186	426	XF-301	3,680	9,508	XF-352	387	948	XF-403	60	98
XF-47	51	75	XF-98	34	31	XF-149	179	408	XF-200	269	642	XF-251	100	202	XF-302	999	2,539	XF-353	263	626	XF-404	27	13
XF-48	33	28	XF-99	64	109	XF-150	225	527	XF-201	470	1,164	XF-252	220	514	XF-303	1,630	4,180	XF-354	27	13	XF-405	29	18
XF-49	37	39	XF-100	41	49	XF-151	130	280	XF-202	293	704	XF-253	85	163	XF-304	1,111	2,830	XF-355	77	142	XF-406	33	28
XF-50	79	148	XF-101	43	54	XF-152	72	129	XF-203	291	699	XF-254	196	452	XF-305	457	1,130	XF-356	39	44	XF-407	31	23
XF-51	17	-	XF-102	45	59	XF-153	57	90	XF-204	167	376	XF-255	521	1,297	XF-306	235	553	XF-357	45	59	XF-408	16	-

Notes:

- Screening limit of 700 parts-per-million exceeded
- XRF readings adjusted based on a linear regression "line of best fit," which was calculated using analytical results of confirmation samples. Details of these calculations are found in Appendix D.

APPENDIX A

CARLSON MCCAIN
STANDARD OPERATING PROCEDURES

Revised 8/14/17



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APPENDICES

Appendix A Field Documentation Forms

1.0 SOIL SAMPLING

1.1 Scope and Application

This Standard Operating Procedure (SOP) is applicable to the collection of representative soil samples. Analysis of soil may determine whether concentrations of specific contaminants exceed established threshold action levels, or if the concentrations present a risk to public health, welfare, or the environment. The methodologies discussed in this procedure are applicable to the sampling of (dry) soil. Typically, this term “soil” refers to samples which are not covered with an aqueous layer for more than 30% of the time. The descriptions and procedures are generic in nature and may be modified in whole or part to meet the handling and analytical requirements of the contaminants of concern, as well as the constraints presented by the sampling area. However, if modifications occur, they should be documented in the site logbook or report summarizing field activities.

1.2 Method Summary

Soil samples may be recovered using a variety of methods and equipment, depending on the portion of the soil profile required (surface versus subsurface), and the type of sample required (disturbed versus undisturbed) and the soil type. Soil is collected directly, using a hand-held device such as hand scoop, auger or a post hole digger, or indirectly using a power activated device such as power augers, back hoes, or drill rigs. Following collection, the soil can be homogenized in a container constructed of inert material and transferred to the appropriate sample containers.

1.3 Manual Soil Sampling

Shallow soil samples are those which can be obtained manually through the use of hand sampling equipment (bucket auger or hand probe), and are limited in depth to no greater than four feet. Sampling is typically performed randomly or on a grid pattern depending on the physical features present at the site and the size of the area to be investigated.

1.3.1 Sampling Surface Soils with a Trowel or Hand Scoop

For target sample depths less than 2 feet, spoons, spades, or shovels may be used to collect the sample. When collecting the sample via spoon or shovel, the hole is dug down to the chosen depth, and a stainless steel or plastic scoop is used to collect the sample. Care should be taken to not collect the sample with chrome or other materials that are plated.

The following procedures are used to collect soil samples with the scoop or trowel:

1. Remove vegetation and the top layer of soil. Dig down through the surface soils to the desired depth. Loosen “fresh” soil from the sampling area, and collect the fresh soil.
2. Transfer the discrete grab sample into the appropriate sample container.
3. For composite samples, homogenize grabs samples in a stainless steel, polyethylene, or glass mixing container using the appropriate tool
4. Secure the cap tightly.

5. Label the sample containers, record the appropriate data for the sample in the field notes, and document the sample on the chain of custody.
6. Decontaminate equipment following procedures listed in Section 4.0.

1.3.2 Sampling Surface Soils with a Hand Auger

Hand Augers are used from depths ranging typically from 0-4 feet below the ground surface. Stainless steel auger buckets with cutting heads are typically used to advance a borehole. The bucket is advanced deeper into the sub-surface by simultaneously pushing and turning using an attached handle.

Augers holes are advanced one bucket at a time until the sample depth is achieved. The following procedure is used to collect a soil sample via a hand auger:

1. Attach the auger bit to an extension rod, then attach the “T” handle to the drill extension rod.
2. Clear the area to be sample of any surface debris.
3. Insert the auger into the ground and begin augering to desired depth. Periodically remove any accumulated soil from the auger bucket.
4. After reaching the desired depth, slowly withdraw the auger bucket.,
5. Remove the top inch of soils, and transfer the sample into an appropriate sample or homogenization container.
6. Decontaminate the auger and auger bucket according to the procedures listed in Section 4.0.

All soil samples manually obtained are classified according to applicable American Society of Testing and Material (ASTM), and/or Unified Soil Classification Standards (USCS) by an experienced field geologist/hydrogeologist and information is entered onto a soil sample collection log sheet (Appendix A).

Sampling equipment for manual soil samples is decontaminated prior to beginning sampling and between boreholes to minimize the potential for any cross-contamination.

1.4 Sampling from Soil Borings

Soil borings are drilled at sites where deeper subsurface information is required to determine the geologic setting of a site and/or to determine the vertical extent of contamination. All soil borings are drilled in accordance with Minnesota Department of Health (MDH) Well Construction Code (Minnesota Rules 4725). Drilling services are provided by a licensed and registered well contractor in the State of Minnesota.

Prior to starting intrusive work, underground utilities are located through the Gopher One-Call State System. In addition, buried utilities are located by private locator contractors.

1.4.1 Direct Push Soil Borings

Soil borings advanced by direct push technology utilizes a truck mounted drill rig which employs a hydraulically powered probe that utilizes static force and percussion to advance a sample liner into the subsurface for collection of soil and groundwater samples. Soils are collected by either depth-discretely or continuously depending on the type of sampler used. In general, direct push methods follow ASTM D6282 “Standard Guide for Direct Push Soil Sampling for Environmental Site Characterizations”. Soil samples collected from direct push soil borings and collected directly from the sample liner.

1.4.2 Hollow and Solid Stem Auger

Solid stem and hollow stem auger drilling utilizes continuous-flight augers which mechanically cut and transport cuttings to the land surface. Soils may be collected using a split barrel or thin-walled tube (also called a Shelby tube) during either drilling operation. In each case, little or no drilling fluid is required in the drilling process. Drilling and sample collection follow ASTM D6151 “Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling for drilling”, ASTM D1586-11 “Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils” for split barrel sampling, and ASTM D1587-15 “Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes”. Soil samples collected using either hollow stem or solid stem auger are collected directly from the split barrel sampler or the thin walled tube sampler.

1.4.3 Mud Rotary

Mud rotary uses rapid rotation of a drill bit to advance the borehole to depth. The bit on the end of the drill rods cut, and breaks up the material at the bottom of the hole into smaller cuttings. These cuttings are then brought to the surface by pumping drilling fluids down through the drill rods and bit, and up through the borehole annulus. With mud rotary, soils can be sampled by using split barrel or thin-walled tube techniques in poorly lithified sediments; in consolidated rock, coring can be completed using mud-rotary. When using mud rotary drilling techniques, ASTM D5783 “Standard Guide for Use of Direct Rotary Drilling with Water-Based Drilling Fluid for Geoenvironmental Exploration and the Installation of Subsurface Water-Quality Monitoring Devices” is used for drilling, and ASTM D1586-11 “Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils” for split barrel sampling, and ASTM D1587-15 “Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes” is used for obtaining the thin walled sample. Soil samples collected from mud rotary are taken directly from the split barrel sampler.

1.4.4 Air Rotary

Air rotary uses the rapid rotation of a drill bit to advance the borehole to depth; and the bit breaks the material at the bottom of the borehole, similar to mud rotary. Air rotary, however, uses compressed air pumped down the drill rods to bring the cuttings back to the surface. Sediment can be sampled by using split-barrel sampling techniques. When drilling with air rotary, ASTM D5782-95(2012) “Standard Guide for Use of Direct Air Rotary Drilling for Geoenvironmental Exploration and the Installation of Subsurface Water-Quality Monitoring Devices” is used for drilling, and ASTM D1586-11 “Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils” is used for soil collection. Soils samples obtained from air rotary are taken directly from the split barrel sampler.

1.4.5 Rota-Sonic

Rota-Sonic drilling methods allow for high quality continuous soil samples. Sonic utilizes vibratory methods to drill two core barrels into the ground, one providing a continuous casing of the borehole to prevent cross-contamination and one for soil extrusion. Soils samples are extruded from the core barrel using vibration, and are released into plastic sleeves from the sampler. Sonic drilling methods follow ASTM D3914-04(2010) "Standard Practice for Sonic Drilling for Site Characterization and the Installation of Subsurface Monitoring Devices". Soil samples collected from Rota-Sonic drilling are taken directly from the plastic sleeve.

1.5 Soil Sample Collection

During collection of the soil sample, all soil and bedrock samples are classified by an experienced Carlson McCain field geologist/hydrogeologist according to applicable ASTM and USCS standards, and entered onto a field boring log sheet (Appendix A). Included on the boring log are the following details:

1. Name of project and site.
2. Borehole number.
3. Location of boring.
4. Type, manufacturer, and model number of the drill rig.
5. Type and size of bit(s) used.
6. Depth of each change of stratum.
7. Thickness of each stratum.
8. Identification of the material of which each stratum is composed according to ASTM D 2488 *Standard Visual Manual Procedure* and/or USCS classification standards. Soil descriptions include recovery, consistency, matrix color (using a Munsell Color Chart), material classification/physical description (using procedures described in ASTM D 2488), field moisture content, plasticity, cohesiveness, sedimentary structures, weathering zone and carbonate status, observed secondary features, depositional interpretation, soil horizon (if applicable), and geologic group, formation, or member name.
9. Depth at which groundwater is first encountered.
10. Depth to water level.
11. Reference elevation for all depth measurements.
12. Depth where any problems were encountered.
13. Photo-ionization field screening information, if applicable.
14. Depths of split-spoon, Shelby tube, or any other type of sample.

1.5.1 Photo-Ionization Detector (PID) Screening

Depending on contaminants of concern at the site, and site-specific requirements PID field-screening of the soil may be required. Prior to field screening, the PID will be calibrated following the manufacturer's instructions. Field screening procedures follow the MPCA bag headspace methods:

1. Using a self-sealing, quart-size polyethylene freezer bag, fill half the bag with the soil sample taken immediately directly from the spoon/shovel of soil (freshest location of soil), auger bucket, the split barrel sampler, thin-walled sampler, or the rota-sonic sleeve. Immediately seal the bag.
2. Manually break up the soil clumps within the bag, and allow the sample to sit for at least ten minutes at approximately room temperature. Vigorously shake the bag for 15 seconds before and after letting the sample sit at room temperature. Do not let the sample sit for longer than 20 minutes prior to screening.
3. Create a small hole in the bag and insert the PID probe to approximately one-half the way into the bag (one-half the way between the top of the bag and the soil). Keep the probe free of water droplets and soil particles.
4. Record the highest meter response on the sampling form. Maximum response typically occurs within about two seconds. Discard the soil sample and polyethylene bag.

1.6 Field Sampling Containers, Sample Preservation, Handling and Storage

The types of sample containers depend on the contaminants of concern for a particular site. The sample volume is a function of the analytical requirements and will be specified in the site-specific work plan. In all cases, sampling containers will be laboratory-supplied and any chemical preservatives added to the container will be added by the laboratory before the samples are collected. Depending on the contaminants of concern at the site, the sample containers may consist of the following:

- HCL-preserved 40-mil vials (for DRO sample analysis)
- MeOH-preserved 40-mil vials (for VOC or GRO analysis)
- 4 oz wide mouth jars (for metals, PCBs, etc.)

Chemical preservation of solids is generally not recommended. Cooling is usually the best approach, supplemented by the appropriate holding time.

1.7 Soil Sampling Procedures

1.7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and required equipment and supplies according to the sampling QA plans for the site.
2. Obtain necessary sampling and monitoring equipment.
3. Decontaminate or pre-clean equipment, and ensure it is in working order.

4. Prepare schedules, and coordinate with staff, client, and regulatory agencies, if appropriate.
5. Perform a general site survey prior to entry in accordance with the site-specific health and safety plan.

1.8 Filling Sample Containers

Depending on site-specific investigation tasks, collecting the sample may be done either through grab or composite sampling. In either case, the following steps is the general procedure to follow for filling sample containers:

1. Between each sample location, don new, clean nitrile gloves.
2. If sampling for GRO, DRO, or VOCs: using a Terra Core sampler, cut syringe, or US Analytical Eazydraw Syringe, collect the correct amount of sample into the core sampler, and put the cored soil directly into the appropriate sample container(s).
3. For metals, PCBs, or analysis requiring an untared weight jar, collect a composite sample and fill the jar from the composited sample. Fill the jar to approximately zero headspace.
4. If dedicated sampling equipment is not used, decontaminate the sampling equipment. Decontamination of samplers is provided in Section 4.0.
5. Label all containers and place in a covered cooler with ice. The label should include the following information:
 - Type of analysis
 - Name of facility
 - Monitoring Point Identification
 - Name of person collecting the sample
 - Time and Date the sample was collected
 - Name of preservative added, if applicable
6. Fill out the chain of custody with the sample information.
7. Ship, transport, collect, and deliver the samples under the chain of custody.

2.0 WATER QUALITY SAMPLING

2.1 Introduction

This section defines procedures to be used for ground water quality measurements and for collecting and handling ground water samples obtained from monitoring wells. Deviations from these procedures may be required by unforeseen circumstances that develop during the sampling event. Such deviations shall be approved by the hydrogeologist or the field crew leader and documented as described in the protocol.

2.2 Quality Assurance for Field Procedures

Contamination of samples can occur prior to and during sampling. Good management and quality control can minimize the chances of contamination. The following items are common ways cross contamination may occur:

- Storing or transporting sampling equipment improperly.
- Contaminating equipment or sample bottles onsite by setting them on or near potential contamination sources such as uncovered ground, a contaminated vehicle, vehicle exhaust, or blowing dust.
- Handling bottles or equipment with dirty hands or gloves.
- Cleaning well purging or sampling devices inadequately.

Field personnel should assume that contamination exists on the soil surface and vegetation, near sampling points, in wash water, etc. Cross Contamination can be minimized by taking the following precautions:

- Minimize the amount of rise water left on washed materials.
- Minimize the time sampling containers are exposed to airborne dust or volatile contaminants in the air.
- Place equipment on clean, ground-covering materials instead of on the ground.
- Wear clean gloves made of appropriately inert material. Keep gloves clean while handling sampling-related materials. Replace gloves with a new pair when soiled and between each sampling location.

Clean, disposable gloves made of appropriately inert material (i.e. nitrile) will be worn by all field crew. Gloves will be kept clean while handling sampling-related materials. The gloves will be replaced by a new pair when soiled and between each sampling site.

2.3 Sampling Containers and Preservation

Laboratories will supply all containers and preservatives needed for sampling. The laboratory should be consulted prior to completing the sampling event to determine the correct amount of sample that needs to be collected per amount of preservative. In general, all preservatives will be added by the laboratory

prior to sampling. Depending on the contaminants of concern at the site, the sampling containers may consist of the following:

- 1-Liter Plastic Bottles, unpreserved (for major and minor ion analysis)
- 125-ml Plastic Bottles, unpreserved (for chromium and total coliform bacteria analyses)
- 125-ml Plastic Bottles, H₂SO₄ preserved (for total phosphorus analysis)
- 250-ml Plastic Bottles, H₂SO₄ preserved (for nitrogen series analysis)
- 250-ml Plastic Bottle, Zn(C₂H₃O₂) preserved (for sulfide analysis)
- 500-ml Plastic Bottles, NaOH preserved (for cyanide analysis)
- 500-ml Plastic Bottles, HNO₃ preserved (for metals analysis)
- 3, 40-mil purge and trap vials, HCl preserved (for VOC analysis)
- 2, 1-Liter amber glass jars, unpreserved (for non-volatile organics)
- 1-Liter amber glass jar, unpreserved (for dioxins and dibenzo furan analysis)
- 1-Liter glass jar, H₂SO₄ preserved (for total organic carbon analysis)
- 1-gallon Plastic Bottle, HNO₃ preserved (for radium, gross alpha, and gross beta analysis)

2.4 Sampling Equipment

The most common types of purging and sampling equipment include the following:

- Pumps including submersible bladder pumps or low flow variable-speed electric submersible pumps with Teflon® bladder
- Pump discharge lines/ tubing
- Regulators and compressed nitrogen or air tanks
- Bailers
- Flow through cells
- Miscellaneous equipment, such as rope, generators, air compressors with air filter, etc.

2.5 Well Stabilization Measurements

Specific conductance, pH, and temperature are measured in the field to determine well stabilization while purging. Site-specific monitoring plans may also require reduction/oxidation potential be measured if trace metals are monitored. Water quality measurements will be taken within a closed Flow Cell whenever possible. Calibration, general care, maintenance, and operation instructions of the Flow Cell will be performed per manufacturer's specifications. Wells will be considered stable when three wells volumes have been purged, and the following criteria have been met:

- Water temperature is stabilized to +/- 0.5 degrees Celsius (C)
- pH is stabilized to +/- 0.1 units
- Specific conductance (temperature corrected) is stabilized to +/- 10%
- Turbidity less than or equal to 50 NTU

2.5.1 Water Quality Measurements with a Flow Cell

When taking water quality measurements within a closed flow cell, the following precautions will be taken:

- Maintain a continuous and steady flow of sample water through the flow cell as practical, throughout the measurement period.
- Keep discharge velocities through the flow cell low to prevent problems of streaming potential with probes.
- Fully immerse all probes without touching the side of the sirtight, non-metallic flow cell.

2.5.2 Water Quality Measurements Without a Flow Cell

When a pump is not used, or a closed flow cell is not available the groundwater sample should be poured into a container that minimizes exposure to sunlight and atmosphere, and the probes allowed to measure the water in the container.

2.5.3 pH

1. Before beginning measurements for the day, calibrate the pH meter by using a two-point calibration method and following the manufacturer's specifications. Record calibration on calibration log.
2. Measure and record the pH to the nearest 0.1 units on the well purging and sample collection form.

2.5.4 Specific Conductance

The following steps will be taken to measure the specific conductance at each well:

1. Inspect the probes for good condition to ensure no chip in the coating.
2. Perform calibration of the conductivity meter each day before taking measurements at the first site. Follow the calibration procedures as provided in the manufacturer's specifications. Record calibration on calibration log.
3. Follow the measurement procedures in the manufacturer's instructions.
4. Measure and record the specific conductance to the nearest 10 umhos/cm on the well purging and sample collection form.

2.5.5 Temperature

The following steps will be taken to measure the temperature at each well:

1. Inspect the temperature probe.
2. Perform calibration of the temperature probe each day before taking measurements at the first site. Follow the calibration procedures provided in the manufacturer's specifications. Record calibration on calibration log.
3. Measure and record the groundwater temperature readings to the nearest 0.1 degrees Celsius on the well purging and sample collection form.

2.5.6 Reduction/Oxidation Potential (Eh)

Measure redox potential in the field using a direct reading probe (preferably using a flow cell). Take care to avoid turbulence and sample aeration.

2.6 Sampling Wells Using a Bailer

Bailers are only acceptable for purging and sampling wells where the static water level in the well is 30 feet or less from grade, or in extremely slow recharging wells. Record the type of bailer used to sample each well on the well purging and sample collection form. Use bailers in the following manner:

- Use only new disposable certified clean, high-density polyethylene, polytetrafluoroethylene or laboratory cleaned stainless steel bailers for sampling. Reusable PVC bailers can be used for purging only.
- Use a new retrieval line for each sampling point.
- Do not allow the bailer or line to touch the ground, a dirty ground cloth, or any other potentially contaminated surface.
- Do not allow the bailer to free fall into the water column. The bailer should enter the water column as gently as possible. A knot in the line referencing the ground water level is useful.
- Try not to submerge the bailer much below the top to prevent mixing and to ensure water removal from the top of the water column.
- Withdraw the bailer gently from the water column and bring it to the surface quickly.
- Keep the check valve on the bottom clear of sediment and in proper working order to minimize the amount of water that drips back into the well.
- If the same bailer is not used for purging and sampling, discard the first two sample bailer volumes as rinse water.
- Transfer the sample from the bailer to the sample container quickly while minimizing turbulence and exposure to the atmosphere.

2.7 Sampling Wells Using a Pump

Pumps can be used to sample any well with sufficient recovery. If recovery is so slow that a satisfactory water column height (for normal pump operation) is not reached in a reasonable amount of time, a bailer can be used for sample collection. Record the type of pump used to sample each well on the well purging and sample collection form. Use pumps in the following manner:

- Adjust the flow rate to the lowest practical setting, and maintain a continuous pumping rate. Slow recharging wells or wells with a small water column height may require cycling of the pump. Pumping should be continuous and sampling conducted immediately following purging. The pump must be equipped with a check valve or operate so as to prevent water in the discharge line from flowing back into the well.
- Water that has entered the pump should not be allowed to re-enter the well during purging or sampling.

2.7.1 Sampling with a Peristaltic Pump

The following step-by-step procedures describe the process of purging and sampling with a peristaltic pump:

1. Cut a length of standard-cleaned Teflon® tubing, equal to the well depth plus an additional five to ten feet. Enough tubing is needed to run from the ground surface up to the top of the well casing and back down to the bottom of the well. This will allow for operation of the pump at all possible water level conditions in the well.
2. Place one end of the tubing into the vacuum side of the peristaltic pump head. Proper sizing of the Teflon® and Silastic® or Tygon® tubing should allow for a snug fit of the Teflon® tubing inside the flexible tubing mounted in the pump head.
3. For purging, run a short section of tubing (does not have to be Teflon®) from the discharge side of the pump head to a closed flow cell meter. Run a short section of tubing from the closed flow cell meter to a graduated bucket.
 - 3.1 Place the free end of the Teflon® tubing into the well until the end of the tubing is 2 feet below the surface of the water column or 2 feet below the height of the well screen.
 - 3.2 Secure the Teflon® tubing to the well casing or other secure object using electrician's tape or other suitable means. This will prevent the tubing from being lost in the well should the tubing detach from the pump head.
 - 3.3. Turn on the pump to produce a vacuum on the well side of the pump head and begin the purge. Observe pump direction to ensure that a vacuum is being applied to the purge line. If the purge line is being pressurized, either switch the tubing at the pump head or reverse the polarity of the cables on the pump or on the battery.
 - 3.4. If the pumping rate exceeds the recovery rate of the well, continue to lower the tubing into the well, as needed, until the drawdown stabilizes or the well is evacuated to dryness. If the pump is a variable speed peristaltic pump, and the water level in the well is being drawn down, reduce the speed of the pump in an attempt to stabilize the drawdown. If the well can be purged without evacuating the well to dryness, a sample with greater integrity can be obtained

4. For sampling:
 - 4.3. Peristaltic pumps may be used for VOC/GRO sampling using the following procedure:
 - 4.3.1. Run the pump until the suction line is filled with clean water. Shut the pump off.
 - 4.3.2. Remove the suction line from the well.
 - 4.3.3. Reverse the flow direction of the pump discharging water from the suction line into the sample vial.
5. Samples other than VOC/GRO can be collected from the discharge line.

2.7.2 Sampling with Submersible Pumps

When a submersible pump is used for well purging and sampling, the pump itself is lowered into the water column. The pump should be decontaminated prior to being lowered into the well.

1. Attach tubing to the submersible pump with a length such that there is enough tubing to run from the ground surface up to the top of the well casing and back down to the bottom of the well.
2. Lower the pump/hose assembly into the top two feet of the standing water column, or two feet below the well screen, and not deep into the column.
3. For purging, run a short section of tubing (does not have to be Teflon®) from the discharge side of the pump head to a closed flow cell meter. Run a short section of tubing from the closed flow cell meter to a graduated bucket.
4. For sampling, collect the sample from the end of the tubing going to the graduated bucket.

2.8 Field Sampling Procedures

Any exceptions to the procedure listed below will be noted in the daily log for the site. The following steps indicate the procedure to follow at each well sampling location.

1. Field inspection
 - At each new well, inspect the well to verify the annular seal is intact at the surface. Note any missing parts, labels, missing locks, well damage or signs of tampering on the well purging and sample collection form. Note any relevant information regarding the general physical condition of the well, surrounding soil or vegetation.
 - If any condition is discovered that may interfere with obtaining representative analytical results, rectify the situation prior to beginning sampling.
 - Record any unusual conditions such as wind-blown dust or odor in the ambient air.
 - Record the air temperature, wind speed and direction, any precipitation/moisture, and ambient odors/dust on the well purging and sample collection form.
2. Unlock the well and remove the inner riser cap. Place the inner riser cap in a clean storage location.

3. Using the water level meter, unwind the probe and meter, and drop the probe until an audible tone is heard. Record the depth of the tone to the nearest 0.01 feet. The tone indicates the depth to water. The depth of the water is referenced to the measured point as marked at the top of the innermost well casing. Where a measuring point has not been marked, the measuring point is assumed to be the top of the north side of the innermost casing. Measure the groundwater depth twice to assure good agreement between the two depths.
4. Measure the depth to the bottom of the well using the water level meter.
5. Determine the water column volume in gallons, using the following equation:

$$Volume = \pi \left(\frac{d}{2}\right)^2 h * 7.48$$

Where $\pi=3.14$

d=diameter of the well in feet

h= height of the water column from bottom of well in feet

7.48= gallons/cubic foot

6. Determine a purging rate for the well based on site specific work plans.
7. Set the equipment used to remove water from a depth approximately 2 feet from the top of the water column, or two feet from the top of the well screen
8. Begin purging the well. Remove one water column volume. Water should be pumped through a flow cell or placed in a clean container. Avoid any significant amount of cascading or turbulence in the well.
9. Measure and record water quality parameters after purging each water column volume of each partial water column volume, as applicable. The following criteria is used for stabilization:
 - Water temperature is stabilized to +/- 0.5 degrees Celsius (C)
 - pH is stabilized to +/- 0.1 units
 - Specific conductance (temperature corrected) is stabilized to +/- 10%
 - Turbidity less than or equal to 50 NTU
10. Repeat steps 8 and 9 until a minimum of three well volumes have been removed from the well, and stabilization parameters have been met. If, after five well volumes have been removed, check operator procedures, equipment, and well construction information for potential problems.
11. Immediately sample the well after stabilization has been met. Collect the sample from the pump discharge line immediately following purging to have well evacuation be continuous between sampling and purging.
12. Prior to collecting the sample, don protect gloves.
13. Do not open individually prepared bottles until they are ready to be filled with water samples. Do not touch the inside of the sampling containers, bottle caps, or rim of sample container. If contact occurs, replace sample container.

14. Hold the sample water discharge point at the end of the tube as close to the sample container as possible without touching it. Shield the sampling container away from wind and airborne dust while filling.
15. Once the container is filled to the correct amount, immediately replace the cap, and place the sample on an ice in an insulated ice chest.
16. After sampling has been completed, replace the inner riser cap and lock the well.
17. Initiate chain of custody controls.
18. Decontaminate any non-dedicated or disposable equipment and proceed to the next well.
19. Ship samples to the laboratory for analysis.

3.0 AIR SAMPLING

3.1 Introduction

This section defines procedures to be used for air quality measurements. Deviations from these procedures may be required by unforeseen circumstances that develop during the sampling event. Such deviations shall be approved by the hydrogeologist or the field crew leader and documented as described in the protocol.

3.2 Collecting Representative Soil Gas Samples

The number of soil gas samples needed and the overall investigation strategies for a soil gas investigation will depend upon the geometry of the vapor sources, the location of receptors, the size and complexity of the site, as well as specific program requirements for which the soil gas investigation is being completed.

Specific locations and methodologies for completing soil gas sampling may include but are not limited to:

- immediately above the identified “worst-case” vapor source area or the area of the highest documented concentrations in soil or groundwater
- adjacent to the base of an existing building foundation or basement (referred to as near-slab soil gas sampling)
- within the footprint of a future building location
- at or near the outer edges of a soil gas plume

In general, it is recommended that soil gas samples should be collected adjacent to specific buildings according to the following depth requirements:

- at least 2 feet above the water table and at least three feet below grade
- near the basement floor depth of a building being evaluated (typically to a total depth of eight to ten feet below grade for a typical house)
- three to five feet below grade adjacent to slab-on-grade buildings

3.3 Sub-Slab Sampling using a Vapor Pin ® Vapor Port

3.3.1 General

Single or multi-use sampling may be conducted using the Vapor Pin® system. Using this sampling port, soil gas samples can be collected quickly and with a high degree of assurance that the samples are representative of the targeted depth, i.e., using this method, there is no leakage at probe rod joints that will compromise the integrity of the sample.

The downhole components of the PRT system include:

- Assembled Vapor Pin®, including brass pin and silicon sleeve tubing

- Vapor Pin[®] protective cap
- Vapor Pin[®] flush mount cover

3.3.2 Vapor Pin[®] Sampling Port Installation Procedures

The following procedures are used to install the Vapor Pin[®] port:

1. Complete a utility locate prior to proceeding to verify no buried obstacles exist.
2. Assemble Vapor Pin[®] by fitting silicon sleeve over the Vapor Pin[®]. The silicon sleeve acts as the seal between the pin and the borehole walls.
3. Drill a 5/8-inch diameter hole through the slab approximately 2-3 inches into the sub-slab soil material.
4. Measure the thickness of the slab, using the drill bit.
5. Drill a 1½ inch diameter hole within the 5/8-inch diameter hole to a depth of 2.25 inches from the bottom of the slab.
6. Remove the drill bit from the hole, and brush the hole with the bottle brush. If available, remove the loose material cuttings with a vacuum.
7. Place the lower end of the assembled Vapor Pin[®] into the drilled hole. Align the small hole in the handle of the installation/extraction tool over the Vapor Pin[®] to protect the barb fitting, making sure the installation/extraction tool is aligned parallel to the Vapor Pin[®] to avoid damaging the barb fitting. Tap the Vapor Pin[®] into place using a dead blow hammer.
8. Place the protective cap on the Vapor Pin[®] to prevent vapor loss prior to sampling.
9. Cover the Vapor Pin[®] and hole with a flush mount cover, using the stainless-steel Secure Cover.
10. At this point, the Vapor Pin[®] has been installed and is ready for sampling. Allow at least 20 minutes after the initial installation to collect the sample to allow for the sub-slab soil gas conditions to re-equilibrate prior to sampling. Sampling is conducted using the procedures described in Section 5, Sampling Soil Gas.

3.3.3 Decommissioning Vapor Pin[®] Sampling Locations

The entire Vapor Pin[®] assemblage must be removed before decommissioning can commence. The following method is used to remove the Vapor Pin[®] and seal the borehole:

1. Remove the protective cap, and thread the installation/extraction tool onto the barrel of the Vapor Pin[®].
2. Turn the tool clockwise to pull the Vapor Pin[®] from the hole.
3. Fill the borehole with either grout or cement flush to the surface.

3.4 Air Sample Collection Using a Summa Canister for Method TO-15

The following are procedures for the cleanup and use of Summa[®] canisters for sampling air for Volatile Organic Compounds (VOC) analysis.

The following procedures must be followed in the preparation and use of Summa[®] canisters for collecting samples for VOC analysis:

- All new Summa[®]/Silcosteel[®] canisters must be individually checked for contamination by the laboratory before use. One of each batch of 10 Summa[®] canisters that are subsequently cleaned must be analyzed to check for contamination.
- Chain-of-custody must be maintained for all samples.

3.4.1 Sample Collection Procedure

Two types of VOC samples can be collected with Summa[®]/ Silcosteel[®] canisters. The canister can be opened and allowed to fill rapidly to obtain a grab sample or filled slowly by using a flow controller to collect a time integrated sample. With either type of sample, the following general procedures should be followed:

- A Chain-Of-Custody Record should be completed detailing time of sampling, sampling interval, and signed by the person collecting the sample.
- After the sample has been collected, the Summa[®]/Silcosteel[®] canister should be capped, a tag should be completed and attached to the canister, and the canister should be placed in a shipping container with a copy of the Chain-Of-Custody Record and sealed with sample custody tape.

3.4.2 Sub Slab Sampling Procedure

After the Vapor Pin[®] has been installed, follow the below steps to collect the sub-slab sample:

1. Remove the flush mount cover, and protective cap on the Vapor Pin[®].
2. Prior to collecting the sample, using a graduated syringe purge two volumes of air (i.e., total volume of the sampling point and tube). This process is to ensure samples collected are representative of sub-surface vapors.
3. Install an in-line particulates trap to prevent particulates and moisture from entering the evacuated canister. The canister filling rate should be limited to a maximum flow rate of 200 milliliters per minute.
4. Collect the sample by attaching the top end of the tubing to a sampling canister instrumented with a vacuum gauge.
5. Record the original vacuum gauge reading, open the sampling canister valve, and monitor the vacuum gauge to check progress of canister filling.

6. Close the canister valve after the required time has elapsed for an adequate volume of soil gas to be collected, or the vacuum gauge indicates the canister is full. Record the time required for sampling and the final pressure onto the reporting form and chain of custody form.
7. Record the time required for sampling and final pressure on the reporting form and chain of custody form.
8. Connect the inert tubing that was used to fill the canister to a field instrument and record the organic vapor measurement onto the laboratory chain of custody form and field sample log sheet.
9. If sampling at the same location will be completed again, put the protective cap on the vapor pin, and place the flush mount cover back on the ground surface.
10. Submit the canisters for laboratory analysis.
11. After sampling activities have been completed and no further sampling will occur, remove the Vapor Pin[®], and properly seal the sub-slab hole opening.

3.4.3 Indoor Air Sampling Procedures

Indoor air samples are collected after subsurface vapor characterization and other environmental sampling (e.g. soil and groundwater characterization) indicated a need. The following procedures should be followed when collecting indoor air samples:

1. Place the sampling canister's port in the breathing zone of the building.
2. Pre-set the flow controller on the sampling canister to collect the sample over 24 hours.
3. Install an in-line particulates filter to prevent particulates and moisture from entering the canister.
4. Open the valve on the canister to begin sample collection.
5. After 24 hours have passed, close the valve on the canister and record the time on the reporting form and chain of custody form.
6. If a grab sample is to be collected, repeat the above procedures without the use of the flow controller.
7. Complete the chain of custody form.
8. Ship sample canister and flow controller (if necessary) to the laboratory.

4.0 DECONTAMINATION PROCEDURES

4.1 Soil Sampling

All sampling related equipment including spoons, shovels, and auger buckets will be decontaminated in the field. Depending on the type of contamination onsite the site, decontamination may consist of the following:

- Cleaning all visible soil and debris off the sampler.
- Rinsing the sampler three times, once in an Alconox wash, followed by a tap water rinse and a DI water rinse.

Drilling equipment is steam-cleaned between sampling locations.

4.2 Groundwater Sampling

All sampling-related equipment including filtration devices, personal protection gear, and materials coming into contact with actual sampling equipment or with sampling personnel will be decontaminated as described below. Decontamination (in the field at each individual sampling point) will be performed before, between, and after working at each sampling point. All equipment will be handled in a manner that will minimize cross-contamination between wells and avoid introducing surface or ambient air contamination into a well. Non-disposable equipment used during purging or sampling will be thoroughly cleaned prior to use in each individual well, even when the wells are located close to each other. After decontamination, the equipment will be visibly inspected to detect sticky residues or other substances that may survive normal cleaning. If inspection reveals that decontamination was insufficient, additional measures such as pressure washing or steam cleaning will be implemented as needed and documented.

Decontamination, when necessary, will consist of decontaminating both the interior and exterior of the sampling equipment. The exterior portion will be decontaminated using DI water and paper toweling. The interior will be decontaminated using a powdered, anionic Alconox® wash, followed by a tap water rinse, and complete with a rinse using DI water. All purge and decontamination water associated with ground water sampling will be discharged on the ground surface, away from each well.

When using a peristaltic pump, new tubing will be used each time the well is sampled. In addition, if disposable bailers are used for sampling, a new dedicated bailer will be used at each well. All sampling-related equipment including in-line filters, disposable gloves and materials coming into contact with actual sampling equipment or with sampling personnel (i.e. paper towels, trash bags, etc.) will be disposed of at the Site.

When transporting or storing equipment after cleaning, the equipment will be protected in a manner that minimizes the potential for contamination. Sampling pumps will be totally enclosed in a clean, inert plastic bag.

4.3 Air Sampling

All air sampling containers such as the Summa Canister, will be decontaminated by the laboratory. Any tubing used at the sampling location will be dedicated and/or disposable. The Vapor Pin[®] may be reused after washing the pin in a hot water and Alconox mix, and heating in an oven to approximately 130 degrees Celsius for approximately 15 to 30 minutes. The Vapor Pin[®] silicone sleeve is disposable and should not be reused between different sampling locations.

5.0 CHAIN OF CUSTODY PROCEDURES

A chain of custody (COC) must accompany each cooler containing samples which are to be submitted to the laboratory for chemical analysis. Using an indelible ink, the COC will be filled out progressively, as samples from each sampling point are collected. The completed COC will then be placed into a sealed polyethylene bag. Field personnel will be required to sign, time and date the COC prior to relinquishing custody. One copy of the COC will be retained by field personnel and the remaining copies will be submitted to the laboratory. Until the samples have been relinquished to the courier or laboratory, custody will be the responsibility of the field sampler. Samples are considered to be in custody if they are in physical possession or within plain view of sampling personnel, or stored in a secured area, in which only restricted personnel can access the samples.

When samples are not transferred directly between laboratory personnel and shipping is required, custody sealed (signed and dated by sampling personnel) be placed on the front and rear side of each cooler, to ensure samples have not been tampered with prior to arrival at the laboratory. When a shipping company is used (i.e. Fed Ex, UPS or other common carrier), the bill of lading is to be retained as part COC documentation.

Upon receipt of each cooler at the laboratory, the time of arrival will be noted and the COC will be signed by the person accepting the shipment. The laboratory sample custodian will then check cooler temperature using the temperature blank, inventory the samples and check them against the COC. The COC will then be signed by the sample custodian and samples will become the responsibility of the laboratory. Should there be any discrepancies or problems, the laboratory will notify the Carlson McCain project manager as soon as possible.

Good communication between field personnel and laboratory personnel is an integral part of the sample handling procedures. Whenever possible, the laboratory will be notified in advance prior to the shipment of samples. Every effort will be made to contact the laboratory each time a sample shipment is made. In addition, confirmation will be made the next day to ensure the samples have arrived. Good communication will also give both field and laboratory personnel the opportunity to discuss project status, request for additional bottles, special handling or instructions, etc. Every effort will be made to avoid shipping samples for Saturday delivery. Should this be necessary, the laboratory will be notified to ensure someone is present to receive the samples.

A copy of the completed COC will be included as part of the final analytical report to be issued by the laboratory.

6.0 REFERENCES

SESD Operating Procedure for Ambient Air Sampling, SESDPROC-303-R4, January 5, 2011.

SESD Operating Procedure for Groundwater Sampling, SESDPROC-301-R2, October 28, 2011.

Field Sampling Guidance Document for Soil Sample, U.S. EPA Region 9 Laboratory, Richmond, California, Document #1205.

Sampling Procedures for Groundwater Monitoring Wells, Minnesota Pollution Control Agency, Water Quality Division, July 1997.

Vapor Intrusion Assessments Performed During Site Investigations, Minnesota Pollution Control Agency, Petroleum Remediation Program, Guidance Document 4-01a, October 2010.

Soil Sample Collection and Analysis Procedures, Minnesota Pollution Control Agency, Petroleum Remediation Program, Guidance Document 4-04, September 2008.

Standard Operating Procedure for Nine Drilling Methods, South Dakota Department of Environment and Natural Resources, SOP 2150, Version 2.0, March 18, 2003.

Appendix A
Blank Field Forms



ATMOSPHERIC MONITORING LOG

Page _____ of _____
Date: _____

Site: _____ Project No.: _____

Carlson McCain Personnel: _____

Subcontractor / Personnel: _____

Action Levels (call for instructions on all upgrades): _____

D Modified D C B A

Task/Equipment: _____

Weather (Skies, Temperature, Wind, Humidity): _____

A.M.: P.M.:

Location	Time	PID		CGI Readings			Comments
		Breathing Zone	Head Space	O ₂ %	LEL %	H ₂ S ppm	



ATMOSPHERIC MONITORING LOG

Site: _____ Date: _____ Page _____ of _____

Location	Time	PID		CGI Readings			Comments
		Breathing Zone	Head Space	O2 %	LEL %	H2S ppm	

PID Model:

CGI Model:

Background Reading:

Draeger Pump used? If so, record media and concentrations here:

Additional Comments:



Boring Log

Boring No.:

Site: _____

Project No.: _____

Sheet _____ of _____

Drilling Method: _____

Ground Surface Elevation: _____

Water Level Info

Company: _____

Physical Setting: _____

Date Time Depth

Foreman: _____

Date/Time Started: _____

Rig Model: _____

Date/Time Completed: _____

Geol/Engr: _____

Disposition of Test Hole: _____

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	TIME	PID/FID		O2/LEL
		NO.	T	A	R	B	N			ATM	HS	
	5											
	10											
	15											
	20											
	25											

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division
 704 Enterprise Drive
 Cedar Falls, IA 50613

Phone 319-277-2401 or 800-750-2401
 Fax 319-277-2425

To assist us in using the proper analytical methods,
 is this work being conducted for regulatory purposes?
 Compliance Monitoring

Client Name: _____ Client #: _____

Address: _____

City/State/Zip Code: _____

Project Manager: _____

Email Address: _____

Telephone Number: _____ Fax: _____

Sampler Name: (Print Name) _____

Sampler Signature: _____

Project Name: _____

Project #: _____

Site/Location ID: _____ State: _____

Report To: _____

Invoice To: _____

Quote #: _____ PO#: _____

TAT Standard _____ Rush (surcharges may apply) _____	Date Needed: _____	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify, Other	Preservation & # of Containers HNO ₃ HCl NaOH H ₂ SO ₄ Methanol None Other (Specify)	Analyze For:	QC Deliverables None _____ Level 2 _____ (Batch QC) Level 3 _____ Level 4 _____ Other: _____
	Fax Results: Y N Email Results: Y N SAMPLE ID								

Special Instructions: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

LABORATORY COMMENTS:



DAILY TIME LOG

Project Name/Location _____ Project No.: _____

Date: _____ Weather: _____

Task/Equipment: _____

Firm/Personnel: _____

Site Visitors: _____

0700 - 0800 _____

0800 - 0900 _____

0900 - 1000 _____

1000 - 1100 _____

1100 - 1200 _____

1200 - 1300 _____

1300 - 1400 _____

1400 - 1500 _____

1500 - 1600 _____

1600 - 1700 _____

1700 - 1800 _____



INSTRUMENT CALIBRATION LOG

Project Name/Location: _____

Project No.: _____

Instrument	Date Calibrated	Actual Instrument Reading	Adjustments Made	Comments

Comments: _____

Signature: _____

Date: _____



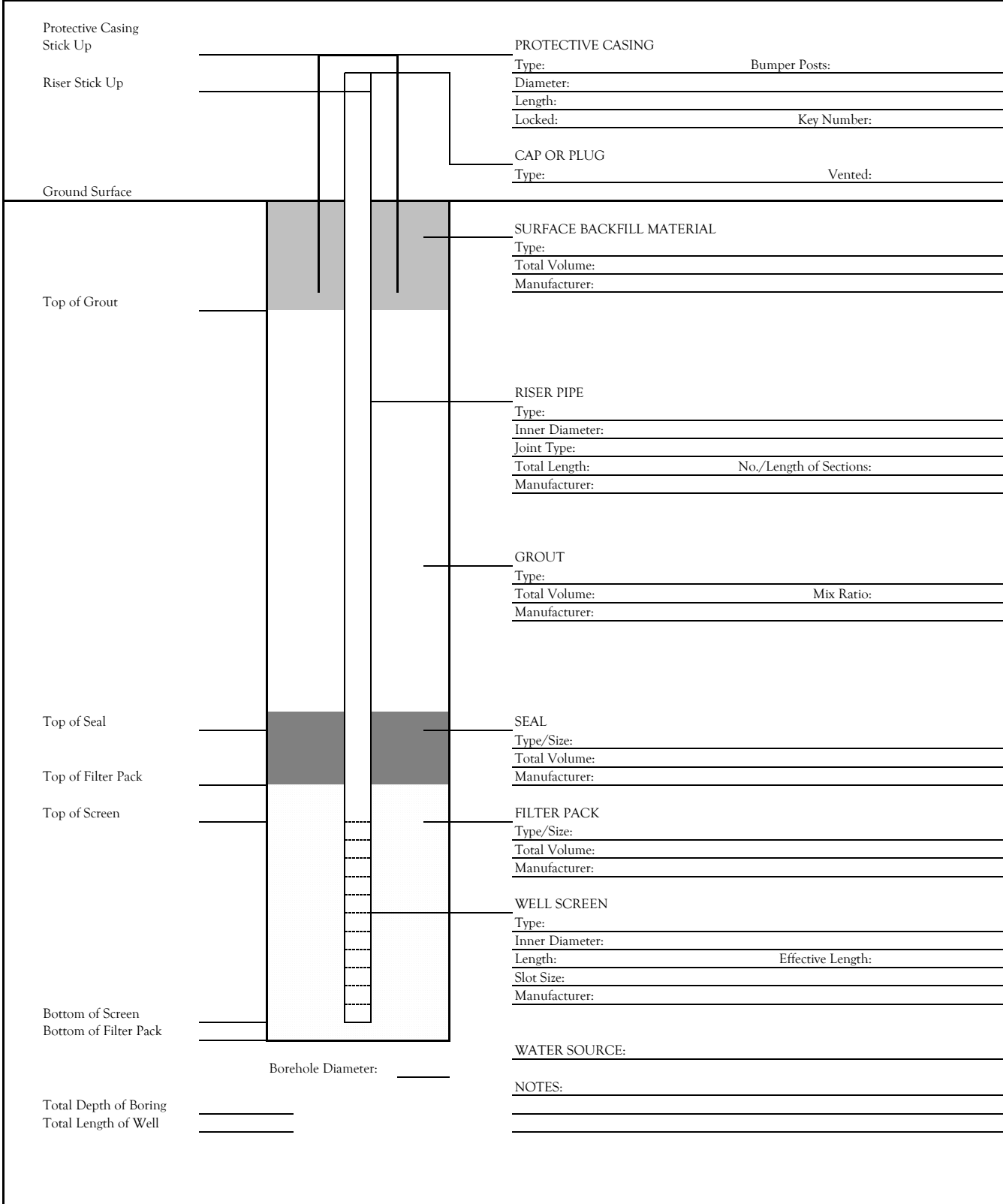
Monitoring Well Diagram Above Grade Completion

PROJECT NAME: _____

LOCATION: _____

Drilling Method: _____
 Company: _____
 Foreman: _____
 Rig Model: _____
 Geol/Engr: _____

Ground Surface Elevation: _____
 MDH Unique Well No.: _____
 Date/Time Started: _____
 Date/Time Completed: _____
 Coordinates: _____

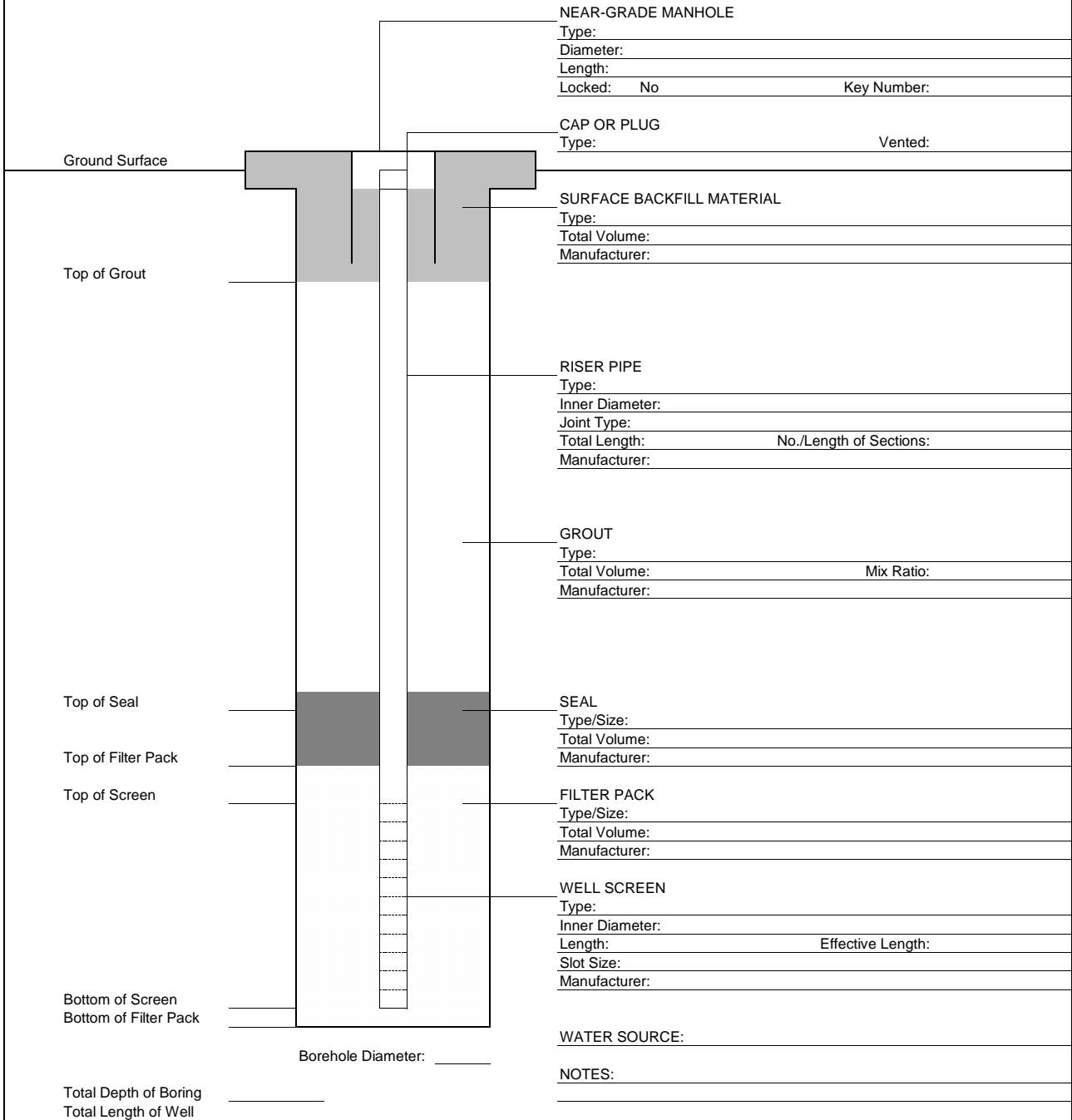




Monitoring Well Diagram
Near Grade Completion
 PROJECT NAME: _____
 LOCATION: _____

Drilling Method: _____
 Company: _____
 Foreman: _____
 Rig Model: _____
 Geol/Engr: _____

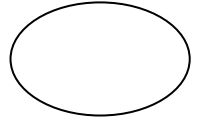
Ground Surface Elevation: _____
 MDH Unique Well No.: _____
 Date/Time Started: _____
 Date/Time Completed: _____
 Coordinates: _____





WELL PURGING AND SAMPLE COLLECTION

Well No. _____



Project Name/Location: _____

Project No.: _____

Date: _____

Weather: _____

Purging Method Pumped Bailed Other _____

Pump

Bailer

Type: _____

Type: _____

Depth to Water

Depth to Bottom

(D.T.W.) _____

(D.T.B.) _____

Volume Calculation: _____

Gals./Well Volume: _____ [(D.T.B. - D.T.W.) gal./ft.] = Gals./well volume]

Time	Volume Removed (gal.)	pH	Cond. (μ S/cm)	Temp. ($^{\circ}$ C)	ORP (mv)	DO (ppm)	Turbidity (ntu)	Odor Y/N	Color
	Initial								

Sample No.: _____

Time: _____

Trip Blank Time: _____

Sample No.: _____

Duplicate Time: _____

Sample No.: _____

Containers: _____

Analysis: _____

Analysis: _____

Signature: _____

Date: _____ / _____ / _____

Stabilization Criteria:

Temperature is stabilized to ± 0.5 degrees Celsius.

pH is stabilized to ± 0.1 standard units.

Specific conductance (temperature corrected) is stabilized to $\pm 10\%$ $\mu\text{S}/\text{cm}$.

Inside Well Diameter	gal./ft.
2"	0.163
4"	0.653
6"	1.469
8"	2.611



VAPOR/TEMPERATURE MONITORING LOG

Page _____ of _____

Date: _____

Site: _____ Project No.: _____

Carlson McCain Personnel: _____

Veit Personnel: _____

Task/Equipment: Portable Gas Analyzer Model: Landtec GEM™ 2000 Plus

Weather (Skies, Temperature, Wind, Humidity):

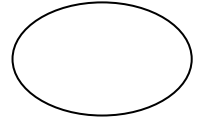
Location	Time	VAPOR READINGS					TEMP (°F)
		CO ppm	% CO ₂	H ₂ S ppm	% O ₂	% CH ₄	

Additional Comments: CO range: 0-2,000 ppm; H₂S range: 0-500 ppm; O₂ range: 0-25%; CH₄ range: 0-100% CO₂; range: 0-100%



VAPOR PROBE PURGING AND SAMPLE COLLECTION

Probe No.



Project Name/Location: _____ Project No.: _____

Date: _____ Weather: _____

Pump Type: Landtec GEM™ 2000 Plus Pump Rate: _____

Sampling Meter: _____ Depth of Probe (DOP): _____

Volume Calculation: _____

Liters Per Probe Volume: _____ [(DOP) x liters/ft.] = Liters Per Probe Volume

Time	Volume Removed (Liters)	CO ppm	% CO ₂	H ₂ S ppm	% O ₂	% CH ₄	TEMP (°F)	Comments

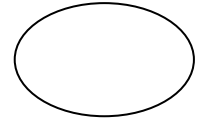
Sample No.: _____ Time: _____
Field Blank Time: _____ Sample No.: _____
Probe Duplicate Time: _____ Sample No.: _____
Containers: _____ Analysis: _____
_____ Analysis: _____
_____ Analysis: _____
Signature: _____ Date: ____/____/____

Inside Probe Diameter	liters/ft.
3/4"	0.0869
1"	0.1544
2"	0.6178
4"	2.4711
6"	5.5599
8"	9.8844



WELL DEVELOPMENT LOG SHEET

Well No. _____



Project Name/Location: _____ Project No.: _____

Date: _____ Weather: _____

Pumping Method Pumped Other _____

Pump Type: _____ Bailer Type: _____

Depth to Water (D.T.W.) _____ Depth to Bottom (D.T.B.) _____

Volume Calculation: _____

$\{[H \times V_w] + [N \times H \times (V_{bh} - V_w)]\} = \text{Total Well Volume}$ *** see below for variable definitions***

Time	Volume Removed (gal.)	pH	Cond. (uS/cm)	Temp. (°C)	ORP (mv)	DO (ppm)	Turbidity (ntu)	Odor Y/N	Color

Comments: _____

Borehole Dia.	Borehole gal./ft. (Vbh)	Inside Well Diameter	Well gal./ft. (Vw)
6.5"	1.723	1"	0.041
8"	2.611	2"	0.163
10"	4.080	4"	0.653
12"	5.875	6"	1.469

N=Porosity = 0.3 H=D.T.B - D.T.W

APPENDIX B



Boring Log

Boring No.:

Site: Former Pine City Rifle Range

Q-1

Project No.: 7687-00

Sheet of

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19

833

497

Rig Model:

Date/Time Completed: 5/17/19

841

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	TIME	PID/FID		O2/LEL	
		NO.	T	A	R	B	N			ATM	HS		
	0-10'	1						10 yr 4/4 (Dark yellow-brown) clayey silt					
								- clay 2-2.7 cohesive & plastic					
								- Sat @ 3.2					
	5	2						Stuck in sleeve, same as above ↑					
	10	3											
	15	4											
	20	5											
	25	6											
								Soil @ 843 @ 1-3					
								GW @ 855 @ 5-15					



Boring Log

Site: Former Pine City Rifle Range

Boring No.:

DP-2

Project No.: 7687-00

Sheet _____ of _____

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date _____ Time _____ Depth _____

Foreman: Todd

Date/Time Started: 5/17/19 1326

3.22

Rig Model:

Date/Time Completed: 5/17/19 1329

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	Description	TIME	PID/FID		O2/LEL
		NO.	T	A	R	B	N				ATM	HS	
	0-5	1							0-5 1/2 1/4 clayey silt				
	1.8'								Sat @ 1.8'			1.4	
	1.5-2.7'								Trace Fine Sand			1.2	
	5-10	2											
	10-15	3											
	15-20	4											
	20-25	5											
	25-30	6											
									Soil @ 1-2 @ 1330				
									GW @ @ 1337				



Boring Log

Site: Former Pine City Rifle Range

Boring No.:

OP-3

Project No.: 7687-00

Sheet of

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19 1130

4.99

Rig Model:

Date/Time Completed: 5/17/19 1137

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	TIME	PID/RID		O2/LEL
		NO.	T	A	R	B	N			ATM	HS	
	0	1										
	1											
	2											
	3											
	4											
	5	2										
	6											
	7											
	8											
	9											
	10	3										
	11											
	12											
	13											
	14											
	15	4										
	16											
	17											
	18											
	19											
	20	5										
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	42											
	43											
	44											
	45											
	46											
	47											
	48											
	49											
	50											

0-9 60YR 4/4 Clayey Silt
Trace gravel 2-3.5'

Soil @ 1-3 @ 1139
GW @ @ 1157



Boring Log

Boring No.: **DP 4**

Site: Former Pine City Rifle Range

Project No.: 7687-00

Sheet **4** of **4**

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19 **1207**

6.5

Rig Model:

Date/Time Completed: 5/17/19 **1213**

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION							USCS	TIME	PID/HID		OZ/LEL
		NO.	T	A	R	B	N	ATM			HS		
	0	1							0-10 10 YR 4/4 clayey silt sate 5.5'				
	5	2									1.0		
	10	3									3.0		
	15	4											
	20	5											
	25	6											
									Soil @ 1-3 @ 1217				
									GW @ @ 1226				



Boring Log

Site: Former Pine City Rifle Range

Boring No.: DP 5

Project No.: 7687-00

Sheet of

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19 1027

 123

Rig Model:

Date/Time Completed: 5/17/19 1030

 223

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	TIME	PID/FID		OZ/LEL
		NO.	T	A	R	B	N			ATM	HS	
	1											
								10 yr 4/4 clayey silt 0-5' -sat @ 3.9'			0.1	
											0.2	
	5											
	10											
	15											
	20											
	25											
								Soil @ 1034 @ 3-5				
								GW @ 1045 @				



Boring Log

Boring No.:

OP 6

Site: Former Pine City Rifle Range

Project No.: 7687-00

Sheet _____ of _____

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19

1021

Rig Model:

Date/Time Completed: 5/17/19

1022

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION							USCS	TIME	PID/FID		O2/LEL
		NO.	T	A	R	B	N	ATM			HS		
	0-5	1							0-5' LOYR 4/4 clayey silt			0.1	
									- Sat @ 3.2'			0.2	
	5-10	2											
	10-15	3											
	15-20	4											
	20-25	5											
	25-30	6											
									Soil @ 1026 @ 3-5				
									GW @ @				



Boring Log

Site: Former Pine City Rifle Range

Boring No.:

DR7

Project No.: 7687-00

Sheet of

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19 1116

Rig Model:

Date/Time Completed: 5/17/19 1123

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	TIME	PID/FID		O2/LEL
		NO.	T	A	R	B	N			ATM	HS	
	0	1										
	3.8											
	5	2										
	10	3										
	15	4										
	20	5										
	25	6										

0-10.0' 10YR 4/4 clayey silt,
trace fine sand
-sat @ 6.1'

Soil @ ~~46~~ @ 1119
GW @ ~~46~~ @



Boring Log

Boring No.:

Site: Former Pine City Rifle Range

DP-8

Project No.: 7687-00

Sheet of

Drilling Method: Direct Push

Ground Surface Elevation: 958

Water Level Info

Company: Range Environmental

Physical Setting: Parking lot

Date Time Depth

Foreman: Todd

Date/Time Started: 5/17/19 12:39

1.0

Rig Model:

Date/Time Completed: 5/17/19 12:47

Geol/Engr: Danny Margarit

Disposition of Test Hole: Abandoned

SOIL LOG	DEPTH (FEET)	SAMPLING INFORMATION						USCS	TIME	PID/FID		O2/LEL
		NO.	T	A	R	B	N			ATM	HS	
	0	1						0-10' 10 YR 4/4 Clayey silt				
	3.4							- Fine Sand lens 2.5-3.4'			1.3	
	4.3							- Sat c ≈ 8.0			1.1	
	5	2									1.1	
	10	3										
	15	4										
	20	5										
	25	6										
								Soil @ 5-7 @ 1258				
								GW @ @ 1307				

APPENDIX C

June 04, 2019

Danny Margarit
Carlson McCain
3890 Pheasant Ridge Drive NE
Minneapolis, MN 55449

RE: Project: Pine City Airport
Pace Project No.: 10475470

Dear Danny Margarit:

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

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

Sincerely,



Tina Soltani
tina.soltani@pacelabs.com
(612)607-6384
Project Manager

Enclosures

cc: John Lichter, Carlson McCain



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: Pine City Airport

Pace Project No.: 10475470

Minnesota Certification IDs

1700 Elm Street SE, 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 DW Certification #: MN00064

Arkansas WW 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

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

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 Primary 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

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Pine City Airport
Pace Project No.: 10475470

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10475470001	DP-1 (1-3')	Solid	05/17/19 08:43	05/17/19 18:20
10475470002	DP-2 (1-2')	Solid	05/17/19 13:30	05/17/19 18:20
10475470003	DP-3 (1-3')	Solid	05/17/19 11:39	05/17/19 18:20
10475470004	DP-4 (1-3')	Solid	05/17/19 12:17	05/17/19 18:20
10475470005	DP-5 (3-5')	Solid	05/17/19 10:39	05/17/19 18:20
10475470006	DP-6 (3-5')	Solid	05/17/19 10:26	05/17/19 18:20
10475470007	DP-7 (4-6')	Solid	05/17/19 11:19	05/17/19 18:20
10475470008	DP-8 (5-7')	Solid	05/17/19 12:58	05/17/19 18:20
10475470009	MWGW	Water	05/17/19 14:20	05/17/19 18:20
10475470010	DP-1 GW	Water	05/17/19 08:55	05/17/19 18:20
10475470011	DP-2 GW	Water	05/17/19 13:37	05/17/19 18:20
10475470012	DP-3 GW	Water	05/17/19 11:57	05/17/19 18:20
10475470013	DP-4 GW	Water	05/17/19 12:26	05/17/19 18:20
10475470014	DP-5 GW	Water	05/17/19 10:45	05/17/19 18:20
10475470015	DP-8 GW	Water	05/17/19 13:07	05/17/19 18:20
10475470016	SP-1	Solid	05/17/19 15:00	05/17/19 18:20
10475470017	SP-2	Solid	05/17/19 15:19	05/17/19 18:20
10475470018	SP-3	Solid	05/17/19 15:42	05/17/19 18:20
10475470019	SP-4	Solid	05/17/19 15:58	05/17/19 18:20
10475470020	SP-5	Solid	05/17/19 16:19	05/17/19 18:20
10475470021	SP-6	Solid	05/17/19 16:44	05/17/19 18:20
10475470022	SL-Trip Blank	Solid	05/17/19 00:00	05/17/19 18:20
10475470023	WT-Trip Blank	Water	05/17/19 00:00	05/17/19 18:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Pine City Airport
Pace Project No.: 10475470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10475470001	DP-1 (1-3')	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	CD2	70	PASI-M
10475470002	DP-2 (1-2')	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	CD2	70	PASI-M
10475470003	DP-3 (1-3')	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	CD2	70	PASI-M
10475470004	DP-4 (1-3')	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	CD2	70	PASI-M
10475470005	DP-5 (3-5')	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	CD2	70	PASI-M
10475470006	DP-6 (3-5')	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR	2	PASI-M

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SAMPLE ANALYTE COUNT

Project: Pine City Airport

Pace Project No.: 10475470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory		
10475470007	DP-7 (4-6')	EPA 6010D	BD1	7	PASI-M		
		EPA 7471B	BTS	1	PASI-M		
		ASTM D2974	JDL	1	PASI-M		
		EPA 8270D by SIM	SNG	18	PASI-M		
		EPA 8260B	CD2	70	PASI-M		
		WI MOD DRO	JVM	2	PASI-M		
		WI MOD GRO	AJR	2	PASI-M		
		EPA 6010D	BD1	7	PASI-M		
		EPA 7471B	BTS	1	PASI-M		
		ASTM D2974	JDL	1	PASI-M		
10475470008	DP-8 (5-7')	EPA 8270D by SIM	SNG	18	PASI-M		
		EPA 8260B	CD2	70	PASI-M		
		WI MOD DRO	JVM	2	PASI-M		
		WI MOD GRO	AJR, AMC	2	PASI-M		
		EPA 6010D	BD1	7	PASI-M		
		EPA 7471B	BTS	1	PASI-M		
		ASTM D2974	JDL	1	PASI-M		
		EPA 8270D by SIM	SNG	18	PASI-M		
		EPA 8260B	CD2	70	PASI-M		
		10475470009	MWGW	WI MOD DRO	JVM	2	PASI-M
WI MOD GRO	AMC			2	PASI-M		
EPA 6010D	DM			7	PASI-M		
EPA 7470A	LMW			1	PASI-M		
EPA 8270D by SIM	SNG			18	PASI-M		
EPA 8260B	AEZ			70	PASI-M		
10475470010	DP-1 GW			WI MOD DRO	JVM	2	PASI-M
				WI MOD GRO	AMC	2	PASI-M
				EPA 6010D	DM	7	PASI-M
				EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M		
		EPA 8260B	MJD	70	PASI-M		
10475470011	DP-2 GW	WI MOD DRO	JVM	2	PASI-M		
		WI MOD GRO	AMC	2	PASI-M		
		EPA 6010D	DM	7	PASI-M		
		EPA 7470A	LMW	1	PASI-M		
		EPA 8270D by SIM	SNG	18	PASI-M		
		EPA 8260B	MJD	70	PASI-M		

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SAMPLE ANALYTE COUNT

Project: Pine City Airport
Pace Project No.: 10475470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10475470012	DP-3 GW	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AMC	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	MJD	70	PASI-M
10475470013	DP-4 GW	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AMC	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	MJD	70	PASI-M
10475470014	DP-5 GW	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AMC	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	MJD	70	PASI-M
10475470015	DP-8 GW	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AMC	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	MJD	70	PASI-M
10475470016	SP-1	WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
10475470017	SP-2	EPA 8260B	CD2	70	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
	EPA 8270D by SIM	SNG	18	PASI-M	

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SAMPLE ANALYTE COUNT

Project: Pine City Airport
Pace Project No.: 10475470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10475470018	SP-3	EPA 8260B	CD2	70	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
10475470019	SP-4	EPA 8260B	CD2	70	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
10475470020	SP-5	EPA 8260B	CD2	70	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
10475470021	SP-6	EPA 8260B	CD2	70	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7471B	BTS	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
10475470022	SL-Trip Blank	EPA 8260B	CD2	70	PASI-M
		WI MOD GRO	AJR, AMC	2	PASI-M
10475470023	WT-Trip Blank	EPA 8260B	CD2	70	PASI-M
		WI MOD GRO	AMC	2	PASI-M
		EPA 8260B	AEZ	70	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-1 (1-3') Lab ID: 10475470001 Collected: 05/17/19 08:43 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	8.9	1	05/21/19 20:00	05/23/19 23:28		
Surrogates								
n-Triacontane (S)	79	%	44-143	1	05/21/19 20:00	05/23/19 23:28	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	12.2	1	05/28/19 13:20	05/29/19 14:24		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 13:20	05/29/19 14:24	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	2.2	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:40	7440-38-2	
Barium	40.1	mg/kg	0.56	1	05/24/19 15:14	05/28/19 11:40	7440-39-3	
Cadmium	ND	mg/kg	0.17	1	05/24/19 15:14	05/28/19 11:40	7440-43-9	
Chromium	17.5	mg/kg	0.56	1	05/24/19 15:14	05/28/19 11:40	7440-47-3	
Lead	5.9	mg/kg	0.56	1	05/24/19 15:14	05/28/19 11:40	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:40	7782-49-2	
Silver	ND	mg/kg	0.56	1	05/24/19 15:14	05/28/19 11:40	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.023	1	05/24/19 16:31	05/28/19 12:00	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	14.7	%	0.10	1		05/24/19 12:42		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	83-32-9	
Acenaphthylene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	208-96-8	
Anthracene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	207-08-9	
Chrysene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	53-70-3	
Fluoranthene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	206-44-0	
Fluorene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	193-39-5	
Naphthalene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	91-20-3	
Phenanthrene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	85-01-8	
Pyrene	ND	ug/kg	11.7	1	05/22/19 08:38	05/25/19 18:28	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	60	%	30-125	1	05/22/19 08:38	05/25/19 18:28	321-60-8	
p-Terphenyl-d14 (S)	70	%	30-125	1	05/22/19 08:38	05/25/19 18:28	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-1 (1-3) **Lab ID: 10475470001** Collected: 05/17/19 08:43 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1160	1	05/24/19 16:10	05/25/19 12:27	67-64-1	
Allyl chloride	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	107-05-1	
Benzene	ND	ug/kg	23.3	1	05/24/19 16:10	05/25/19 12:27	71-43-2	
Bromobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	108-86-1	
Bromochloromethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	74-97-5	
Bromodichloromethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	75-27-4	
Bromoform	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	75-25-2	
Bromomethane	ND	ug/kg	582	1	05/24/19 16:10	05/25/19 12:27	74-83-9	
2-Butanone (MEK)	ND	ug/kg	291	1	05/24/19 16:10	05/25/19 12:27	78-93-3	
n-Butylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	104-51-8	
sec-Butylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	135-98-8	
tert-Butylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	98-06-6	
Carbon tetrachloride	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	56-23-5	
Chlorobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	108-90-7	
Chloroethane	ND	ug/kg	582	1	05/24/19 16:10	05/25/19 12:27	75-00-3	
Chloroform	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	67-66-3	
Chloromethane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	74-87-3	
2-Chlorotoluene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	95-49-8	
4-Chlorotoluene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	582	1	05/24/19 16:10	05/25/19 12:27	96-12-8	
Dibromochloromethane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	106-93-4	
Dibromomethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	75-71-8	
1,1-Dichloroethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	75-34-3	
1,2-Dichloroethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	107-06-2	
1,1-Dichloroethene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	156-60-5	
Dichlorofluoromethane	ND	ug/kg	582	1	05/24/19 16:10	05/25/19 12:27	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	78-87-5	
1,3-Dichloropropane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	142-28-9	
2,2-Dichloropropane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	594-20-7	
1,1-Dichloropropene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	60-29-7	
Ethylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	291	1	05/24/19 16:10	05/25/19 12:27	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	98-82-8	
p-Isopropyltoluene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	99-87-6	
Methylene Chloride	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	291	1	05/24/19 16:10	05/25/19 12:27	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-1 (1-3) **Lab ID: 10475470001** Collected: 05/17/19 08:43 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	1634-04-4	
Naphthalene	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	91-20-3	
n-Propylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	103-65-1	
Styrene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	79-34-5	
Tetrachloroethene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	127-18-4	
Tetrahydrofuran	ND	ug/kg	2330	1	05/24/19 16:10	05/25/19 12:27	109-99-9	
Toluene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	79-00-5	
Trichloroethene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	79-01-6	
Trichlorofluoromethane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	233	1	05/24/19 16:10	05/25/19 12:27	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	58.2	1	05/24/19 16:10	05/25/19 12:27	108-67-8	
Vinyl chloride	ND	ug/kg	23.3	1	05/24/19 16:10	05/25/19 12:27	75-01-4	
Xylene (Total)	ND	ug/kg	175	1	05/24/19 16:10	05/25/19 12:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	75-125	1	05/24/19 16:10	05/25/19 12:27	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 12:27	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1	05/24/19 16:10	05/25/19 12:27	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-2 (1-2) **Lab ID: 10475470002** Collected: 05/17/19 13:30 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	7.7	1	05/21/19 20:00	05/23/19 23:21		
Surrogates								
n-Triacontane (S)	81	%	44-143	1	05/21/19 20:00	05/23/19 23:21	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.6	1	05/28/19 13:20	05/29/19 14:50		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 13:20	05/29/19 14:50	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	1.9	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:42	7440-38-2	
Barium	42.7	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:42	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 11:42	7440-43-9	
Chromium	15.7	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:42	7440-47-3	
Lead	2.9	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:42	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:42	7782-49-2	
Silver	ND	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:42	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.020	1	05/24/19 16:31	05/28/19 12:02	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	12.1	%	0.10	1		05/24/19 12:42		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	83-32-9	
Acenaphthylene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	208-96-8	
Anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	207-08-9	
Chrysene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	53-70-3	
Fluoranthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	206-44-0	
Fluorene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	193-39-5	
Naphthalene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	91-20-3	
Phenanthrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	85-01-8	
Pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/25/19 18:53	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	64	%	30-125	1	05/22/19 08:38	05/25/19 18:53	321-60-8	
p-Terphenyl-d14 (S)	75	%	30-125	1	05/22/19 08:38	05/25/19 18:53	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-2 (1-2) **Lab ID: 10475470002** Collected: 05/17/19 13:30 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1100	1	05/24/19 16:10	05/25/19 15:02	67-64-1	
Allyl chloride	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	107-05-1	
Benzene	ND	ug/kg	21.9	1	05/24/19 16:10	05/25/19 15:02	71-43-2	
Bromobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	108-86-1	
Bromochloromethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	74-97-5	
Bromodichloromethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	75-27-4	
Bromoform	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	75-25-2	
Bromomethane	ND	ug/kg	548	1	05/24/19 16:10	05/25/19 15:02	74-83-9	
2-Butanone (MEK)	ND	ug/kg	274	1	05/24/19 16:10	05/25/19 15:02	78-93-3	
n-Butylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	104-51-8	
sec-Butylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	135-98-8	
tert-Butylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	98-06-6	
Carbon tetrachloride	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	56-23-5	
Chlorobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	108-90-7	
Chloroethane	ND	ug/kg	548	1	05/24/19 16:10	05/25/19 15:02	75-00-3	
Chloroform	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	67-66-3	
Chloromethane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	74-87-3	
2-Chlorotoluene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	95-49-8	
4-Chlorotoluene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	548	1	05/24/19 16:10	05/25/19 15:02	96-12-8	
Dibromochloromethane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	106-93-4	
Dibromomethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	75-71-8	
1,1-Dichloroethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	75-34-3	
1,2-Dichloroethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	107-06-2	
1,1-Dichloroethene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	156-60-5	
Dichlorofluoromethane	ND	ug/kg	548	1	05/24/19 16:10	05/25/19 15:02	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	78-87-5	
1,3-Dichloropropane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	142-28-9	
2,2-Dichloropropane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	594-20-7	
1,1-Dichloropropene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	60-29-7	
Ethylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	274	1	05/24/19 16:10	05/25/19 15:02	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	98-82-8	
p-Isopropyltoluene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	99-87-6	
Methylene Chloride	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	274	1	05/24/19 16:10	05/25/19 15:02	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-2 (1-2) **Lab ID: 10475470002** Collected: 05/17/19 13:30 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	1634-04-4	
Naphthalene	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	91-20-3	
n-Propylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	103-65-1	
Styrene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	79-34-5	
Tetrachloroethene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	127-18-4	
Tetrahydrofuran	ND	ug/kg	2190	1	05/24/19 16:10	05/25/19 15:02	109-99-9	
Toluene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	79-00-5	
Trichloroethene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	79-01-6	
Trichlorofluoromethane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	219	1	05/24/19 16:10	05/25/19 15:02	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	54.8	1	05/24/19 16:10	05/25/19 15:02	108-67-8	
Vinyl chloride	ND	ug/kg	21.9	1	05/24/19 16:10	05/25/19 15:02	75-01-4	
Xylene (Total)	ND	ug/kg	164	1	05/24/19 16:10	05/25/19 15:02	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%.	75-125	1	05/24/19 16:10	05/25/19 15:02	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 15:02	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 15:02	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-3 (1-3') **Lab ID: 10475470003** Collected: 05/17/19 11:39 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	9.6	1	05/21/19 20:00	05/24/19 00:01		
Surrogates								
n-Triacontane (S)	95	%	44-143	1	05/21/19 20:00	05/24/19 00:01	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.6	1	05/28/19 13:20	05/30/19 02:12		
Surrogates								
a,a,a-Trifluorotoluene (S)	97	%	80-150	1	05/28/19 13:20	05/30/19 02:12	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	2.1	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:43	7440-38-2	
Barium	37.2	mg/kg	0.53	1	05/24/19 15:14	05/28/19 11:43	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 11:43	7440-43-9	
Chromium	13.6	mg/kg	0.53	1	05/24/19 15:14	05/28/19 11:43	7440-47-3	
Lead	5.9	mg/kg	0.53	1	05/24/19 15:14	05/28/19 11:43	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:43	7782-49-2	
Silver	ND	mg/kg	0.53	1	05/24/19 15:14	05/28/19 11:43	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.021	1	05/24/19 16:31	05/28/19 12:04	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	11.5	%	0.10	1		05/24/19 12:43		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	83-32-9	
Acenaphthylene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	208-96-8	
Anthracene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	207-08-9	
Chrysene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	53-70-3	
Fluoranthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	206-44-0	
Fluorene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	193-39-5	
Naphthalene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	91-20-3	
Phenanthrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	85-01-8	
Pyrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 19:17	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	56	%	30-125	1	05/22/19 08:38	05/25/19 19:17	321-60-8	
p-Terphenyl-d14 (S)	72	%	30-125	1	05/22/19 08:38	05/25/19 19:17	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-3 (1-3) **Lab ID: 10475470003** Collected: 05/17/19 11:39 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1090	1	05/24/19 16:10	05/25/19 15:23	67-64-1	
Allyl chloride	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	107-05-1	
Benzene	ND	ug/kg	21.8	1	05/24/19 16:10	05/25/19 15:23	71-43-2	
Bromobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	108-86-1	
Bromochloromethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	74-97-5	
Bromodichloromethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	75-27-4	
Bromoform	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	75-25-2	
Bromomethane	ND	ug/kg	546	1	05/24/19 16:10	05/25/19 15:23	74-83-9	
2-Butanone (MEK)	ND	ug/kg	273	1	05/24/19 16:10	05/25/19 15:23	78-93-3	
n-Butylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	104-51-8	
sec-Butylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	135-98-8	
tert-Butylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	98-06-6	
Carbon tetrachloride	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	56-23-5	
Chlorobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	108-90-7	
Chloroethane	ND	ug/kg	546	1	05/24/19 16:10	05/25/19 15:23	75-00-3	
Chloroform	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	67-66-3	
Chloromethane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	74-87-3	
2-Chlorotoluene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	95-49-8	
4-Chlorotoluene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	546	1	05/24/19 16:10	05/25/19 15:23	96-12-8	
Dibromochloromethane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	106-93-4	
Dibromomethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	75-71-8	
1,1-Dichloroethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	75-34-3	
1,2-Dichloroethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	107-06-2	
1,1-Dichloroethene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	156-60-5	
Dichlorofluoromethane	ND	ug/kg	546	1	05/24/19 16:10	05/25/19 15:23	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	78-87-5	
1,3-Dichloropropane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	142-28-9	
2,2-Dichloropropane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	594-20-7	
1,1-Dichloropropene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	60-29-7	
Ethylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	273	1	05/24/19 16:10	05/25/19 15:23	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	98-82-8	
p-Isopropyltoluene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	99-87-6	
Methylene Chloride	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	273	1	05/24/19 16:10	05/25/19 15:23	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-3 (1-3) **Lab ID: 10475470003** Collected: 05/17/19 11:39 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	1634-04-4	
Naphthalene	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	91-20-3	
n-Propylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	103-65-1	
Styrene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	79-34-5	
Tetrachloroethene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	127-18-4	
Tetrahydrofuran	ND	ug/kg	2180	1	05/24/19 16:10	05/25/19 15:23	109-99-9	
Toluene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	79-00-5	
Trichloroethene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	79-01-6	
Trichlorofluoromethane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	218	1	05/24/19 16:10	05/25/19 15:23	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	54.6	1	05/24/19 16:10	05/25/19 15:23	108-67-8	
Vinyl chloride	ND	ug/kg	21.8	1	05/24/19 16:10	05/25/19 15:23	75-01-4	
Xylene (Total)	ND	ug/kg	164	1	05/24/19 16:10	05/25/19 15:23	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%.	75-125	1	05/24/19 16:10	05/25/19 15:23	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1	05/24/19 16:10	05/25/19 15:23	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 15:23	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-4 (1-3') Lab ID: 10475470004 Collected: 05/17/19 12:17 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	8.6	1	05/21/19 20:00	05/23/19 23:07		
Surrogates								
n-Triacontane (S)	95	%	44-143	1	05/21/19 20:00	05/23/19 23:07	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	12.0	1	05/28/19 17:09	05/31/19 08:15		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/31/19 08:15	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	2.8	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:45	7440-38-2	
Barium	61.9	mg/kg	0.57	1	05/24/19 15:14	05/28/19 11:45	7440-39-3	
Cadmium	ND	mg/kg	0.17	1	05/24/19 15:14	05/28/19 11:45	7440-43-9	
Chromium	26.9	mg/kg	0.57	1	05/24/19 15:14	05/28/19 11:45	7440-47-3	
Lead	4.6	mg/kg	0.57	1	05/24/19 15:14	05/28/19 11:45	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:45	7782-49-2	
Silver	ND	mg/kg	0.57	1	05/24/19 15:14	05/28/19 11:45	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.022	1	05/24/19 16:31	05/28/19 12:10	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	16.4	%	0.10	1		05/24/19 12:43		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	83-32-9	
Acenaphthylene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	208-96-8	
Anthracene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	207-08-9	
Chrysene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	53-70-3	
Fluoranthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	206-44-0	
Fluorene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	193-39-5	
Naphthalene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	91-20-3	
Phenanthrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	85-01-8	
Pyrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 19:41	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	57	%	30-125	1	05/22/19 08:38	05/25/19 19:41	321-60-8	
p-Terphenyl-d14 (S)	66	%	30-125	1	05/22/19 08:38	05/25/19 19:41	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-4 (1-3) **Lab ID: 10475470004** Collected: 05/17/19 12:17 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1180	1	05/24/19 16:10	05/25/19 15:45	67-64-1	
Allyl chloride	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	107-05-1	
Benzene	ND	ug/kg	23.7	1	05/24/19 16:10	05/25/19 15:45	71-43-2	
Bromobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	108-86-1	
Bromochloromethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	74-97-5	
Bromodichloromethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	75-27-4	
Bromoform	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	75-25-2	
Bromomethane	ND	ug/kg	592	1	05/24/19 16:10	05/25/19 15:45	74-83-9	
2-Butanone (MEK)	ND	ug/kg	296	1	05/24/19 16:10	05/25/19 15:45	78-93-3	
n-Butylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	104-51-8	
sec-Butylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	135-98-8	
tert-Butylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	98-06-6	
Carbon tetrachloride	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	56-23-5	
Chlorobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	108-90-7	
Chloroethane	ND	ug/kg	592	1	05/24/19 16:10	05/25/19 15:45	75-00-3	
Chloroform	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	67-66-3	
Chloromethane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	74-87-3	
2-Chlorotoluene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	95-49-8	
4-Chlorotoluene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	592	1	05/24/19 16:10	05/25/19 15:45	96-12-8	
Dibromochloromethane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	106-93-4	
Dibromomethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	75-71-8	
1,1-Dichloroethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	75-34-3	
1,2-Dichloroethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	107-06-2	
1,1-Dichloroethene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	156-60-5	
Dichlorofluoromethane	ND	ug/kg	592	1	05/24/19 16:10	05/25/19 15:45	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	78-87-5	
1,3-Dichloropropane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	142-28-9	
2,2-Dichloropropane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	594-20-7	
1,1-Dichloropropene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	60-29-7	
Ethylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	296	1	05/24/19 16:10	05/25/19 15:45	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	98-82-8	
p-Isopropyltoluene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	99-87-6	
Methylene Chloride	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	296	1	05/24/19 16:10	05/25/19 15:45	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-4 (1-3) **Lab ID: 10475470004** Collected: 05/17/19 12:17 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	1634-04-4	
Naphthalene	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	91-20-3	
n-Propylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	103-65-1	
Styrene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	79-34-5	
Tetrachloroethene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	127-18-4	
Tetrahydrofuran	ND	ug/kg	2370	1	05/24/19 16:10	05/25/19 15:45	109-99-9	
Toluene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	79-00-5	
Trichloroethene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	79-01-6	
Trichlorofluoromethane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	237	1	05/24/19 16:10	05/25/19 15:45	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	59.2	1	05/24/19 16:10	05/25/19 15:45	108-67-8	
Vinyl chloride	ND	ug/kg	23.7	1	05/24/19 16:10	05/25/19 15:45	75-01-4	
Xylene (Total)	ND	ug/kg	177	1	05/24/19 16:10	05/25/19 15:45	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	75-125	1	05/24/19 16:10	05/25/19 15:45	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1	05/24/19 16:10	05/25/19 15:45	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 15:45	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-5 (3-5) **Lab ID: 10475470005** Collected: 05/17/19 10:39 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	9.0	1	05/21/19 20:00	05/24/19 00:07		
Surrogates								
n-Triacontane (S)	87	%	44-143	1	05/21/19 20:00	05/24/19 00:07	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	10.8	1	05/28/19 17:09	05/31/19 09:08		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/31/19 09:08	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	2.5	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:47	7440-38-2	
Barium	33.2	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:47	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 11:47	7440-43-9	
Chromium	16.6	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:47	7440-47-3	
Lead	2.6	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:47	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 11:47	7782-49-2	
Silver	ND	mg/kg	0.55	1	05/24/19 15:14	05/28/19 11:47	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.022	1	05/24/19 16:31	05/28/19 12:12	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	11.3	%	0.10	1		05/24/19 12:43		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	83-32-9	
Acenaphthylene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	208-96-8	
Anthracene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	207-08-9	
Chrysene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	53-70-3	
Fluoranthene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	206-44-0	
Fluorene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	193-39-5	
Naphthalene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	91-20-3	
Phenanthrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	85-01-8	
Pyrene	ND	ug/kg	11.3	1	05/22/19 08:38	05/25/19 20:06	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	58	%	30-125	1	05/22/19 08:38	05/25/19 20:06	321-60-8	
p-Terphenyl-d14 (S)	71	%	30-125	1	05/22/19 08:38	05/25/19 20:06	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-5 (3-5) **Lab ID: 10475470005** Collected: 05/17/19 10:39 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1100	1	05/24/19 16:10	05/25/19 16:06	67-64-1	
Allyl chloride	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	107-05-1	
Benzene	ND	ug/kg	22.0	1	05/24/19 16:10	05/25/19 16:06	71-43-2	
Bromobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	108-86-1	
Bromochloromethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	74-97-5	
Bromodichloromethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	75-27-4	
Bromoform	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	75-25-2	
Bromomethane	ND	ug/kg	550	1	05/24/19 16:10	05/25/19 16:06	74-83-9	
2-Butanone (MEK)	ND	ug/kg	275	1	05/24/19 16:10	05/25/19 16:06	78-93-3	
n-Butylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	104-51-8	
sec-Butylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	135-98-8	
tert-Butylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	98-06-6	
Carbon tetrachloride	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	56-23-5	
Chlorobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	108-90-7	
Chloroethane	ND	ug/kg	550	1	05/24/19 16:10	05/25/19 16:06	75-00-3	
Chloroform	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	67-66-3	
Chloromethane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	74-87-3	
2-Chlorotoluene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	95-49-8	
4-Chlorotoluene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	550	1	05/24/19 16:10	05/25/19 16:06	96-12-8	
Dibromochloromethane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	106-93-4	
Dibromomethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	75-71-8	
1,1-Dichloroethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	75-34-3	
1,2-Dichloroethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	107-06-2	
1,1-Dichloroethene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	156-60-5	
Dichlorofluoromethane	ND	ug/kg	550	1	05/24/19 16:10	05/25/19 16:06	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	78-87-5	
1,3-Dichloropropane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	142-28-9	
2,2-Dichloropropane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	594-20-7	
1,1-Dichloropropene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	60-29-7	
Ethylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	275	1	05/24/19 16:10	05/25/19 16:06	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	98-82-8	
p-Isopropyltoluene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	99-87-6	
Methylene Chloride	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	275	1	05/24/19 16:10	05/25/19 16:06	108-10-1	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-5 (3-5) **Lab ID: 10475470005** Collected: 05/17/19 10:39 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	1634-04-4	
Naphthalene	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	91-20-3	
n-Propylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	103-65-1	
Styrene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	79-34-5	
Tetrachloroethene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	127-18-4	
Tetrahydrofuran	ND	ug/kg	2200	1	05/24/19 16:10	05/25/19 16:06	109-99-9	
Toluene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	79-00-5	
Trichloroethene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	79-01-6	
Trichlorofluoromethane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	220	1	05/24/19 16:10	05/25/19 16:06	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	55.0	1	05/24/19 16:10	05/25/19 16:06	108-67-8	
Vinyl chloride	ND	ug/kg	22.0	1	05/24/19 16:10	05/25/19 16:06	75-01-4	
Xylene (Total)	ND	ug/kg	165	1	05/24/19 16:10	05/25/19 16:06	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	75-125	1	05/24/19 16:10	05/25/19 16:06	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1	05/24/19 16:10	05/25/19 16:06	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 16:06	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-6 (3-5) **Lab ID: 10475470006** Collected: 05/17/19 10:26 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	8.6	1	05/21/19 20:00	05/24/19 00:14		
Surrogates								
n-Triacontane (S)	89	%	44-143	1	05/21/19 20:00	05/24/19 00:14	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	12.3	1	05/28/19 17:09	05/31/19 08:42		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/31/19 08:42	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	1.9	mg/kg	1.2	1	05/24/19 15:14	05/28/19 11:57	7440-38-2	
Barium	34.0	mg/kg	0.58	1	05/24/19 15:14	05/28/19 11:57	7440-39-3	
Cadmium	ND	mg/kg	0.17	1	05/24/19 15:14	05/28/19 11:57	7440-43-9	
Chromium	15.4	mg/kg	0.58	1	05/24/19 15:14	05/28/19 11:57	7440-47-3	
Lead	3.1	mg/kg	0.58	1	05/24/19 15:14	05/28/19 11:57	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/24/19 15:14	05/28/19 11:57	7782-49-2	
Silver	ND	mg/kg	0.58	1	05/24/19 15:14	05/28/19 11:57	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.021	1	05/24/19 16:31	05/28/19 12:14	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	16.4	%	0.10	1		05/24/19 12:43		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	83-32-9	
Acenaphthylene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	208-96-8	
Anthracene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	207-08-9	
Chrysene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	53-70-3	
Fluoranthene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	206-44-0	
Fluorene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	193-39-5	
Naphthalene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	91-20-3	
Phenanthrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	85-01-8	
Pyrene	ND	ug/kg	11.9	1	05/22/19 08:38	05/25/19 20:30	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	70	%	30-125	1	05/22/19 08:38	05/25/19 20:30	321-60-8	
p-Terphenyl-d14 (S)	70	%	30-125	1	05/22/19 08:38	05/25/19 20:30	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-6 (3-5) **Lab ID: 10475470006** Collected: 05/17/19 10:26 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1180	1	05/24/19 16:10	05/25/19 16:28	67-64-1	
Allyl chloride	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	107-05-1	
Benzene	ND	ug/kg	23.6	1	05/24/19 16:10	05/25/19 16:28	71-43-2	
Bromobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	108-86-1	
Bromochloromethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	74-97-5	
Bromodichloromethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	75-27-4	
Bromoform	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	75-25-2	
Bromomethane	ND	ug/kg	591	1	05/24/19 16:10	05/25/19 16:28	74-83-9	
2-Butanone (MEK)	ND	ug/kg	295	1	05/24/19 16:10	05/25/19 16:28	78-93-3	
n-Butylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	104-51-8	
sec-Butylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	135-98-8	
tert-Butylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	98-06-6	
Carbon tetrachloride	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	56-23-5	
Chlorobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	108-90-7	
Chloroethane	ND	ug/kg	591	1	05/24/19 16:10	05/25/19 16:28	75-00-3	
Chloroform	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	67-66-3	
Chloromethane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	74-87-3	
2-Chlorotoluene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	95-49-8	
4-Chlorotoluene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	591	1	05/24/19 16:10	05/25/19 16:28	96-12-8	
Dibromochloromethane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	106-93-4	
Dibromomethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	75-71-8	
1,1-Dichloroethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	75-34-3	
1,2-Dichloroethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	107-06-2	
1,1-Dichloroethene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	156-60-5	
Dichlorofluoromethane	ND	ug/kg	591	1	05/24/19 16:10	05/25/19 16:28	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	78-87-5	
1,3-Dichloropropane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	142-28-9	
2,2-Dichloropropane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	594-20-7	
1,1-Dichloropropene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	60-29-7	
Ethylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	295	1	05/24/19 16:10	05/25/19 16:28	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	98-82-8	
p-Isopropyltoluene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	99-87-6	
Methylene Chloride	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	295	1	05/24/19 16:10	05/25/19 16:28	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-6 (3-5) **Lab ID: 10475470006** Collected: 05/17/19 10:26 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	1634-04-4	
Naphthalene	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	91-20-3	
n-Propylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	103-65-1	
Styrene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	79-34-5	
Tetrachloroethene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	127-18-4	
Tetrahydrofuran	ND	ug/kg	2360	1	05/24/19 16:10	05/25/19 16:28	109-99-9	
Toluene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	79-00-5	
Trichloroethene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	79-01-6	
Trichlorofluoromethane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	236	1	05/24/19 16:10	05/25/19 16:28	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	59.1	1	05/24/19 16:10	05/25/19 16:28	108-67-8	
Vinyl chloride	ND	ug/kg	23.6	1	05/24/19 16:10	05/25/19 16:28	75-01-4	
Xylene (Total)	ND	ug/kg	177	1	05/24/19 16:10	05/25/19 16:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	75-125	1	05/24/19 16:10	05/25/19 16:28	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 16:28	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1	05/24/19 16:10	05/25/19 16:28	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-7 (4-6) **Lab ID: 10475470007** Collected: 05/17/19 11:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	8.6	1	05/21/19 20:00	05/24/19 00:21		
Surrogates								
n-Triacontane (S)	86	%	44-143	1	05/21/19 20:00	05/24/19 00:21	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	12.0	1	05/29/19 13:51	05/31/19 09:34		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/29/19 13:51	05/31/19 09:34	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	ND	mg/kg	5.8	5	05/24/19 15:14	05/28/19 13:08	7440-38-2	D3
Barium	71.6	mg/kg	2.9	5	05/24/19 15:14	05/28/19 13:08	7440-39-3	
Cadmium	ND	mg/kg	0.88	5	05/24/19 15:14	05/28/19 13:08	7440-43-9	D3
Chromium	35.8	mg/kg	2.9	5	05/24/19 15:14	05/28/19 13:08	7440-47-3	
Lead	5.1	mg/kg	2.9	5	05/24/19 15:14	05/28/19 13:08	7439-92-1	
Selenium	ND	mg/kg	5.8	5	05/24/19 15:14	05/28/19 13:08	7782-49-2	D3
Silver	ND	mg/kg	2.9	5	05/24/19 15:14	05/28/19 13:08	7440-22-4	D3
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.022	1	05/24/19 16:31	05/28/19 12:16	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	17.7	%	0.10	1		05/24/19 12:43		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	83-32-9	
Acenaphthylene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	208-96-8	
Anthracene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	120-12-7	
Benzo(a)anthracene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	56-55-3	
Benzo(a)pyrene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	207-08-9	
Chrysene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	53-70-3	
Fluoranthene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	206-44-0	
Fluorene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	193-39-5	
Naphthalene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	91-20-3	
Phenanthrene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	85-01-8	
Pyrene	ND	ug/kg	12.1	1	05/22/19 08:38	05/25/19 20:54	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	70	%	30-125	1	05/22/19 08:38	05/25/19 20:54	321-60-8	
p-Terphenyl-d14 (S)	70	%	30-125	1	05/22/19 08:38	05/25/19 20:54	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-7 (4-6) **Lab ID: 10475470007** Collected: 05/17/19 11:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1230	1	05/24/19 16:10	05/25/19 16:50	67-64-1	
Allyl chloride	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	107-05-1	
Benzene	ND	ug/kg	24.6	1	05/24/19 16:10	05/25/19 16:50	71-43-2	
Bromobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	108-86-1	
Bromochloromethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	74-97-5	
Bromodichloromethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	75-27-4	
Bromoform	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	75-25-2	
Bromomethane	ND	ug/kg	615	1	05/24/19 16:10	05/25/19 16:50	74-83-9	
2-Butanone (MEK)	ND	ug/kg	308	1	05/24/19 16:10	05/25/19 16:50	78-93-3	
n-Butylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	104-51-8	
sec-Butylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	135-98-8	
tert-Butylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	98-06-6	
Carbon tetrachloride	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	56-23-5	
Chlorobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	108-90-7	
Chloroethane	ND	ug/kg	615	1	05/24/19 16:10	05/25/19 16:50	75-00-3	
Chloroform	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	67-66-3	
Chloromethane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	74-87-3	
2-Chlorotoluene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	95-49-8	
4-Chlorotoluene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	615	1	05/24/19 16:10	05/25/19 16:50	96-12-8	
Dibromochloromethane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	106-93-4	
Dibromomethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	75-71-8	
1,1-Dichloroethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	75-34-3	
1,2-Dichloroethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	107-06-2	
1,1-Dichloroethene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	156-60-5	
Dichlorofluoromethane	ND	ug/kg	615	1	05/24/19 16:10	05/25/19 16:50	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	78-87-5	
1,3-Dichloropropane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	142-28-9	
2,2-Dichloropropane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	594-20-7	
1,1-Dichloropropene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	60-29-7	
Ethylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	308	1	05/24/19 16:10	05/25/19 16:50	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	98-82-8	
p-Isopropyltoluene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	99-87-6	
Methylene Chloride	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	308	1	05/24/19 16:10	05/25/19 16:50	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-7 (4-6) **Lab ID: 10475470007** Collected: 05/17/19 11:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	1634-04-4	
Naphthalene	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	91-20-3	
n-Propylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	103-65-1	
Styrene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	79-34-5	
Tetrachloroethene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	127-18-4	
Tetrahydrofuran	ND	ug/kg	2460	1	05/24/19 16:10	05/25/19 16:50	109-99-9	
Toluene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	79-00-5	
Trichloroethene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	79-01-6	
Trichlorofluoromethane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	246	1	05/24/19 16:10	05/25/19 16:50	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	61.5	1	05/24/19 16:10	05/25/19 16:50	108-67-8	
Vinyl chloride	ND	ug/kg	24.6	1	05/24/19 16:10	05/25/19 16:50	75-01-4	
Xylene (Total)	ND	ug/kg	185	1	05/24/19 16:10	05/25/19 16:50	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1	05/24/19 16:10	05/25/19 16:50	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1	05/24/19 16:10	05/25/19 16:50	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 16:50	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-8 (5-7) **Lab ID: 10475470008** Collected: 05/17/19 12:58 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	8.2	1	05/21/19 20:00	05/23/19 23:14		
Surrogates								
n-Triacontane (S)	85	%	44-143	1	05/21/19 20:00	05/23/19 23:14	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.7	1	05/28/19 17:09	05/30/19 17:35		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/30/19 17:35	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	2.1	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:00	7440-38-2	
Barium	30.3	mg/kg	0.54	1	05/24/19 15:14	05/28/19 12:00	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 12:00	7440-43-9	
Chromium	19.9	mg/kg	0.54	1	05/24/19 15:14	05/28/19 12:00	7440-47-3	
Lead	2.5	mg/kg	0.54	1	05/24/19 15:14	05/28/19 12:00	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:00	7782-49-2	
Silver	ND	mg/kg	0.54	1	05/24/19 15:14	05/28/19 12:00	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.022	1	05/24/19 16:31	05/28/19 12:18	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	12.9	%	0.10	1		05/24/19 12:44		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	83-32-9	
Acenaphthylene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	208-96-8	
Anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	207-08-9	
Chrysene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	53-70-3	
Fluoranthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	206-44-0	
Fluorene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	193-39-5	
Naphthalene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	91-20-3	
Phenanthrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	85-01-8	
Pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 10:37	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	57	%	30-125	1	05/22/19 08:38	05/28/19 10:37	321-60-8	
p-Terphenyl-d14 (S)	77	%	30-125	1	05/22/19 08:38	05/28/19 10:37	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-8 (5-7) **Lab ID: 10475470008** Collected: 05/17/19 12:58 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1110	1	05/24/19 16:10	05/25/19 17:11	67-64-1	
Allyl chloride	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	107-05-1	
Benzene	ND	ug/kg	22.2	1	05/24/19 16:10	05/25/19 17:11	71-43-2	
Bromobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	108-86-1	
Bromochloromethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	74-97-5	
Bromodichloromethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	75-27-4	
Bromoform	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	75-25-2	
Bromomethane	ND	ug/kg	555	1	05/24/19 16:10	05/25/19 17:11	74-83-9	
2-Butanone (MEK)	ND	ug/kg	278	1	05/24/19 16:10	05/25/19 17:11	78-93-3	
n-Butylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	104-51-8	
sec-Butylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	135-98-8	
tert-Butylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	98-06-6	
Carbon tetrachloride	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	56-23-5	
Chlorobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	108-90-7	
Chloroethane	ND	ug/kg	555	1	05/24/19 16:10	05/25/19 17:11	75-00-3	
Chloroform	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	67-66-3	
Chloromethane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	74-87-3	
2-Chlorotoluene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	95-49-8	
4-Chlorotoluene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	555	1	05/24/19 16:10	05/25/19 17:11	96-12-8	
Dibromochloromethane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	106-93-4	
Dibromomethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	75-71-8	
1,1-Dichloroethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	75-34-3	
1,2-Dichloroethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	107-06-2	
1,1-Dichloroethene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	156-60-5	
Dichlorofluoromethane	ND	ug/kg	555	1	05/24/19 16:10	05/25/19 17:11	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	78-87-5	
1,3-Dichloropropane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	142-28-9	
2,2-Dichloropropane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	594-20-7	
1,1-Dichloropropene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	60-29-7	
Ethylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	278	1	05/24/19 16:10	05/25/19 17:11	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	98-82-8	
p-Isopropyltoluene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	99-87-6	
Methylene Chloride	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	278	1	05/24/19 16:10	05/25/19 17:11	108-10-1	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-8 (5-7) **Lab ID: 10475470008** Collected: 05/17/19 12:58 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	1634-04-4	
Naphthalene	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	91-20-3	
n-Propylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	103-65-1	
Styrene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	79-34-5	
Tetrachloroethene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	127-18-4	
Tetrahydrofuran	ND	ug/kg	2220	1	05/24/19 16:10	05/25/19 17:11	109-99-9	
Toluene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	79-00-5	
Trichloroethene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	79-01-6	
Trichlorofluoromethane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	222	1	05/24/19 16:10	05/25/19 17:11	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	55.5	1	05/24/19 16:10	05/25/19 17:11	108-67-8	
Vinyl chloride	ND	ug/kg	22.2	1	05/24/19 16:10	05/25/19 17:11	75-01-4	
Xylene (Total)	ND	ug/kg	167	1	05/24/19 16:10	05/25/19 17:11	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%.	75-125	1	05/24/19 16:10	05/25/19 17:11	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1	05/24/19 16:10	05/25/19 17:11	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125	1	05/24/19 16:10	05/25/19 17:11	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: MWGW	Lab ID: 10475470009	Collected: 05/17/19 14:20	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.10	1	05/20/19 08:57	05/23/19 15:59		
Surrogates								
n-Triacontane (S)	105	%.	48-125	1	05/20/19 08:57	05/23/19 15:59	638-68-6	A5
WIGRO GCV Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 11:27		
Surrogates								
a,a,a-Trifluorotoluene (S)	100	%.	80-150	1		05/31/19 11:27	98-08-8	
6010D MET ICP, Dissolved Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:21	7440-38-2	
Barium, Dissolved	73.8	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:21	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:21	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:21	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:21	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:21	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:21	7440-22-4	
7470A Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:02	7439-97-6	
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	83-32-9	
Acenaphthylene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	208-96-8	
Anthracene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	207-08-9	
Chrysene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	53-70-3	
Fluoranthene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	206-44-0	
Fluorene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	193-39-5	
Naphthalene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	91-20-3	
Phenanthrene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	85-01-8	
Pyrene	ND	ug/L	0.045	1	05/22/19 15:20	05/25/19 12:53	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	63	%.	47-125	1	05/22/19 15:20	05/25/19 12:53	321-60-8	
p-Terphenyl-d14 (S)	82	%.	62-125	1	05/22/19 15:20	05/25/19 12:53	1718-51-0	
8260B VOC Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 23:30	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 23:30	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 23:30	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: MWGW	Lab ID: 10475470009	Collected: 05/17/19 14:20	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Bromobenzene	ND	ug/L	1.0	1		05/29/19 23:30	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 23:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 23:30	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 23:30	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 23:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 23:30	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 23:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 23:30	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 23:30	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 23:30	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 23:30	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 23:30	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 23:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 23:30	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 23:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 23:30	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 23:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 23:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 23:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 23:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 23:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 23:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 23:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 23:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 23:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 23:30	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 23:30	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 23:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 23:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 23:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 23:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 23:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 23:30	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 23:30	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 23:30	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 23:30	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 23:30	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 23:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 23:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 23:30	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 23:30	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 23:30	100-42-5	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: MWGW		Lab ID: 10475470009		Collected: 05/17/19 14:20		Received: 05/17/19 18:20		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260B VOC		Analytical Method: EPA 8260B							
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 23:30	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 23:30	79-34-5		
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 23:30	127-18-4		
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 23:30	109-99-9		
Toluene	ND	ug/L	1.0	1		05/29/19 23:30	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 23:30	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 23:30	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 23:30	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 23:30	79-00-5		
Trichloroethene	ND	ug/L	0.40	1		05/29/19 23:30	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 23:30	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 23:30	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 23:30	76-13-1		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 23:30	108-67-8		
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 23:30	75-01-4		
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 23:30	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125	1		05/29/19 23:30	17060-07-0		
Toluene-d8 (S)	94	%	75-125	1		05/29/19 23:30	2037-26-5		
4-Bromofluorobenzene (S)	99	%	75-125	1		05/29/19 23:30	460-00-4		

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-1 GW	Lab ID: 10475470010	Collected: 05/17/19 08:55	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.12	1	05/20/19 08:57	05/23/19 16:07		
Surrogates								
n-Triacontane (S)	98	%	48-125	1	05/20/19 08:57	05/23/19 16:07	638-68-6	A5
WIGRO GCV								
Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 09:45		G-,M1, R1
Surrogates								
a,a,a-Trifluorotoluene (S)	95	%	80-150	1		05/31/19 09:45	98-08-8	
6010D MET ICP, Dissolved								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:29	7440-38-2	
Barium, Dissolved	57.3	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:29	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:29	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:29	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:29	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:29	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:29	7440-22-4	
7470A Mercury, Dissolved								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:04	7439-97-6	
8270D MSSV PAH by SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	83-32-9	
Acenaphthylene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	208-96-8	
Anthracene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	207-08-9	
Chrysene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	53-70-3	
Fluoranthene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	206-44-0	
Fluorene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	193-39-5	
Naphthalene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	91-20-3	
Phenanthrene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	85-01-8	
Pyrene	ND	ug/L	0.042	1	05/22/19 15:20	05/25/19 13:14	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	76	%	47-125	1	05/22/19 15:20	05/25/19 13:14	321-60-8	
p-Terphenyl-d14 (S)	88	%	62-125	1	05/22/19 15:20	05/25/19 13:14	1718-51-0	
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 02:58	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 02:58	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 02:58	71-43-2	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-1 GW		Lab ID: 10475470010	Collected: 05/17/19 08:55	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260B VOC		Analytical Method: EPA 8260B							
Bromobenzene	ND	ug/L	1.0	1		05/29/19 02:58	108-86-1		
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 02:58	74-97-5		
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 02:58	75-27-4		
Bromoform	ND	ug/L	4.0	1		05/29/19 02:58	75-25-2		
Bromomethane	ND	ug/L	4.0	1		05/29/19 02:58	74-83-9		
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 02:58	78-93-3		
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	104-51-8		
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	135-98-8		
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	98-06-6		
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 02:58	56-23-5		
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 02:58	108-90-7		
Chloroethane	ND	ug/L	1.0	1		05/29/19 02:58	75-00-3		
Chloroform	ND	ug/L	1.0	1		05/29/19 02:58	67-66-3		
Chloromethane	ND	ug/L	4.0	1		05/29/19 02:58	74-87-3		
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 02:58	95-49-8		
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 02:58	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 02:58	96-12-8		
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 02:58	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 02:58	106-93-4		
Dibromomethane	ND	ug/L	4.0	1		05/29/19 02:58	74-95-3		
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 02:58	95-50-1		
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 02:58	541-73-1		
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 02:58	106-46-7		
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 02:58	75-71-8		
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 02:58	75-34-3		
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 02:58	107-06-2		
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 02:58	75-35-4		
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 02:58	156-59-2		
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 02:58	156-60-5		
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 02:58	75-43-4	N2	
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 02:58	78-87-5		
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 02:58	142-28-9		
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 02:58	594-20-7		
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 02:58	563-58-6		
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 02:58	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 02:58	10061-02-6		
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 02:58	60-29-7		
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 02:58	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 02:58	98-82-8		
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 02:58	99-87-6		
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 02:58	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 02:58	108-10-1		
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 02:58	1634-04-4		
Naphthalene	ND	ug/L	4.0	1		05/29/19 02:58	91-20-3		
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	103-65-1		
Styrene	ND	ug/L	1.0	1		05/29/19 02:58	100-42-5		

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-1 GW		Lab ID: 10475470010	Collected: 05/17/19 08:55	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 02:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 02:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 02:58	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 02:58	109-99-9	
Toluene	ND	ug/L	1.0	1		05/29/19 02:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 02:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 02:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 02:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 02:58	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		05/29/19 02:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 02:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 02:58	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 02:58	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 02:58	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 02:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 02:58	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	75-125	1		05/29/19 02:58	17060-07-0	
Toluene-d8 (S)	95	%	75-125	1		05/29/19 02:58	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		05/29/19 02:58	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-2 GW	Lab ID: 10475470011	Collected: 05/17/19 13:37	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	1	05/20/19 08:57	05/23/19 16:15		
Surrogates								
n-Triacontane (S)	96	%.	48-125	1	05/20/19 08:57	05/23/19 16:15	638-68-6	A5
WIGRO GCV								
Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 11:53		G-
Surrogates								
a,a,a-Trifluorotoluene (S)	104	%.	80-150	1		05/31/19 11:53	98-08-8	
6010D MET ICP, Dissolved								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:31	7440-38-2	
Barium, Dissolved	53.8	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:31	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:31	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:31	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:31	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:31	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:31	7440-22-4	
7470A Mercury, Dissolved								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:07	7439-97-6	
8270D MSSV PAH by SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	83-32-9	
Acenaphthylene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	208-96-8	
Anthracene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	207-08-9	
Chrysene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	53-70-3	
Fluoranthene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	206-44-0	
Fluorene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	193-39-5	
Naphthalene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	91-20-3	
Phenanthrene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	85-01-8	
Pyrene	ND	ug/L	0.044	1	05/22/19 15:20	05/25/19 13:36	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	83	%.	47-125	1	05/22/19 15:20	05/25/19 13:36	321-60-8	
p-Terphenyl-d14 (S)	87	%.	62-125	1	05/22/19 15:20	05/25/19 13:36	1718-51-0	
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 03:14	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 03:14	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 03:14	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-2 GW		Lab ID: 10475470011	Collected: 05/17/19 13:37	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Bromobenzene	ND	ug/L	1.0	1		05/29/19 03:14	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 03:14	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 03:14	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 03:14	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 03:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 03:14	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 03:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 03:14	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 03:14	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 03:14	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 03:14	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 03:14	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 03:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 03:14	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 03:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 03:14	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 03:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 03:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 03:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 03:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:14	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 03:14	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 03:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 03:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 03:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 03:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 03:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 03:14	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 03:14	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 03:14	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 03:14	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 03:14	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 03:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 03:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 03:14	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 03:14	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 03:14	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-2 GW		Lab ID: 10475470011	Collected: 05/17/19 13:37	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 03:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 03:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 03:14	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 03:14	109-99-9	
Toluene	ND	ug/L	1.0	1		05/29/19 03:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 03:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 03:14	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		05/29/19 03:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 03:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 03:14	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 03:14	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 03:14	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 03:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 03:14	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	75-125	1		05/29/19 03:14	17060-07-0	
Toluene-d8 (S)	94	%	75-125	1		05/29/19 03:14	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125	1		05/29/19 03:14	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-3 GW	Lab ID: 10475470012	Collected: 05/17/19 11:57	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.12	1	05/20/19 08:57	05/23/19 15:51		
Surrogates								
n-Triacontane (S)	98	%.	48-125	1	05/20/19 08:57	05/23/19 15:51	638-68-6	A5
WIGRO GCV								
Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 12:19		G-
Surrogates								
a,a,a-Trifluorotoluene (S)	101	%.	80-150	1		05/31/19 12:19	98-08-8	
6010D MET ICP, Dissolved								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:33	7440-38-2	
Barium, Dissolved	68.4	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:33	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:33	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:33	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:33	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:33	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:33	7440-22-4	
7470A Mercury, Dissolved								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:09	7439-97-6	
8270D MSSV PAH by SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	83-32-9	
Acenaphthylene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	208-96-8	
Anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	207-08-9	
Chrysene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	53-70-3	
Fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	206-44-0	
Fluorene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	193-39-5	
Naphthalene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	91-20-3	
Phenanthrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	85-01-8	
Pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 13:57	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	63	%.	47-125	1	05/22/19 15:20	05/25/19 13:57	321-60-8	
p-Terphenyl-d14 (S)	85	%.	62-125	1	05/22/19 15:20	05/25/19 13:57	1718-51-0	
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 03:31	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 03:31	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 03:31	71-43-2	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-3 GW	Lab ID: 10475470012	Collected: 05/17/19 11:57	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Bromobenzene	ND	ug/L	1.0	1		05/29/19 03:31	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 03:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 03:31	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 03:31	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 03:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 03:31	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 03:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 03:31	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 03:31	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 03:31	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 03:31	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 03:31	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 03:31	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 03:31	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 03:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 03:31	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 03:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:31	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 03:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 03:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 03:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:31	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 03:31	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 03:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 03:31	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 03:31	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 03:31	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 03:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 03:31	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 03:31	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 03:31	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 03:31	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 03:31	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 03:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 03:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 03:31	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 03:31	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 03:31	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-3 GW		Lab ID: 10475470012		Collected: 05/17/19 11:57		Received: 05/17/19 18:20		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260B VOC									
Analytical Method: EPA 8260B									
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 03:31	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 03:31	79-34-5		
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 03:31	127-18-4		
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 03:31	109-99-9		
Toluene	ND	ug/L	1.0	1		05/29/19 03:31	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:31	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:31	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 03:31	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 03:31	79-00-5		
Trichloroethene	ND	ug/L	0.40	1		05/29/19 03:31	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 03:31	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 03:31	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 03:31	76-13-1		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 03:31	108-67-8		
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 03:31	75-01-4		
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 03:31	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	75-125	1		05/29/19 03:31	17060-07-0		
Toluene-d8 (S)	95	%	75-125	1		05/29/19 03:31	2037-26-5		
4-Bromofluorobenzene (S)	100	%	75-125	1		05/29/19 03:31	460-00-4		

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-4 GW	Lab ID: 10475470013	Collected: 05/17/19 12:26	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.12	1	05/22/19 14:31	05/24/19 12:19		
Surrogates								
n-Triacontane (S)	91	%.	48-125	1	05/22/19 14:31	05/24/19 12:19	638-68-6	A5
WIGRO GCV								
Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 12:43		G-
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%.	80-150	1		05/31/19 12:43	98-08-8	
6010D MET ICP, Dissolved								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:38	7440-38-2	
Barium, Dissolved	27.7	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:38	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:38	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:38	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:38	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:38	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:38	7440-22-4	
7470A Mercury, Dissolved								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:11	7439-97-6	
8270D MSSV PAH by SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	83-32-9	
Acenaphthylene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	208-96-8	
Anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	207-08-9	
Chrysene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	53-70-3	
Fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	206-44-0	
Fluorene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	193-39-5	
Naphthalene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	91-20-3	
Phenanthrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	85-01-8	
Pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 14:18	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	74	%.	47-125	1	05/22/19 15:20	05/25/19 14:18	321-60-8	
p-Terphenyl-d14 (S)	88	%.	62-125	1	05/22/19 15:20	05/25/19 14:18	1718-51-0	
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 03:48	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 03:48	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 03:48	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-4 GW	Lab ID: 10475470013	Collected: 05/17/19 12:26	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Bromobenzene	ND	ug/L	1.0	1		05/29/19 03:48	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 03:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 03:48	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 03:48	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 03:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 03:48	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 03:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 03:48	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 03:48	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 03:48	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 03:48	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 03:48	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 03:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 03:48	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 03:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 03:48	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 03:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:48	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 03:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 03:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 03:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 03:48	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 03:48	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 03:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 03:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 03:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 03:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 03:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 03:48	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 03:48	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 03:48	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 03:48	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 03:48	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 03:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 03:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 03:48	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 03:48	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 03:48	100-42-5	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-4 GW		Lab ID: 10475470013	Collected: 05/17/19 12:26	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 03:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 03:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 03:48	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 03:48	109-99-9	
Toluene	ND	ug/L	1.0	1		05/29/19 03:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 03:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 03:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 03:48	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		05/29/19 03:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 03:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 03:48	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 03:48	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 03:48	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 03:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 03:48	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	75-125	1		05/29/19 03:48	17060-07-0	
Toluene-d8 (S)	95	%	75-125	1		05/29/19 03:48	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125	1		05/29/19 03:48	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-5 GW	Lab ID: 10475470014	Collected: 05/17/19 10:45	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	1	05/22/19 14:31	05/24/19 12:35		
Surrogates								
n-Triacontane (S)	98	%.	48-125	1	05/22/19 14:31	05/24/19 12:35	638-68-6	A5
WIGRO GCV								
Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 13:10		G-
Surrogates								
a,a,a-Trifluorotoluene (S)	106	%.	80-150	1		05/31/19 13:10	98-08-8	
6010D MET ICP, Dissolved								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:39	7440-38-2	
Barium, Dissolved	56.4	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:39	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:39	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:39	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:39	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:39	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:39	7440-22-4	
7470A Mercury, Dissolved								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:14	7439-97-6	
8270D MSSV PAH by SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	83-32-9	
Acenaphthylene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	208-96-8	
Anthracene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	207-08-9	
Chrysene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	53-70-3	
Fluoranthene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	206-44-0	
Fluorene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	193-39-5	
Naphthalene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	91-20-3	
Phenanthrene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	85-01-8	
Pyrene	ND	ug/L	0.046	1	05/22/19 15:20	05/25/19 14:40	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	73	%.	47-125	1	05/22/19 15:20	05/25/19 14:40	321-60-8	
p-Terphenyl-d14 (S)	89	%.	62-125	1	05/22/19 15:20	05/25/19 14:40	1718-51-0	
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 04:04	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 04:04	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 04:04	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-5 GW	Lab ID: 10475470014	Collected: 05/17/19 10:45	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Bromobenzene	ND	ug/L	1.0	1		05/29/19 04:04	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 04:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 04:04	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 04:04	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 04:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 04:04	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 04:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 04:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 04:04	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 04:04	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 04:04	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 04:04	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 04:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 04:04	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 04:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 04:04	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 04:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:04	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 04:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 04:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 04:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 04:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 04:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 04:04	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 04:04	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 04:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 04:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 04:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 04:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 04:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 04:04	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 04:04	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 04:04	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 04:04	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 04:04	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 04:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 04:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 04:04	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 04:04	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 04:04	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-5 GW		Lab ID: 10475470014	Collected: 05/17/19 10:45	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 04:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 04:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 04:04	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 04:04	109-99-9	
Toluene	ND	ug/L	1.0	1		05/29/19 04:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 04:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 04:04	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		05/29/19 04:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 04:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 04:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 04:04	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 04:04	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 04:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 04:04	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	75-125	1		05/29/19 04:04	17060-07-0	
Toluene-d8 (S)	94	%	75-125	1		05/29/19 04:04	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		05/29/19 04:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: DP-8 GW	Lab ID: 10475470015	Collected: 05/17/19 13:07	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.12	1	05/22/19 14:31	05/24/19 12:43		
Surrogates								
n-Triacontane (S)	86	%.	48-125	1	05/22/19 14:31	05/24/19 12:43	638-68-6	A5
WIGRO GCV								
Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 13:35		G-
Surrogates								
a,a,a-Trifluorotoluene (S)	98	%.	80-150	1		05/31/19 13:35	98-08-8	
6010D MET ICP, Dissolved								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Arsenic, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:41	7440-38-2	
Barium, Dissolved	16.0	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:41	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	05/23/19 07:49	05/24/19 15:41	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:41	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:41	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	05/23/19 07:49	05/24/19 15:41	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/23/19 07:49	05/24/19 15:41	7440-22-4	
7470A Mercury, Dissolved								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	1	05/23/19 12:19	05/23/19 17:16	7439-97-6	
8270D MSSV PAH by SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C								
Acenaphthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	83-32-9	
Acenaphthylene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	208-96-8	
Anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	207-08-9	
Chrysene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	53-70-3	
Fluoranthene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	206-44-0	
Fluorene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	193-39-5	
Naphthalene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	91-20-3	
Phenanthrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	85-01-8	
Pyrene	ND	ug/L	0.048	1	05/22/19 15:20	05/25/19 15:01	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	65	%.	47-125	1	05/22/19 15:20	05/25/19 15:01	321-60-8	
p-Terphenyl-d14 (S)	86	%.	62-125	1	05/22/19 15:20	05/25/19 15:01	1718-51-0	
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	1		05/29/19 04:21	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 04:21	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 04:21	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-8 GW	Lab ID: 10475470015	Collected: 05/17/19 13:07	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Bromobenzene	ND	ug/L	1.0	1		05/29/19 04:21	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 04:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 04:21	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 04:21	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 04:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 04:21	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 04:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 04:21	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 04:21	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 04:21	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 04:21	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 04:21	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 04:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 04:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 04:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 04:21	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 04:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 04:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 04:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 04:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 04:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 04:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 04:21	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 04:21	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 04:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 04:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 04:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 04:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 04:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 04:21	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 04:21	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 04:21	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 04:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 04:21	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 04:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 04:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 04:21	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 04:21	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 04:21	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: DP-8 GW		Lab ID: 10475470015	Collected: 05/17/19 13:07	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 04:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 04:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 04:21	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 04:21	109-99-9	
Toluene	ND	ug/L	1.0	1		05/29/19 04:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 04:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 04:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 04:21	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		05/29/19 04:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 04:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 04:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 04:21	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 04:21	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 04:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 04:21	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	75-125	1		05/29/19 04:21	17060-07-0	
Toluene-d8 (S)	94	%	75-125	1		05/29/19 04:21	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125	1		05/29/19 04:21	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-1 **Lab ID: 10475470016** Collected: 05/17/19 15:00 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	56.7	mg/kg	18.7	2	05/21/19 20:00	05/24/19 11:35		T6
Surrogates								
n-Triacontane (S)	99	%.	44-143	2	05/21/19 20:00	05/24/19 11:35	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.2	1	05/28/19 17:09	05/30/19 17:09		
Surrogates								
a,a,a-Trifluorotoluene (S)	100	%.	80-150	1	05/28/19 17:09	05/30/19 17:09	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	1.3	mg/kg	1.0	1	05/24/19 15:14	05/28/19 12:02	7440-38-2	
Barium	20.5	mg/kg	0.50	1	05/24/19 15:14	05/28/19 12:02	7440-39-3	
Cadmium	ND	mg/kg	0.15	1	05/24/19 15:14	05/28/19 12:02	7440-43-9	
Chromium	12.0	mg/kg	0.50	1	05/24/19 15:14	05/28/19 12:02	7440-47-3	
Lead	3.2	mg/kg	0.50	1	05/24/19 15:14	05/28/19 12:02	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/24/19 15:14	05/28/19 12:02	7782-49-2	
Silver	ND	mg/kg	0.50	1	05/24/19 15:14	05/28/19 12:02	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.019	1	05/24/19 16:31	05/28/19 12:20	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	5.3	%	0.10	1		05/24/19 12:44		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	83-32-9	
Acenaphthylene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	208-96-8	
Anthracene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	120-12-7	
Benzo(a)anthracene	96.2	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	56-55-3	
Benzo(a)pyrene	116	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	50-32-8	
Benzo(b)fluoranthene	155	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	205-99-2	
Benzo(g,h,i)perylene	118	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	191-24-2	
Benzo(k)fluoranthene	54.6	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	207-08-9	
Chrysene	136	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	53-70-3	
Fluoranthene	312	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	206-44-0	
Fluorene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	193-39-5	
Naphthalene	ND	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	91-20-3	
Phenanthrene	197	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	85-01-8	
Pyrene	245	ug/kg	52.8	1	05/22/19 08:38	05/28/19 11:02	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	81	%.	30-125	1	05/22/19 08:38	05/28/19 11:02	321-60-8	P3
p-Terphenyl-d14 (S)	87	%.	30-125	1	05/22/19 08:38	05/28/19 11:02	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-1 **Lab ID: 10475470016** Collected: 05/17/19 15:00 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1120	1	05/24/19 16:10	05/25/19 17:32	67-64-1	
Allyl chloride	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	107-05-1	
Benzene	ND	ug/kg	22.5	1	05/24/19 16:10	05/25/19 17:32	71-43-2	
Bromobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	108-86-1	
Bromochloromethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	74-97-5	
Bromodichloromethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	75-27-4	
Bromoform	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	75-25-2	
Bromomethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	74-83-9	
2-Butanone (MEK)	ND	ug/kg	281	1	05/24/19 16:10	05/25/19 17:32	78-93-3	
n-Butylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	104-51-8	
sec-Butylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	135-98-8	
tert-Butylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	98-06-6	
Carbon tetrachloride	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	56-23-5	
Chlorobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	108-90-7	
Chloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	75-00-3	
Chloroform	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	67-66-3	
Chloromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	74-87-3	
2-Chlorotoluene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	95-49-8	
4-Chlorotoluene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	96-12-8	
Dibromochloromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	106-93-4	
Dibromomethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	75-71-8	
1,1-Dichloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	75-34-3	
1,2-Dichloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	107-06-2	
1,1-Dichloroethene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	156-60-5	
Dichlorofluoromethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	78-87-5	
1,3-Dichloropropane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	142-28-9	
2,2-Dichloropropane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	594-20-7	
1,1-Dichloropropene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	60-29-7	
Ethylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	281	1	05/24/19 16:10	05/25/19 17:32	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	98-82-8	
p-Isopropyltoluene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	99-87-6	
Methylene Chloride	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	281	1	05/24/19 16:10	05/25/19 17:32	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-1 **Lab ID: 10475470016** Collected: 05/17/19 15:00 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	1634-04-4	
Naphthalene	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	91-20-3	
n-Propylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	103-65-1	
Styrene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	79-34-5	
Tetrachloroethene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	127-18-4	
Tetrahydrofuran	ND	ug/kg	2250	1	05/24/19 16:10	05/25/19 17:32	109-99-9	
Toluene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	79-00-5	
Trichloroethene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	79-01-6	
Trichlorofluoromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 17:32	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	56.1	1	05/24/19 16:10	05/25/19 17:32	108-67-8	
Vinyl chloride	ND	ug/kg	22.5	1	05/24/19 16:10	05/25/19 17:32	75-01-4	
Xylene (Total)	ND	ug/kg	168	1	05/24/19 16:10	05/25/19 17:32	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%.	75-125	1	05/24/19 16:10	05/25/19 17:32	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 17:32	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 17:32	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-2 **Lab ID: 10475470017** Collected: 05/17/19 15:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	81.4	mg/kg	58.6	5	05/21/19 20:00	05/24/19 11:41		T6
Surrogates								
n-Triacontane (S)	97	%.	44-143	5	05/21/19 20:00	05/24/19 11:41	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.8	1	05/28/19 17:09	05/30/19 18:01		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%.	80-150	1	05/28/19 17:09	05/30/19 18:01	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	1.7	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:04	7440-38-2	
Barium	23.5	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:04	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 12:04	7440-43-9	
Chromium	14.2	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:04	7440-47-3	
Lead	4.1	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:04	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:04	7782-49-2	
Silver	ND	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:04	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.020	1	05/24/19 16:31	05/28/19 12:22	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	9.1	%	0.10	1		05/24/19 12:44		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	83-32-9	
Acenaphthylene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	208-96-8	
Anthracene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	120-12-7	
Benzo(a)anthracene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	56-55-3	
Benzo(a)pyrene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	50-32-8	
Benzo(b)fluoranthene	57.0	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	207-08-9	
Chrysene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	53-70-3	
Fluoranthene	71.5	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	206-44-0	
Fluorene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	193-39-5	
Naphthalene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	91-20-3	
Phenanthrene	ND	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	85-01-8	
Pyrene	64.8	ug/kg	54.8	1	05/22/19 08:38	05/28/19 11:26	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	80	%.	30-125	1	05/22/19 08:38	05/28/19 11:26	321-60-8	P3
p-Terphenyl-d14 (S)	84	%.	30-125	1	05/22/19 08:38	05/28/19 11:26	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-2 **Lab ID: 10475470017** Collected: 05/17/19 15:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1140	1	05/24/19 16:10	05/25/19 17:54	67-64-1	
Allyl chloride	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	107-05-1	
Benzene	ND	ug/kg	22.8	1	05/24/19 16:10	05/25/19 17:54	71-43-2	
Bromobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	108-86-1	
Bromochloromethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	74-97-5	
Bromodichloromethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	75-27-4	
Bromoform	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	75-25-2	
Bromomethane	ND	ug/kg	570	1	05/24/19 16:10	05/25/19 17:54	74-83-9	
2-Butanone (MEK)	ND	ug/kg	285	1	05/24/19 16:10	05/25/19 17:54	78-93-3	
n-Butylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	104-51-8	
sec-Butylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	135-98-8	
tert-Butylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	98-06-6	
Carbon tetrachloride	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	56-23-5	
Chlorobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	108-90-7	
Chloroethane	ND	ug/kg	570	1	05/24/19 16:10	05/25/19 17:54	75-00-3	
Chloroform	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	67-66-3	
Chloromethane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	74-87-3	
2-Chlorotoluene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	95-49-8	
4-Chlorotoluene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	570	1	05/24/19 16:10	05/25/19 17:54	96-12-8	
Dibromochloromethane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	106-93-4	
Dibromomethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	75-71-8	
1,1-Dichloroethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	107-06-2	
1,1-Dichloroethene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	156-60-5	
Dichlorofluoromethane	ND	ug/kg	570	1	05/24/19 16:10	05/25/19 17:54	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	78-87-5	
1,3-Dichloropropane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	142-28-9	
2,2-Dichloropropane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	594-20-7	
1,1-Dichloropropene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	60-29-7	
Ethylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	285	1	05/24/19 16:10	05/25/19 17:54	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	98-82-8	
p-Isopropyltoluene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	99-87-6	
Methylene Chloride	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	285	1	05/24/19 16:10	05/25/19 17:54	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-2 **Lab ID: 10475470017** Collected: 05/17/19 15:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	1634-04-4	
Naphthalene	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	91-20-3	
n-Propylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	103-65-1	
Styrene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	79-34-5	
Tetrachloroethene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	127-18-4	
Tetrahydrofuran	ND	ug/kg	2280	1	05/24/19 16:10	05/25/19 17:54	109-99-9	
Toluene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	79-00-5	
Trichloroethene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	79-01-6	
Trichlorofluoromethane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	228	1	05/24/19 16:10	05/25/19 17:54	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	57.0	1	05/24/19 16:10	05/25/19 17:54	108-67-8	
Vinyl chloride	ND	ug/kg	22.8	1	05/24/19 16:10	05/25/19 17:54	75-01-4	
Xylene (Total)	ND	ug/kg	171	1	05/24/19 16:10	05/25/19 17:54	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1	05/24/19 16:10	05/25/19 17:54	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 17:54	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1	05/24/19 16:10	05/25/19 17:54	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-3 **Lab ID: 10475470018** Collected: 05/17/19 15:42 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	43.0	mg/kg	20.6	2	05/21/19 20:00	05/24/19 11:48		T6
Surrogates								
n-Triacontane (S)	62	%.	44-143	2	05/21/19 20:00	05/24/19 11:48	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.2	1	05/28/19 17:09	05/30/19 18:27		
Surrogates								
a,a,a-Trifluorotoluene (S)	100	%.	80-150	1	05/28/19 17:09	05/30/19 18:27	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	1.9	mg/kg	1.0	1	05/24/19 15:14	05/28/19 12:05	7440-38-2	
Barium	21.5	mg/kg	0.52	1	05/24/19 15:14	05/28/19 12:05	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 12:05	7440-43-9	
Chromium	10.5	mg/kg	0.52	1	05/24/19 15:14	05/28/19 12:05	7440-47-3	
Lead	5.4	mg/kg	0.52	1	05/24/19 15:14	05/28/19 12:05	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/24/19 15:14	05/28/19 12:05	7782-49-2	
Silver	ND	mg/kg	0.52	1	05/24/19 15:14	05/28/19 12:05	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.021	1	05/24/19 16:31	05/28/19 12:25	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	10.7	%	0.10	1		05/24/19 13:44		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	83-32-9	
Acenaphthylene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	208-96-8	
Anthracene	17.2	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	120-12-7	
Benzo(a)anthracene	35.4	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	56-55-3	
Benzo(a)pyrene	50.5	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	50-32-8	
Benzo(b)fluoranthene	65.5	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	191-24-2	
Benzo(k)fluoranthene	32.2	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	207-08-9	
Chrysene	65.7	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	53-70-3	
Fluoranthene	102	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	206-44-0	
Fluorene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	193-39-5	
Naphthalene	ND	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	91-20-3	
Phenanthrene	59.7	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	85-01-8	
Pyrene	97.0	ug/kg	11.1	1	05/22/19 08:38	05/28/19 11:50	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	60	%.	30-125	1	05/22/19 08:38	05/28/19 11:50	321-60-8	
p-Terphenyl-d14 (S)	61	%.	30-125	1	05/22/19 08:38	05/28/19 11:50	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-3 **Lab ID: 10475470018** Collected: 05/17/19 15:42 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1220	1	05/24/19 16:10	05/25/19 18:15	67-64-1	
Allyl chloride	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	107-05-1	
Benzene	ND	ug/kg	24.3	1	05/24/19 16:10	05/25/19 18:15	71-43-2	
Bromobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	108-86-1	
Bromochloromethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	74-97-5	
Bromodichloromethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	75-27-4	
Bromoform	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	75-25-2	
Bromomethane	ND	ug/kg	608	1	05/24/19 16:10	05/25/19 18:15	74-83-9	
2-Butanone (MEK)	ND	ug/kg	304	1	05/24/19 16:10	05/25/19 18:15	78-93-3	
n-Butylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	104-51-8	
sec-Butylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	135-98-8	
tert-Butylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	98-06-6	
Carbon tetrachloride	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	56-23-5	
Chlorobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	108-90-7	
Chloroethane	ND	ug/kg	608	1	05/24/19 16:10	05/25/19 18:15	75-00-3	
Chloroform	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	67-66-3	
Chloromethane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	74-87-3	
2-Chlorotoluene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	95-49-8	
4-Chlorotoluene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	608	1	05/24/19 16:10	05/25/19 18:15	96-12-8	
Dibromochloromethane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	106-93-4	
Dibromomethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	75-71-8	
1,1-Dichloroethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	75-34-3	
1,2-Dichloroethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	107-06-2	
1,1-Dichloroethene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	156-60-5	
Dichlorofluoromethane	ND	ug/kg	608	1	05/24/19 16:10	05/25/19 18:15	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	78-87-5	
1,3-Dichloropropane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	142-28-9	
2,2-Dichloropropane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	594-20-7	
1,1-Dichloropropene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	60-29-7	
Ethylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	304	1	05/24/19 16:10	05/25/19 18:15	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	98-82-8	
p-Isopropyltoluene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	99-87-6	
Methylene Chloride	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	304	1	05/24/19 16:10	05/25/19 18:15	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-3 **Lab ID: 10475470018** Collected: 05/17/19 15:42 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	1634-04-4	
Naphthalene	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	91-20-3	
n-Propylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	103-65-1	
Styrene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	79-34-5	
Tetrachloroethene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	127-18-4	
Tetrahydrofuran	ND	ug/kg	2430	1	05/24/19 16:10	05/25/19 18:15	109-99-9	
Toluene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	79-00-5	
Trichloroethene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	79-01-6	
Trichlorofluoromethane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	243	1	05/24/19 16:10	05/25/19 18:15	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	60.8	1	05/24/19 16:10	05/25/19 18:15	108-67-8	
Vinyl chloride	ND	ug/kg	24.3	1	05/24/19 16:10	05/25/19 18:15	75-01-4	
Xylene (Total)	ND	ug/kg	182	1	05/24/19 16:10	05/25/19 18:15	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%.	75-125	1	05/24/19 16:10	05/25/19 18:15	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 18:15	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 18:15	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-4 **Lab ID: 10475470019** Collected: 05/17/19 15:58 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	10.2	1	05/21/19 20:00	05/23/19 22:54		
Surrogates								
n-Triacontane (S)	103	%	44-143	1	05/21/19 20:00	05/23/19 22:54	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	12.2	1	05/28/19 17:09	05/31/19 01:44		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/31/19 01:44	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	2.8	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:07	7440-38-2	
Barium	58.4	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:07	7440-39-3	
Cadmium	ND	mg/kg	0.16	1	05/24/19 15:14	05/28/19 12:07	7440-43-9	
Chromium	15.5	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:07	7440-47-3	
Lead	6.2	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:07	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:07	7782-49-2	
Silver	ND	mg/kg	0.53	1	05/24/19 15:14	05/28/19 12:07	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.021	1	05/24/19 16:31	05/28/19 12:31	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	11.9	%	0.10	1		05/24/19 14:12		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	83-32-9	
Acenaphthylene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	208-96-8	
Anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	120-12-7	
Benzo(a)anthracene	27.8	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	56-55-3	
Benzo(a)pyrene	39.7	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	50-32-8	
Benzo(b)fluoranthene	59.5	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	205-99-2	
Benzo(g,h,i)perylene	41.9	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	191-24-2	
Benzo(k)fluoranthene	27.1	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	207-08-9	
Chrysene	47.4	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	53-70-3	
Fluoranthene	87.6	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	206-44-0	
Fluorene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	193-39-5	
Naphthalene	ND	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	91-20-3	
Phenanthrene	40.9	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	85-01-8	
Pyrene	75.4	ug/kg	11.4	1	05/22/19 08:38	05/28/19 12:14	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	66	%	30-125	1	05/22/19 08:38	05/28/19 12:14	321-60-8	
p-Terphenyl-d14 (S)	61	%	30-125	1	05/22/19 08:38	05/28/19 12:14	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-4 **Lab ID: 10475470019** Collected: 05/17/19 15:58 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1150	1	05/24/19 16:10	05/25/19 18:36	67-64-1	
Allyl chloride	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	107-05-1	
Benzene	ND	ug/kg	23.0	1	05/24/19 16:10	05/25/19 18:36	71-43-2	
Bromobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	108-86-1	
Bromochloromethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	74-97-5	
Bromodichloromethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	75-27-4	
Bromoform	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	75-25-2	
Bromomethane	ND	ug/kg	574	1	05/24/19 16:10	05/25/19 18:36	74-83-9	
2-Butanone (MEK)	ND	ug/kg	287	1	05/24/19 16:10	05/25/19 18:36	78-93-3	
n-Butylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	104-51-8	
sec-Butylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	135-98-8	
tert-Butylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	98-06-6	
Carbon tetrachloride	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	56-23-5	
Chlorobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	108-90-7	
Chloroethane	ND	ug/kg	574	1	05/24/19 16:10	05/25/19 18:36	75-00-3	
Chloroform	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	67-66-3	
Chloromethane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	74-87-3	
2-Chlorotoluene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	95-49-8	
4-Chlorotoluene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	574	1	05/24/19 16:10	05/25/19 18:36	96-12-8	
Dibromochloromethane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	106-93-4	
Dibromomethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	75-71-8	
1,1-Dichloroethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	75-34-3	
1,2-Dichloroethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	107-06-2	
1,1-Dichloroethene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	156-60-5	
Dichlorofluoromethane	ND	ug/kg	574	1	05/24/19 16:10	05/25/19 18:36	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	78-87-5	
1,3-Dichloropropane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	142-28-9	
2,2-Dichloropropane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	594-20-7	
1,1-Dichloropropene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	60-29-7	
Ethylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	287	1	05/24/19 16:10	05/25/19 18:36	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	98-82-8	
p-Isopropyltoluene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	99-87-6	
Methylene Chloride	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	287	1	05/24/19 16:10	05/25/19 18:36	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-4 **Lab ID: 10475470019** Collected: 05/17/19 15:58 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	1634-04-4	
Naphthalene	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	91-20-3	
n-Propylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	103-65-1	
Styrene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	79-34-5	
Tetrachloroethene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	127-18-4	
Tetrahydrofuran	ND	ug/kg	2300	1	05/24/19 16:10	05/25/19 18:36	109-99-9	
Toluene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	79-00-5	
Trichloroethene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	79-01-6	
Trichlorofluoromethane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	230	1	05/24/19 16:10	05/25/19 18:36	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	57.4	1	05/24/19 16:10	05/25/19 18:36	108-67-8	
Vinyl chloride	ND	ug/kg	23.0	1	05/24/19 16:10	05/25/19 18:36	75-01-4	
Xylene (Total)	ND	ug/kg	172	1	05/24/19 16:10	05/25/19 18:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%.	75-125	1	05/24/19 16:10	05/25/19 18:36	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 18:36	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 18:36	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-5 **Lab ID: 10475470020** Collected: 05/17/19 16:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	11.0	1	05/21/19 20:00	05/23/19 23:41		
Surrogates								
n-Triacontane (S)	93	%	44-143	1	05/21/19 20:00	05/23/19 23:41	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	13.7	1	05/28/19 17:09	05/31/19 02:10		
Surrogates								
a,a,a-Trifluorotoluene (S)	98	%	80-150	1	05/28/19 17:09	05/31/19 02:10	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	3.9	mg/kg	1.2	1	05/24/19 15:14	05/28/19 12:09	7440-38-2	
Barium	95.6	mg/kg	0.59	1	05/24/19 15:14	05/28/19 12:09	7440-39-3	
Cadmium	ND	mg/kg	0.18	1	05/24/19 15:14	05/28/19 12:09	7440-43-9	
Chromium	18.8	mg/kg	0.59	1	05/24/19 15:14	05/28/19 12:09	7440-47-3	
Lead	9.6	mg/kg	0.59	1	05/24/19 15:14	05/28/19 12:09	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/24/19 15:14	05/28/19 12:09	7782-49-2	
Silver	ND	mg/kg	0.59	1	05/24/19 15:14	05/28/19 12:09	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	0.025	mg/kg	0.023	1	05/24/19 16:31	05/28/19 12:33	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	20.2	%	0.10	1		05/24/19 14:12		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	83-32-9	
Acenaphthylene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	208-96-8	
Anthracene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	120-12-7	
Benzo(a)anthracene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	56-55-3	
Benzo(a)pyrene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	207-08-9	
Chrysene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	53-70-3	
Fluoranthene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	206-44-0	
Fluorene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	193-39-5	
Naphthalene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	91-20-3	
Phenanthrene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	85-01-8	
Pyrene	ND	ug/kg	12.5	1	05/22/19 08:38	05/28/19 12:39	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	60	%	30-125	1	05/22/19 08:38	05/28/19 12:39	321-60-8	
p-Terphenyl-d14 (S)	60	%	30-125	1	05/22/19 08:38	05/28/19 12:39	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-5 **Lab ID: 10475470020** Collected: 05/17/19 16:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1350	1	05/24/19 16:10	05/25/19 18:58	67-64-1	
Allyl chloride	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	107-05-1	
Benzene	ND	ug/kg	27.1	1	05/24/19 16:10	05/25/19 18:58	71-43-2	
Bromobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	108-86-1	
Bromochloromethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	74-97-5	
Bromodichloromethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	75-27-4	
Bromoform	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	75-25-2	
Bromomethane	ND	ug/kg	677	1	05/24/19 16:10	05/25/19 18:58	74-83-9	
2-Butanone (MEK)	ND	ug/kg	338	1	05/24/19 16:10	05/25/19 18:58	78-93-3	
n-Butylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	104-51-8	
sec-Butylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	135-98-8	
tert-Butylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	98-06-6	
Carbon tetrachloride	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	56-23-5	
Chlorobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	108-90-7	
Chloroethane	ND	ug/kg	677	1	05/24/19 16:10	05/25/19 18:58	75-00-3	
Chloroform	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	67-66-3	
Chloromethane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	74-87-3	
2-Chlorotoluene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	95-49-8	
4-Chlorotoluene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	677	1	05/24/19 16:10	05/25/19 18:58	96-12-8	
Dibromochloromethane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	106-93-4	
Dibromomethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	75-71-8	
1,1-Dichloroethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	75-34-3	
1,2-Dichloroethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	107-06-2	
1,1-Dichloroethene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	156-60-5	
Dichlorofluoromethane	ND	ug/kg	677	1	05/24/19 16:10	05/25/19 18:58	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	78-87-5	
1,3-Dichloropropane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	142-28-9	
2,2-Dichloropropane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	594-20-7	
1,1-Dichloropropene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	60-29-7	
Ethylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	338	1	05/24/19 16:10	05/25/19 18:58	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	98-82-8	
p-Isopropyltoluene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	99-87-6	
Methylene Chloride	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	338	1	05/24/19 16:10	05/25/19 18:58	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-5 **Lab ID: 10475470020** Collected: 05/17/19 16:19 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	1634-04-4	
Naphthalene	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	91-20-3	
n-Propylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	103-65-1	
Styrene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	79-34-5	
Tetrachloroethene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	127-18-4	
Tetrahydrofuran	ND	ug/kg	2710	1	05/24/19 16:10	05/25/19 18:58	109-99-9	
Toluene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	79-00-5	
Trichloroethene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	79-01-6	
Trichlorofluoromethane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	271	1	05/24/19 16:10	05/25/19 18:58	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	67.7	1	05/24/19 16:10	05/25/19 18:58	108-67-8	
Vinyl chloride	ND	ug/kg	27.1	1	05/24/19 16:10	05/25/19 18:58	75-01-4	
Xylene (Total)	ND	ug/kg	203	1	05/24/19 16:10	05/25/19 18:58	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%.	75-125	1	05/24/19 16:10	05/25/19 18:58	17060-07-0	
Toluene-d8 (S)	95	%.	75-125	1	05/24/19 16:10	05/25/19 18:58	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 18:58	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-6 **Lab ID: 10475470021** Collected: 05/17/19 16:44 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/kg	11.4	1	05/21/19 20:00	05/23/19 23:01		
Surrogates								
n-Triacontane (S)	94	%	44-143	1	05/21/19 20:00	05/23/19 23:01	638-68-6	
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil								
Gasoline Range Organics	ND	mg/kg	11.6	1	05/28/19 17:09	05/31/19 07:23		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/31/19 07:23	98-08-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050								
Arsenic	3.2	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:10	7440-38-2	
Barium	77.4	mg/kg	0.55	1	05/24/19 15:14	05/28/19 12:10	7440-39-3	
Cadmium	ND	mg/kg	0.17	1	05/24/19 15:14	05/28/19 12:10	7440-43-9	
Chromium	37.8	mg/kg	0.55	1	05/24/19 15:14	05/28/19 12:10	7440-47-3	
Lead	6.2	mg/kg	0.55	1	05/24/19 15:14	05/28/19 12:10	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/24/19 15:14	05/28/19 12:10	7782-49-2	
Silver	ND	mg/kg	0.55	1	05/24/19 15:14	05/28/19 12:10	7440-22-4	
7471B Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	ND	mg/kg	0.023	1	05/24/19 16:31	05/28/19 12:35	7439-97-6	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974								
Percent Moisture	15.2	%	0.10	1		05/24/19 14:12		
8270D MSSV PAH by SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550								
Acenaphthene	ND	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	83-32-9	
Acenaphthylene	ND	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	208-96-8	
Anthracene	ND	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	120-12-7	
Benzo(a)anthracene	22.5	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	56-55-3	
Benzo(a)pyrene	25.4	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	50-32-8	
Benzo(b)fluoranthene	39.5	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	205-99-2	
Benzo(g,h,i)perylene	25.3	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	191-24-2	
Benzo(k)fluoranthene	15.0	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	207-08-9	
Chrysene	28.6	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	53-70-3	
Fluoranthene	56.5	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	206-44-0	
Fluorene	ND	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	86-73-7	
Indeno(1,2,3-cd)pyrene	16.4	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	193-39-5	
Naphthalene	ND	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	91-20-3	
Phenanthrene	27.2	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	85-01-8	
Pyrene	45.7	ug/kg	11.8	1	05/23/19 09:00	05/24/19 16:41	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	83	%	30-125	1	05/23/19 09:00	05/24/19 16:41	321-60-8	
p-Terphenyl-d14 (S)	78	%	30-125	1	05/23/19 09:00	05/24/19 16:41	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: SP-6 **Lab ID: 10475470021** Collected: 05/17/19 16:44 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1120	1	05/24/19 16:10	05/25/19 19:20	67-64-1	
Allyl chloride	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	107-05-1	
Benzene	ND	ug/kg	22.5	1	05/24/19 16:10	05/25/19 19:20	71-43-2	
Bromobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	108-86-1	
Bromochloromethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	74-97-5	
Bromodichloromethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	75-27-4	
Bromoform	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	75-25-2	
Bromomethane	ND	ug/kg	562	1	05/24/19 16:10	05/25/19 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/kg	281	1	05/24/19 16:10	05/25/19 19:20	78-93-3	
n-Butylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	104-51-8	
sec-Butylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	135-98-8	
tert-Butylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	98-06-6	
Carbon tetrachloride	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	56-23-5	
Chlorobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	108-90-7	
Chloroethane	ND	ug/kg	562	1	05/24/19 16:10	05/25/19 19:20	75-00-3	
Chloroform	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	67-66-3	
Chloromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	74-87-3	
2-Chlorotoluene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	95-49-8	
4-Chlorotoluene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	562	1	05/24/19 16:10	05/25/19 19:20	96-12-8	
Dibromochloromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	106-93-4	
Dibromomethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	75-71-8	
1,1-Dichloroethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	107-06-2	
1,1-Dichloroethene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	156-60-5	
Dichlorofluoromethane	ND	ug/kg	562	1	05/24/19 16:10	05/25/19 19:20	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	78-87-5	
1,3-Dichloropropane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	142-28-9	
2,2-Dichloropropane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	594-20-7	
1,1-Dichloropropene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	60-29-7	
Ethylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	281	1	05/24/19 16:10	05/25/19 19:20	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	98-82-8	
p-Isopropyltoluene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	99-87-6	
Methylene Chloride	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	281	1	05/24/19 16:10	05/25/19 19:20	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SP-6 **Lab ID: 10475470021** Collected: 05/17/19 16:44 Received: 05/17/19 18:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Methyl-tert-butyl ether	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	1634-04-4	
Naphthalene	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	91-20-3	
n-Propylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	103-65-1	
Styrene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	79-34-5	
Tetrachloroethene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	127-18-4	
Tetrahydrofuran	ND	ug/kg	2250	1	05/24/19 16:10	05/25/19 19:20	109-99-9	
Toluene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	79-00-5	
Trichloroethene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	79-01-6	
Trichlorofluoromethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	225	1	05/24/19 16:10	05/25/19 19:20	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	56.2	1	05/24/19 16:10	05/25/19 19:20	108-67-8	
Vinyl chloride	ND	ug/kg	22.5	1	05/24/19 16:10	05/25/19 19:20	75-01-4	
Xylene (Total)	ND	ug/kg	169	1	05/24/19 16:10	05/25/19 19:20	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%.	75-125	1	05/24/19 16:10	05/25/19 19:20	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1	05/24/19 16:10	05/25/19 19:20	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1	05/24/19 16:10	05/25/19 19:20	460-00-4	

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ANALYTICAL RESULTS

Project: Pine City Airport
Pace Project No.: 10475470

Sample: **SL-Trip Blank** Lab ID: **10475470022** Collected: 05/17/19 00:00 Received: 05/17/19 18:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO Preparation Method: EPA 5030 Medium Soil						
Gasoline Range Organics	ND	mg/kg	10.0	1	05/28/19 17:09	05/31/19 03:02		
Surrogates								
a,a,a-Trifluorotoluene (S)	99	%	80-150	1	05/28/19 17:09	05/31/19 03:02	98-08-8	
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Acetone	ND	ug/kg	1000	1	05/24/19 16:10	05/25/19 12:06	67-64-1	
Allyl chloride	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	107-05-1	
Benzene	ND	ug/kg	20.0	1	05/24/19 16:10	05/25/19 12:06	71-43-2	
Bromobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	108-86-1	
Bromochloromethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	74-97-5	
Bromodichloromethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	75-27-4	
Bromoform	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	75-25-2	
Bromomethane	ND	ug/kg	500	1	05/24/19 16:10	05/25/19 12:06	74-83-9	
2-Butanone (MEK)	ND	ug/kg	250	1	05/24/19 16:10	05/25/19 12:06	78-93-3	
n-Butylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	104-51-8	
sec-Butylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	135-98-8	
tert-Butylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	98-06-6	
Carbon tetrachloride	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	56-23-5	
Chlorobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	108-90-7	
Chloroethane	ND	ug/kg	500	1	05/24/19 16:10	05/25/19 12:06	75-00-3	
Chloroform	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	67-66-3	
Chloromethane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	74-87-3	
2-Chlorotoluene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	95-49-8	
4-Chlorotoluene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	500	1	05/24/19 16:10	05/25/19 12:06	96-12-8	
Dibromochloromethane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	106-93-4	
Dibromomethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	75-71-8	
1,1-Dichloroethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	75-34-3	
1,2-Dichloroethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	107-06-2	
1,1-Dichloroethene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	156-60-5	
Dichlorofluoromethane	ND	ug/kg	500	1	05/24/19 16:10	05/25/19 12:06	75-43-4	N2
1,2-Dichloropropane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	78-87-5	
1,3-Dichloropropane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	142-28-9	
2,2-Dichloropropane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	594-20-7	
1,1-Dichloropropene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	60-29-7	
Ethylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	100-41-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: SL-Trip Blank **Lab ID: 10475470022** Collected: 05/17/19 00:00 Received: 05/17/19 18:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B						
Hexachloro-1,3-butadiene	ND	ug/kg	250	1	05/24/19 16:10	05/25/19 12:06	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	98-82-8	
p-Isopropyltoluene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	99-87-6	
Methylene Chloride	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	250	1	05/24/19 16:10	05/25/19 12:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	1634-04-4	
Naphthalene	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	91-20-3	
n-Propylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	103-65-1	
Styrene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	79-34-5	
Tetrachloroethene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	127-18-4	
Tetrahydrofuran	ND	ug/kg	2000	1	05/24/19 16:10	05/25/19 12:06	109-99-9	
Toluene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	79-00-5	
Trichloroethene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	79-01-6	
Trichlorofluoromethane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	200	1	05/24/19 16:10	05/25/19 12:06	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	50.0	1	05/24/19 16:10	05/25/19 12:06	108-67-8	
Vinyl chloride	ND	ug/kg	20.0	1	05/24/19 16:10	05/25/19 12:06	75-01-4	
Xylene (Total)	ND	ug/kg	150	1	05/24/19 16:10	05/25/19 12:06	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 12:06	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	05/24/19 16:10	05/25/19 12:06	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	05/24/19 16:10	05/25/19 12:06	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: WT-Trip Blank	Lab ID: 10475470023	Collected: 05/17/19 00:00	Received: 05/17/19 18:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV		Analytical Method: WI MOD GRO						
Gasoline Range Organics	ND	ug/L	100	1		05/31/19 14:51		
Surrogates								
a,a,a-Trifluorotoluene (S)	97	%	80-150	1		05/31/19 14:51	98-08-8	
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		05/29/19 12:23	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		05/29/19 12:23	107-05-1	
Benzene	ND	ug/L	1.0	1		05/29/19 12:23	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/29/19 12:23	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/29/19 12:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/29/19 12:23	75-27-4	
Bromoform	ND	ug/L	4.0	1		05/29/19 12:23	75-25-2	
Bromomethane	ND	ug/L	4.0	1		05/29/19 12:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/29/19 12:23	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		05/29/19 12:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/29/19 12:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/29/19 12:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/29/19 12:23	67-66-3	
Chloromethane	ND	ug/L	4.0	1		05/29/19 12:23	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 12:23	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/29/19 12:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		05/29/19 12:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/29/19 12:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/29/19 12:23	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		05/29/19 12:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 12:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 12:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/29/19 12:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/29/19 12:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/29/19 12:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/29/19 12:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/29/19 12:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 12:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/29/19 12:23	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 12:23	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 12:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/29/19 12:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		05/29/19 12:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/29/19 12:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 12:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		05/29/19 12:23	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		05/29/19 12:23	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/29/19 12:23	87-68-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport

Pace Project No.: 10475470

Sample: WT-Trip Blank		Lab ID: 10475470023	Collected: 05/17/19 00:00	Received: 05/17/19 18:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/29/19 12:23	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/29/19 12:23	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		05/29/19 12:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/29/19 12:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/29/19 12:23	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		05/29/19 12:23	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	103-65-1	
Styrene	ND	ug/L	1.0	1		05/29/19 12:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 12:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/29/19 12:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/29/19 12:23	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		05/29/19 12:23	109-99-9	
Toluene	ND	ug/L	1.0	1		05/29/19 12:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 12:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/29/19 12:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/29/19 12:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/29/19 12:23	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		05/29/19 12:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/29/19 12:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		05/29/19 12:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		05/29/19 12:23	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		05/29/19 12:23	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		05/29/19 12:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/29/19 12:23	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%.	75-125	1		05/29/19 12:23	17060-07-0	HS
Toluene-d8 (S)	94	%.	75-125	1		05/29/19 12:23	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125	1		05/29/19 12:23	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 608497 Analysis Method: WI MOD GRO
QC Batch Method: EPA 5030 Medium Soil Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10475470001, 10475470002, 10475470003

METHOD BLANK: 3289415 Matrix: Solid
Associated Lab Samples: 10475470001, 10475470002, 10475470003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	10.0	05/28/19 19:30	
a,a,a-Trifluorotoluene (S)	%.	99	80-150	05/28/19 19:30	

LABORATORY CONTROL SAMPLE & LCSD: 3289416 3289417

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	50	44.4	53.4	89	107	80-120	18	20	
a,a,a-Trifluorotoluene (S)	%.				99	99	80-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3290175 3290176

Parameter	Units	10474936024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	mg/kg	ND	55.6	55.3	85.7	49.7	153	89	80-120	53	20	C0,M1, R1
a,a,a-Trifluorotoluene (S)	%.						100	99	80-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 608555 Analysis Method: WI MOD GRO
 QC Batch Method: EPA 5030 Medium Soil Analysis Description: WIGRO Solid GCV
 Associated Lab Samples: 10475470004, 10475470005, 10475470006, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021, 10475470022

METHOD BLANK: 3289585 Matrix: Solid
 Associated Lab Samples: 10475470004, 10475470005, 10475470006, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021, 10475470022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	10.0	05/30/19 07:26	
a,a,a-Trifluorotoluene (S)	%.	98	80-150	05/30/19 07:26	

LABORATORY CONTROL SAMPLE & LCSD: 3289586 3289587

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	50	51.6	55.1	103	110	80-120	6	20	
a,a,a-Trifluorotoluene (S)	%.				99	98	80-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3290731 3290732

Parameter	Units	10476112006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	mg/kg	15.2	57.2	58	82.3	81.3	117	114	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.						99	99	80-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 609052 Analysis Method: WI MOD GRO
QC Batch Method: EPA 5030 Medium Soil Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10475470007

METHOD BLANK: 3291590 Matrix: Solid
Associated Lab Samples: 10475470007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	10.0	05/29/19 16:08	
a,a,a-Trifluorotoluene (S)	%.	99	80-150	05/29/19 16:08	

LABORATORY CONTROL SAMPLE & LCSD: 3291591 3291592

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	50	44.8	47.2	90	94	80-120	5	20	
a,a,a-Trifluorotoluene (S)	%.				97	100	80-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3291899 3291900

Parameter	Units	10475056010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	mg/kg	ND	53.9	54.9	69.5	59.8	127	108	80-120	15	20	M1
a,a,a-Trifluorotoluene (S)	%.						99	99	80-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 609570 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015, 10475470023

METHOD BLANK: 3294289 Matrix: Water
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015, 10475470023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	05/31/19 09:21	
a,a,a-Trifluorotoluene (S)	%.	98	80-150	05/31/19 09:21	

LABORATORY CONTROL SAMPLE & LCSD: 3294290

3294291

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	936	866	94	87	80-120	8	20	
a,a,a-Trifluorotoluene (S)	%.				105	109	80-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3294436

3294437

Parameter	Units	10475470010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	ug/L	ND	1000	1000	1010	1280	97	125	80-120	24	20	G-,M1, R1
a,a,a-Trifluorotoluene (S)	%.						106	97	80-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 606915 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
 Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

METHOD BLANK: 3280935 Matrix: Water
 Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/23/19 16:36	

LABORATORY CONTROL SAMPLE: 3280936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3280937 3280938

Parameter	Units	10475203002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5.4	5.2	107	104	80-120	3	20	

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 607840 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021

METHOD BLANK: 3285929 Matrix: Solid
Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.019	05/28/19 11:49	

LABORATORY CONTROL SAMPLE: 3285930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.47	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3285931 3285932

Parameter	Units	10475437003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.024	0.53	0.5	0.56	0.52	101	100	80-120	7	20	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch:	607782	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050	Analysis Description:	6010D Solids
Associated Lab Samples:	10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021		

METHOD BLANK:	3285692	Matrix:	Solid
Associated Lab Samples:	10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.96	05/28/19 11:23	
Barium	mg/kg	ND	0.48	05/28/19 11:23	
Cadmium	mg/kg	ND	0.14	05/28/19 11:23	
Chromium	mg/kg	ND	0.48	05/28/19 11:23	
Lead	mg/kg	ND	0.48	05/28/19 11:23	
Selenium	mg/kg	ND	0.96	05/28/19 11:23	
Silver	mg/kg	ND	0.48	05/28/19 11:23	

LABORATORY CONTROL SAMPLE: 3285693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.5	46.7	96	80-120	
Barium	mg/kg	48.5	50.9	105	80-120	
Cadmium	mg/kg	48.5	50.5	104	80-120	
Chromium	mg/kg	48.5	50.4	104	80-120	
Lead	mg/kg	48.5	50.1	103	80-120	
Selenium	mg/kg	48.5	44.2	91	80-120	
Silver	mg/kg	24.3	24.6	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3285694 3285695

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10475437003 Result	Spike Conc.	Spike Conc.	MS Result								
Arsenic	mg/kg	5.2	51.9	56.6	49.3	52.2	85	83	75-125	6	20		
Barium	mg/kg	87.8	51.9	56.6	147	141	114	93	75-125	5	20		
Cadmium	mg/kg	ND	51.9	56.6	44.9	49.6	86	88	75-125	10	20		
Chromium	mg/kg	12.0	51.9	56.6	58.7	62.7	90	90	75-125	7	20		
Lead	mg/kg	8.6	51.9	56.6	53.1	57.4	86	86	75-125	8	20		
Selenium	mg/kg	ND	51.9	56.6	40.0	44.8	77	79	75-125	11	20		
Silver	mg/kg	ND	25.9	28.3	23.3	25.8	90	91	75-125	10	20		

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 607808 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

METHOD BLANK: 3285795 Matrix: Water
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	ND	20.0	05/24/19 15:18	
Barium, Dissolved	ug/L	ND	10.0	05/24/19 15:18	
Cadmium, Dissolved	ug/L	ND	3.0	05/24/19 15:18	
Chromium, Dissolved	ug/L	ND	10.0	05/24/19 15:18	
Lead, Dissolved	ug/L	ND	10.0	05/24/19 15:18	
Selenium, Dissolved	ug/L	ND	20.0	05/24/19 15:18	
Silver, Dissolved	ug/L	ND	10.0	05/24/19 15:18	

LABORATORY CONTROL SAMPLE: 3285796

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	1000	1030	103	80-120	
Barium, Dissolved	ug/L	1000	1050	105	80-120	
Cadmium, Dissolved	ug/L	1000	1040	104	80-120	
Chromium, Dissolved	ug/L	1000	1030	103	80-120	
Lead, Dissolved	ug/L	1000	1030	103	80-120	
Selenium, Dissolved	ug/L	1000	1050	105	80-120	
Silver, Dissolved	ug/L	500	508	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3285797 3285798

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10475470009 Result	Spike Conc.	Spike Conc.	Result						
Arsenic, Dissolved	ug/L	ND	1000	1000	1060	1070	106	107	75-125	1	20
Barium, Dissolved	ug/L	73.8	1000	1000	1120	1130	105	106	75-125	1	20
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1040	103	104	75-125	1	20
Chromium, Dissolved	ug/L	ND	1000	1000	1030	1040	103	104	75-125	1	20
Lead, Dissolved	ug/L	ND	1000	1000	1030	1050	103	105	75-125	1	20
Selenium, Dissolved	ug/L	ND	1000	1000	1080	1090	108	109	75-125	1	20
Silver, Dissolved	ug/L	ND	500	500	531	535	106	107	75-125	1	20

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 608191 Analysis Method: ASTM D2974
 QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
 Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007,
 10475470008, 10475470016, 10475470017

SAMPLE DUPLICATE: 3287462

Parameter	Units	10475279014 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.3	10.7	5	30	

SAMPLE DUPLICATE: 3287463

Parameter	Units	10475470017 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.1	8.5	6	30	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 608193

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10475470018

SAMPLE DUPLICATE: 3287466

Parameter	Units	10474936001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.7	22.9	1	30	

SAMPLE DUPLICATE: 3287467

Parameter	Units	10475470018 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.7	11.1	3	30	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 608196

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10475470019, 10475470020, 10475470021

SAMPLE DUPLICATE: 3287471

Parameter	Units	10475470019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.9	14.2	17	30	

SAMPLE DUPLICATE: 3287472

Parameter	Units	10475608011 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.4	10.7	7	30	

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QUALITY CONTROL DATA

Project: Pine City Airport

Project No.: 10475470

QC Batch: 608364 Analysis Method: EPA 8260B
 QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
 Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007,
 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021,
 10475470022

METHOD BLANK: 3288261 Matrix: Solid
 Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007,
 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021,
 10475470022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	50.0	05/25/19 11:44	
1,1,1-Trichloroethane	ug/kg	ND	50.0	05/25/19 11:44	
1,1,2,2-Tetrachloroethane	ug/kg	ND	50.0	05/25/19 11:44	
1,1,2-Trichloroethane	ug/kg	ND	50.0	05/25/19 11:44	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	200	05/25/19 11:44	
1,1-Dichloroethane	ug/kg	ND	50.0	05/25/19 11:44	
1,1-Dichloroethene	ug/kg	ND	50.0	05/25/19 11:44	
1,1-Dichloropropene	ug/kg	ND	50.0	05/25/19 11:44	
1,2,3-Trichlorobenzene	ug/kg	ND	50.0	05/25/19 11:44	
1,2,3-Trichloropropane	ug/kg	ND	200	05/25/19 11:44	
1,2,4-Trichlorobenzene	ug/kg	ND	50.0	05/25/19 11:44	
1,2,4-Trimethylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
1,2-Dibromo-3-chloropropane	ug/kg	ND	500	05/25/19 11:44	
1,2-Dibromoethane (EDB)	ug/kg	ND	50.0	05/25/19 11:44	
1,2-Dichlorobenzene	ug/kg	ND	50.0	05/25/19 11:44	
1,2-Dichloroethane	ug/kg	ND	50.0	05/25/19 11:44	
1,2-Dichloropropane	ug/kg	ND	50.0	05/25/19 11:44	
1,3,5-Trimethylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
1,3-Dichlorobenzene	ug/kg	ND	50.0	05/25/19 11:44	
1,3-Dichloropropane	ug/kg	ND	50.0	05/25/19 11:44	
1,4-Dichlorobenzene	ug/kg	ND	50.0	05/25/19 11:44	
2,2-Dichloropropane	ug/kg	ND	200	05/25/19 11:44	
2-Butanone (MEK)	ug/kg	ND	250	05/25/19 11:44	
2-Chlorotoluene	ug/kg	ND	50.0	05/25/19 11:44	
4-Chlorotoluene	ug/kg	ND	50.0	05/25/19 11:44	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	250	05/25/19 11:44	
Acetone	ug/kg	ND	1000	05/25/19 11:44	
Allyl chloride	ug/kg	ND	200	05/25/19 11:44	
Benzene	ug/kg	ND	20.0	05/25/19 11:44	
Bromobenzene	ug/kg	ND	50.0	05/25/19 11:44	
Bromochloromethane	ug/kg	ND	50.0	05/25/19 11:44	
Bromodichloromethane	ug/kg	ND	50.0	05/25/19 11:44	
Bromoform	ug/kg	ND	200	05/25/19 11:44	
Bromomethane	ug/kg	ND	500	05/25/19 11:44	
Carbon tetrachloride	ug/kg	ND	50.0	05/25/19 11:44	
Chlorobenzene	ug/kg	ND	50.0	05/25/19 11:44	
Chloroethane	ug/kg	ND	500	05/25/19 11:44	
Chloroform	ug/kg	ND	50.0	05/25/19 11:44	

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

METHOD BLANK: 3288261

Matrix: Solid

Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021, 10475470022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/kg	ND	200	05/25/19 11:44	
cis-1,2-Dichloroethene	ug/kg	ND	50.0	05/25/19 11:44	
cis-1,3-Dichloropropene	ug/kg	ND	50.0	05/25/19 11:44	
Dibromochloromethane	ug/kg	ND	200	05/25/19 11:44	
Dibromomethane	ug/kg	ND	50.0	05/25/19 11:44	
Dichlorodifluoromethane	ug/kg	ND	200	05/25/19 11:44	
Dichlorofluoromethane	ug/kg	ND	500	05/25/19 11:44	N2
Diethyl ether (Ethyl ether)	ug/kg	ND	200	05/25/19 11:44	
Ethylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
Hexachloro-1,3-butadiene	ug/kg	ND	250	05/25/19 11:44	
Isopropylbenzene (Cumene)	ug/kg	ND	50.0	05/25/19 11:44	
Methyl-tert-butyl ether	ug/kg	ND	50.0	05/25/19 11:44	
Methylene Chloride	ug/kg	ND	200	05/25/19 11:44	
n-Butylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
n-Propylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
Naphthalene	ug/kg	ND	200	05/25/19 11:44	
p-Isopropyltoluene	ug/kg	ND	50.0	05/25/19 11:44	
sec-Butylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
Styrene	ug/kg	ND	50.0	05/25/19 11:44	
tert-Butylbenzene	ug/kg	ND	50.0	05/25/19 11:44	
Tetrachloroethene	ug/kg	ND	50.0	05/25/19 11:44	
Tetrahydrofuran	ug/kg	ND	2000	05/25/19 11:44	
Toluene	ug/kg	ND	50.0	05/25/19 11:44	
trans-1,2-Dichloroethene	ug/kg	ND	50.0	05/25/19 11:44	
trans-1,3-Dichloropropene	ug/kg	ND	50.0	05/25/19 11:44	
Trichloroethene	ug/kg	ND	50.0	05/25/19 11:44	
Trichlorofluoromethane	ug/kg	ND	200	05/25/19 11:44	
Vinyl chloride	ug/kg	ND	20.0	05/25/19 11:44	
Xylene (Total)	ug/kg	ND	150	05/25/19 11:44	
1,2-Dichloroethane-d4 (S)	%	100	75-125	05/25/19 11:44	
4-Bromofluorobenzene (S)	%	98	75-125	05/25/19 11:44	
Toluene-d8 (S)	%	97	75-125	05/25/19 11:44	

LABORATORY CONTROL SAMPLE: 3288262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	1000	828	83	53-125	
1,1,1-Trichloroethane	ug/kg	1000	882	88	53-146	
1,1,2,2-Tetrachloroethane	ug/kg	1000	826	83	51-125	
1,1,2-Trichloroethane	ug/kg	1000	797	80	55-125	
1,1,2-Trichlorotrifluoroethane	ug/kg	1000	991	99	49-150	
1,1-Dichloroethane	ug/kg	1000	814	81	56-125	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3288262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/kg	1000	875	88	48-148	
1,1-Dichloropropene	ug/kg	1000	810	81	55-142	
1,2,3-Trichlorobenzene	ug/kg	1000	658	66	47-125	
1,2,3-Trichloropropane	ug/kg	1000	870	87	52-125	
1,2,4-Trichlorobenzene	ug/kg	1000	649	65	48-125	
1,2,4-Trimethylbenzene	ug/kg	1000	713	71	51-126	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1920	77	50-125	
1,2-Dibromoethane (EDB)	ug/kg	1000	833	83	52-125	
1,2-Dichlorobenzene	ug/kg	1000	743	74	50-125	
1,2-Dichloroethane	ug/kg	1000	758	76	51-125	
1,2-Dichloropropane	ug/kg	1000	826	83	57-125	
1,3,5-Trimethylbenzene	ug/kg	1000	767	77	52-127	
1,3-Dichlorobenzene	ug/kg	1000	759	76	50-128	
1,3-Dichloropropane	ug/kg	1000	799	80	55-125	
1,4-Dichlorobenzene	ug/kg	1000	775	77	51-125	
2,2-Dichloropropane	ug/kg	1000	853	85	41-136	
2-Butanone (MEK)	ug/kg	5000	4130	83	43-125	
2-Chlorotoluene	ug/kg	1000	751	75	52-126	
4-Chlorotoluene	ug/kg	1000	759	76	53-126	
4-Methyl-2-pentanone (MIBK)	ug/kg	5000	4230	85	39-125	
Acetone	ug/kg	5000	4700	94	46-136	
Allyl chloride	ug/kg	1000	759	76	48-130	
Benzene	ug/kg	1000	773	77	48-125	
Bromobenzene	ug/kg	1000	792	79	51-125	
Bromochloromethane	ug/kg	1000	830	83	52-125	
Bromodichloromethane	ug/kg	1000	868	87	51-131	
Bromoform	ug/kg	1000	830	83	52-125	
Bromomethane	ug/kg	1000	862	86	30-150	
Carbon tetrachloride	ug/kg	1000	885	89	59-129	
Chlorobenzene	ug/kg	1000	785	78	54-125	
Chloroethane	ug/kg	1000	1070	107	61-132	CH
Chloroform	ug/kg	1000	782	78	52-125	
Chloromethane	ug/kg	1000	740	74	46-125	
cis-1,2-Dichloroethene	ug/kg	1000	809	81	54-127	
cis-1,3-Dichloropropene	ug/kg	1000	844	84	50-134	
Dibromochloromethane	ug/kg	1000	825	83	54-125	
Dibromomethane	ug/kg	1000	870	87	51-125	
Dichlorodifluoromethane	ug/kg	1000	707	71	42-125	
Dichlorofluoromethane	ug/kg	1000	840	84	30-150	N2
Diethyl ether (Ethyl ether)	ug/kg	1000	841	84	50-127	
Ethylbenzene	ug/kg	1000	770	77	51-125	
Hexachloro-1,3-butadiene	ug/kg	1000	669	67	41-133	
Isopropylbenzene (Cumene)	ug/kg	1000	773	77	54-134	
Methyl-tert-butyl ether	ug/kg	1000	814	81	53-125	
Methylene Chloride	ug/kg	1000	804	80	48-125	
n-Butylbenzene	ug/kg	1000	612	61	49-135	
n-Propylbenzene	ug/kg	1000	727	73	55-129	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3288262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	1000	638	64	51-125	
p-Isopropyltoluene	ug/kg	1000	726	73	53-134	
sec-Butylbenzene	ug/kg	1000	719	72	52-134	
Styrene	ug/kg	1000	765	76	53-128	
tert-Butylbenzene	ug/kg	1000	791	79	51-133	
Tetrachloroethene	ug/kg	1000	820	82	54-131	
Tetrahydrofuran	ug/kg	10000	8400	84	42-145	
Toluene	ug/kg	1000	733	73	51-125	
trans-1,2-Dichloroethene	ug/kg	1000	817	82	50-130	
trans-1,3-Dichloropropene	ug/kg	1000	827	83	52-125	
Trichloroethene	ug/kg	1000	839	84	55-131	
Trichlorofluoromethane	ug/kg	1000	1070	107	30-150	CH
Vinyl chloride	ug/kg	1000	752	75	58-125	
Xylene (Total)	ug/kg	3000	2360	79	52-125	
1,2-Dichloroethane-d4 (S)	%			97	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			96	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3288263 3288264

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10475470001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/kg	ND	1150	1140	1360	1260	119	111	68-150	8	30		
1,1,1-Trichloroethane	ug/kg	ND	1150	1140	1410	1320	123	116	63-150	6	30		
1,1,2,2-Tetrachloroethane	ug/kg	ND	1150	1140	1310	1170	114	103	60-146	11	30		
1,1,2-Trichloroethane	ug/kg	ND	1150	1140	1270	1190	111	104	63-143	7	30		
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	1150	1140	1460	1360	127	120	30-150	7	30		
1,1-Dichloroethane	ug/kg	ND	1150	1140	1250	1180	108	104	63-144	5	30		
1,1-Dichloroethene	ug/kg	ND	1150	1140	1330	1220	116	107	30-150	9	30		
1,1-Dichloropropene	ug/kg	ND	1150	1140	1310	1200	114	105	54-150	9	30		
1,2,3-Trichlorobenzene	ug/kg	ND	1150	1140	1060	989	93	87	63-142	7	30		
1,2,3-Trichloropropane	ug/kg	ND	1150	1140	1320	1230	115	108	59-147	7	30		
1,2,4-Trichlorobenzene	ug/kg	ND	1150	1140	1070	974	93	85	66-142	9	30		
1,2,4-Trimethylbenzene	ug/kg	ND	1150	1140	1180	1110	103	97	65-145	6	30		
1,2-Dibromo-3-chloropropane	ug/kg	ND	2870	2850	3170	2850	110	100	60-142	11	30		
1,2-Dibromoethane (EDB)	ug/kg	ND	1150	1140	1290	1180	112	104	67-135	8	30		
1,2-Dichlorobenzene	ug/kg	ND	1150	1140	1200	1100	104	96	68-141	9	30		
1,2-Dichloroethane	ug/kg	ND	1150	1140	1200	1110	104	98	56-132	7	30		
1,2-Dichloropropane	ug/kg	ND	1150	1140	1330	1250	116	110	58-150	6	30		
1,3,5-Trimethylbenzene	ug/kg	ND	1150	1140	1230	1150	107	101	66-148	7	30		
1,3-Dichlorobenzene	ug/kg	ND	1150	1140	1240	1130	108	99	63-148	9	30		
1,3-Dichloropropane	ug/kg	ND	1150	1140	1310	1210	114	106	63-142	8	30		
1,4-Dichlorobenzene	ug/kg	ND	1150	1140	1230	1140	107	100	68-140	7	30		
2,2-Dichloropropane	ug/kg	ND	1150	1140	1360	1270	118	112	62-143	7	30		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3288263 3288264												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10475470001 Result	Spike Conc.	Spike Conc.	MS Result							
2-Butanone (MEK)	ug/kg	ND	5740	5700	6450	5530	112	97	53-138	15	30	
2-Chlorotoluene	ug/kg	ND	1150	1140	1200	1110	104	97	64-145	8	30	
4-Chlorotoluene	ug/kg	ND	1150	1140	1200	1120	105	98	63-149	7	30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	5740	5700	6810	6280	118	110	47-150	8	30	
Acetone	ug/kg	ND	5740	5700	7980	8190	139	144	64-150	3	30	
Allyl chloride	ug/kg	ND	1150	1140	1200	1130	105	99	49-146	6	30	
Benzene	ug/kg	ND	1150	1140	1220	1150	106	101	63-136	6	30	
Bromobenzene	ug/kg	ND	1150	1140	1250	1170	109	103	63-142	7	30	
Bromochloromethane	ug/kg	ND	1150	1140	1300	1210	113	106	61-139	7	30	
Bromodichloromethane	ug/kg	ND	1150	1140	1390	1310	121	115	63-150	6	30	
Bromoform	ug/kg	ND	1150	1140	1380	1260	120	111	64-140	9	30	
Bromomethane	ug/kg	ND	1150	1140	1250	1290	109	113	56-148	3	30	
Carbon tetrachloride	ug/kg	ND	1150	1140	1410	1330	123	117	75-148	6	30	
Chlorobenzene	ug/kg	ND	1150	1140	1260	1190	110	105	62-147	6	30	
Chloroethane	ug/kg	ND	1150	1140	1620	1510	141	132	37-150	7	30	CH
Chloroform	ug/kg	ND	1150	1140	1250	1160	109	102	66-130	7	30	
Chloromethane	ug/kg	ND	1150	1140	1030	1090	90	95	35-131	5	30	
cis-1,2-Dichloroethene	ug/kg	ND	1150	1140	1270	1230	111	108	63-143	3	30	
cis-1,3-Dichloropropene	ug/kg	ND	1150	1140	1380	1280	120	112	60-150	7	30	
Dibromochloromethane	ug/kg	ND	1150	1140	1350	1240	117	109	64-144	9	30	
Dibromomethane	ug/kg	ND	1150	1140	1360	1300	118	114	59-148	5	30	
Dichlorodifluoromethane	ug/kg	ND	1150	1140	835	869	73	76	30-125	4	30	
Dichlorofluoromethane	ug/kg	ND	1150	1140	1200	1230	104	108	39-150	3	30	N2
Diethyl ether (Ethyl ether)	ug/kg	ND	1150	1140	1300	1230	113	108	59-149	5	30	
Ethylbenzene	ug/kg	ND	1150	1140	1240	1150	108	101	64-142	8	30	
Hexachloro-1,3-butadiene	ug/kg	ND	1150	1140	1070	1000	93	88	58-150	6	30	
Isopropylbenzene (Cumene)	ug/kg	ND	1150	1140	1270	1180	110	104	67-150	7	30	
Methyl-tert-butyl ether	ug/kg	ND	1150	1140	1310	1220	114	107	69-134	7	30	
Methylene Chloride	ug/kg	ND	1150	1140	1270	1210	104	99	56-134	5	30	
n-Butylbenzene	ug/kg	ND	1150	1140	1010	971	88	85	64-150	4	30	
n-Propylbenzene	ug/kg	ND	1150	1140	1170	1090	102	95	65-150	8	30	
Naphthalene	ug/kg	ND	1150	1140	1040	958	90	84	63-148	8	30	
p-Isopropyltoluene	ug/kg	ND	1150	1140	1170	1080	102	95	69-150	8	30	
sec-Butylbenzene	ug/kg	ND	1150	1140	1190	1120	104	99	69-150	6	30	
Styrene	ug/kg	ND	1150	1140	1280	1190	111	105	63-150	7	30	
tert-Butylbenzene	ug/kg	ND	1150	1140	1260	1190	110	105	67-150	6	30	
Tetrachloroethene	ug/kg	ND	1150	1140	1320	1240	114	109	62-150	6	30	
Tetrahydrofuran	ug/kg	ND	11500	11400	13800	12800	120	113	53-150	7	30	
Toluene	ug/kg	ND	1150	1140	1150	1090	100	95	61-141	5	30	
trans-1,2-Dichloroethene	ug/kg	ND	1150	1140	1290	1190	112	104	52-148	8	30	
trans-1,3-Dichloropropene	ug/kg	ND	1150	1140	1350	1240	118	109	62-142	9	30	
Trichloroethene	ug/kg	ND	1150	1140	1310	1250	114	109	59-150	5	30	
Trichlorofluoromethane	ug/kg	ND	1150	1140	1530	1510	133	133	30-150	1	30	CH
Vinyl chloride	ug/kg	ND	1150	1140	1010	1050	88	92	44-144	4	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3288263 3288264												
Parameter	Units	10475470001		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Xylene (Total)	ug/kg	ND	3450	3420	3790	3560	110	104	67-145	6	30	
1,2-Dichloroethane-d4 (S)	%						97	95	75-125			
4-Bromofluorobenzene (S)	%						95	96	75-125			
Toluene-d8 (S)	%						97	97	75-125			

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 608780 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

METHOD BLANK: 3290600 Matrix: Water
Associated Lab Samples: 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/28/19 23:21	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/28/19 23:21	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/28/19 23:21	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/28/19 23:21	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	05/28/19 23:21	
1,1-Dichloroethane	ug/L	ND	1.0	05/28/19 23:21	
1,1-Dichloroethene	ug/L	ND	1.0	05/28/19 23:21	
1,1-Dichloropropene	ug/L	ND	1.0	05/28/19 23:21	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/28/19 23:21	
1,2,3-Trichloropropane	ug/L	ND	4.0	05/28/19 23:21	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/28/19 23:21	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	05/28/19 23:21	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	05/28/19 23:21	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/28/19 23:21	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/28/19 23:21	
1,2-Dichloroethane	ug/L	ND	1.0	05/28/19 23:21	
1,2-Dichloropropane	ug/L	ND	4.0	05/28/19 23:21	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	05/28/19 23:21	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/28/19 23:21	
1,3-Dichloropropane	ug/L	ND	1.0	05/28/19 23:21	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/28/19 23:21	
2,2-Dichloropropane	ug/L	ND	4.0	05/28/19 23:21	
2-Butanone (MEK)	ug/L	ND	5.0	05/28/19 23:21	
2-Chlorotoluene	ug/L	ND	1.0	05/28/19 23:21	
4-Chlorotoluene	ug/L	ND	1.0	05/28/19 23:21	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/28/19 23:21	
Acetone	ug/L	ND	20.0	05/28/19 23:21	
Allyl chloride	ug/L	ND	4.0	05/28/19 23:21	
Benzene	ug/L	ND	1.0	05/28/19 23:21	
Bromobenzene	ug/L	ND	1.0	05/28/19 23:21	
Bromochloromethane	ug/L	ND	1.0	05/28/19 23:21	
Bromodichloromethane	ug/L	ND	1.0	05/28/19 23:21	
Bromoform	ug/L	ND	4.0	05/28/19 23:21	
Bromomethane	ug/L	ND	4.0	05/28/19 23:21	
Carbon tetrachloride	ug/L	ND	1.0	05/28/19 23:21	
Chlorobenzene	ug/L	ND	1.0	05/28/19 23:21	
Chloroethane	ug/L	ND	1.0	05/28/19 23:21	
Chloroform	ug/L	ND	1.0	05/28/19 23:21	
Chloromethane	ug/L	ND	4.0	05/28/19 23:21	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/28/19 23:21	
cis-1,3-Dichloropropene	ug/L	ND	4.0	05/28/19 23:21	

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

METHOD BLANK: 3290600 Matrix: Water
Associated Lab Samples: 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	05/28/19 23:21	
Dibromomethane	ug/L	ND	4.0	05/28/19 23:21	
Dichlorodifluoromethane	ug/L	ND	1.0	05/28/19 23:21	
Dichlorofluoromethane	ug/L	ND	1.0	05/28/19 23:21	N2
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	05/28/19 23:21	
Ethylbenzene	ug/L	ND	1.0	05/28/19 23:21	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	05/28/19 23:21	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	05/28/19 23:21	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/28/19 23:21	
Methylene Chloride	ug/L	ND	4.0	05/28/19 23:21	
n-Butylbenzene	ug/L	ND	1.0	05/28/19 23:21	
n-Propylbenzene	ug/L	ND	1.0	05/28/19 23:21	
Naphthalene	ug/L	ND	4.0	05/28/19 23:21	
p-Isopropyltoluene	ug/L	ND	1.0	05/28/19 23:21	
sec-Butylbenzene	ug/L	ND	1.0	05/28/19 23:21	
Styrene	ug/L	ND	1.0	05/28/19 23:21	
tert-Butylbenzene	ug/L	ND	1.0	05/28/19 23:21	
Tetrachloroethene	ug/L	ND	1.0	05/28/19 23:21	
Tetrahydrofuran	ug/L	ND	10.0	05/28/19 23:21	
Toluene	ug/L	ND	1.0	05/28/19 23:21	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/28/19 23:21	
trans-1,3-Dichloropropene	ug/L	ND	4.0	05/28/19 23:21	
Trichloroethene	ug/L	ND	0.40	05/28/19 23:21	
Trichlorofluoromethane	ug/L	ND	1.0	05/28/19 23:21	
Vinyl chloride	ug/L	ND	0.20	05/28/19 23:21	
Xylene (Total)	ug/L	ND	3.0	05/28/19 23:21	
1,2-Dichloroethane-d4 (S)	%	105	75-125	05/28/19 23:21	
4-Bromofluorobenzene (S)	%	98	75-125	05/28/19 23:21	
Toluene-d8 (S)	%	96	75-125	05/28/19 23:21	

LABORATORY CONTROL SAMPLE: 3290601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.5	105	75-125	
1,1,1-Trichloroethane	ug/L	10	9.7	97	75-125	
1,1,2,2-Tetrachloroethane	ug/L	10	9.4	94	71-128	
1,1,2-Trichloroethane	ug/L	10	9.7	97	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	10	8.6	86	73-125	
1,1-Dichloroethane	ug/L	10	9.5	95	75-125	
1,1-Dichloroethene	ug/L	10	9.1	91	69-125	
1,1-Dichloropropene	ug/L	10	8.8	88	73-125	
1,2,3-Trichlorobenzene	ug/L	10	9.8	98	70-129	
1,2,3-Trichloropropane	ug/L	10	10	100	75-125	
1,2,4-Trichlorobenzene	ug/L	10	9.2	92	71-126	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3290601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	10	9.2	92	73-127	
1,2-Dibromo-3-chloropropane	ug/L	25	23.0	92	66-127	
1,2-Dibromoethane (EDB)	ug/L	10	9.8	98	75-125	
1,2-Dichlorobenzene	ug/L	10	10.2	102	75-125	
1,2-Dichloroethane	ug/L	10	10.5	105	71-125	
1,2-Dichloropropane	ug/L	10	9.2	92	72-125	
1,3,5-Trimethylbenzene	ug/L	10	9.3	93	75-125	
1,3-Dichlorobenzene	ug/L	10	9.1	91	75-125	
1,3-Dichloropropane	ug/L	10	9.5	95	75-125	
1,4-Dichlorobenzene	ug/L	10	9.5	95	75-125	
2,2-Dichloropropane	ug/L	10	9.1	91	65-127	
2-Butanone (MEK)	ug/L	50	41.5	83	74-125	
2-Chlorotoluene	ug/L	10	9.1	91	74-125	
4-Chlorotoluene	ug/L	10	9.2	92	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	49.4	99	75-132	
Acetone	ug/L	50	37.4	75	30-150	
Allyl chloride	ug/L	10	8.5	85	75-125	
Benzene	ug/L	10	9.1	91	75-125	
Bromobenzene	ug/L	10	9.5	95	75-125	
Bromochloromethane	ug/L	10	9.7	97	74-126	
Bromodichloromethane	ug/L	10	10.4	104	75-125	
Bromoform	ug/L	10	10.3	103	74-125	
Bromomethane	ug/L	10	15.0	150	30-150	CH,SS
Carbon tetrachloride	ug/L	10	9.4	94	70-125	
Chlorobenzene	ug/L	10	9.7	97	75-125	
Chloroethane	ug/L	10	7.8	78	64-129	
Chloroform	ug/L	10	10.1	101	75-125	
Chloromethane	ug/L	10	7.9	79	67-125	
cis-1,2-Dichloroethene	ug/L	10	9.7	97	73-125	
cis-1,3-Dichloropropene	ug/L	10	9.6	96	75-125	
Dibromochloromethane	ug/L	10	10.0	100	75-125	
Dibromomethane	ug/L	10	10.0	100	75-125	
Dichlorodifluoromethane	ug/L	10	7.9	79	65-129	
Dichlorofluoromethane	ug/L	10	9.1	91	75-125	N2
Diethyl ether (Ethyl ether)	ug/L	10	9.6	96	74-125	
Ethylbenzene	ug/L	10	9.2	92	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.2	92	66-137	
Isopropylbenzene (Cumene)	ug/L	10	9.4	94	75-125	
Methyl-tert-butyl ether	ug/L	10	10.7	107	75-125	
Methylene Chloride	ug/L	10	9.4	94	72-125	
n-Butylbenzene	ug/L	10	8.6	86	69-132	
n-Propylbenzene	ug/L	10	8.6	86	74-125	
Naphthalene	ug/L	10	9.2	92	63-125	
p-Isopropyltoluene	ug/L	10	8.9	89	75-125	
sec-Butylbenzene	ug/L	10	8.6	86	75-125	
Styrene	ug/L	10	10.0	100	75-125	
tert-Butylbenzene	ug/L	10	8.9	89	75-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3290601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethane	ug/L	10	8.7	87	75-125	
Tetrahydrofuran	ug/L	100	111	111	30-150	
Toluene	ug/L	10	8.9	89	75-125	
trans-1,2-Dichloroethane	ug/L	10	9.0	90	70-125	
trans-1,3-Dichloropropene	ug/L	10	9.8	98	75-125	
Trichloroethene	ug/L	10	10.7	107	74-125	
Trichlorofluoromethane	ug/L	10	9.3	93	74-125	
Vinyl chloride	ug/L	10	8.3	83	71-125	
Xylene (Total)	ug/L	30	27.6	92	75-125	
1,2-Dichloroethane-d4 (S)	%			104	75-125	
4-Bromofluorobenzene (S)	%			98	75-125	
Toluene-d8 (S)	%			96	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3291433 3291434

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10475382004 Result	Spike Conc.	Spike Conc.	Result							Result
1,1,1,2-Tetrachloroethane	ug/L	<1.0	10	10	11.4	10.5	114	105	30-150	8	30	
1,1,1-Trichloroethane	ug/L	<1.0	10	10	11.8	10.7	118	107	30-150	10	30	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	10	10	9.5	9.2	95	92	30-150	3	30	
1,1,2-Trichloroethane	ug/L	<1.0	10	10	9.8	9.3	98	93	30-150	5	30	
1,1,2-Trichloroethane	ug/L	<5.0	10	10	11.1	10.5	111	105	30-150	5	30	
Trichlorotrifluoroethane												
1,1-Dichloroethane	ug/L	<1.0	10	10	10.6	9.3	106	93	30-150	13	30	
1,1-Dichloroethene	ug/L	<1.0	10	10	10.8	10.2	108	102	30-150	6	30	
1,1-Dichloropropene	ug/L	<1.0	10	10	10.6	9.8	106	98	30-150	7	30	
1,2,3-Trichlorobenzene	ug/L	<5.0	10	10	10.6	9.6	106	96	30-150	10	30	
1,2,3-Trichloropropane	ug/L	<4.0	10	10	10	9.1	100	91	30-150	9	30	
1,2,4-Trichlorobenzene	ug/L	<5.0	10	10	9.9	9.0	99	90	30-150	10	30	
1,2,4-Trimethylbenzene	ug/L	<1.0	10	10	10.2	9.4	102	94	30-150	8	30	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	25	25	26.4	22.2	106	89	30-150	17	30	
1,2-Dibromoethane (EDB)	ug/L	<1.0	10	10	10.2	9.6	102	96	30-150	6	30	
1,2-Dichlorobenzene	ug/L	<1.0	10	10	11.3	9.9	113	99	30-150	13	30	
1,2-Dichloroethane	ug/L	<1.0	10	10	11.1	10.5	111	105	30-150	6	30	
1,2-Dichloropropane	ug/L	<4.0	10	10	10	8.8	100	88	30-150	12	30	
1,3,5-Trimethylbenzene	ug/L	<1.0	10	10	10.5	9.5	105	95	30-150	10	30	
1,3-Dichlorobenzene	ug/L	<1.0	10	10	10.1	9.4	101	94	30-150	7	30	
1,3-Dichloropropane	ug/L	<1.0	10	10	10.4	9.3	104	93	30-150	12	30	
1,4-Dichlorobenzene	ug/L	<1.0	10	10	10.1	9.3	101	93	30-150	9	30	
2,2-Dichloropropane	ug/L	<4.0	10	10	10.9	9.7	109	97	30-150	12	30	
2-Butanone (MEK)	ug/L	<20.0	50	50	41.0	38.4	82	77	30-150	7	30	
2-Chlorotoluene	ug/L	<1.0	10	10	10	9.2	100	92	30-150	8	30	
4-Chlorotoluene	ug/L	<1.0	10	10	9.6	9.2	96	92	30-150	5	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	50	50	50.3	46.2	101	92	30-150	8	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3291433 3291434												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10475382004 Result	Spike Conc.	Spike Conc.	MS Result							
Acetone	ug/L	<20.0	50	50	34.1	29.9	68	60	30-150	13	30	
Allyl chloride	ug/L	<5.0	10	10	10.0	9.4	100	94	30-147	6	30	
Benzene	ug/L	<1.0	10	10	10.6	9.4	106	94	30-150	12	30	
Bromobenzene	ug/L	<1.0	10	10	10.5	9.4	105	94	30-150	10	30	
Bromochloromethane	ug/L	<1.0	10	10	10.4	9.4	104	94	30-150	10	30	
Bromodichloromethane	ug/L	<1.0	10	10	11.3	10.0	113	100	30-150	12	30	
Bromoform	ug/L	<1.0	10	10	11.0	10.4	110	104	30-150	6	30	
Bromomethane	ug/L	<5.0	10	10	15.3	14.8	153	148	30-150	3	30	CH, M1,SS
Carbon tetrachloride	ug/L	<1.0	10	10	11.3	10.7	113	107	30-150	5	30	
Chlorobenzene	ug/L	<1.0	10	10	10.6	9.9	106	99	30-150	7	30	
Chloroethane	ug/L	<1.0	10	10	8.4	8.5	84	85	30-150	1	30	
Chloroform	ug/L	<5.0	10	10	10.5	9.9	105	99	30-150	6	30	
Chloromethane	ug/L	<1.0	10	10	8.2	8.0	82	80	30-150	2	30	
cis-1,2-Dichloroethene	ug/L	<1.0	10	10	10.8	10.2	108	102	30-150	6	30	
cis-1,3-Dichloropropene	ug/L	<4.0	10	10	10.8	9.7	108	97	30-145	10	30	
Dibromochloromethane	ug/L	<1.0	10	10	10.8	9.9	108	99	30-150	8	30	
Dibromomethane	ug/L	<4.0	10	10	10.3	9.7	103	97	30-150	6	30	
Dichlorodifluoromethane	ug/L	<1.0	10	10	9.3	8.9	93	89	30-150	5	30	
Dichlorofluoromethane	ug/L	<1.0	10	10	9.8	10.0	98	100	30-150	2	30	N2
Diethyl ether (Ethyl ether)	ug/L	<5.0	10	10	10.1	9.6	101	96	30-150	5	30	
Ethylbenzene	ug/L	<1.0	10	10	10.2	9.4	102	94	30-150	8	30	
Hexachloro-1,3-butadiene	ug/L	<5.0	10	10	10.3	10	103	100	30-150	3	30	
Isopropylbenzene (Cumene)	ug/L	<1.0	10	10	10.5	9.4	105	94	30-150	11	30	
Methyl-tert-butyl ether	ug/L	<1.0	10	10	11.3	10.7	113	107	30-150	5	30	
Methylene Chloride	ug/L	<4.0	10	10	9.6	9.2	96	92	30-146	4	30	
n-Butylbenzene	ug/L	<1.0	10	10	10	9.2	100	92	30-150	8	30	
n-Propylbenzene	ug/L	<1.0	10	10	9.9	9.2	99	92	30-150	7	30	
Naphthalene	ug/L	<5.0	10	10	9.9	9.2	99	92	30-150	8	30	
p-Isopropyltoluene	ug/L	<1.0	10	10	9.9	8.9	99	89	30-150	11	30	
sec-Butylbenzene	ug/L	<5.0	10	10	10.3	9.1	103	91	30-150	12	30	
Styrene	ug/L	<1.0	10	10	9.9	9.2	99	92	30-150	7	30	
tert-Butylbenzene	ug/L	<1.0	10	10	10.1	9.1	101	91	30-150	10	30	
Tetrachloroethene	ug/L	<1.0	10	10	10.4	9.6	104	96	30-150	8	30	
Tetrahydrofuran	ug/L	<10.0	100	100	110	106	110	106	30-150	4	30	
Toluene	ug/L	<1.0	10	10	10.2	9.3	102	93	30-150	8	30	
trans-1,2-Dichloroethene	ug/L	<1.0	10	10	11.0	10.3	110	103	30-150	7	30	
trans-1,3-Dichloropropene	ug/L	<4.0	10	10	10	9.4	100	94	30-150	6	30	
Trichloroethene	ug/L	<0.40	10	10	11.6	10.7	116	107	30-150	7	30	
Trichlorofluoromethane	ug/L	<1.0	10	10	11.1	11.0	111	110	30-150	0	30	
Vinyl chloride	ug/L	<0.20	10	10	8.8	8.6	88	86	30-150	3	30	
Xylene (Total)	ug/L	<3.0	30	30	29.4	27.7	98	92	30-150	6	30	
1,2-Dichloroethane-d4 (S)	%						106	105	75-125			
4-Bromofluorobenzene (S)	%						98	98	75-125			
Toluene-d8 (S)	%						96	97	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 609026 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10475470023

METHOD BLANK: 3291486 Matrix: Water
Associated Lab Samples: 10475470023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/29/19 12:06	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/29/19 12:06	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/29/19 12:06	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/29/19 12:06	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	05/29/19 12:06	
1,1-Dichloroethane	ug/L	ND	1.0	05/29/19 12:06	
1,1-Dichloroethene	ug/L	ND	1.0	05/29/19 12:06	
1,1-Dichloropropene	ug/L	ND	1.0	05/29/19 12:06	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/29/19 12:06	
1,2,3-Trichloropropane	ug/L	ND	4.0	05/29/19 12:06	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/29/19 12:06	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	05/29/19 12:06	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	05/29/19 12:06	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/29/19 12:06	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/29/19 12:06	
1,2-Dichloroethane	ug/L	ND	1.0	05/29/19 12:06	
1,2-Dichloropropane	ug/L	ND	4.0	05/29/19 12:06	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	05/29/19 12:06	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/29/19 12:06	
1,3-Dichloropropane	ug/L	ND	1.0	05/29/19 12:06	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/29/19 12:06	
2,2-Dichloropropane	ug/L	ND	4.0	05/29/19 12:06	
2-Butanone (MEK)	ug/L	ND	5.0	05/29/19 12:06	
2-Chlorotoluene	ug/L	ND	1.0	05/29/19 12:06	
4-Chlorotoluene	ug/L	ND	1.0	05/29/19 12:06	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/29/19 12:06	
Acetone	ug/L	ND	20.0	05/29/19 12:06	
Allyl chloride	ug/L	ND	4.0	05/29/19 12:06	
Benzene	ug/L	ND	1.0	05/29/19 12:06	
Bromobenzene	ug/L	ND	1.0	05/29/19 12:06	
Bromochloromethane	ug/L	ND	1.0	05/29/19 12:06	
Bromodichloromethane	ug/L	ND	1.0	05/29/19 12:06	
Bromoform	ug/L	ND	4.0	05/29/19 12:06	
Bromomethane	ug/L	ND	4.0	05/29/19 12:06	
Carbon tetrachloride	ug/L	ND	1.0	05/29/19 12:06	
Chlorobenzene	ug/L	ND	1.0	05/29/19 12:06	
Chloroethane	ug/L	ND	1.0	05/29/19 12:06	
Chloroform	ug/L	ND	1.0	05/29/19 12:06	
Chloromethane	ug/L	ND	4.0	05/29/19 12:06	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/29/19 12:06	
cis-1,3-Dichloropropene	ug/L	ND	4.0	05/29/19 12:06	

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

METHOD BLANK: 3291486 Matrix: Water
Associated Lab Samples: 10475470023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	05/29/19 12:06	
Dibromomethane	ug/L	ND	4.0	05/29/19 12:06	
Dichlorodifluoromethane	ug/L	ND	1.0	05/29/19 12:06	
Dichlorofluoromethane	ug/L	ND	1.0	05/29/19 12:06	N2
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	05/29/19 12:06	
Ethylbenzene	ug/L	ND	1.0	05/29/19 12:06	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	05/29/19 12:06	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	05/29/19 12:06	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/29/19 12:06	
Methylene Chloride	ug/L	ND	4.0	05/29/19 12:06	
n-Butylbenzene	ug/L	ND	1.0	05/29/19 12:06	
n-Propylbenzene	ug/L	ND	1.0	05/29/19 12:06	
Naphthalene	ug/L	ND	4.0	05/29/19 12:06	
p-Isopropyltoluene	ug/L	ND	1.0	05/29/19 12:06	
sec-Butylbenzene	ug/L	ND	1.0	05/29/19 12:06	
Styrene	ug/L	ND	1.0	05/29/19 12:06	
tert-Butylbenzene	ug/L	ND	1.0	05/29/19 12:06	
Tetrachloroethene	ug/L	ND	1.0	05/29/19 12:06	
Tetrahydrofuran	ug/L	ND	10.0	05/29/19 12:06	
Toluene	ug/L	ND	1.0	05/29/19 12:06	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/29/19 12:06	
trans-1,3-Dichloropropene	ug/L	ND	4.0	05/29/19 12:06	
Trichloroethene	ug/L	ND	0.40	05/29/19 12:06	
Trichlorofluoromethane	ug/L	ND	1.0	05/29/19 12:06	
Vinyl chloride	ug/L	ND	0.20	05/29/19 12:06	
Xylene (Total)	ug/L	ND	3.0	05/29/19 12:06	
1,2-Dichloroethane-d4 (S)	%	105	75-125	05/29/19 12:06	
4-Bromofluorobenzene (S)	%	99	75-125	05/29/19 12:06	
Toluene-d8 (S)	%	95	75-125	05/29/19 12:06	

LABORATORY CONTROL SAMPLE: 3291487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.8	108	75-125	
1,1,1-Trichloroethane	ug/L	10	11.2	112	75-125	
1,1,2,2-Tetrachloroethane	ug/L	10	9.5	95	71-128	
1,1,2-Trichloroethane	ug/L	10	9.3	93	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	10	10.4	104	73-125	
1,1-Dichloroethane	ug/L	10	9.7	97	75-125	
1,1-Dichloroethene	ug/L	10	9.7	97	69-125	
1,1-Dichloropropene	ug/L	10	9.6	96	73-125	
1,2,3-Trichlorobenzene	ug/L	10	10.1	101	70-129	
1,2,3-Trichloropropane	ug/L	10	10.0	100	75-125	
1,2,4-Trichlorobenzene	ug/L	10	10.3	103	71-126	

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3291487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	10	10.0	100	73-127	
1,2-Dibromo-3-chloropropane	ug/L	25	25.6	102	66-127	
1,2-Dibromoethane (EDB)	ug/L	10	9.8	98	75-125	
1,2-Dichlorobenzene	ug/L	10	10.5	105	75-125	
1,2-Dichloroethane	ug/L	10	11.3	113	71-125	
1,2-Dichloropropane	ug/L	10	9.7	97	72-125	
1,3,5-Trimethylbenzene	ug/L	10	9.9	99	75-125	
1,3-Dichlorobenzene	ug/L	10	9.9	99	75-125	
1,3-Dichloropropane	ug/L	10	10.3	103	75-125	
1,4-Dichlorobenzene	ug/L	10	10.0	100	75-125	
2,2-Dichloropropane	ug/L	10	10.9	109	65-127	
2-Butanone (MEK)	ug/L	50	44.5	89	74-125	
2-Chlorotoluene	ug/L	10	9.4	94	74-125	
4-Chlorotoluene	ug/L	10	9.6	96	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.2	96	75-132	
Acetone	ug/L	50	51.1	102	30-150	
Allyl chloride	ug/L	10	8.8	88	75-125	
Benzene	ug/L	10	9.6	96	75-125	
Bromobenzene	ug/L	10	9.8	98	75-125	
Bromochloromethane	ug/L	10	10.4	104	74-126	
Bromodichloromethane	ug/L	10	11.1	111	75-125	
Bromoform	ug/L	10	10.6	106	74-125	
Bromomethane	ug/L	10	12.9	129	30-150	SS
Carbon tetrachloride	ug/L	10	10.5	105	70-125	
Chlorobenzene	ug/L	10	10.0	100	75-125	
Chloroethane	ug/L	10	8.4	84	64-129	
Chloroform	ug/L	10	10.5	105	75-125	
Chloromethane	ug/L	10	7.5	75	67-125	
cis-1,2-Dichloroethene	ug/L	10	10.5	105	73-125	
cis-1,3-Dichloropropene	ug/L	10	10.7	107	75-125	
Dibromochloromethane	ug/L	10	10.7	107	75-125	
Dibromomethane	ug/L	10	10.8	108	75-125	
Dichlorodifluoromethane	ug/L	10	8.9	89	65-129	
Dichlorofluoromethane	ug/L	10	9.8	98	75-125	N2
Diethyl ether (Ethyl ether)	ug/L	10	9.3	93	74-125	
Ethylbenzene	ug/L	10	9.4	94	75-125	
Hexachloro-1,3-butadiene	ug/L	10	10.9	109	66-137	
Isopropylbenzene (Cumene)	ug/L	10	9.6	96	75-125	
Methyl-tert-butyl ether	ug/L	10	11.3	113	75-125	
Methylene Chloride	ug/L	10	9.2	92	72-125	
n-Butylbenzene	ug/L	10	9.5	95	69-132	
n-Propylbenzene	ug/L	10	9.3	93	74-125	
Naphthalene	ug/L	10	9.5	95	63-125	
p-Isopropyltoluene	ug/L	10	9.3	93	75-125	
sec-Butylbenzene	ug/L	10	9.4	94	75-125	
Styrene	ug/L	10	9.9	99	75-125	
tert-Butylbenzene	ug/L	10	9.6	96	75-125	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3291487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethane	ug/L	10	9.6	96	75-125	
Tetrahydrofuran	ug/L	100	111	111	30-150	
Toluene	ug/L	10	9.3	93	75-125	
trans-1,2-Dichloroethene	ug/L	10	9.9	99	70-125	
trans-1,3-Dichloropropene	ug/L	10	9.8	98	75-125	
Trichloroethene	ug/L	10	11.2	112	74-125	
Trichlorofluoromethane	ug/L	10	11.2	112	74-125	
Vinyl chloride	ug/L	10	8.3	83	71-125	
Xylene (Total)	ug/L	30	27.6	92	75-125	
1,2-Dichloroethane-d4 (S)	%			104	75-125	
4-Bromofluorobenzene (S)	%			98	75-125	
Toluene-d8 (S)	%			95	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3291488 3291489

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10475148006 Result	Spike Conc.	Spike Conc.	Result						
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	10	9.7	100	97	30-150	3	30
1,1,1-Trichloroethane	ug/L	<0.14	10	10	10.6	10.1	106	101	30-150	6	30
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	8.4	7.6	84	76	30-150	10	30
1,1,2-Trichloroethane	ug/L	<0.18	10	10	8.9	8.0	89	80	30-150	10	30
1,1,2-Trichloroethane	ug/L	<0.47	10	10	10.1	9.9	101	99	30-150	2	30
Trichlorotrifluoroethane											
1,1-Dichloroethane	ug/L	<0.17	10	10	9.1	8.6	91	86	30-150	6	30
1,1-Dichloroethene	ug/L	<0.16	10	10	9.7	9.7	97	97	30-150	0	30
1,1-Dichloropropene	ug/L	<0.20	10	10	9.3	9.1	93	91	30-150	2	30
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	10.4	9.6	104	96	30-150	7	30
1,2,3-Trichloropropane	ug/L	<0.26	10	10	9.4	8.6	94	86	30-150	9	30
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	10.3	9.4	103	94	30-150	8	30
1,2,4-Trimethylbenzene	ug/L	2.4	10	10	11.4	11.2	90	88	30-150	2	30
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	22.5	21.7	90	87	30-150	4	30
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	8.6	9.1	86	91	30-150	5	30
1,2-Dichlorobenzene	ug/L	<0.14	10	10	9.5	8.8	95	88	30-150	8	30
1,2-Dichloroethane	ug/L	<0.22	10	10	10.2	9.7	102	97	30-150	5	30
1,2-Dichloropropane	ug/L	<0.16	10	10	8.5	8.3	85	83	30-150	2	30
1,3,5-Trimethylbenzene	ug/L	1.8	10	10	10.6	10.4	88	86	30-150	2	30
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.3	8.5	93	85	30-150	9	30
1,3-Dichloropropane	ug/L	<0.17	10	10	9.1	8.6	91	86	30-150	6	30
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.3	8.8	93	88	30-150	5	30
2,2-Dichloropropane	ug/L	<0.17	10	10	10.3	10.1	103	101	30-150	2	30
2-Butanone (MEK)	ug/L	<0.99	50	50	34.7	32.8	69	66	30-150	6	30
2-Chlorotoluene	ug/L	<0.16	10	10	9.4	8.8	94	88	30-150	6	30
4-Chlorotoluene	ug/L	<0.13	10	10	8.8	8.6	88	86	30-150	2	30
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	41.7	41.0	83	82	30-150	2	30

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3291488 3291489												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10475148006 Result	Spike Conc.	Spike Conc.	MS Result							
Acetone	ug/L	<9.2	50	50	30.7	31.3	56	57	30-150	2	30	
Allyl chloride	ug/L	<0.29	10	10	8.2	8.1	82	81	30-147	1	30	
Benzene	ug/L	3.8	10	10	12.4	11.9	86	81	30-150	4	30	
Bromobenzene	ug/L	<0.21	10	10	9.7	8.7	97	87	30-150	10	30	
Bromochloromethane	ug/L	<0.27	10	10	9.5	8.7	95	87	30-150	9	30	
Bromodichloromethane	ug/L	<0.22	10	10	10.4	9.3	104	93	30-150	11	30	
Bromoform	ug/L	<0.80	10	10	9.8	8.9	98	89	30-150	10	30	
Bromomethane	ug/L	<1.8	10	10	14.6	16.4	146	164	30-150	12	30	M1,SS
Carbon tetrachloride	ug/L	<0.19	10	10	10.5	9.6	105	96	30-150	9	30	
Chlorobenzene	ug/L	<0.17	10	10	9.5	9.1	95	91	30-150	4	30	
Chloroethane	ug/L	<0.49	10	10	8.2	9.4	82	94	30-150	13	30	
Chloroform	ug/L	<0.45	10	10	9.5	8.8	95	88	30-150	7	30	
Chloromethane	ug/L	0.41J	10	10	7.7	9.5	73	91	30-150	21	30	
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	10.5	9.0	105	90	30-150	16	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	9.6	9.1	96	91	30-145	5	30	
Dibromochloromethane	ug/L	<0.46	10	10	9.6	8.9	96	89	30-150	8	30	
Dibromomethane	ug/L	<0.39	10	10	9.3	9.5	93	95	30-150	2	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	9.0	9.7	90	97	30-150	7	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.4	11.0	94	110	30-150	15	30	N2
Diethyl ether (Ethyl ether)	ug/L	<0.095	10	10	8.8	8.3	88	83	30-150	6	30	
Ethylbenzene	ug/L	3.9	10	10	12.3	12.1	85	83	30-150	2	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	10.9	10.5	109	105	30-150	3	30	
Isopropylbenzene (Cumene)	ug/L	2.9	10	10	11.5	11.4	86	85	30-150	1	30	
Methyl-tert-butyl ether	ug/L	<0.16	10	10	10	9.4	100	94	30-150	6	30	
Methylene Chloride	ug/L	<0.98	10	10	8.7	8.7	87	87	30-146	0	30	
n-Butylbenzene	ug/L	0.72J	10	10	10	9.4	93	87	30-150	6	30	
n-Propylbenzene	ug/L	2.3	10	10	10.4	10.1	80	78	30-150	3	30	
Naphthalene	ug/L	161	10	10	175	198	133	369	30-150	13	30	M1
p-Isopropyltoluene	ug/L	0.60J	10	10	9.7	8.9	91	83	30-150	8	30	
sec-Butylbenzene	ug/L	<0.15	10	10	8.9	8.6	89	86	30-150	3	30	
Styrene	ug/L	<0.19	10	10	9.6	9.3	96	93	30-150	3	30	
tert-Butylbenzene	ug/L	<0.15	10	10	8.9	8.7	89	87	30-150	3	30	
Tetrachloroethene	ug/L	<0.17	10	10	9.3	8.7	93	87	30-150	6	30	
Tetrahydrofuran	ug/L	<2.2	100	100	98.5	93.9	99	94	30-150	5	30	
Toluene	ug/L	0.86J	10	10	9.0	8.6	82	78	30-150	5	30	
trans-1,2-Dichloroethene	ug/L	<0.24	10	10	10.3	9.0	103	90	30-150	13	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	9.2	8.4	92	84	30-150	9	30	
Trichloroethene	ug/L	<0.15	10	10	10.9	10.4	109	104	30-150	4	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	10.9	12.7	109	127	30-150	15	30	
Vinyl chloride	ug/L	<0.092	10	10	8.5	9.9	85	98	30-150	15	30	
Xylene (Total)	ug/L	5.8	30	30	30.1	29.9	81	80	30-150	1	30	
1,2-Dichloroethane-d4 (S)	%						105	107	75-125			
4-Bromofluorobenzene (S)	%						97	96	75-125			
Toluene-d8 (S)	%						95	96	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 609186

Analysis Method: EPA 8260B

QC Batch Method: EPA 8260B

Analysis Description: 8260B MSV 465 W

Associated Lab Samples: 10475470009

METHOD BLANK: 3292171

Matrix: Water

Associated Lab Samples: 10475470009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/29/19 21:49	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/29/19 21:49	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/29/19 21:49	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/29/19 21:49	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	05/29/19 21:49	
1,1-Dichloroethane	ug/L	ND	1.0	05/29/19 21:49	
1,1-Dichloroethene	ug/L	ND	1.0	05/29/19 21:49	
1,1-Dichloropropene	ug/L	ND	1.0	05/29/19 21:49	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/29/19 21:49	
1,2,3-Trichloropropane	ug/L	ND	4.0	05/29/19 21:49	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/29/19 21:49	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	05/29/19 21:49	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	05/29/19 21:49	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/29/19 21:49	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/29/19 21:49	
1,2-Dichloroethane	ug/L	ND	1.0	05/29/19 21:49	
1,2-Dichloropropane	ug/L	ND	4.0	05/29/19 21:49	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	05/29/19 21:49	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/29/19 21:49	
1,3-Dichloropropane	ug/L	ND	1.0	05/29/19 21:49	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/29/19 21:49	
2,2-Dichloropropane	ug/L	ND	4.0	05/29/19 21:49	
2-Butanone (MEK)	ug/L	ND	5.0	05/29/19 21:49	
2-Chlorotoluene	ug/L	ND	1.0	05/29/19 21:49	
4-Chlorotoluene	ug/L	ND	1.0	05/29/19 21:49	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/29/19 21:49	
Acetone	ug/L	ND	20.0	05/29/19 21:49	
Allyl chloride	ug/L	ND	4.0	05/29/19 21:49	
Benzene	ug/L	ND	1.0	05/29/19 21:49	
Bromobenzene	ug/L	ND	1.0	05/29/19 21:49	
Bromochloromethane	ug/L	ND	1.0	05/29/19 21:49	
Bromodichloromethane	ug/L	ND	1.0	05/29/19 21:49	
Bromoform	ug/L	ND	4.0	05/29/19 21:49	
Bromomethane	ug/L	ND	4.0	05/29/19 21:49	
Carbon tetrachloride	ug/L	ND	1.0	05/29/19 21:49	
Chlorobenzene	ug/L	ND	1.0	05/29/19 21:49	
Chloroethane	ug/L	ND	1.0	05/29/19 21:49	
Chloroform	ug/L	ND	1.0	05/29/19 21:49	
Chloromethane	ug/L	ND	4.0	05/29/19 21:49	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/29/19 21:49	
cis-1,3-Dichloropropene	ug/L	ND	4.0	05/29/19 21:49	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

METHOD BLANK: 3292171 Matrix: Water
Associated Lab Samples: 10475470009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	05/29/19 21:49	
Dibromomethane	ug/L	ND	4.0	05/29/19 21:49	
Dichlorodifluoromethane	ug/L	ND	1.0	05/29/19 21:49	
Dichlorofluoromethane	ug/L	ND	1.0	05/29/19 21:49	N2
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	05/29/19 21:49	
Ethylbenzene	ug/L	ND	1.0	05/29/19 21:49	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	05/29/19 21:49	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	05/29/19 21:49	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/29/19 21:49	
Methylene Chloride	ug/L	ND	4.0	05/29/19 21:49	
n-Butylbenzene	ug/L	ND	1.0	05/29/19 21:49	
n-Propylbenzene	ug/L	ND	1.0	05/29/19 21:49	
Naphthalene	ug/L	ND	4.0	05/29/19 21:49	
p-Isopropyltoluene	ug/L	ND	1.0	05/29/19 21:49	
sec-Butylbenzene	ug/L	ND	1.0	05/29/19 21:49	
Styrene	ug/L	ND	1.0	05/29/19 21:49	
tert-Butylbenzene	ug/L	ND	1.0	05/29/19 21:49	
Tetrachloroethene	ug/L	ND	1.0	05/29/19 21:49	
Tetrahydrofuran	ug/L	ND	10.0	05/29/19 21:49	
Toluene	ug/L	ND	1.0	05/29/19 21:49	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/29/19 21:49	
trans-1,3-Dichloropropene	ug/L	ND	4.0	05/29/19 21:49	
Trichloroethene	ug/L	ND	0.40	05/29/19 21:49	
Trichlorofluoromethane	ug/L	ND	1.0	05/29/19 21:49	
Vinyl chloride	ug/L	ND	0.20	05/29/19 21:49	
Xylene (Total)	ug/L	ND	3.0	05/29/19 21:49	
1,2-Dichloroethane-d4 (S)	%	103	75-125	05/29/19 21:49	
4-Bromofluorobenzene (S)	%	100	75-125	05/29/19 21:49	
Toluene-d8 (S)	%	95	75-125	05/29/19 21:49	

LABORATORY CONTROL SAMPLE: 3292172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.8	108	75-125	
1,1,1-Trichloroethane	ug/L	10	10.7	107	75-125	
1,1,2,2-Tetrachloroethane	ug/L	10	9.4	94	71-128	
1,1,2-Trichloroethane	ug/L	10	9.5	95	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	10	9.7	97	73-125	
1,1-Dichloroethane	ug/L	10	9.9	99	75-125	
1,1-Dichloroethene	ug/L	10	9.8	98	69-125	
1,1-Dichloropropene	ug/L	10	9.1	91	73-125	
1,2,3-Trichlorobenzene	ug/L	10	10.1	101	70-129	
1,2,3-Trichloropropane	ug/L	10	10.2	102	75-125	
1,2,4-Trichlorobenzene	ug/L	10	10.3	103	71-126	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3292172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	10	9.7	97	73-127	
1,2-Dibromo-3-chloropropane	ug/L	25	23.3	93	66-127	
1,2-Dibromoethane (EDB)	ug/L	10	9.7	97	75-125	
1,2-Dichlorobenzene	ug/L	10	10	100	75-125	
1,2-Dichloroethane	ug/L	10	11.1	111	71-125	
1,2-Dichloropropane	ug/L	10	9.3	93	72-125	
1,3,5-Trimethylbenzene	ug/L	10	9.9	99	75-125	
1,3-Dichlorobenzene	ug/L	10	9.8	98	75-125	
1,3-Dichloropropane	ug/L	10	9.7	97	75-125	
1,4-Dichlorobenzene	ug/L	10	9.7	97	75-125	
2,2-Dichloropropane	ug/L	10	10.1	101	65-127	
2-Butanone (MEK)	ug/L	50	43.7	87	74-125	
2-Chlorotoluene	ug/L	10	9.3	93	74-125	
4-Chlorotoluene	ug/L	10	9.1	91	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	47.6	95	75-132	
Acetone	ug/L	50	41.7	83	30-150	
Allyl chloride	ug/L	10	8.9	89	75-125	
Benzene	ug/L	10	9.7	97	75-125	
Bromobenzene	ug/L	10	9.8	98	75-125	
Bromochloromethane	ug/L	10	9.6	96	74-126	
Bromodichloromethane	ug/L	10	10.7	107	75-125	
Bromoform	ug/L	10	10.1	101	74-125	
Bromomethane	ug/L	10	8.1	81	30-150	SS
Carbon tetrachloride	ug/L	10	10.4	104	70-125	
Chlorobenzene	ug/L	10	9.8	98	75-125	
Chloroethane	ug/L	10	9.1	91	64-129	
Chloroform	ug/L	10	10.7	107	75-125	
Chloromethane	ug/L	10	7.6	76	67-125	
cis-1,2-Dichloroethene	ug/L	10	10.6	106	73-125	
cis-1,3-Dichloropropene	ug/L	10	10.5	105	75-125	
Dibromochloromethane	ug/L	10	10.3	103	75-125	
Dibromomethane	ug/L	10	11.2	112	75-125	
Dichlorodifluoromethane	ug/L	10	8.7	87	65-129	
Dichlorofluoromethane	ug/L	10	10.6	106	75-125	N2
Diethyl ether (Ethyl ether)	ug/L	10	10.1	101	74-125	
Ethylbenzene	ug/L	10	9.3	93	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.9	99	66-137	
Isopropylbenzene (Cumene)	ug/L	10	9.6	96	75-125	
Methyl-tert-butyl ether	ug/L	10	11.8	118	75-125	
Methylene Chloride	ug/L	10	10.0	100	72-125	
n-Butylbenzene	ug/L	10	9.2	92	69-132	
n-Propylbenzene	ug/L	10	9.1	91	74-125	
Naphthalene	ug/L	10	9.9	99	63-125	
p-Isopropyltoluene	ug/L	10	9.5	95	75-125	
sec-Butylbenzene	ug/L	10	9.3	93	75-125	
Styrene	ug/L	10	10	100	75-125	
tert-Butylbenzene	ug/L	10	9.5	95	75-125	

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3292172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethane	ug/L	10	9.3	93	75-125	
Tetrahydrofuran	ug/L	100	113	113	30-150	
Toluene	ug/L	10	9.3	93	75-125	
trans-1,2-Dichloroethane	ug/L	10	10	100	70-125	
trans-1,3-Dichloropropene	ug/L	10	9.2	92	75-125	
Trichloroethene	ug/L	10	10.9	109	74-125	
Trichlorofluoromethane	ug/L	10	10.7	107	74-125	
Vinyl chloride	ug/L	10	8.3	83	71-125	
Xylene (Total)	ug/L	30	27.5	92	75-125	
1,2-Dichloroethane-d4 (S)	%			104	75-125	
4-Bromofluorobenzene (S)	%			97	75-125	
Toluene-d8 (S)	%			92	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3292173 3292174

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10475468034 Result	Spike Conc.	Spike Conc.	Result							Result
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	9.9	10.6	99	106	30-150	7	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	10.9	11.9	109	119	30-150	9	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	7.7	9.0	77	90	30-150	15	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	8.8	9.4	88	94	30-150	7	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	11.5	12.2	115	122	30-150	6	30	
Trichlorotrifluoroethane												
1,1-Dichloroethane	ug/L	ND	10	10	10.2	10.6	102	106	30-150	4	30	
1,1-Dichloroethene	ug/L	ND	10	10	11.4	12.0	114	120	30-150	6	30	
1,1-Dichloropropene	ug/L	ND	10	10	10.6	10.6	106	106	30-150	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	9.5	10.3	95	103	30-150	8	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	8.7	9.2	87	92	30-150	7	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	9.1	9.9	91	99	30-150	9	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	9.4	10.2	94	102	30-150	8	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	20.0	21.9	80	87	30-150	9	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.0	9.8	90	98	30-150	8	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	9.4	10.1	94	101	30-150	7	30	
1,2-Dichloroethane	ug/L	ND	10	10	10.6	11.2	106	112	30-150	6	30	
1,2-Dichloropropane	ug/L	ND	10	10	9.3	9.8	93	98	30-150	5	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	9.6	10.1	96	101	30-150	5	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	9.1	9.9	91	99	30-150	9	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.2	9.7	92	97	30-150	6	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	9.2	10.1	92	101	30-150	10	30	
2,2-Dichloropropane	ug/L	ND	10	10	10.8	11.3	108	113	30-150	5	30	
2-Butanone (MEK)	ug/L	ND	50	50	37.0	38.6	74	77	30-150	4	30	
2-Chlorotoluene	ug/L	ND	10	10	9.1	9.8	91	98	30-150	7	30	
4-Chlorotoluene	ug/L	ND	10	10	8.9	9.9	89	99	30-150	11	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	43.3	46.4	87	93	30-150	7	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3292173 3292174												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10475468034 Result	Spike Conc.	Spike Conc.	MS Result							
Acetone	ug/L	ND	50	50	35.2	34.7	70	69	30-150	1	30	
Allyl chloride	ug/L	ND	10	10	9.4	10.2	94	102	30-147	8	30	
Benzene	ug/L	ND	10	10	10.2	10.9	102	109	30-150	6	30	
Bromobenzene	ug/L	ND	10	10	9.4	9.9	94	99	30-150	5	30	
Bromochloromethane	ug/L	ND	10	10	10.0	10.7	100	107	30-150	6	30	
Bromodichloromethane	ug/L	ND	10	10	10.2	10.9	102	109	30-150	6	30	
Bromoform	ug/L	ND	10	10	8.9	9.7	89	97	30-150	9	30	
Bromomethane	ug/L	ND	10	10	10.7	11.9	107	119	30-150	11	30	SS
Carbon tetrachloride	ug/L	ND	10	10	11.1	11.8	111	118	30-150	6	30	
Chlorobenzene	ug/L	ND	10	10	9.5	10.4	95	104	30-150	9	30	
Chloroethane	ug/L	ND	10	10	11.0	10.5	110	105	30-150	5	30	
Chloroform	ug/L	ND	10	10	10.1	10.7	101	107	30-150	6	30	
Chloromethane	ug/L	ND	10	10	10.2	9.8	102	98	30-150	4	30	
cis-1,2-Dichloroethene	ug/L	5.5	10	10	15.5	16.8	100	113	30-150	8	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	9.6	10.3	96	103	30-145	7	30	
Dibromochloromethane	ug/L	ND	10	10	9.2	9.6	92	96	30-150	5	30	
Dibromomethane	ug/L	ND	10	10	10.2	10.9	102	109	30-150	7	30	
Dichlorodifluoromethane	ug/L	ND	10	10	11.3	11.0	113	110	30-150	3	30	
Dichlorofluoromethane	ug/L	ND	10	10	11.3	10.4	113	104	30-150	8	30	N2
Diethyl ether (Ethyl ether)	ug/L	ND	10	10	9.4	10.4	94	104	30-150	10	30	
Ethylbenzene	ug/L	ND	10	10	9.7	10.3	97	103	30-150	6	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	10.6	11.2	106	112	30-150	5	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.0	10.5	100	105	30-150	5	30	
Methyl-tert-butyl ether	ug/L	ND	10	10	11.0	11.5	110	115	30-150	4	30	
Methylene Chloride	ug/L	ND	10	10	9.7	10.8	97	108	30-146	11	30	
n-Butylbenzene	ug/L	ND	10	10	9.4	10.1	94	101	30-150	7	30	
n-Propylbenzene	ug/L	ND	10	10	9.2	10	92	100	30-150	8	30	
Naphthalene	ug/L	ND	10	10	9.0	9.3	90	93	30-150	3	30	
p-Isopropyltoluene	ug/L	ND	10	10	9.7	10.2	97	102	30-150	5	30	
sec-Butylbenzene	ug/L	ND	10	10	9.2	10.2	92	102	30-150	10	30	
Styrene	ug/L	ND	10	10	9.9	10.1	99	101	30-150	3	30	
tert-Butylbenzene	ug/L	ND	10	10	9.4	10.3	94	103	30-150	10	30	
Tetrachloroethene	ug/L	7.9	10	10	17.3	18.1	94	102	30-150	5	30	
Tetrahydrofuran	ug/L	ND	100	100	108	109	108	109	30-150	1	30	
Toluene	ug/L	ND	10	10	9.3	9.9	93	99	30-150	6	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	11.3	11.6	113	116	30-150	3	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.0	9.8	90	98	30-150	9	30	
Trichloroethene	ug/L	2.3	10	10	12.7	13.1	104	108	30-150	3	30	
Trichlorofluoromethane	ug/L	ND	10	10	12.7	12.0	127	120	30-150	6	30	
Vinyl chloride	ug/L	ND	10	10	11.4	10.8	114	108	30-150	5	30	
Xylene (Total)	ug/L	ND	30	30	28.7	29.9	96	100	30-150	4	30	
1,2-Dichloroethane-d4 (S)	%						105	107	75-125			
4-Bromofluorobenzene (S)	%						95	98	75-125			
Toluene-d8 (S)	%						94	94	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch: 607515

Analysis Method: EPA 8270D by SIM

QC Batch Method: EPA 3550

Analysis Description: 8270D Solid PAH by SIM MSSV

Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020

METHOD BLANK: 3284153

Matrix: Solid

Associated Lab Samples: 10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	10.0	05/25/19 09:58	
Acenaphthylene	ug/kg	ND	10.0	05/25/19 09:58	
Anthracene	ug/kg	ND	10.0	05/25/19 09:58	
Benzo(a)anthracene	ug/kg	ND	10.0	05/25/19 09:58	
Benzo(a)pyrene	ug/kg	ND	10.0	05/25/19 09:58	
Benzo(b)fluoranthene	ug/kg	ND	10.0	05/25/19 09:58	
Benzo(g,h,i)perylene	ug/kg	ND	10.0	05/25/19 09:58	
Benzo(k)fluoranthene	ug/kg	ND	10.0	05/25/19 09:58	
Chrysene	ug/kg	ND	10.0	05/25/19 09:58	
Dibenz(a,h)anthracene	ug/kg	ND	10.0	05/25/19 09:58	
Fluoranthene	ug/kg	ND	10.0	05/25/19 09:58	
Fluorene	ug/kg	ND	10.0	05/25/19 09:58	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	10.0	05/25/19 09:58	
Naphthalene	ug/kg	ND	10.0	05/25/19 09:58	
Phenanthrene	ug/kg	ND	10.0	05/25/19 09:58	
Pyrene	ug/kg	ND	10.0	05/25/19 09:58	
2-Fluorobiphenyl (S)	%	56	30-125	05/25/19 09:58	
p-Terphenyl-d14 (S)	%	82	30-125	05/25/19 09:58	

LABORATORY CONTROL SAMPLE: 3284154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	20.3	61	46-125	
Acenaphthylene	ug/kg	33.3	19.9	60	44-125	
Anthracene	ug/kg	33.3	27.3	82	62-125	
Benzo(a)anthracene	ug/kg	33.3	26.2	79	53-125	
Benzo(a)pyrene	ug/kg	33.3	27.4	82	62-125	
Benzo(b)fluoranthene	ug/kg	33.3	26.6	80	51-125	
Benzo(g,h,i)perylene	ug/kg	33.3	27.8	83	58-125	
Benzo(k)fluoranthene	ug/kg	33.3	28.0	84	59-125	
Chrysene	ug/kg	33.3	26.2	79	59-125	
Dibenz(a,h)anthracene	ug/kg	33.3	29.7	89	60-125	
Fluoranthene	ug/kg	33.3	30.5	92	67-125	
Fluorene	ug/kg	33.3	22.8	68	51-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	27.2	82	59-125	
Naphthalene	ug/kg	33.3	20.0	60	47-125	
Phenanthrene	ug/kg	33.3	26.9	81	61-125	
Pyrene	ug/kg	33.3	28.2	84	52-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

LABORATORY CONTROL SAMPLE: 3284154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Fluorobiphenyl (S)	%.			56	30-125	
p-Terphenyl-d14 (S)	%.			81	30-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3284155 3284156

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		10475436002	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Acenaphthene	ug/kg	ND	37.5	37.6	27.0	29.1	72	77	30-125	8	30		
Acenaphthylene	ug/kg	ND	37.5	37.6	29.3	30.9	78	82	30-125	6	30		
Anthracene	ug/kg	ND	37.5	37.6	33.6	33.1	82	80	30-131	2	30		
Benzo(a)anthracene	ug/kg	0.014 mg/kg	37.5	37.6	38.9	37.2	66	61	30-126	4	30		
Benzo(a)pyrene	ug/kg	0.026 mg/kg	37.5	37.6	41.1	40.4	41	39	30-150	2	30		
Benzo(b)fluoranthene	ug/kg	0.023 mg/kg	37.5	37.6	40.8	39.3	46	42	30-150	4	30		
Benzo(g,h,i)perylene	ug/kg	0.038 mg/kg	37.5	37.6	34.7	35.7	-8	-5	30-150	3	30 M1		
Benzo(k)fluoranthene	ug/kg	ND	37.5	37.6	38.9	39.1	103	104	30-150	1	30		
Chrysene	ug/kg	0.020 mg/kg	37.5	37.6	40.6	37.7	55	48	30-150	7	30		
Dibenz(a,h)anthracene	ug/kg	ND	37.5	37.6	31.7	33.7	84	89	30-143	6	30		
Fluoranthene	ug/kg	0.025 mg/kg	37.5	37.6	54.9	50.9	80	69	30-143	8	30		
Fluorene	ug/kg	ND	37.5	37.6	29.4	30.1	78	80	30-138	3	30		
Indeno(1,2,3-cd)pyrene	ug/kg	0.014 mg/kg	37.5	37.6	33.6	34.5	51	54	30-150	3	30		
Naphthalene	ug/kg	ND	37.5	37.6	22.8	29.4	61	78	30-125	25	30		
Phenanthrene	ug/kg	ND	37.5	37.6	37.0	35.8	98	95	30-142	3	30		
Pyrene	ug/kg	0.023 mg/kg	37.5	37.6	50.7	46.9	75	65	30-149	8	30		
2-Fluorobiphenyl (S)	%.						61	72	30-125				
p-Terphenyl-d14 (S)	%.						75	75	30-125				

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 607900 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA 3550 Analysis Description: 8270D Solid PAH by SIM MSSV
Associated Lab Samples: 10475470021

METHOD BLANK: 3286088 Matrix: Solid
Associated Lab Samples: 10475470021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	10.0	05/23/19 18:17	
Acenaphthylene	ug/kg	ND	10.0	05/23/19 18:17	
Anthracene	ug/kg	ND	10.0	05/23/19 18:17	
Benzo(a)anthracene	ug/kg	ND	10.0	05/23/19 18:17	
Benzo(a)pyrene	ug/kg	ND	10.0	05/23/19 18:17	
Benzo(b)fluoranthene	ug/kg	ND	10.0	05/23/19 18:17	
Benzo(g,h,i)perylene	ug/kg	ND	10.0	05/23/19 18:17	
Benzo(k)fluoranthene	ug/kg	ND	10.0	05/23/19 18:17	
Chrysene	ug/kg	ND	10.0	05/23/19 18:17	
Dibenz(a,h)anthracene	ug/kg	ND	10.0	05/23/19 18:17	
Fluoranthene	ug/kg	ND	10.0	05/23/19 18:17	
Fluorene	ug/kg	ND	10.0	05/23/19 18:17	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	10.0	05/23/19 18:17	
Naphthalene	ug/kg	ND	10.0	05/23/19 18:17	
Phenanthrene	ug/kg	ND	10.0	05/23/19 18:17	
Pyrene	ug/kg	ND	10.0	05/23/19 18:17	
2-Fluorobiphenyl (S)	%	78	30-125	05/23/19 18:17	
p-Terphenyl-d14 (S)	%	84	30-125	05/23/19 18:17	

LABORATORY CONTROL SAMPLE: 3286089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	27.9	84	46-125	
Acenaphthylene	ug/kg	33.3	27.0	81	44-125	
Anthracene	ug/kg	33.3	25.2	76	62-125	
Benzo(a)anthracene	ug/kg	33.3	29.3	88	53-125	
Benzo(a)pyrene	ug/kg	33.3	29.4	88	62-125	
Benzo(b)fluoranthene	ug/kg	33.3	27.8	83	51-125	
Benzo(g,h,i)perylene	ug/kg	33.3	29.4	88	58-125	
Benzo(k)fluoranthene	ug/kg	33.3	29.3	88	59-125	
Chrysene	ug/kg	33.3	28.9	87	59-125	
Dibenz(a,h)anthracene	ug/kg	33.3	31.1	93	60-125	
Fluoranthene	ug/kg	33.3	28.0	84	67-125	
Fluorene	ug/kg	33.3	28.4	85	51-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	30.1	90	59-125	
Naphthalene	ug/kg	33.3	26.7	80	47-125	
Phenanthrene	ug/kg	33.3	28.8	86	61-125	
Pyrene	ug/kg	33.3	27.3	82	52-125	
2-Fluorobiphenyl (S)	%			82	30-125	
p-Terphenyl-d14 (S)	%			88	30-125	

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

Parameter	Units	10474936008		3286090		3286091		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Acenaphthene	ug/kg	ND	36.5	36.5	31.7	30.1	87	82	30-125	5	30			
Acenaphthylene	ug/kg	ND	36.5	36.5	33.1	32.6	91	89	30-125	1	30			
Anthracene	ug/kg	ND	36.5	36.5	32.9	32.1	90	88	30-131	2	30			
Benzo(a)anthracene	ug/kg	0.046	36.5	36.5	56.3	56.2	28	28	30-126	0	30	M1		
Benzo(a)pyrene	ug/kg	0.039	36.5	36.5	51.8	51.2	34	32	30-150	1	30			
Benzo(b)fluoranthene	ug/kg	0.060	36.5	36.5	60.5	60.0	1	0	30-150	1	30	M1		
Benzo(g,h,i)perylene	ug/kg	0.028	36.5	36.5	43.8	41.7	43	37	30-150	5	30			
Benzo(k)fluoranthene	ug/kg	0.022	36.5	36.5	43.6	41.9	59	54	30-150	4	30			
Chrysene	ug/kg	0.046	36.5	36.5	56.0	53.1	28	20	30-150	5	30	M1		
Dibenz(a,h)anthracene	ug/kg	ND	36.5	36.5	31.7	30.8	87	84	30-143	3	30			
Fluoranthene	ug/kg	0.075	36.5	36.5	67.1	64.6	-22	-29	30-143	4	30	M1		
Fluorene	ug/kg	ND	36.5	36.5	32.2	30.8	88	84	30-138	4	30			
Indeno(1,2,3-cd)pyrene	ug/kg	0.023	36.5	36.5	39.0	37.6	43	39	30-150	4	30			
Naphthalene	ug/kg	0.036	36.5	36.5	52.5	48.7	46	35	30-125	8	30			
Phenanthrene	ug/kg	0.062	36.5	36.5	65.3	60.8	10	-2	30-142	7	30	M1		
Pyrene	ug/kg	0.070	36.5	36.5	65.3	63.7	-14	-18	30-149	2	30	M1		
2-Fluorobiphenyl (S)	%						77	75	30-125					
p-Terphenyl-d14 (S)	%						81	81	30-125					

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 607565 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA Mod. 3510C Analysis Description: 8270D PAH by SIM MSSV
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

METHOD BLANK: 3284311 Matrix: Water
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012, 10475470013, 10475470014, 10475470015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	05/25/19 11:49	
Acenaphthylene	ug/L	ND	0.040	05/25/19 11:49	
Anthracene	ug/L	ND	0.040	05/25/19 11:49	
Benzo(a)anthracene	ug/L	ND	0.040	05/25/19 11:49	
Benzo(a)pyrene	ug/L	ND	0.040	05/25/19 11:49	
Benzo(b)fluoranthene	ug/L	ND	0.040	05/25/19 11:49	
Benzo(g,h,i)perylene	ug/L	ND	0.040	05/25/19 11:49	
Benzo(k)fluoranthene	ug/L	ND	0.040	05/25/19 11:49	
Chrysene	ug/L	ND	0.040	05/25/19 11:49	
Dibenz(a,h)anthracene	ug/L	ND	0.040	05/25/19 11:49	
Fluoranthene	ug/L	ND	0.040	05/25/19 11:49	
Fluorene	ug/L	ND	0.040	05/25/19 11:49	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	05/25/19 11:49	
Naphthalene	ug/L	ND	0.040	05/25/19 11:49	
Phenanthrene	ug/L	ND	0.040	05/25/19 11:49	
Pyrene	ug/L	ND	0.040	05/25/19 11:49	
2-Fluorobiphenyl (S)	%	78	47-125	05/25/19 11:49	
p-Terphenyl-d14 (S)	%	87	62-125	05/25/19 11:49	

LABORATORY CONTROL SAMPLE & LCSD: 3284312

Parameter	Units	Spike Conc.	3284313		LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
			LCS Result	LCSD Result						
Acenaphthene	ug/L	1	0.77	0.75	77	75	50-125	2	20	
Acenaphthylene	ug/L	1	0.80	0.76	80	76	46-125	4	20	
Anthracene	ug/L	1	0.85	0.85	85	85	59-125	1	20	
Benzo(a)anthracene	ug/L	1	0.93	0.94	93	94	55-125	1	20	
Benzo(a)pyrene	ug/L	1	0.96	0.99	96	99	66-125	4	20	
Benzo(b)fluoranthene	ug/L	1	0.90	0.90	90	90	64-125	0	20	
Benzo(g,h,i)perylene	ug/L	1	0.92	0.92	92	92	58-125	0	20	
Benzo(k)fluoranthene	ug/L	1	0.97	0.99	97	99	60-125	2	20	
Chrysene	ug/L	1	0.85	0.87	85	87	62-125	2	20	
Dibenz(a,h)anthracene	ug/L	1	0.95	0.93	95	93	51-125	2	20	
Fluoranthene	ug/L	1	0.90	0.90	90	90	64-125	0	20	
Fluorene	ug/L	1	0.83	0.82	83	82	55-125	1	20	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.93	0.94	93	94	61-125	1	20	
Naphthalene	ug/L	1	0.66	0.64	66	64	48-125	3	20	
Phenanthrene	ug/L	1	0.81	0.82	81	82	63-125	2	20	
Pyrene	ug/L	1	0.91	0.92	91	92	61-125	1	20	
2-Fluorobiphenyl (S)	%				72	68	47-125			
p-Terphenyl-d14 (S)	%				89	88	62-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport

Pace Project No.: 10475470

QC Batch:	607482	Analysis Method:	WI MOD DRO
QC Batch Method:	WI MOD DRO	Analysis Description:	WIDRO Solid GCV
Associated Lab Samples:	10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021		

METHOD BLANK:	3283918	Matrix:	Solid
Associated Lab Samples:	10475470001, 10475470002, 10475470003, 10475470004, 10475470005, 10475470006, 10475470007, 10475470008, 10475470016, 10475470017, 10475470018, 10475470019, 10475470020, 10475470021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	ND	10.0	05/23/19 22:21	
n-Triacontane (S)	%.	93	44-143	05/23/19 22:21	

Parameter	Units	LABORATORY CONTROL SAMPLE & LCSD: 3283919					3283920				Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD		
WDRO C10-C28	mg/kg	80	71.4	68.7	89	86	61-125	4	20		
n-Triacontane (S)	%.				99	98	44-143				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 606942 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO Low Volume GCS w/Cleanup
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012

METHOD BLANK: 3281022 Matrix: Water
Associated Lab Samples: 10475470009, 10475470010, 10475470011, 10475470012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	05/23/19 12:11	
n-Triacontane (S)	%.	89	48-125	05/23/19 12:11	

LABORATORY CONTROL SAMPLE & LCSD: 3281023

Parameter	Units	3281024								
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	0.8	0.64	0.66	80	83	39-125	3	20	
n-Triacontane (S)	%.				88	90	48-125			

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QUALITY CONTROL DATA

Project: Pine City Airport
Pace Project No.: 10475470

QC Batch: 607562 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO Low Volume GCS w/Cleanup
Associated Lab Samples: 10475470013, 10475470014, 10475470015

METHOD BLANK: 3284300 Matrix: Water
Associated Lab Samples: 10475470013, 10475470014, 10475470015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	05/24/19 11:00	
n-Triacontane (S)	%.	100	48-125	05/24/19 11:00	

LABORATORY CONTROL SAMPLE & LCSD: 3284301

Parameter	Units	3284302								
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	0.8	0.72	0.70	89	88	39-125	2	20	
n-Triacontane (S)	%.				101	102	48-125			

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QUALIFIERS

Project: Pine City Airport

Pace Project No.: 10475470

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

WORKORDER QUALIFIERS

WO: 10475470

[1] Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice.

BATCH QUALIFIERS

Batch: 608443

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

ANALYTE QUALIFIERS

A5 Greater than 5% sediment in sample determined by visual observation. Aqueous portion decanted from the sediment and extracted. The sample container could not be rinsed with solvent per the method requirement.

C0 Result confirmed by second analysis.

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

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

G- Early peaks present outside the GRO window.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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

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QUALIFIERS

Project: Pine City Airport

Pace Project No.: 10475470

ANALYTE QUALIFIERS

- N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
- P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.
- R1 RPD value was outside control limits.
- SS This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.
- 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: Pine City Airport
Pace Project No.: 10475470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10475470001	DP-1 (1-3')	WI MOD DRO	607482	WI MOD DRO	608190
10475470002	DP-2 (1-2')	WI MOD DRO	607482	WI MOD DRO	608190
10475470003	DP-3 (1-3')	WI MOD DRO	607482	WI MOD DRO	608190
10475470004	DP-4 (1-3')	WI MOD DRO	607482	WI MOD DRO	608190
10475470005	DP-5 (3-5')	WI MOD DRO	607482	WI MOD DRO	608190
10475470006	DP-6 (3-5')	WI MOD DRO	607482	WI MOD DRO	608190
10475470007	DP-7 (4-6')	WI MOD DRO	607482	WI MOD DRO	608190
10475470008	DP-8 (5-7')	WI MOD DRO	607482	WI MOD DRO	608190
10475470016	SP-1	WI MOD DRO	607482	WI MOD DRO	608190
10475470017	SP-2	WI MOD DRO	607482	WI MOD DRO	608190
10475470018	SP-3	WI MOD DRO	607482	WI MOD DRO	608190
10475470019	SP-4	WI MOD DRO	607482	WI MOD DRO	608190
10475470020	SP-5	WI MOD DRO	607482	WI MOD DRO	608190
10475470021	SP-6	WI MOD DRO	607482	WI MOD DRO	608190
10475470009	MWGW	WI MOD DRO	606942	WI MOD DRO	607762
10475470010	DP-1 GW	WI MOD DRO	606942	WI MOD DRO	607762
10475470011	DP-2 GW	WI MOD DRO	606942	WI MOD DRO	607762
10475470012	DP-3 GW	WI MOD DRO	606942	WI MOD DRO	607762
10475470013	DP-4 GW	WI MOD DRO	607562	WI MOD DRO	608262
10475470014	DP-5 GW	WI MOD DRO	607562	WI MOD DRO	608262
10475470015	DP-8 GW	WI MOD DRO	607562	WI MOD DRO	608262
10475470001	DP-1 (1-3')	EPA 5030 Medium Soil	608497	WI MOD GRO	608766
10475470002	DP-2 (1-2')	EPA 5030 Medium Soil	608497	WI MOD GRO	608766
10475470003	DP-3 (1-3')	EPA 5030 Medium Soil	608497	WI MOD GRO	608766
10475470004	DP-4 (1-3')	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470005	DP-5 (3-5')	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470006	DP-6 (3-5')	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470007	DP-7 (4-6')	EPA 5030 Medium Soil	609052	WI MOD GRO	609160
10475470008	DP-8 (5-7')	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470016	SP-1	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470017	SP-2	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470018	SP-3	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470019	SP-4	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470020	SP-5	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470021	SP-6	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470022	SL-Trip Blank	EPA 5030 Medium Soil	608555	WI MOD GRO	609050
10475470009	MWGW	WI MOD GRO	609570		
10475470010	DP-1 GW	WI MOD GRO	609570		
10475470011	DP-2 GW	WI MOD GRO	609570		
10475470012	DP-3 GW	WI MOD GRO	609570		
10475470013	DP-4 GW	WI MOD GRO	609570		
10475470014	DP-5 GW	WI MOD GRO	609570		
10475470015	DP-8 GW	WI MOD GRO	609570		
10475470023	WT-Trip Blank	WI MOD GRO	609570		
10475470001	DP-1 (1-3')	EPA 3050	607782	EPA 6010D	608594

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Pine City Airport

Pace Project No.: 10475470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10475470002	DP-2 (1-2')	EPA 3050	607782	EPA 6010D	608594
10475470003	DP-3 (1-3')	EPA 3050	607782	EPA 6010D	608594
10475470004	DP-4 (1-3')	EPA 3050	607782	EPA 6010D	608594
10475470005	DP-5 (3-5')	EPA 3050	607782	EPA 6010D	608594
10475470006	DP-6 (3-5')	EPA 3050	607782	EPA 6010D	608594
10475470007	DP-7 (4-6')	EPA 3050	607782	EPA 6010D	608594
10475470008	DP-8 (5-7')	EPA 3050	607782	EPA 6010D	608594
10475470016	SP-1	EPA 3050	607782	EPA 6010D	608594
10475470017	SP-2	EPA 3050	607782	EPA 6010D	608594
10475470018	SP-3	EPA 3050	607782	EPA 6010D	608594
10475470019	SP-4	EPA 3050	607782	EPA 6010D	608594
10475470020	SP-5	EPA 3050	607782	EPA 6010D	608594
10475470021	SP-6	EPA 3050	607782	EPA 6010D	608594
10475470009	MWGW	EPA 3010	607808	EPA 6010D	608209
10475470010	DP-1 GW	EPA 3010	607808	EPA 6010D	608209
10475470011	DP-2 GW	EPA 3010	607808	EPA 6010D	608209
10475470012	DP-3 GW	EPA 3010	607808	EPA 6010D	608209
10475470013	DP-4 GW	EPA 3010	607808	EPA 6010D	608209
10475470014	DP-5 GW	EPA 3010	607808	EPA 6010D	608209
10475470015	DP-8 GW	EPA 3010	607808	EPA 6010D	608209
10475470009	MWGW	EPA 7470A	606915	EPA 7470A	608064
10475470010	DP-1 GW	EPA 7470A	606915	EPA 7470A	608064
10475470011	DP-2 GW	EPA 7470A	606915	EPA 7470A	608064
10475470012	DP-3 GW	EPA 7470A	606915	EPA 7470A	608064
10475470013	DP-4 GW	EPA 7470A	606915	EPA 7470A	608064
10475470014	DP-5 GW	EPA 7470A	606915	EPA 7470A	608064
10475470015	DP-8 GW	EPA 7470A	606915	EPA 7470A	608064
10475470001	DP-1 (1-3')	EPA 7471B	607840	EPA 7471B	608572
10475470002	DP-2 (1-2')	EPA 7471B	607840	EPA 7471B	608572
10475470003	DP-3 (1-3')	EPA 7471B	607840	EPA 7471B	608572
10475470004	DP-4 (1-3')	EPA 7471B	607840	EPA 7471B	608572
10475470005	DP-5 (3-5')	EPA 7471B	607840	EPA 7471B	608572
10475470006	DP-6 (3-5')	EPA 7471B	607840	EPA 7471B	608572
10475470007	DP-7 (4-6')	EPA 7471B	607840	EPA 7471B	608572
10475470008	DP-8 (5-7')	EPA 7471B	607840	EPA 7471B	608572
10475470016	SP-1	EPA 7471B	607840	EPA 7471B	608572
10475470017	SP-2	EPA 7471B	607840	EPA 7471B	608572
10475470018	SP-3	EPA 7471B	607840	EPA 7471B	608572
10475470019	SP-4	EPA 7471B	607840	EPA 7471B	608572
10475470020	SP-5	EPA 7471B	607840	EPA 7471B	608572
10475470021	SP-6	EPA 7471B	607840	EPA 7471B	608572
10475470001	DP-1 (1-3')	ASTM D2974	608191		
10475470002	DP-2 (1-2')	ASTM D2974	608191		
10475470003	DP-3 (1-3')	ASTM D2974	608191		
10475470004	DP-4 (1-3')	ASTM D2974	608191		
10475470005	DP-5 (3-5')	ASTM D2974	608191		
10475470006	DP-6 (3-5')	ASTM D2974	608191		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Pine City Airport

Pace Project No.: 10475470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10475470007	DP-7 (4-6')	ASTM D2974	608191		
10475470008	DP-8 (5-7')	ASTM D2974	608191		
10475470016	SP-1	ASTM D2974	608191		
10475470017	SP-2	ASTM D2974	608191		
10475470018	SP-3	ASTM D2974	608193		
10475470019	SP-4	ASTM D2974	608196		
10475470020	SP-5	ASTM D2974	608196		
10475470021	SP-6	ASTM D2974	608196		
10475470001	DP-1 (1-3')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470002	DP-2 (1-2')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470003	DP-3 (1-3')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470004	DP-4 (1-3')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470005	DP-5 (3-5')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470006	DP-6 (3-5')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470007	DP-7 (4-6')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470008	DP-8 (5-7')	EPA 3550	607515	EPA 8270D by SIM	608442
10475470016	SP-1	EPA 3550	607515	EPA 8270D by SIM	608442
10475470017	SP-2	EPA 3550	607515	EPA 8270D by SIM	608442
10475470018	SP-3	EPA 3550	607515	EPA 8270D by SIM	608442
10475470019	SP-4	EPA 3550	607515	EPA 8270D by SIM	608442
10475470020	SP-5	EPA 3550	607515	EPA 8270D by SIM	608442
10475470021	SP-6	EPA 3550	607900	EPA 8270D by SIM	608127
10475470009	MWGW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470010	DP-1 GW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470011	DP-2 GW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470012	DP-3 GW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470013	DP-4 GW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470014	DP-5 GW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470015	DP-8 GW	EPA Mod. 3510C	607565	EPA 8270D by SIM	608443
10475470001	DP-1 (1-3')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470002	DP-2 (1-2')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470003	DP-3 (1-3')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470004	DP-4 (1-3')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470005	DP-5 (3-5')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470006	DP-6 (3-5')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470007	DP-7 (4-6')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470008	DP-8 (5-7')	EPA 5035/5030B	608364	EPA 8260B	608392
10475470016	SP-1	EPA 5035/5030B	608364	EPA 8260B	608392
10475470017	SP-2	EPA 5035/5030B	608364	EPA 8260B	608392
10475470018	SP-3	EPA 5035/5030B	608364	EPA 8260B	608392
10475470019	SP-4	EPA 5035/5030B	608364	EPA 8260B	608392
10475470020	SP-5	EPA 5035/5030B	608364	EPA 8260B	608392
10475470021	SP-6	EPA 5035/5030B	608364	EPA 8260B	608392
10475470022	SL-Trip Blank	EPA 5035/5030B	608364	EPA 8260B	608392
10475470009	MWGW	EPA 8260B	609186		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Pine City Airport

Pace Project No.: 10475470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10475470010	DP-1 GW	EPA 8260B	608780		
10475470011	DP-2 GW	EPA 8260B	608780		
10475470012	DP-3 GW	EPA 8260B	608780		
10475470013	DP-4 GW	EPA 8260B	608780		
10475470014	DP-5 GW	EPA 8260B	608780		
10475470015	DP-8 GW	EPA 8260B	608780		
10475470023	WT-Trip Blank	EPA 8260B	609026		

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NO# 10475470



Section A
Required Client Information:
Company: Carlson McLean
Address: 3520 Pleasant Ridge Dr NE
Blaine, MN 55444
Email To: Danny Margaret
Phone: _____ Fax: _____
Requested Due Date/TAT: _____

Section B
Required Project Information:
Report To: Danny Margaret
Copy To: John Lichte
Purchase Order No.: _____
Project Name: Five City Airport
Project Number: _____

Section C
Invoice Information:
Attention: _____
Company Name: _____
Address: _____
Pace Quote Reference: _____
Pace Project Manager: _____
Pace Profile #: 39886

REGULATORY AGENCY
NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER
Site Location STATE: MN

1 of 2
2281888

ITEM #	Section D Required Client Information	Matrix Codes MATERIAL / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives	Analysis Test ↑ Y/N	Requested Analysis Filtered (Y/N)	Temp in C	Received on	Sealed Cooler (Y/N)	Custody (Y/N)	Samples Intact (Y/N)
			COMPOSITE START	COMPOSITE END/GRAB											
1	VP-1 (1-31)	Drinking Water	DATE	TIME	SLC	SLC	Unpreserved								
2	VP-2 (1-21)	Water	5/17/19	843											
3	VP-3 (1-31)	Waste Water		1330											
4	VP-4 (1-31)	Product		1139											
5	VP-5 (3-51)	Soil/Solid		1217											
6	VP-6 (3-51)	Oil		1039											
7	VP-7 (4-61)	Wipe		1026											
8	VP-8 (5-71)	Air		1119											
9	MWGW	Tissue		1258											
10	VP-1 GW	Other		1430											
11	VP-2 GW			855											
12	VP-3 GW			1337											
				1157											

ADDITIONAL COMMENTS
Danny McLean

RELINQUISHED BY / AFFILIATION
DATE: 5/17/19 TIME: 1824

ACCEPTED BY / AFFILIATION
DATE: 5/17/19 TIME: 1820

SAMPLE CONDITIONS
Received on: 5/17/19 Temp in C: 14.3
11.5
9.2

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Danny Margaret
SIGNATURE OF SAMPLER: [Signature]
DATE Signed (MM/DD/YYYY): 5/17/19

ORIGINAL

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:
Company: Carlson McLean
Address: _____
Email To: Danny Maguire
Phone: _____
Requested Due Date/TAT: _____

Section B Required Project Information:
Report To: Danny Maguire
Copy To: John Lichte
Purchase Order No.: _____
Project Name: Pine City Airport
Project Number: _____

Section C Invoice Information:
Attention: _____
Company Name: _____
Address: _____
Preservatives: _____
OF CONTAINERS: _____
SAMPLE TEMP AT COLLECTION: _____

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____
Site Location: MA
STATE: _____

Page: 2 of 2
2281887

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE Drinking Water DW Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
			COMPOSITE START	COMPOSITE END/GRAB									
1	DP-4 GW		5/17/19	1226	WT G		Danny Maguire	5/17/19	1823	DTG/PAE	5/17/19	1820	Y N Y
2	DP-5 GW		1645		WT G								
3	DP-8 GW		1307		WT G								
4	SP-1		1500		SL C								
5	SP-2		1514										
6	SP-3		1542										
7	SP-4		1558										
8	SP-5		1619										
9	SP-6		1644										
10	Trip Blanks CG 5/18/19												
11	Trip Blanks CG 5/18/19												
12													

ADDITIONAL COMMENTS

Requested Analysis Filtered (Y/N)

Analysis Test ↑

Preservatives

Unpreserved

H₂SO₄

HNO₃

HCl

NaOH

Na₂O₂

Methanol

Other

Temp in °C

Received on

Ice (Y/N)

Custody

Sealed Cooler (Y/N)

Samples Intact (Y/N)

Print Name of Sampler: Danny Maguire
Signature of Sampler: Danny Maguire
Date Signed (MM/DD/YY): 5/17/19

*Important Note: By signing this form, you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt **Client Name:** Carlson McCain **Project #:** **WO#: 10475470**

Courier: Fed Ex UPS USPS Client
 Pace SpeeDee Commercial See Exception

Tracking Number: _____

PM: TS1 **Due Date:** 06/04/19
CLIENT: CARLSON PROF

Custody Seal on Cooler/Box Present? Yes No **Seals Intact?** Yes No **Biological Tissue Frozen?** Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other: PB **Temp Blank?** Yes No

Thermometer: T1(0461) T2(1336) T3(0459)
 T4(0254) T5(0489) **Type of Ice:** Wet Blue None Dry Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: <u>14.4, 14.6, 8.0, 11.6, 9.3°C</u>	Average Corrected Temp See Exceptions (no temp blank only): <input checked="" type="checkbox"/>
Correction Factor: <u>-0.1</u>	Cooler Temp Corrected w/temp blank: <u>14.3, 14.5, 7.9, 11.5, 9.2°C</u>	°C

USDA Regulated Soil: (N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** CG 5/18/19

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 and Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other _____
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: See Exception Did not receive sample DP-7 (4-6), but did receive sample DP-7 (3-5) <input type="checkbox"/>
Matrix: <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other _____	
All containers needing acid/base preservation have been checked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. Sample # <input type="checkbox"/> NaOH <input checked="" type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate 7/7
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) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes See Exception Chlorine? <input type="checkbox"/> No pH Paper Lot# <input type="checkbox"/>
Exceptions: <u>VOA</u> , Coliform, TOC/DOC Oil and Grease, <u>DRO</u> 8015 (water) and Dioxin/PFAS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in VOA Vials (greater than 6mm)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. See Exception <input checked="" type="checkbox"/>
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased): <u>207797, 041519-3</u>

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

Person Contacted: Dan Margarit Date/Time: 5/20/19


Comments/Resolution: Client verified that sample DP-7 (3-5) is sample DP-7 (4-6). What is listed on the COC is correct.

Project Manager Review: J. McCain **Date:** 5/21/19

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).

Labeled by: CG/KG

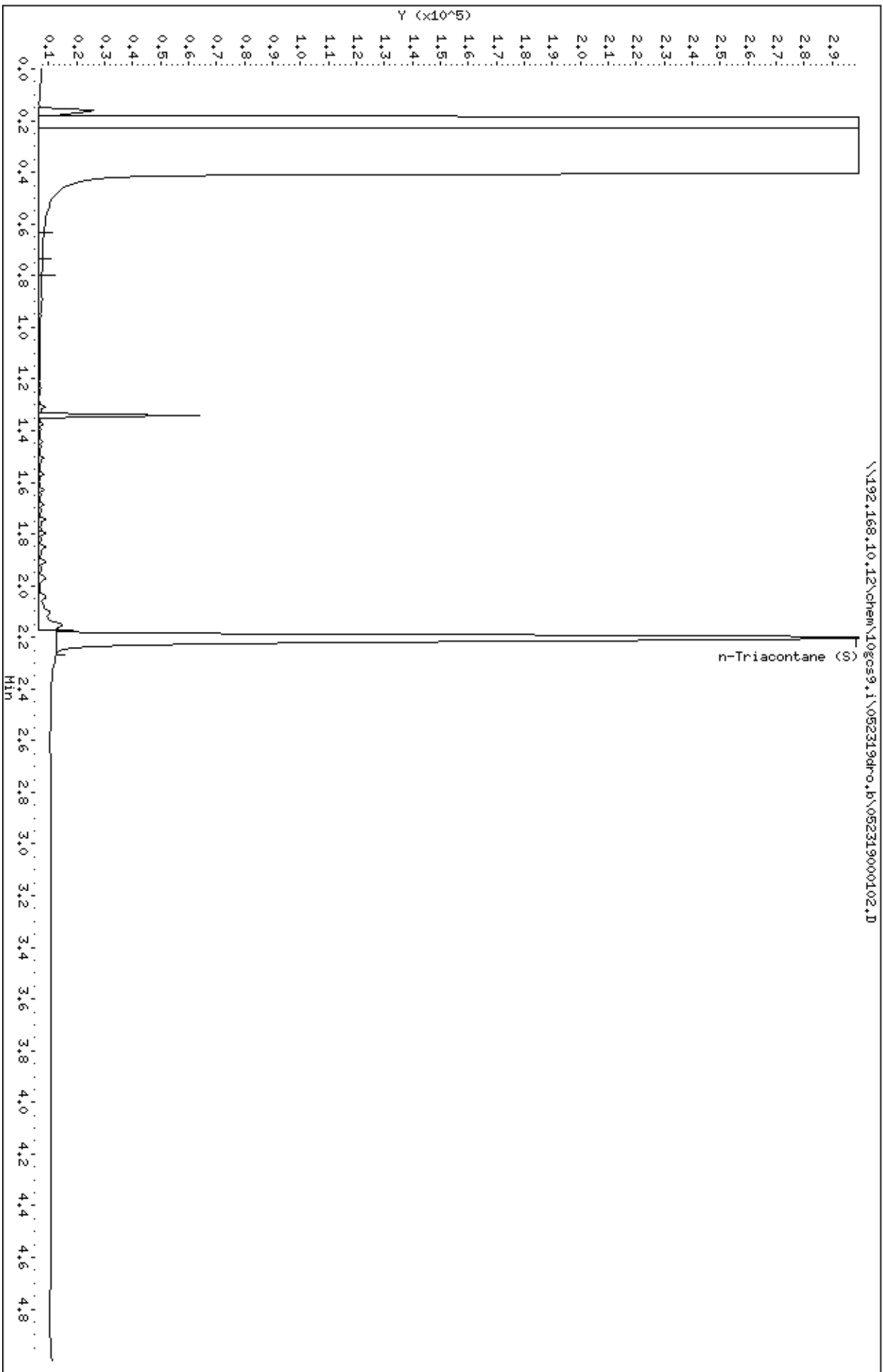
Page 123 of 138

	Document Name: Headspace Exception	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: F-MN-C-276-Rev.01	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW GW	0	4	2	6	N
DP-1 GW	0	1	5	6	N
DP-2 GW	0	2	4	6	N
DP-3 GW	0	6	0	6	N
DP-4 GW	0	5	1	6	N
DP-5 GW	0	6	0	6	N
DP-8 GW	0	6	0	6	N
Trip Blank	1	7	0	8	N

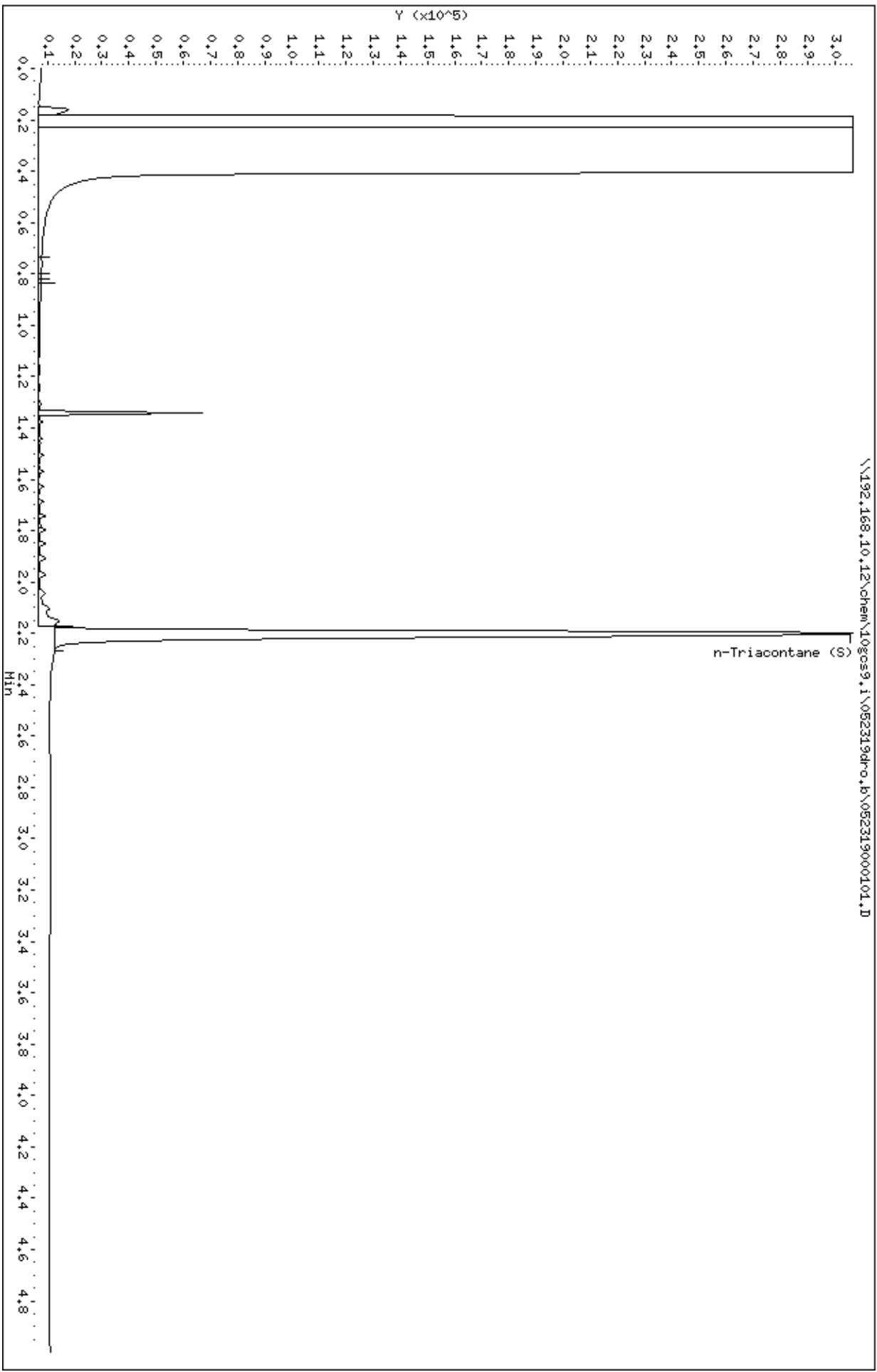
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000102.D
Date: 23-MAY-2019 23:28
Client ID: DP-1 (1-37)
Sample Info: 10475470001
Volume Injected (uL): 1.0
Column phase: DB-5-USA180013

Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32



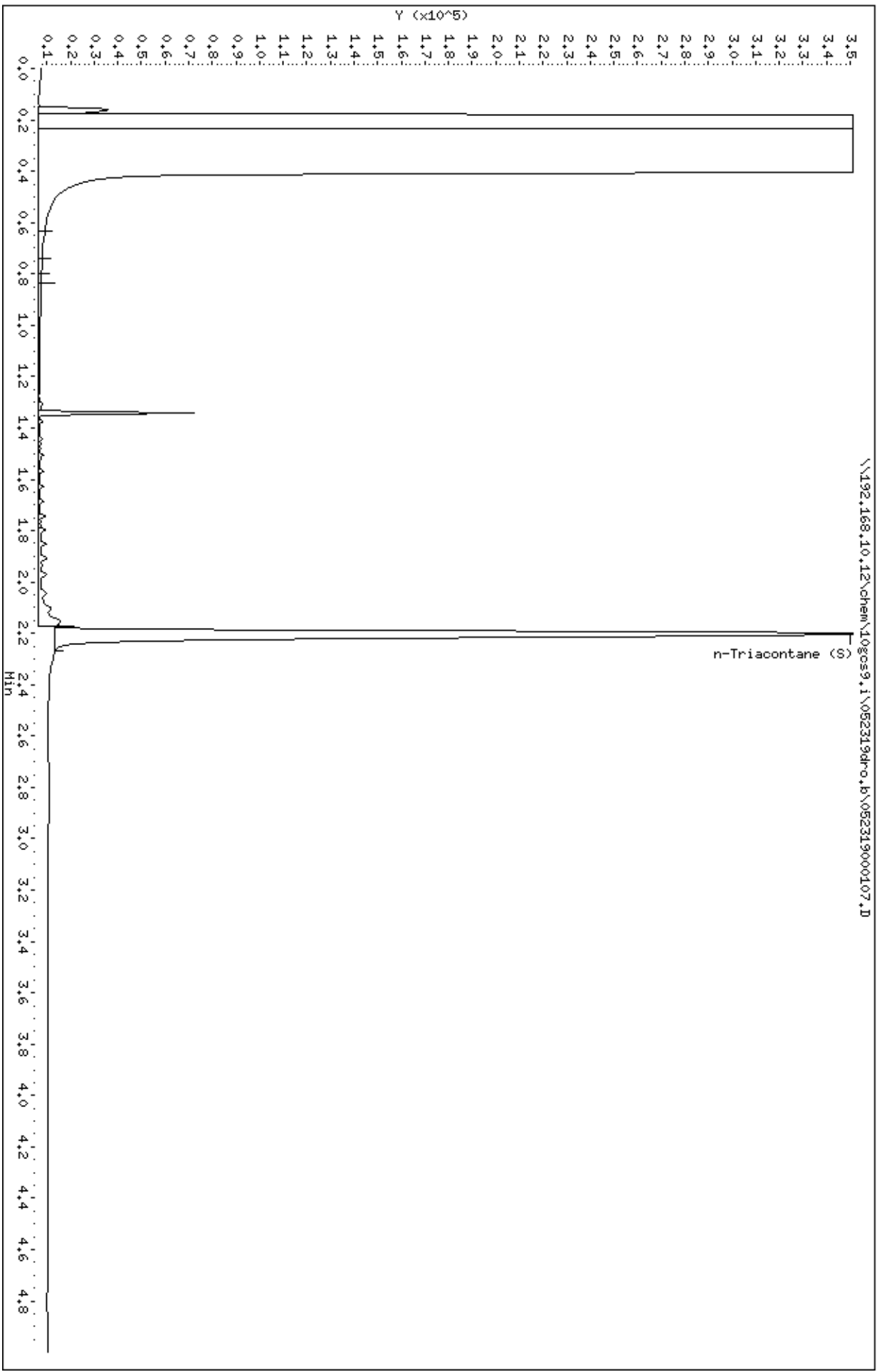
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000101.D
Date: 23-MAY-2019 23:21
Client ID: DP-2 (1-27)
Sample Info: 10475470002
Volume Injected (uL): 1.0
Column phase: DB-5-MS18180013

Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32



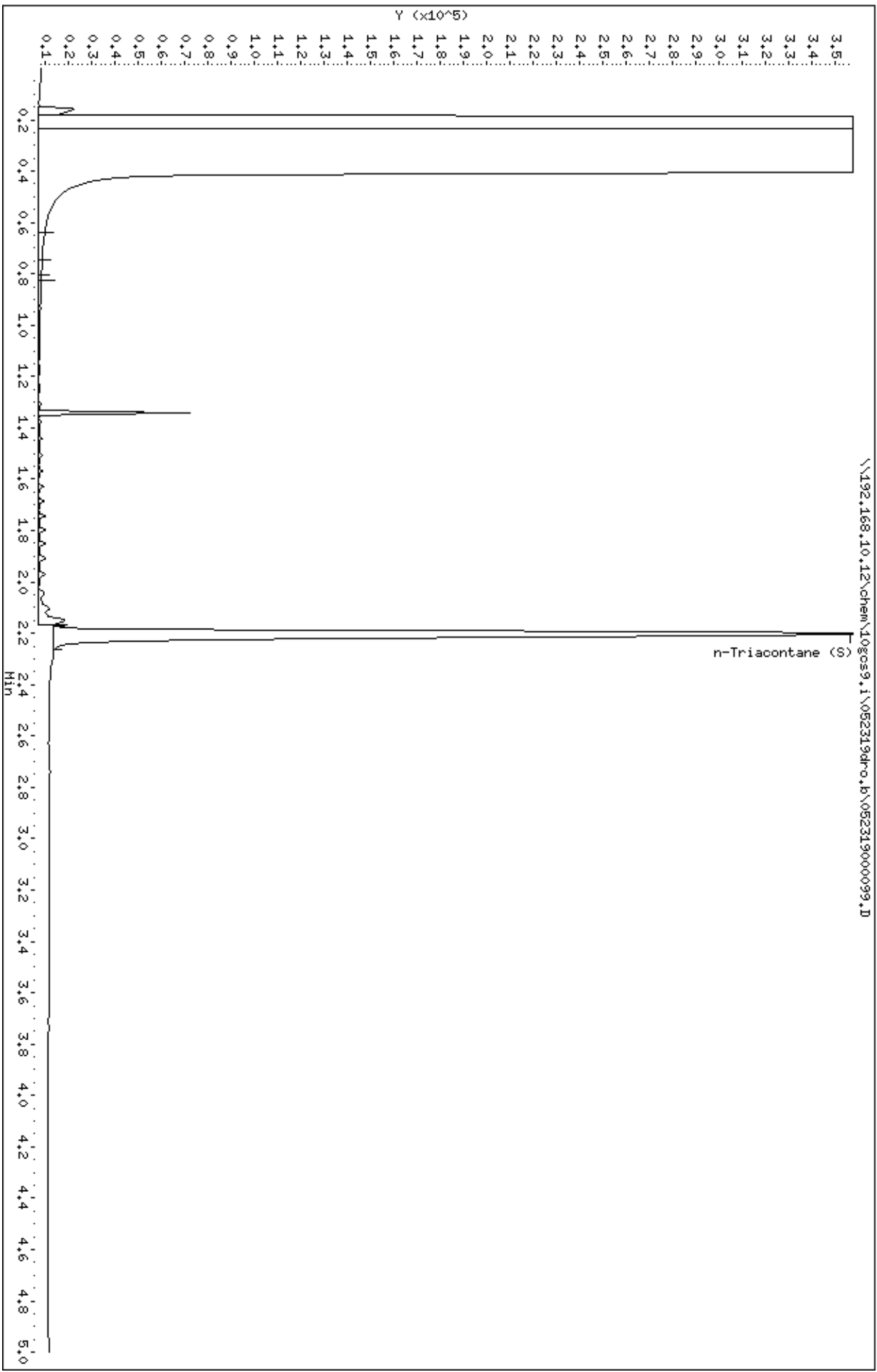
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000107.D
Date: 24-MAY-2019 00:01
Client ID: DP-3 (1-37)
Sample Info: 10475470003
Volume Injected (uL): 1.0
Column phase: DB-5-MS18180013

Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32



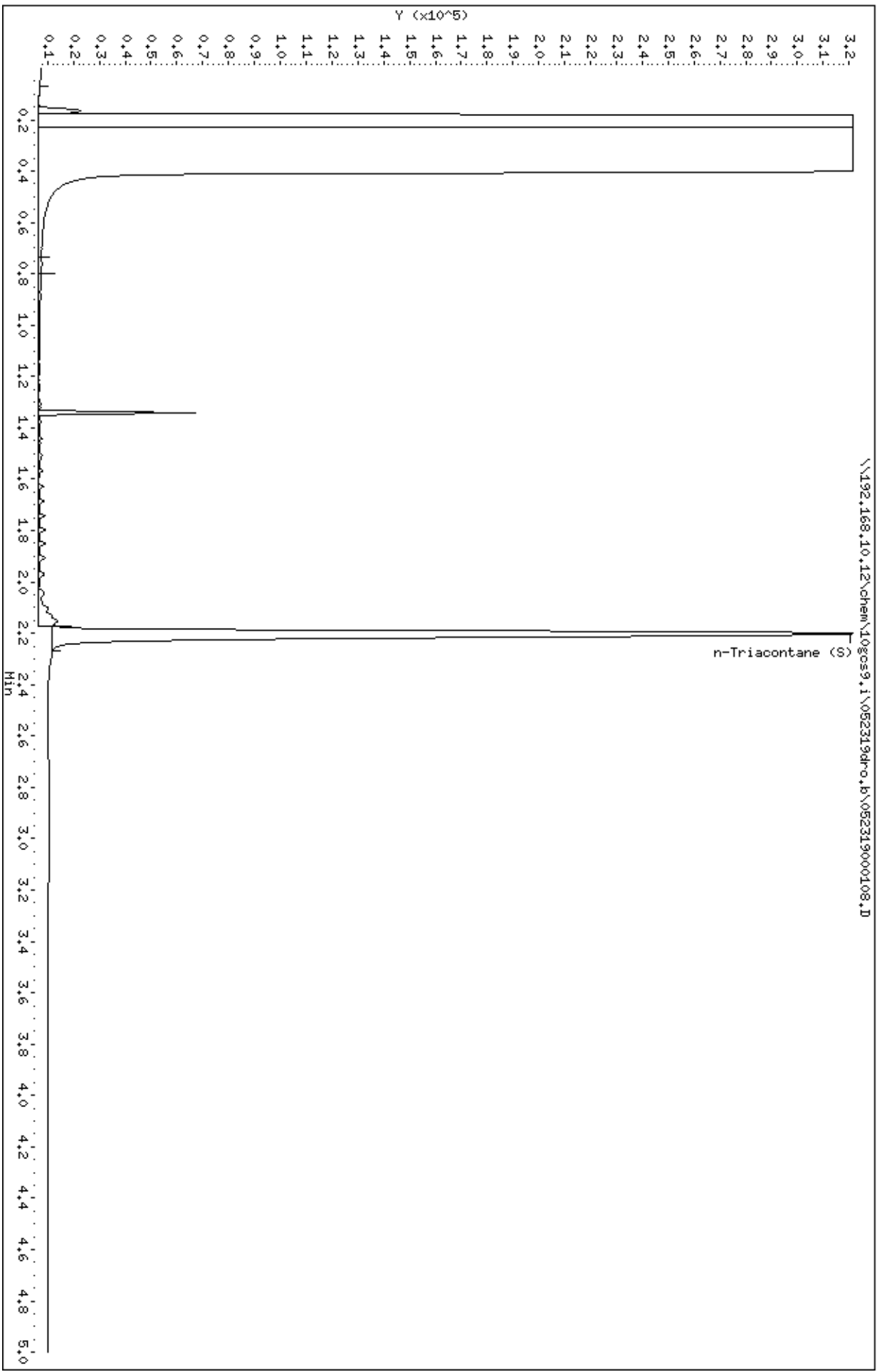
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000099.D
Date: 23-MAY-2019 23:07
Client ID: DP-4 (1-37)
Sample Info: 10475470004
Volume Injected (uL): 1.0
Column phase: DB-5-MS18180013

Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32



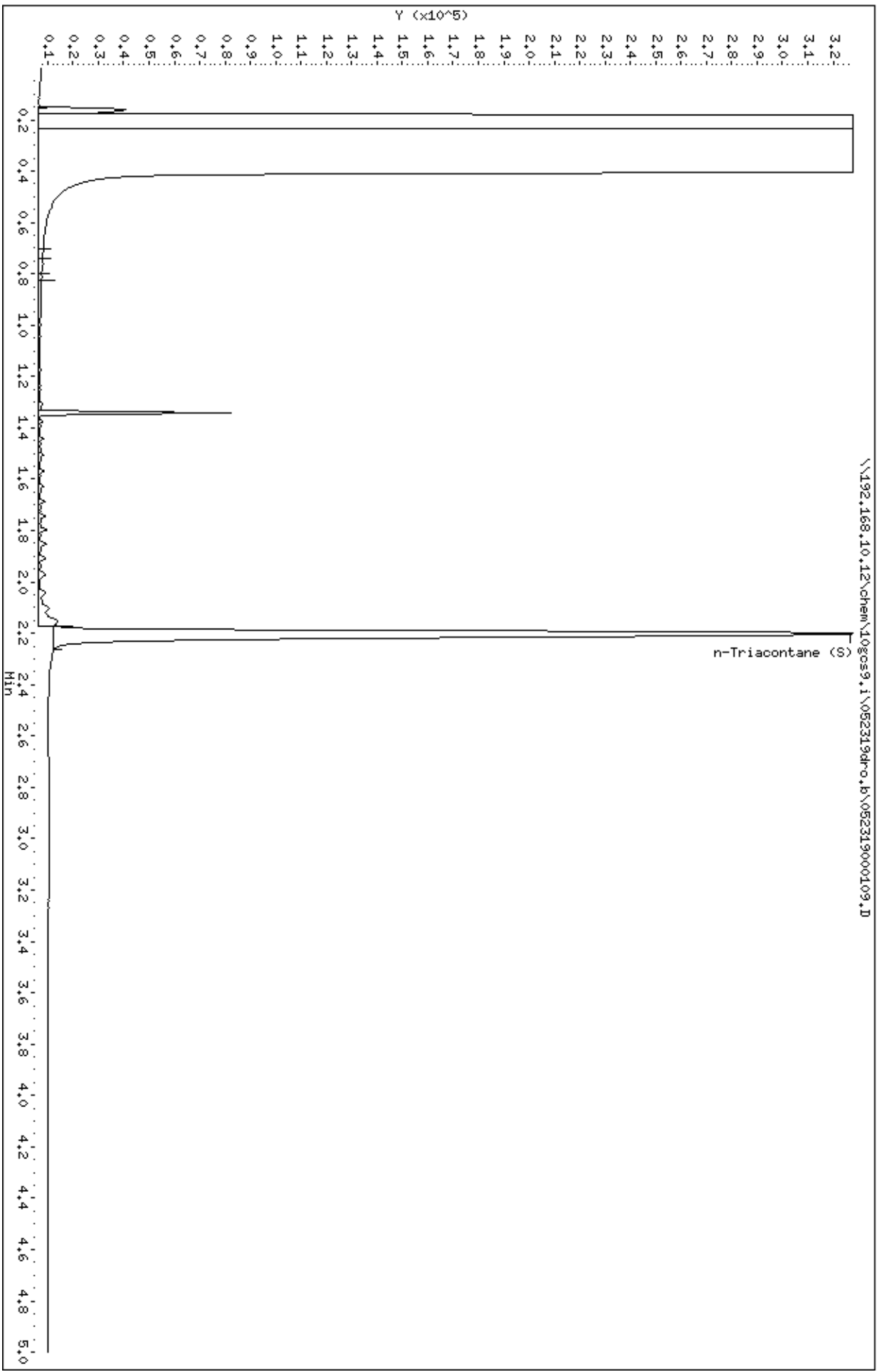
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000108.D
Date: 24-MAY-2019 00:07
Client ID: DP-5 (3-5')
Sample Info: 10475470005
Volume Injected (uL): 1.0
Column phase: DB-5-USA180013

Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32



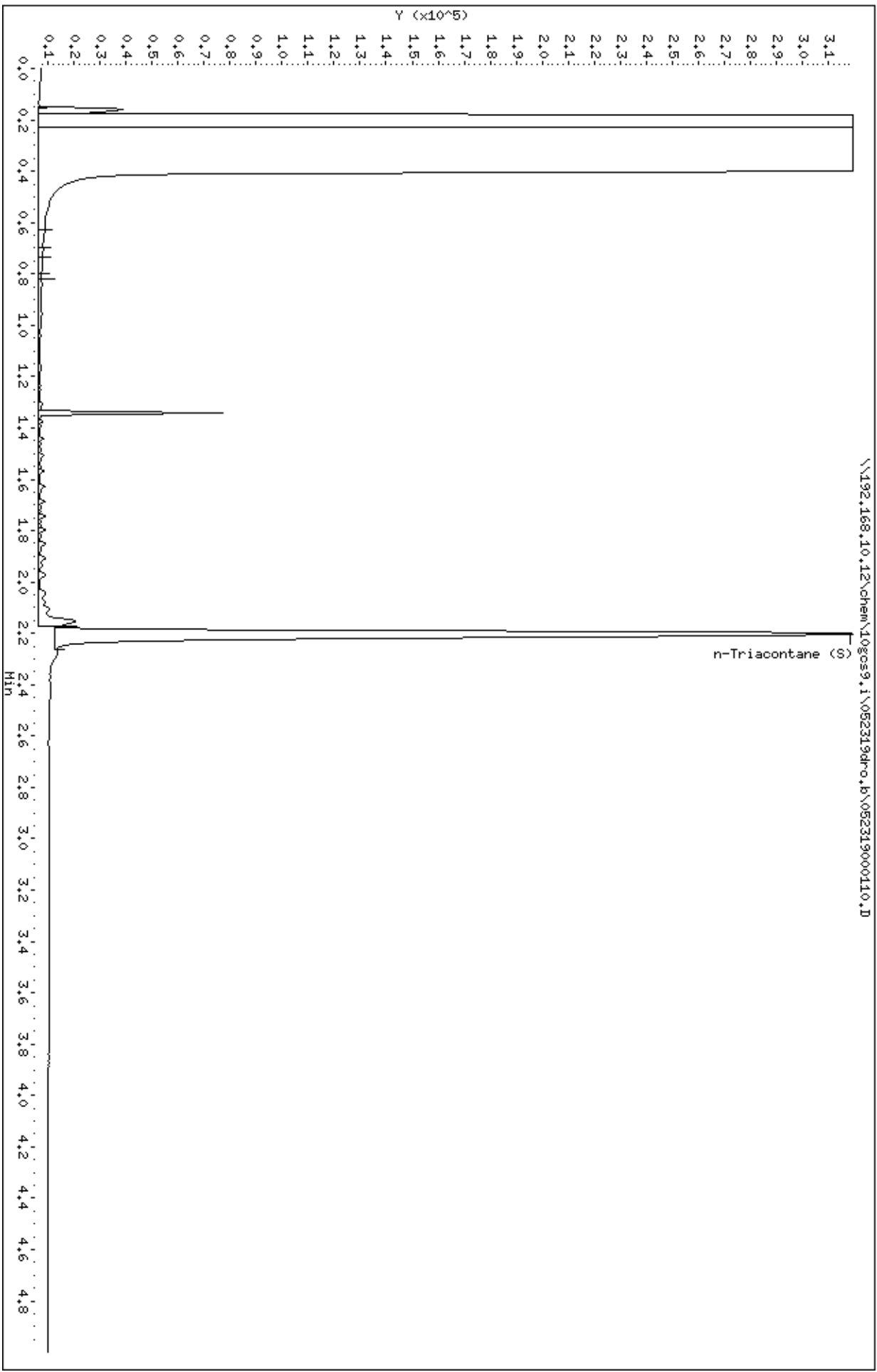
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Date: 24-MAY-2019 00:14
Client ID: DP-6 (3-5')
Sample Info: 10475470006
Volume Injected (uL): 1.0
Column phase: DB-5-MS18180013

Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32



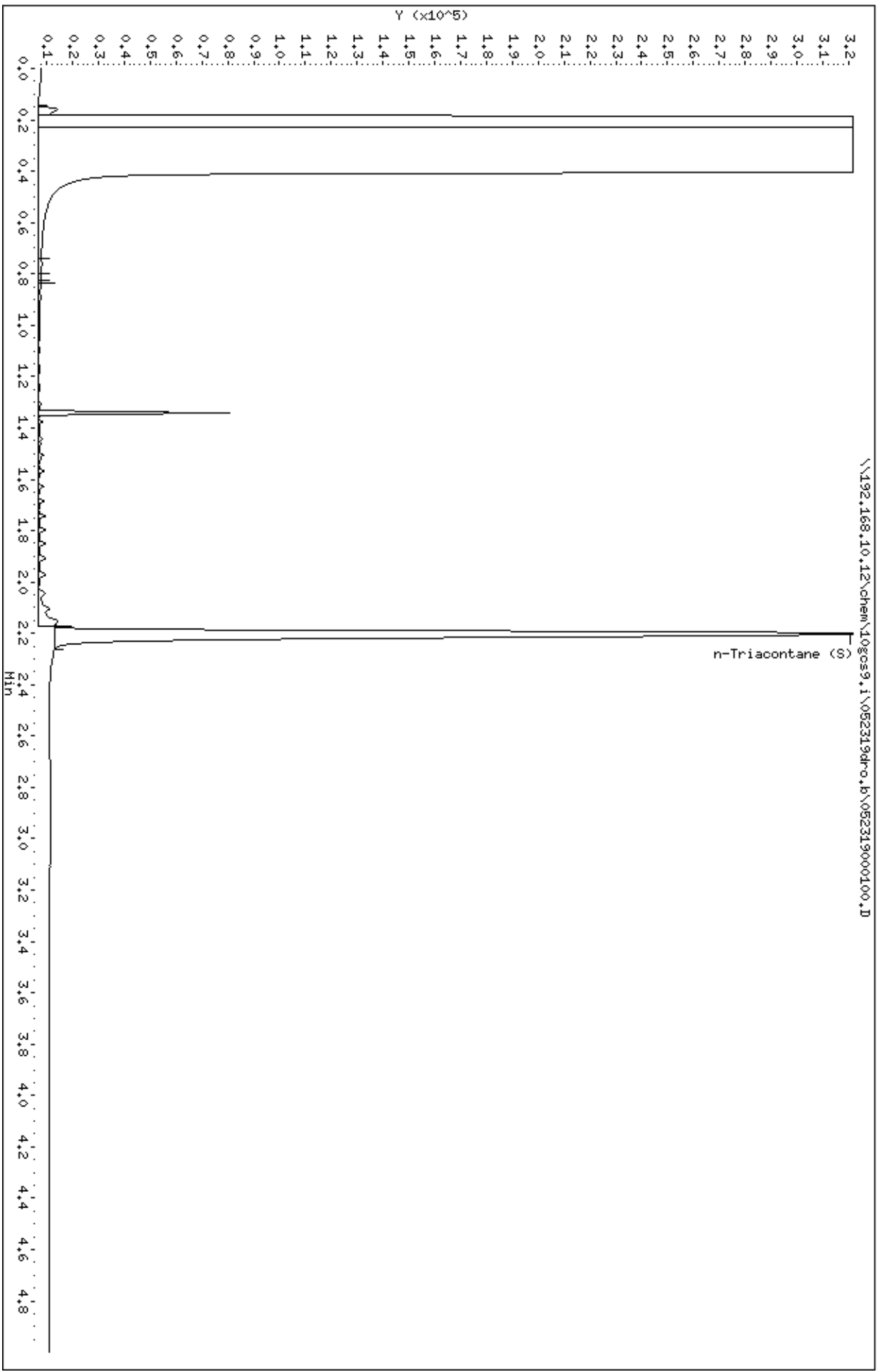
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000110.D
Date: 24-MAY-2019 00:21
Client ID: DP-7 (4-67)
Sample Info: 10475470007
Volume Injected (uL): 1.0
Column phase: DB-5-MS18180013

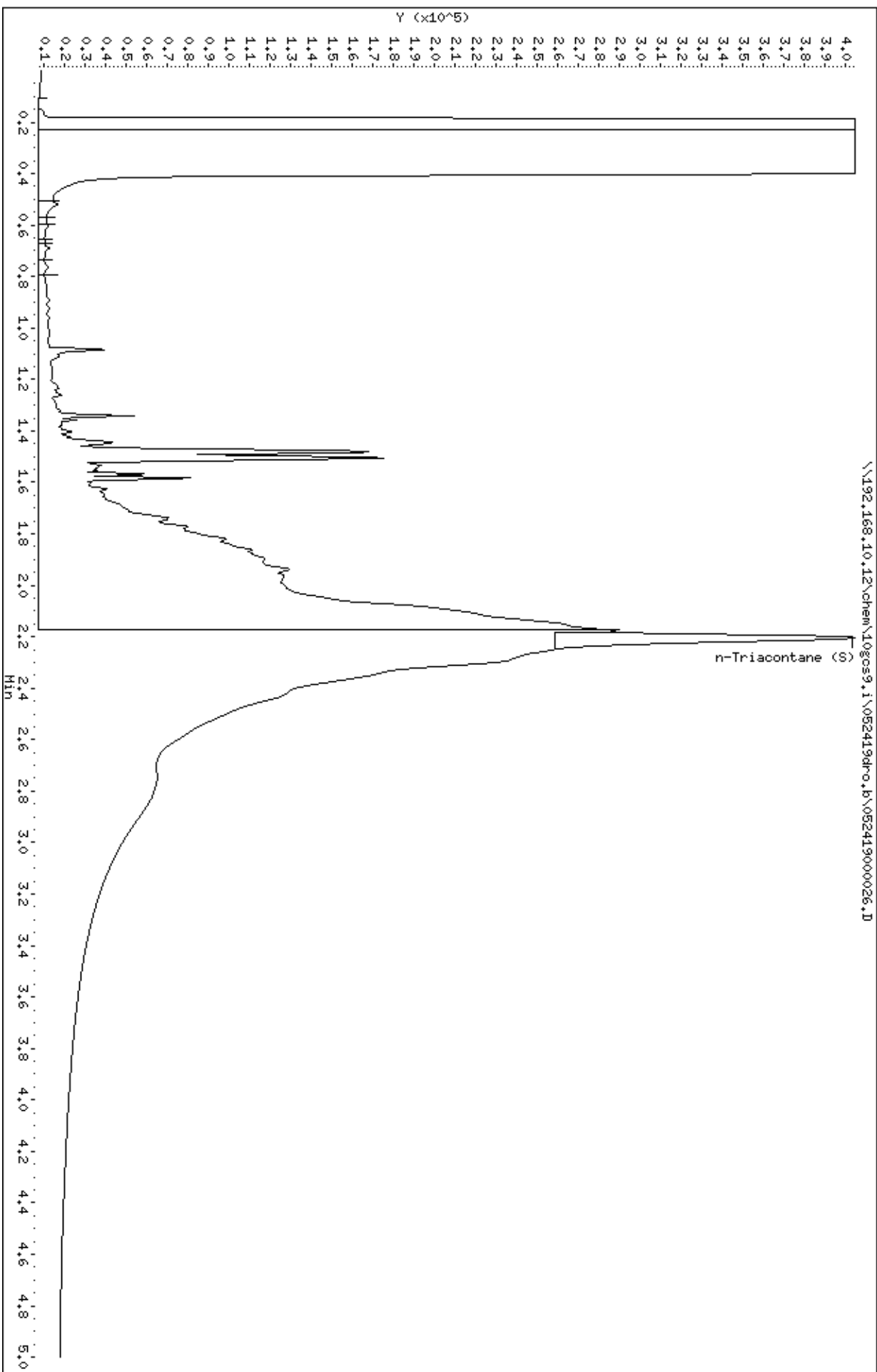
Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32

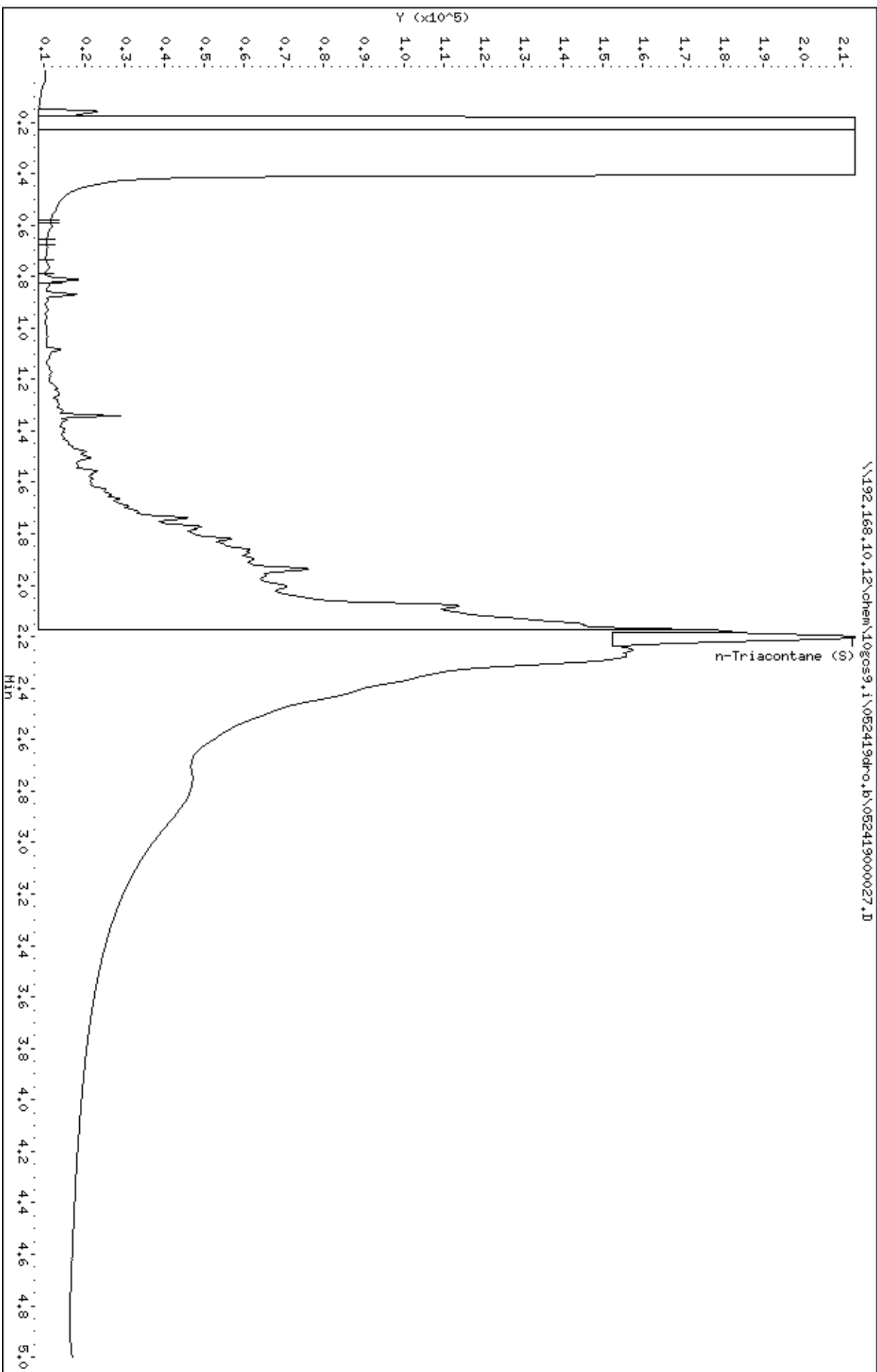


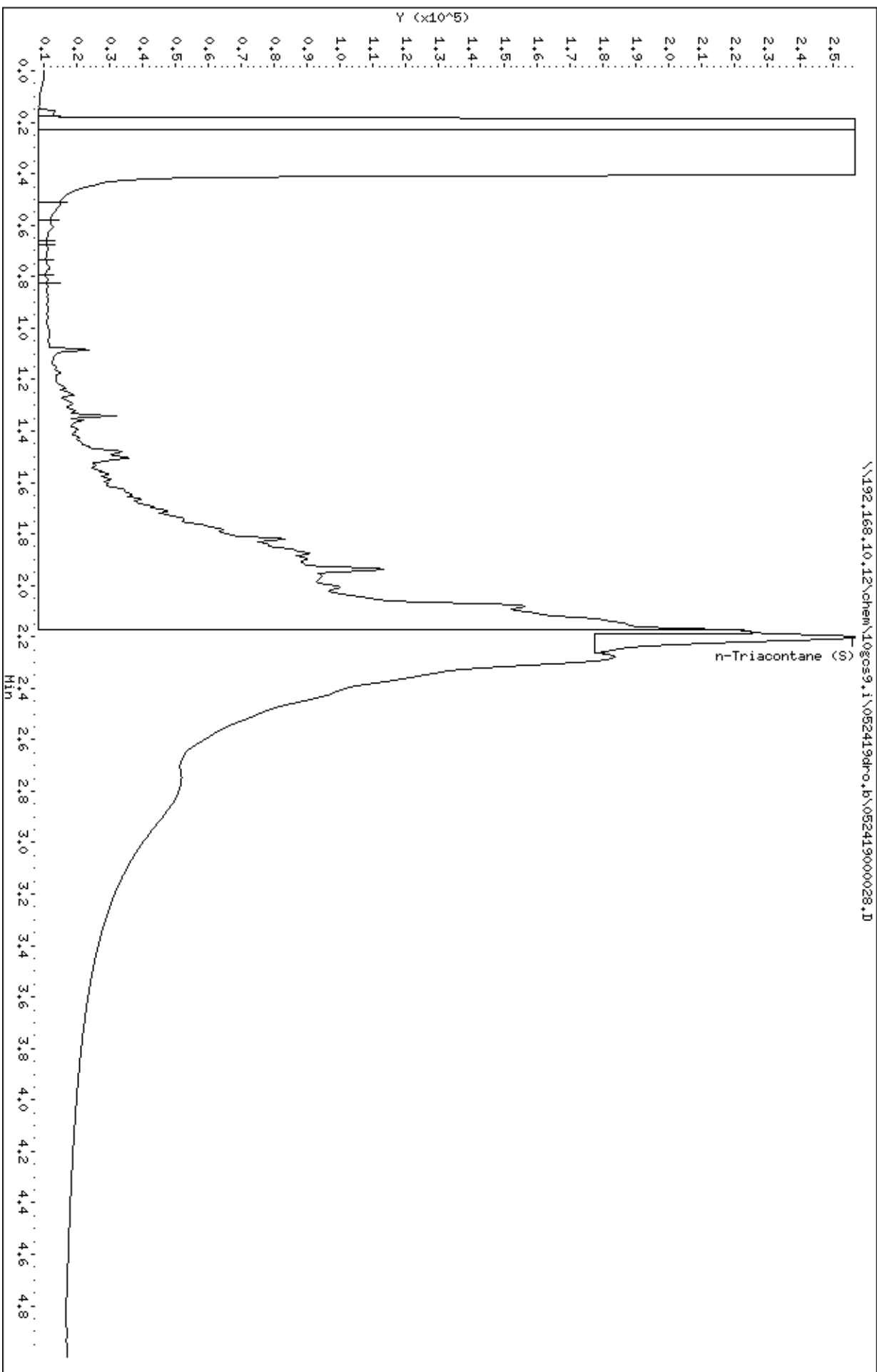
Data File: \\192.168.10.12\chem\10gcs9,1\052319dfo,b\052319000100.D
Date: 23-MAY-2019 23:14
Client ID: DP-8 (5-77)
Sample Info: 10475470008
Volume Injected (uL): 1.0
Column phase: DB-5-MS18180013

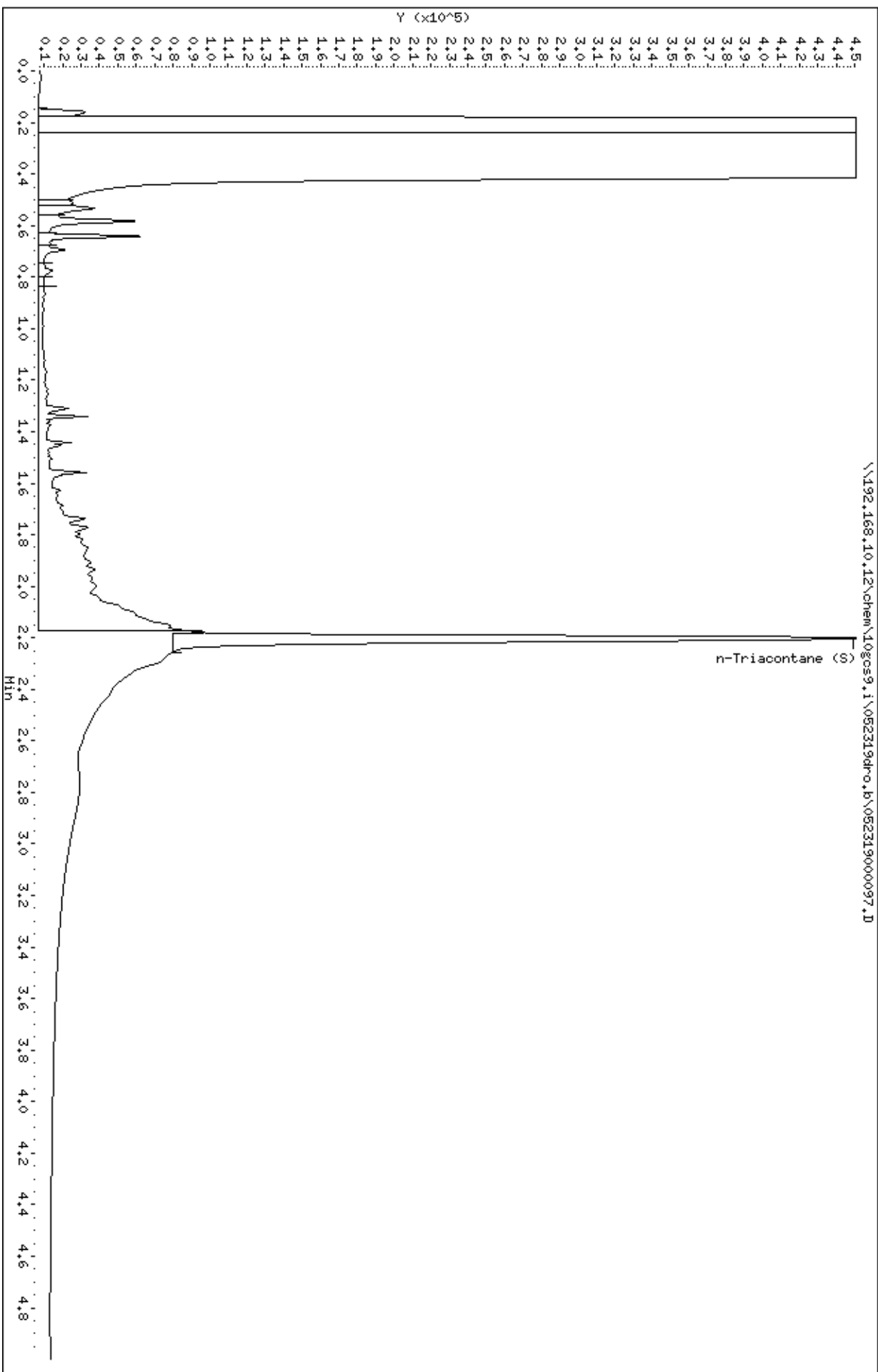
Instrument: 10gcs9,1
Operator: JMH
Column diameter: 0.32

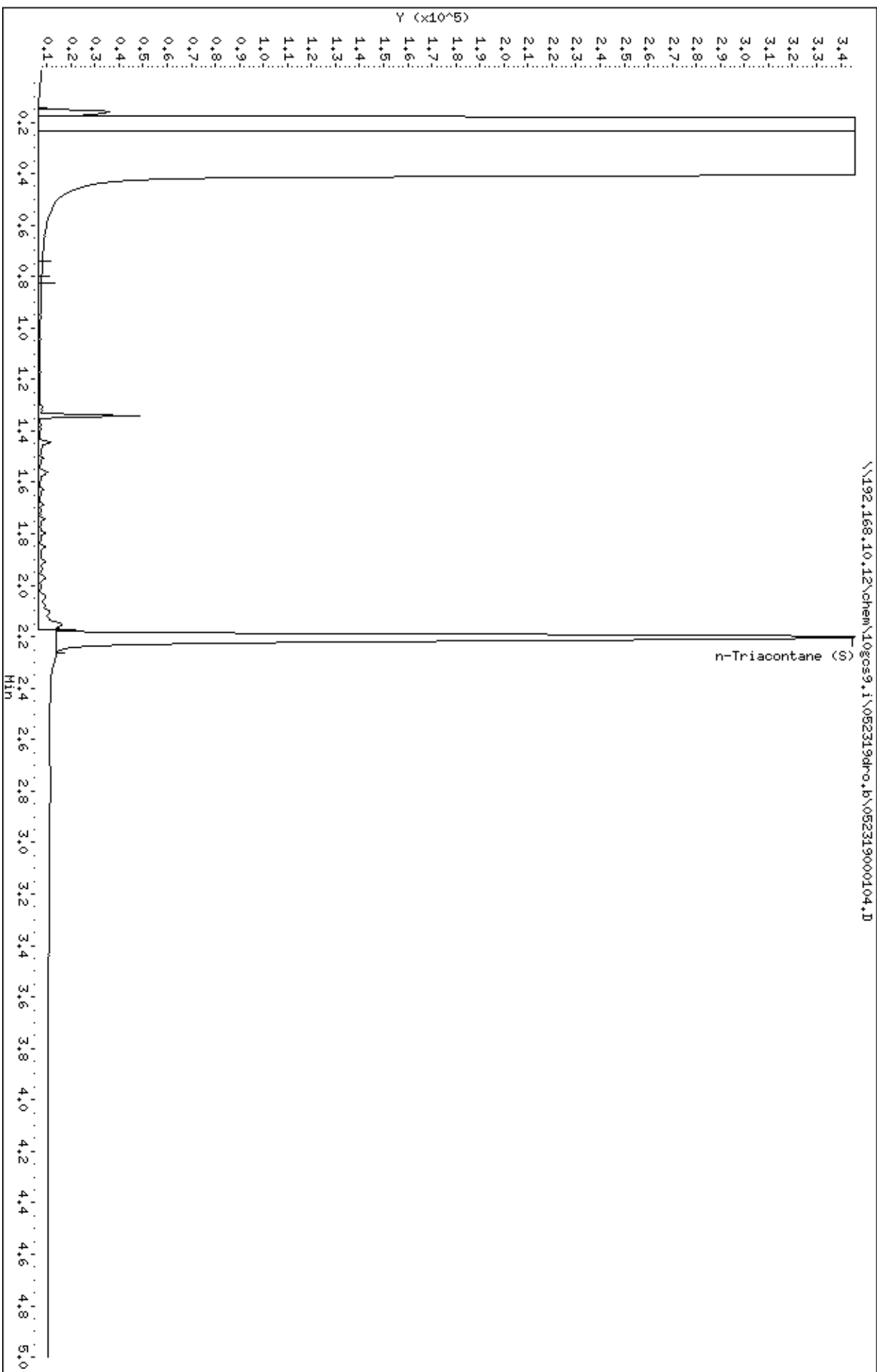


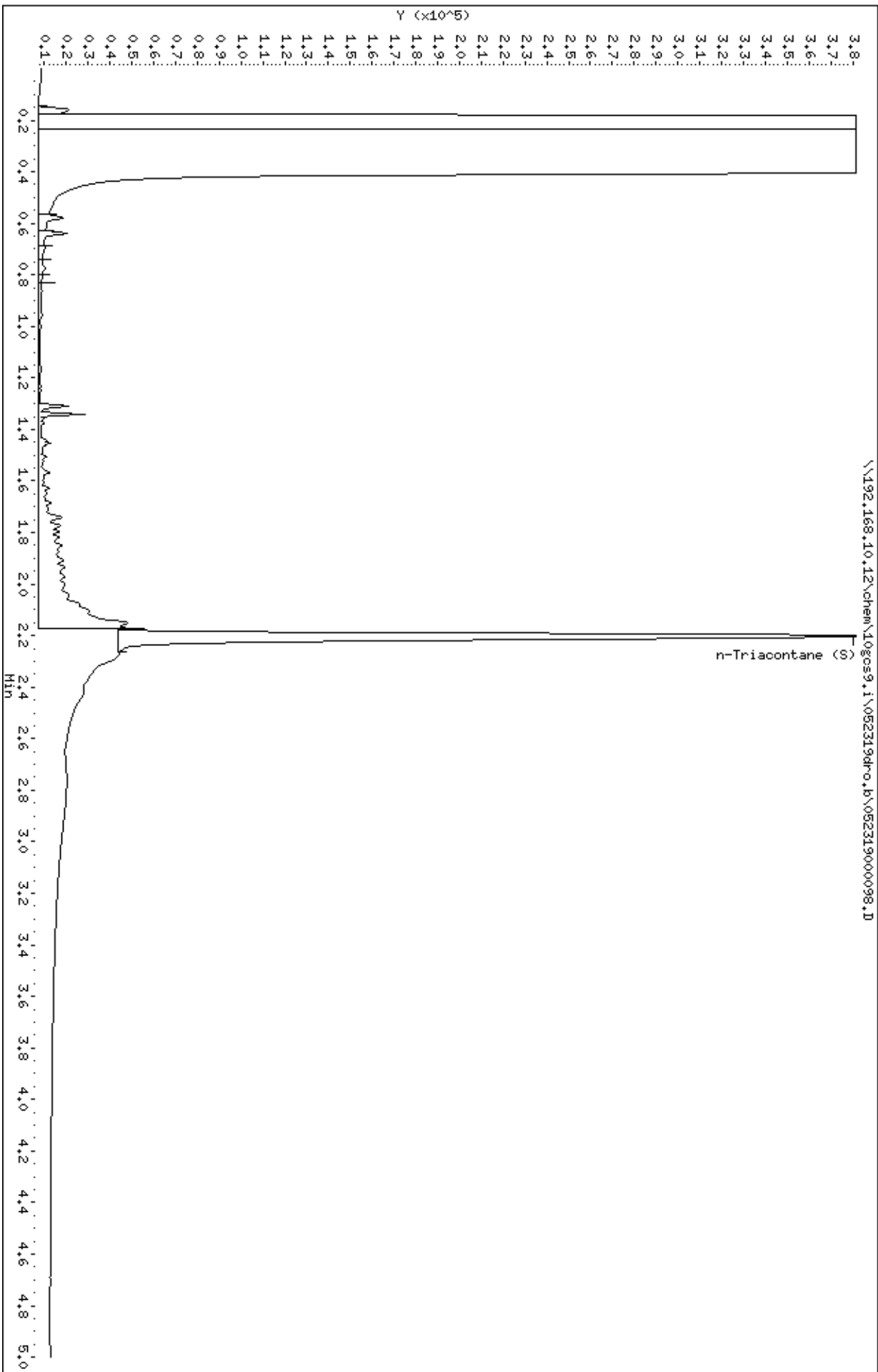












May 28, 2019

Danny Margarit
Carlson McCain
3890 Pheasant Ridge Drive NE
Minneapolis, MN 55449

RE: Project: Pine City Airport Air
Pace Project No.: 10475498

Dear Danny Margarit:

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

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

Sincerely,



Tina Soltani
tina.soltani@pacelabs.com
(612)607-6384
Project Manager

Enclosures

cc: John Lichter, Carlson McCain



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: Pine City Airport Air

Pace Project No.: 10475498

Minnesota Certification IDs

1700 Elm Street SE, 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 DW Certification #: MN00064

Arkansas WW 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

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

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 Primary 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

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Pine City Airport Air

Pace Project No.: 10475498

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10475498001	VP-1	Air	05/17/19 09:50	05/17/19 18:20
10475498002	VP-2	Air	05/17/19 10:24	05/17/19 18:20
10475498003	VP-3	Air	05/17/19 12:15	05/17/19 18:20
10475498004	VP-4	Air	05/17/19 12:55	05/17/19 18:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Pine City Airport Air

Pace Project No.: 10475498

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10475498001	VP-1	TO-15	AFV	61	PASI-M
10475498002	VP-2	TO-15	AFV	61	PASI-M
10475498003	VP-3	TO-15	AFV	61	PASI-M
10475498004	VP-4	TO-15	AFV	61	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-1	Lab ID: 10475498001	Collected: 05/17/19 09:50	Received: 05/17/19 18:20	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	23.7	ug/m3	4.2	1.74		05/22/19 23:58	67-64-1	
Benzene	1.4	ug/m3	0.57	1.74		05/22/19 23:58	71-43-2	
Benzyl chloride	ND	ug/m3	4.6	1.74		05/22/19 23:58	100-44-7	
Bromodichloromethane	ND	ug/m3	2.4	1.74		05/22/19 23:58	75-27-4	
Bromoform	ND	ug/m3	9.1	1.74		05/22/19 23:58	75-25-2	
Bromomethane	ND	ug/m3	1.4	1.74		05/22/19 23:58	74-83-9	
1,3-Butadiene	ND	ug/m3	0.78	1.74		05/22/19 23:58	106-99-0	
2-Butanone (MEK)	ND	ug/m3	5.2	1.74		05/22/19 23:58	78-93-3	
Carbon disulfide	ND	ug/m3	1.1	1.74		05/22/19 23:58	75-15-0	
Carbon tetrachloride	ND	ug/m3	2.2	1.74		05/22/19 23:58	56-23-5	
Chlorobenzene	ND	ug/m3	1.6	1.74		05/22/19 23:58	108-90-7	
Chloroethane	ND	ug/m3	0.93	1.74		05/22/19 23:58	75-00-3	
Chloroform	ND	ug/m3	0.86	1.74		05/22/19 23:58	67-66-3	
Chloromethane	1.4	ug/m3	0.73	1.74		05/22/19 23:58	74-87-3	
Cyclohexane	ND	ug/m3	3.0	1.74		05/22/19 23:58	110-82-7	
Dibromochloromethane	ND	ug/m3	3.0	1.74		05/22/19 23:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.4	1.74		05/22/19 23:58	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.1	1.74		05/22/19 23:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.1	1.74		05/22/19 23:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	5.3	1.74		05/22/19 23:58	106-46-7	
Dichlorodifluoromethane	2.8	ug/m3	1.8	1.74		05/22/19 23:58	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.4	1.74		05/22/19 23:58	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.72	1.74		05/22/19 23:58	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.74		05/22/19 23:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		05/22/19 23:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.74		05/22/19 23:58	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.6	1.74		05/22/19 23:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.6	1.74		05/22/19 23:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.6	1.74		05/22/19 23:58	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.5	1.74		05/22/19 23:58	76-14-2	
Ethanol	4.9	ug/m3	3.3	1.74		05/22/19 23:58	64-17-5	
Ethyl acetate	ND	ug/m3	1.3	1.74		05/22/19 23:58	141-78-6	
Ethylbenzene	2.1	ug/m3	1.5	1.74		05/22/19 23:58	100-41-4	
4-Ethyltoluene	ND	ug/m3	4.4	1.74		05/22/19 23:58	622-96-8	
n-Heptane	ND	ug/m3	1.4	1.74		05/22/19 23:58	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	9.4	1.74		05/22/19 23:58	87-68-3	
n-Hexane	1.5	ug/m3	1.2	1.74		05/22/19 23:58	110-54-3	
2-Hexanone	ND	ug/m3	7.2	1.74		05/22/19 23:58	591-78-6	
Methylene Chloride	15.0	ug/m3	6.1	1.74		05/22/19 23:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	7.2	1.74		05/22/19 23:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	6.4	1.74		05/22/19 23:58	1634-04-4	
Naphthalene	ND	ug/m3	4.6	1.74		05/22/19 23:58	91-20-3	
2-Propanol	ND	ug/m3	4.4	1.74		05/22/19 23:58	67-63-0	
Propylene	21.3	ug/m3	0.61	1.74		05/22/19 23:58	115-07-1	
Styrene	ND	ug/m3	1.5	1.74		05/22/19 23:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.2	1.74		05/22/19 23:58	79-34-5	
Tetrachloroethene	ND	ug/m3	1.2	1.74		05/22/19 23:58	127-18-4	

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-1		Lab ID: 10475498001	Collected: 05/17/19 09:50	Received: 05/17/19 18:20	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Tetrahydrofuran	10.3	ug/m3	1.0	1.74		05/22/19 23:58	109-99-9	
Toluene	3.5	ug/m3	1.3	1.74		05/22/19 23:58	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	13.1	1.74		05/22/19 23:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.9	1.74		05/22/19 23:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.97	1.74		05/22/19 23:58	79-00-5	
Trichloroethene	ND	ug/m3	0.95	1.74		05/22/19 23:58	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.0	1.74		05/22/19 23:58	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.7	1.74		05/22/19 23:58	76-13-1	
1,2,4-Trimethylbenzene	2.9	ug/m3	1.7	1.74		05/22/19 23:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.7	1.74		05/22/19 23:58	108-67-8	
Vinyl acetate	ND	ug/m3	1.2	1.74		05/22/19 23:58	108-05-4	
Vinyl chloride	ND	ug/m3	0.45	1.74		05/22/19 23:58	75-01-4	
m&p-Xylene	6.4	ug/m3	3.1	1.74		05/22/19 23:58	179601-23-1	
o-Xylene	2.2	ug/m3	1.5	1.74		05/22/19 23:58	95-47-6	

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-2	Lab ID: 10475498002	Collected: 05/17/19 10:24	Received: 05/17/19 18:20	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	64.7	ug/m3	20.4	8.48		05/23/19 00:27	67-64-1	
Benzene	3.5	ug/m3	2.8	8.48		05/23/19 00:27	71-43-2	
Benzyl chloride	ND	ug/m3	22.3	8.48		05/23/19 00:27	100-44-7	
Bromodichloromethane	ND	ug/m3	11.5	8.48		05/23/19 00:27	75-27-4	
Bromoform	ND	ug/m3	44.5	8.48		05/23/19 00:27	75-25-2	
Bromomethane	ND	ug/m3	6.7	8.48		05/23/19 00:27	74-83-9	
1,3-Butadiene	ND	ug/m3	3.8	8.48		05/23/19 00:27	106-99-0	
2-Butanone (MEK)	ND	ug/m3	25.4	8.48		05/23/19 00:27	78-93-3	
Carbon disulfide	ND	ug/m3	5.4	8.48		05/23/19 00:27	75-15-0	
Carbon tetrachloride	ND	ug/m3	10.9	8.48		05/23/19 00:27	56-23-5	
Chlorobenzene	ND	ug/m3	7.9	8.48		05/23/19 00:27	108-90-7	
Chloroethane	ND	ug/m3	4.5	8.48		05/23/19 00:27	75-00-3	
Chloroform	ND	ug/m3	4.2	8.48		05/23/19 00:27	67-66-3	
Chloromethane	ND	ug/m3	3.6	8.48		05/23/19 00:27	74-87-3	
Cyclohexane	ND	ug/m3	14.8	8.48		05/23/19 00:27	110-82-7	
Dibromochloromethane	ND	ug/m3	14.7	8.48		05/23/19 00:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	6.6	8.48		05/23/19 00:27	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	10.3	8.48		05/23/19 00:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	10.3	8.48		05/23/19 00:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	25.9	8.48		05/23/19 00:27	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	8.6	8.48		05/23/19 00:27	75-71-8	
1,1-Dichloroethane	ND	ug/m3	7.0	8.48		05/23/19 00:27	75-34-3	
1,2-Dichloroethane	ND	ug/m3	3.5	8.48		05/23/19 00:27	107-06-2	
1,1-Dichloroethene	ND	ug/m3	6.8	8.48		05/23/19 00:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	6.8	8.48		05/23/19 00:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	6.8	8.48		05/23/19 00:27	156-60-5	
1,2-Dichloropropane	ND	ug/m3	8.0	8.48		05/23/19 00:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	7.8	8.48		05/23/19 00:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	7.8	8.48		05/23/19 00:27	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	12.0	8.48		05/23/19 00:27	76-14-2	
Ethanol	271	ug/m3	16.3	8.48		05/23/19 00:27	64-17-5	
Ethyl acetate	ND	ug/m3	6.2	8.48		05/23/19 00:27	141-78-6	
Ethylbenzene	ND	ug/m3	7.5	8.48		05/23/19 00:27	100-41-4	
4-Ethyltoluene	ND	ug/m3	21.2	8.48		05/23/19 00:27	622-96-8	
n-Heptane	ND	ug/m3	7.1	8.48		05/23/19 00:27	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	46.0	8.48		05/23/19 00:27	87-68-3	
n-Hexane	15.0	ug/m3	6.1	8.48		05/23/19 00:27	110-54-3	
2-Hexanone	ND	ug/m3	35.3	8.48		05/23/19 00:27	591-78-6	
Methylene Chloride	205	ug/m3	29.9	8.48		05/23/19 00:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	35.3	8.48		05/23/19 00:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	31.0	8.48		05/23/19 00:27	1634-04-4	
Naphthalene	ND	ug/m3	22.6	8.48		05/23/19 00:27	91-20-3	
2-Propanol	ND	ug/m3	21.2	8.48		05/23/19 00:27	67-63-0	
Propylene	68.7	ug/m3	3.0	8.48		05/23/19 00:27	115-07-1	
Styrene	ND	ug/m3	7.3	8.48		05/23/19 00:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	5.9	8.48		05/23/19 00:27	79-34-5	
Tetrachloroethene	349	ug/m3	5.8	8.48		05/23/19 00:27	127-18-4	

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-2		Lab ID: 10475498002	Collected: 05/17/19 10:24	Received: 05/17/19 18:20	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Tetrahydrofuran	21.4	ug/m3	5.1	8.48		05/23/19 00:27	109-99-9	
Toluene	11.4	ug/m3	6.5	8.48		05/23/19 00:27	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	63.9	8.48		05/23/19 00:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	9.4	8.48		05/23/19 00:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	4.7	8.48		05/23/19 00:27	79-00-5	
Trichloroethene	ND	ug/m3	4.6	8.48		05/23/19 00:27	79-01-6	
Trichlorofluoromethane	ND	ug/m3	9.7	8.48		05/23/19 00:27	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	13.2	8.48		05/23/19 00:27	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	8.5	8.48		05/23/19 00:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	8.5	8.48		05/23/19 00:27	108-67-8	
Vinyl acetate	ND	ug/m3	6.1	8.48		05/23/19 00:27	108-05-4	
Vinyl chloride	ND	ug/m3	2.2	8.48		05/23/19 00:27	75-01-4	
m&p-Xylene	ND	ug/m3	15.0	8.48		05/23/19 00:27	179601-23-1	
o-Xylene	ND	ug/m3	7.5	8.48		05/23/19 00:27	95-47-6	

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-3	Lab ID: 10475498003	Collected: 05/17/19 12:15	Received: 05/17/19 18:20	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	15.7	ug/m3	4.4	1.83		05/23/19 00:56	67-64-1	
Benzene	2.0	ug/m3	0.59	1.83		05/23/19 00:56	71-43-2	
Benzyl chloride	ND	ug/m3	4.8	1.83		05/23/19 00:56	100-44-7	
Bromodichloromethane	ND	ug/m3	2.5	1.83		05/23/19 00:56	75-27-4	
Bromoform	ND	ug/m3	9.6	1.83		05/23/19 00:56	75-25-2	
Bromomethane	ND	ug/m3	1.4	1.83		05/23/19 00:56	74-83-9	
1,3-Butadiene	ND	ug/m3	0.82	1.83		05/23/19 00:56	106-99-0	
2-Butanone (MEK)	ND	ug/m3	5.5	1.83		05/23/19 00:56	78-93-3	
Carbon disulfide	ND	ug/m3	1.2	1.83		05/23/19 00:56	75-15-0	
Carbon tetrachloride	ND	ug/m3	2.3	1.83		05/23/19 00:56	56-23-5	
Chlorobenzene	ND	ug/m3	1.7	1.83		05/23/19 00:56	108-90-7	
Chloroethane	ND	ug/m3	0.98	1.83		05/23/19 00:56	75-00-3	
Chloroform	ND	ug/m3	0.91	1.83		05/23/19 00:56	67-66-3	
Chloromethane	1.4	ug/m3	0.77	1.83		05/23/19 00:56	74-87-3	
Cyclohexane	ND	ug/m3	3.2	1.83		05/23/19 00:56	110-82-7	
Dibromochloromethane	ND	ug/m3	3.2	1.83		05/23/19 00:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.4	1.83		05/23/19 00:56	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.2	1.83		05/23/19 00:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.2	1.83		05/23/19 00:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	5.6	1.83		05/23/19 00:56	106-46-7	
Dichlorodifluoromethane	2.6	ug/m3	1.8	1.83		05/23/19 00:56	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.5	1.83		05/23/19 00:56	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.75	1.83		05/23/19 00:56	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.83		05/23/19 00:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		05/23/19 00:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.83		05/23/19 00:56	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.7	1.83		05/23/19 00:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.7	1.83		05/23/19 00:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.7	1.83		05/23/19 00:56	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.6	1.83		05/23/19 00:56	76-14-2	
Ethanol	5.7	ug/m3	3.5	1.83		05/23/19 00:56	64-17-5	
Ethyl acetate	ND	ug/m3	1.3	1.83		05/23/19 00:56	141-78-6	
Ethylbenzene	ND	ug/m3	1.6	1.83		05/23/19 00:56	100-41-4	
4-Ethyltoluene	ND	ug/m3	4.6	1.83		05/23/19 00:56	622-96-8	
n-Heptane	ND	ug/m3	1.5	1.83		05/23/19 00:56	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	9.9	1.83		05/23/19 00:56	87-68-3	
n-Hexane	3.2	ug/m3	1.3	1.83		05/23/19 00:56	110-54-3	
2-Hexanone	ND	ug/m3	7.6	1.83		05/23/19 00:56	591-78-6	
Methylene Chloride	19.0	ug/m3	6.5	1.83		05/23/19 00:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	7.6	1.83		05/23/19 00:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	6.7	1.83		05/23/19 00:56	1634-04-4	
Naphthalene	ND	ug/m3	4.9	1.83		05/23/19 00:56	91-20-3	
2-Propanol	ND	ug/m3	4.6	1.83		05/23/19 00:56	67-63-0	
Propylene	121	ug/m3	0.64	1.83		05/23/19 00:56	115-07-1	E
Styrene	ND	ug/m3	1.6	1.83		05/23/19 00:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.3	1.83		05/23/19 00:56	79-34-5	
Tetrachloroethene	58.3	ug/m3	1.3	1.83		05/23/19 00:56	127-18-4	

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-3		Lab ID: 10475498003	Collected: 05/17/19 12:15	Received: 05/17/19 18:20	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Tetrahydrofuran	11.7	ug/m3	1.1	1.83		05/23/19 00:56	109-99-9	
Toluene	5.0	ug/m3	1.4	1.83		05/23/19 00:56	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	13.8	1.83		05/23/19 00:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.83		05/23/19 00:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.0	1.83		05/23/19 00:56	79-00-5	
Trichloroethene	2.4	ug/m3	1.0	1.83		05/23/19 00:56	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.1	1.83		05/23/19 00:56	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.9	1.83		05/23/19 00:56	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	1.8	1.83		05/23/19 00:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.8	1.83		05/23/19 00:56	108-67-8	
Vinyl acetate	ND	ug/m3	1.3	1.83		05/23/19 00:56	108-05-4	
Vinyl chloride	ND	ug/m3	0.48	1.83		05/23/19 00:56	75-01-4	
m&p-Xylene	ND	ug/m3	3.2	1.83		05/23/19 00:56	179601-23-1	
o-Xylene	ND	ug/m3	1.6	1.83		05/23/19 00:56	95-47-6	

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-4	Lab ID: 10475498004	Collected: 05/17/19 12:55	Received: 05/17/19 18:20	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Acetone	14.0	ug/m3	4.3	1.77		05/23/19 01:25	67-64-1	
Benzene	0.71	ug/m3	0.58	1.77		05/23/19 01:25	71-43-2	
Benzyl chloride	ND	ug/m3	4.7	1.77		05/23/19 01:25	100-44-7	
Bromodichloromethane	ND	ug/m3	2.4	1.77		05/23/19 01:25	75-27-4	
Bromoform	ND	ug/m3	9.3	1.77		05/23/19 01:25	75-25-2	
Bromomethane	ND	ug/m3	1.4	1.77		05/23/19 01:25	74-83-9	
1,3-Butadiene	ND	ug/m3	0.80	1.77		05/23/19 01:25	106-99-0	
2-Butanone (MEK)	ND	ug/m3	5.3	1.77		05/23/19 01:25	78-93-3	
Carbon disulfide	ND	ug/m3	1.1	1.77		05/23/19 01:25	75-15-0	
Carbon tetrachloride	ND	ug/m3	2.3	1.77		05/23/19 01:25	56-23-5	
Chlorobenzene	ND	ug/m3	1.7	1.77		05/23/19 01:25	108-90-7	
Chloroethane	ND	ug/m3	0.95	1.77		05/23/19 01:25	75-00-3	
Chloroform	ND	ug/m3	0.88	1.77		05/23/19 01:25	67-66-3	
Chloromethane	1.1	ug/m3	0.74	1.77		05/23/19 01:25	74-87-3	
Cyclohexane	ND	ug/m3	3.1	1.77		05/23/19 01:25	110-82-7	
Dibromochloromethane	ND	ug/m3	3.1	1.77		05/23/19 01:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.4	1.77		05/23/19 01:25	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.2	1.77		05/23/19 01:25	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.2	1.77		05/23/19 01:25	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	5.4	1.77		05/23/19 01:25	106-46-7	
Dichlorodifluoromethane	3.0	ug/m3	1.8	1.77		05/23/19 01:25	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.5	1.77		05/23/19 01:25	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.73	1.77		05/23/19 01:25	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.4	1.77		05/23/19 01:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.4	1.77		05/23/19 01:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.4	1.77		05/23/19 01:25	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.7	1.77		05/23/19 01:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.6	1.77		05/23/19 01:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.6	1.77		05/23/19 01:25	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.5	1.77		05/23/19 01:25	76-14-2	
Ethanol	5.6	ug/m3	3.4	1.77		05/23/19 01:25	64-17-5	
Ethyl acetate	ND	ug/m3	1.3	1.77		05/23/19 01:25	141-78-6	
Ethylbenzene	ND	ug/m3	1.6	1.77		05/23/19 01:25	100-41-4	
4-Ethyltoluene	ND	ug/m3	4.4	1.77		05/23/19 01:25	622-96-8	
n-Heptane	ND	ug/m3	1.5	1.77		05/23/19 01:25	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	9.6	1.77		05/23/19 01:25	87-68-3	
n-Hexane	1.3	ug/m3	1.3	1.77		05/23/19 01:25	110-54-3	
2-Hexanone	ND	ug/m3	7.4	1.77		05/23/19 01:25	591-78-6	
Methylene Chloride	15.2	ug/m3	6.2	1.77		05/23/19 01:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	7.4	1.77		05/23/19 01:25	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	6.5	1.77		05/23/19 01:25	1634-04-4	
Naphthalene	ND	ug/m3	4.7	1.77		05/23/19 01:25	91-20-3	
2-Propanol	ND	ug/m3	4.4	1.77		05/23/19 01:25	67-63-0	
Propylene	15.2	ug/m3	0.62	1.77		05/23/19 01:25	115-07-1	
Styrene	ND	ug/m3	1.5	1.77		05/23/19 01:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.2	1.77		05/23/19 01:25	79-34-5	
Tetrachloroethene	ND	ug/m3	1.2	1.77		05/23/19 01:25	127-18-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City Airport Air

Pace Project No.: 10475498

Sample: VP-4		Lab ID: 10475498004	Collected: 05/17/19 12:55	Received: 05/17/19 18:20	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15						
Tetrahydrofuran	10.7	ug/m3	1.1	1.77		05/23/19 01:25	109-99-9	
Toluene	3.1	ug/m3	1.4	1.77		05/23/19 01:25	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	13.3	1.77		05/23/19 01:25	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.77		05/23/19 01:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.98	1.77		05/23/19 01:25	79-00-5	
Trichloroethene	ND	ug/m3	0.97	1.77		05/23/19 01:25	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.0	1.77		05/23/19 01:25	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.8	1.77		05/23/19 01:25	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	1.8	1.77		05/23/19 01:25	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.8	1.77		05/23/19 01:25	108-67-8	
Vinyl acetate	ND	ug/m3	1.3	1.77		05/23/19 01:25	108-05-4	
Vinyl chloride	ND	ug/m3	0.46	1.77		05/23/19 01:25	75-01-4	
m&p-Xylene	ND	ug/m3	3.1	1.77		05/23/19 01:25	179601-23-1	
o-Xylene	ND	ug/m3	1.6	1.77		05/23/19 01:25	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport Air

Pace Project No.: 10475498

QC Batch: 607612 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10475498001, 10475498002, 10475498003, 10475498004

METHOD BLANK: 3284618 Matrix: Air
Associated Lab Samples: 10475498001, 10475498002, 10475498003, 10475498004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	05/22/19 10:44	
1,1,2,2-Tetrachloroethane	ug/m3	ND	0.70	05/22/19 10:44	
1,1,2-Trichloroethane	ug/m3	ND	0.56	05/22/19 10:44	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	05/22/19 10:44	
1,1-Dichloroethane	ug/m3	ND	0.82	05/22/19 10:44	
1,1-Dichloroethene	ug/m3	ND	0.81	05/22/19 10:44	
1,2,4-Trichlorobenzene	ug/m3	ND	7.5	05/22/19 10:44	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	05/22/19 10:44	
1,2-Dibromoethane (EDB)	ug/m3	ND	0.78	05/22/19 10:44	
1,2-Dichlorobenzene	ug/m3	ND	1.2	05/22/19 10:44	
1,2-Dichloroethane	ug/m3	ND	0.41	05/22/19 10:44	
1,2-Dichloropropane	ug/m3	ND	0.94	05/22/19 10:44	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	05/22/19 10:44	
1,3-Butadiene	ug/m3	ND	0.45	05/22/19 10:44	
1,3-Dichlorobenzene	ug/m3	ND	1.2	05/22/19 10:44	
1,4-Dichlorobenzene	ug/m3	ND	3.1	05/22/19 10:44	
2-Butanone (MEK)	ug/m3	ND	3.0	05/22/19 10:44	
2-Hexanone	ug/m3	ND	4.2	05/22/19 10:44	
2-Propanol	ug/m3	ND	2.5	05/22/19 10:44	
4-Ethyltoluene	ug/m3	ND	2.5	05/22/19 10:44	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	4.2	05/22/19 10:44	
Acetone	ug/m3	ND	2.4	05/22/19 10:44	
Benzene	ug/m3	ND	0.32	05/22/19 10:44	
Benzyl chloride	ug/m3	ND	2.6	05/22/19 10:44	
Bromodichloromethane	ug/m3	ND	1.4	05/22/19 10:44	
Bromoform	ug/m3	ND	5.2	05/22/19 10:44	
Bromomethane	ug/m3	ND	0.79	05/22/19 10:44	
Carbon disulfide	ug/m3	ND	0.63	05/22/19 10:44	
Carbon tetrachloride	ug/m3	ND	1.3	05/22/19 10:44	
Chlorobenzene	ug/m3	ND	0.94	05/22/19 10:44	
Chloroethane	ug/m3	ND	0.54	05/22/19 10:44	
Chloroform	ug/m3	ND	0.50	05/22/19 10:44	
Chloromethane	ug/m3	ND	0.42	05/22/19 10:44	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	05/22/19 10:44	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	05/22/19 10:44	
Cyclohexane	ug/m3	ND	1.8	05/22/19 10:44	
Dibromochloromethane	ug/m3	ND	1.7	05/22/19 10:44	
Dichlorodifluoromethane	ug/m3	ND	1.0	05/22/19 10:44	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	05/22/19 10:44	
Ethanol	ug/m3	ND	1.9	05/22/19 10:44	
Ethyl acetate	ug/m3	ND	0.73	05/22/19 10:44	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport Air

Pace Project No.: 10475498

METHOD BLANK: 3284618

Matrix: Air

Associated Lab Samples: 10475498001, 10475498002, 10475498003, 10475498004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/m3	ND	0.88	05/22/19 10:44	
Hexachloro-1,3-butadiene	ug/m3	ND	5.4	05/22/19 10:44	
m&p-Xylene	ug/m3	ND	1.8	05/22/19 10:44	
Methyl-tert-butyl ether	ug/m3	ND	3.7	05/22/19 10:44	
Methylene Chloride	ug/m3	ND	3.5	05/22/19 10:44	
n-Heptane	ug/m3	ND	0.83	05/22/19 10:44	
n-Hexane	ug/m3	ND	0.72	05/22/19 10:44	
Naphthalene	ug/m3	ND	2.7	05/22/19 10:44	
o-Xylene	ug/m3	ND	0.88	05/22/19 10:44	
Propylene	ug/m3	ND	0.35	05/22/19 10:44	
Styrene	ug/m3	ND	0.87	05/22/19 10:44	
Tetrachloroethene	ug/m3	ND	0.69	05/22/19 10:44	
Tetrahydrofuran	ug/m3	ND	0.60	05/22/19 10:44	
Toluene	ug/m3	ND	0.77	05/22/19 10:44	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	05/22/19 10:44	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	05/22/19 10:44	
Trichloroethene	ug/m3	ND	0.55	05/22/19 10:44	
Trichlorofluoromethane	ug/m3	ND	1.1	05/22/19 10:44	
Vinyl acetate	ug/m3	ND	0.72	05/22/19 10:44	
Vinyl chloride	ug/m3	ND	0.26	05/22/19 10:44	

LABORATORY CONTROL SAMPLE: 3284619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	59.5	107	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	77.9	112	70-132	
1,1,2-Trichloroethane	ug/m3	55.5	62.1	112	70-130	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	90.2	116	70-130	
1,1-Dichloroethane	ug/m3	41.1	48.1	117	70-130	
1,1-Dichloroethene	ug/m3	40.3	50.0	124	70-130	
1,2,4-Trichlorobenzene	ug/m3	75.4	75.7	100	56-130	
1,2,4-Trimethylbenzene	ug/m3	50	52.5	105	70-134	
1,2-Dibromoethane (EDB)	ug/m3	78.1	83.1	106	70-130	
1,2-Dichlorobenzene	ug/m3	61.1	62.3	102	70-132	
1,2-Dichloroethane	ug/m3	41.1	45.6	111	70-130	
1,2-Dichloropropane	ug/m3	47	54.1	115	70-130	
1,3,5-Trimethylbenzene	ug/m3	50	53.5	107	70-132	
1,3-Butadiene	ug/m3	22.5	24.6	109	65-130	
1,3-Dichlorobenzene	ug/m3	61.1	62.8	103	70-137	
1,4-Dichlorobenzene	ug/m3	61.1	66.1	108	70-134	
2-Butanone (MEK)	ug/m3	30	30.2	101	70-130	
2-Hexanone	ug/m3	41.6	52.5	126	70-135	
2-Propanol	ug/m3	125	139	111	68-130	
4-Ethyltoluene	ug/m3	50	55.0	110	70-138	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport Air

Pace Project No.: 10475498

LABORATORY CONTROL SAMPLE: 3284619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/m3	41.6	52.4	126	70-131	
Acetone	ug/m3	121	124	103	67-130	
Benzene	ug/m3	32.5	35.8	110	70-130	
Benzyl chloride	ug/m3	52.6	58.1	110	70-130	
Bromodichloromethane	ug/m3	68.1	76.6	113	70-130	
Bromoform	ug/m3	105	116	110	70-132	
Bromomethane	ug/m3	39.5	39.7	101	69-130	
Carbon disulfide	ug/m3	31.6	36.0	114	56-137	
Carbon tetrachloride	ug/m3	64	72.3	113	66-131	
Chlorobenzene	ug/m3	46.8	50.8	109	70-130	
Chloroethane	ug/m3	26.8	31.6	118	70-130	
Chloroform	ug/m3	49.6	53.5	108	70-130	
Chloromethane	ug/m3	21	22.6	107	66-130	
cis-1,2-Dichloroethene	ug/m3	40.3	43.6	108	70-130	
cis-1,3-Dichloropropene	ug/m3	46.1	54.1	117	70-133	
Cyclohexane	ug/m3	35	40.3	115	68-132	
Dibromochloromethane	ug/m3	86.6	99.7	115	70-130	
Dichlorodifluoromethane	ug/m3	50.3	54.4	108	70-130	
Dichlorotetrafluoroethane	ug/m3	71	74.9	105	70-130	
Ethanol	ug/m3	95.8	103	107	68-133	
Ethyl acetate	ug/m3	36.6	43.7	119	69-130	
Ethylbenzene	ug/m3	44.1	49.3	112	67-131	
Hexachloro-1,3-butadiene	ug/m3	108	102	94	66-137	
m&p-Xylene	ug/m3	88.3	96.3	109	70-132	
Methyl-tert-butyl ether	ug/m3	36.6	41.7	114	70-130	
Methylene Chloride	ug/m3	177	212	120	65-130	
n-Heptane	ug/m3	41.7	48.1	116	65-130	
n-Hexane	ug/m3	35.8	41.9	117	66-130	
Naphthalene	ug/m3	53.3	53.5	100	56-130	
o-Xylene	ug/m3	44.1	47.9	109	70-130	
Propylene	ug/m3	17.5	20.8	119	67-130	
Styrene	ug/m3	43.3	48.3	112	69-136	
Tetrachloroethene	ug/m3	68.9	73.1	106	70-130	
Tetrahydrofuran	ug/m3	30	37.5	125	68-131	
Toluene	ug/m3	38.3	42.2	110	70-130	
trans-1,2-Dichloroethene	ug/m3	40.3	42.6	106	70-130	
trans-1,3-Dichloropropene	ug/m3	46.1	56.6	123	70-134	
Trichloroethene	ug/m3	54.6	60.4	111	70-130	
Trichlorofluoromethane	ug/m3	57.1	60.6	106	65-130	
Vinyl acetate	ug/m3	35.8	42.7	119	61-133	
Vinyl chloride	ug/m3	26	26.5	102	70-130	

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QUALITY CONTROL DATA

Project: Pine City Airport Air

Pace Project No.: 10475498

SAMPLE DUPLICATE: 3286202

Parameter	Units	10475528001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND		25	
1,1,2-Trichloroethane	ug/m3	ND	ND		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trichlorobenzene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	24.5	24.0	2	25	
1,2-Dibromoethane (EDB)	ug/m3	ND	ND		25	
1,2-Dichlorobenzene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
1,2-Dichloropropane	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	11.1	11.4	3	25	
1,3-Butadiene	ug/m3	ND	ND		25	
1,3-Dichlorobenzene	ug/m3	ND	ND		25	
1,4-Dichlorobenzene	ug/m3	ND	ND		25	
2-Butanone (MEK)	ug/m3	ND	ND		25	
2-Hexanone	ug/m3	ND	ND		25	
2-Propanol	ug/m3	ND	ND		25	
4-Ethyltoluene	ug/m3	6.0	5.6	7	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	ND		25	
Acetone	ug/m3	8.6	8.5	1	25	
Benzene	ug/m3	1.4	1.6	10	25	
Benzyl chloride	ug/m3	ND	ND		25	
Bromodichloromethane	ug/m3	ND	ND		25	
Bromoform	ug/m3	ND	ND		25	
Bromomethane	ug/m3	ND	ND		25	
Carbon disulfide	ug/m3	ND	ND		25	
Carbon tetrachloride	ug/m3	ND	ND		25	
Chlorobenzene	ug/m3	ND	ND		25	
Chloroethane	ug/m3	ND	ND		25	
Chloroform	ug/m3	ND	ND		25	
Chloromethane	ug/m3	1.2	1.2	0	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
cis-1,3-Dichloropropene	ug/m3	ND	ND		25	
Cyclohexane	ug/m3	ND	ND		25	
Dibromochloromethane	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.5	2.8	8	25	
Dichlorotetrafluoroethane	ug/m3	ND	ND		25	
Ethanol	ug/m3	ND	3.3J		25	
Ethyl acetate	ug/m3	ND	ND		25	
Ethylbenzene	ug/m3	ND	.63J		25	
Hexachloro-1,3-butadiene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	24.5	23.8	3	25	
Methyl-tert-butyl ether	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	4J		25	
n-Heptane	ug/m3	ND	1.2J		25	

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QUALITY CONTROL DATA

Project: Pine City Airport Air

Pace Project No.: 10475498

SAMPLE DUPLICATE: 3286202

Parameter	Units	10475528001 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	ND	.79J		25	
Naphthalene	ug/m3	ND	4.2J		25	
o-Xylene	ug/m3	20.4	20.1	2	25	
Propylene	ug/m3	0.96	0.94	2	25	
Styrene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	ND		25	
Tetrahydrofuran	ug/m3	ND	ND		25	
Toluene	ug/m3	4.3	4.0	7	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
trans-1,3-Dichloropropene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Trichlorofluoromethane	ug/m3	ND	ND		25	
Vinyl acetate	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

SAMPLE DUPLICATE: 3286203

Parameter	Units	10475528002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND		25	
1,1,2-Trichloroethane	ug/m3	ND	ND		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trichlorobenzene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	ND		25	
1,2-Dibromoethane (EDB)	ug/m3	ND	ND		25	
1,2-Dichlorobenzene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
1,2-Dichloropropane	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
1,3-Butadiene	ug/m3	ND	ND		25	
1,3-Dichlorobenzene	ug/m3	ND	ND		25	
1,4-Dichlorobenzene	ug/m3	ND	ND		25	
2-Butanone (MEK)	ug/m3	ND	2.2J		25	
2-Hexanone	ug/m3	ND	ND		25	
2-Propanol	ug/m3	ND	ND		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	ND		25	
Acetone	ug/m3	17.0	16.5	3	25	
Benzene	ug/m3	1.7	1.6	3	25	
Benzyl chloride	ug/m3	ND	ND		25	
Bromodichloromethane	ug/m3	ND	ND		25	
Bromoform	ug/m3	ND	ND		25	
Bromomethane	ug/m3	ND	ND		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City Airport Air

Pace Project No.: 10475498

SAMPLE DUPLICATE: 3286203

Parameter	Units	10475528002 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbon disulfide	ug/m3	ND	ND		25	
Carbon tetrachloride	ug/m3	ND	ND		25	
Chlorobenzene	ug/m3	ND	ND		25	
Chloroethane	ug/m3	ND	ND		25	
Chloroform	ug/m3	ND	ND		25	
Chloromethane	ug/m3	1.1	1.2	7	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
cis-1,3-Dichloropropene	ug/m3	ND	ND		25	
Cyclohexane	ug/m3	ND	ND		25	
Dibromochloromethane	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.7	2.7	1	25	
Dichlorotetrafluoroethane	ug/m3	ND	ND		25	
Ethanol	ug/m3	ND	2.8J		25	
Ethyl acetate	ug/m3	ND	ND		25	
Ethylbenzene	ug/m3	ND	ND		25	
Hexachloro-1,3-butadiene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	ND	ND		25	
Methyl-tert-butyl ether	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	3.5J		25	
n-Heptane	ug/m3	ND	1J		25	
n-Hexane	ug/m3	ND	ND		25	
Naphthalene	ug/m3	ND	2.7J		25	
o-Xylene	ug/m3	ND	ND		25	
Propylene	ug/m3	0.80	ND		25	
Styrene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	ND		25	
Tetrahydrofuran	ug/m3	ND	ND		25	
Toluene	ug/m3	ND	ND		25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
trans-1,3-Dichloropropene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Trichlorofluoromethane	ug/m3	ND	ND		25	
Vinyl acetate	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Pine City Airport Air
Pace Project No.: 10475498

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 10475498001

[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

Sample: 10475498002

[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

Sample: 10475498003

[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

Sample: 10475498004

[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Pine City Airport Air
Pace Project No.: 10475498

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10475498001	VP-1	TO-15	607612		
10475498002	VP-2	TO-15	607612		
10475498003	VP-3	TO-15	607612		
10475498004	VP-4	TO-15	607612		

REPORT OF LABORATORY ANALYSIS

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AIR: CHAIN-OF-CUSTODY /
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

WO#: 10475498
10475498

Section A Required Client Information: Company: <u>Carlson Melon Inc</u> Address: <u>2800 Pleasant Ridge Drive</u> <u>Blaine, MN 55449</u> Email To: <u>Danny Margrit</u> Phone: _____ Fax: _____ Requested Due Date/TAT: _____		Section B Required Project Information: Report To: <u>Danny Margrit</u> Copy To: <u>John Lichte</u> Address: _____ Company Name: _____ Attention: _____ Pace Quote Reference: _____ Pace Project Manager/Sales Rep. _____ Project Name: <u>Pine City Airport</u> Project Number: _____ Project Profile #: <u>39868</u>		Section C Invoice Information: Report: _____ Invoice #: <u>36085</u> Page: <u>1</u> of <u>1</u>																															
Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE		Valid Media Codes MEDIA TB 1 Liter Summa Can 1LC 5 Liter Summa Can 6LC Low Volume Puff LVP High Volume Puff HVP Other PM10		Method: PM10 3C - Fixed Gas (%) TO-3M (Methane) TO-14 TO-15 Full List VOCs TO-15 Short List BTEX TO-15 Short List Chlorinated TO-15 Short List (Other)																															
# 1 2 3 4 5 6 7 8 9 10 11 12	VP-1 VP-2 VP-3 VP-4	MEDIA CODE 1LC I I	PID Reading (Client only) 	COLLECTED <table border="1"> <thead> <tr> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> <th colspan="2">COMPOSITE</th> </tr> <tr> <th>START</th> <th>END</th> </tr> </thead> <tbody> <tr> <td>9/41</td> <td>5/17/14</td> <td>9:50</td> <td>10:24</td> <td>10:24</td> <td>10:24</td> </tr> <tr> <td>10:19</td> <td></td> <td>10:15</td> <td>10:44</td> <td>10:44</td> <td>10:44</td> </tr> <tr> <td>10:47</td> <td></td> <td>11:55</td> <td>12:12</td> <td>12:12</td> <td>12:12</td> </tr> </tbody> </table>	DATE	TIME	DATE	TIME	COMPOSITE		START	END	9/41	5/17/14	9:50	10:24	10:24	10:24	10:19		10:15	10:44	10:44	10:44	10:47		11:55	12:12	12:12	12:12	Canister Pressure (Initial Field - In Hg) -29 -23 -20 -20	Canister Pressure (Final Field - In Hg) -1 -2 -2 -1	Summa Can Number 3214 2913 1002 3272	Flow Control Number 2853 0622 0651 212	Pace Lab ID W01 W02 W03 W04
DATE	TIME	DATE	TIME	COMPOSITE																															
				START	END																														
9/41	5/17/14	9:50	10:24	10:24	10:24																														
10:19		10:15	10:44	10:44	10:44																														
10:47		11:55	12:12	12:12	12:12																														
Section E Relinquished By / Affiliation <u>Danny Margrit</u>		Date <u>5/17/14</u>	Time <u>10:20</u>	Accepted By / Affiliation <u>Danny Margrit</u>	Date <u>5/17/14</u>	Time <u>18:20</u>	Sample Conditions Received on _____ Temp in C _____ Sealed Cooler _____ Samples Intact _____																												
Relinquished By / Affiliation <u>Danny Margrit</u>		Date <u>5/17/14</u>	Time <u>10:20</u>	Accepted By / Affiliation <u>Danny Margrit</u>	Date <u>5/17/14</u>	Time <u>18:20</u>	Sample Conditions Received on _____ Temp in C _____ Sealed Cooler _____ Samples Intact _____																												
Relinquished By / Affiliation <u>Danny Margrit</u>		Date <u>5/17/14</u>	Time <u>10:20</u>	Accepted By / Affiliation <u>Danny Margrit</u>	Date <u>5/17/14</u>	Time <u>18:20</u>	Sample Conditions Received on _____ Temp in C _____ Sealed Cooler _____ Samples Intact _____																												

ORIGINAL

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Danny Margrit
 SIGNATURE of SAMPLER: Danny Margrit DATE Signed (MM/DD/YY) 5/17/14



Document Name:
Air Sample Condition Upon Receipt
Document No.:
F-MN-A-106-rev.18

Document Revised: 31Jan2019
Page 1 of 1
Issuing Authority:
Pace Analytical

Air Sample Condition Upon Receipt

Client Name: Carlson McCain Project #: _____

WO#: 10475498

PM: TS1 Due Date: 05/28/19
CLIENT: CARLSON PROF

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exception

Tracking Number: _____

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

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): _____ Thermometer Used: G87A9170600254 G87A9155100842

Temp should be above freezing to 6°C Correction Factor: _____ Date & Initials of Person Examining Contents: 5-20-19 MT

Type of ice Received Blue Wet None

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
Do cans need to be pressurized (3C and ASTM 1946 DO NOT PRESSURIZE)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13.

Samples Received:					Pressure Gauge # <input type="checkbox"/> 10AIR34 <input type="checkbox"/> 10AIR35				
Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
VP-1	3214	2853	-1	+10					
VP-2	2913	622	-24	+10					
VP-3	1002	651	-2.5	+10					
VP-4	3272	1212	-1.5	+10					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: Dan Margarit Date/Time: 5/20/19

Comments/Resolution: Client wants to proceed with analysis for low pressure can.

Project Manager Review:

Jina Shari

Date: 5/21/19

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\10airI.i\052219.b\14231.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10airI.i\052219.b\14231.D
Lab Smp Id: 10475498001
Inj Date : 22-MAY-2019 23:58
Operator : AFV Inst ID: 10airI.i
Smp Info :
Misc Info : 33816
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10airI.i\052219.b\TO15_136-19.m
Meth Date : 22-May-2019 14:10 avandenbro Quant Type: ISTD
Cal Date : 16-MAY-2019 12:28 Cal File: 13610.D
Als bottle: 31
Dil Factor: 1.74000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNAIRWKS11

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.740	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
11 Ethanol	3.312	3211	1.467

RT	AREA	CONCENTRATIONS			QUANT		
		ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown							
3.196	52218	23.8600392	41.5	0		0	11(L)

QC Flag Legend

L - Operator selected an alternate library search match.

Data File: \\192.168.10.12\chem\10airI.i\052219.b\14231.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10475498001
Operator : AFV
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 22-MAY-2019 23:58

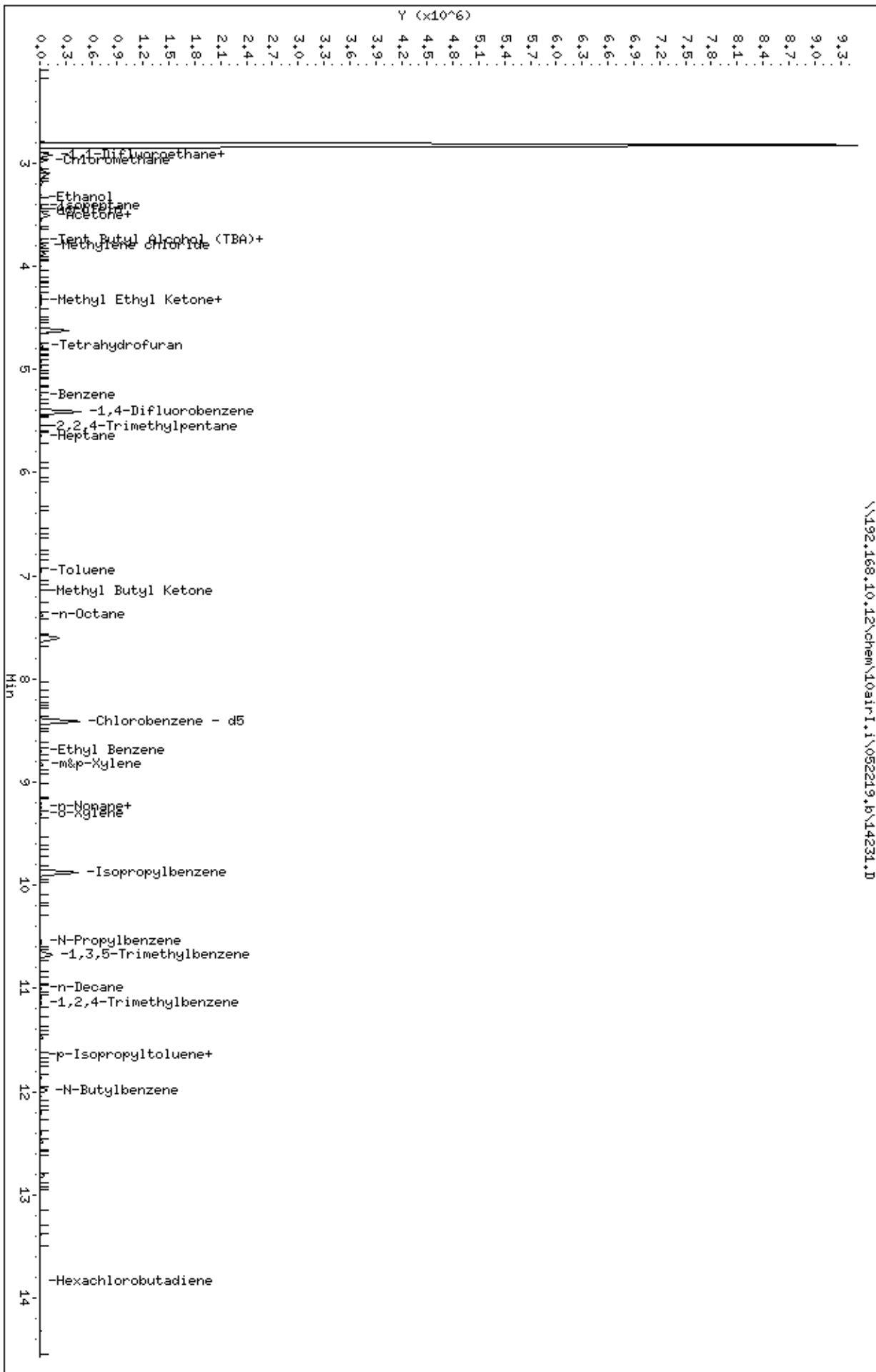
Client SDG: 052219.b
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	3.196	41.5	_J_

\\192.168.10.12\chem\10air1.i\052219,b\14231.D



Data File: \\192.168.10.12\chem\10airI.i\052219.b\14232.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10airI.i\052219.b\14232.D
Lab Smp Id: 10475498002
Inj Date : 23-MAY-2019 00:27
Operator : AFV Inst ID: 10airI.i
Smp Info :
Misc Info : 33816
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10airI.i\052219.b\TO15_136-19.m
Meth Date : 22-May-2019 14:10 avandenbro Quant Type: ISTD
Cal Date : 16-MAY-2019 12:28 Cal File: 13610.D
Als bottle: 32
Dil Factor: 8.48000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNAIRWKS11

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	8.480	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
=====	=====	=====	=====
77 n-Decane	11.006	7099	0.096

CONCENTRATIONS				QUANT			
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
----	----	-----	-----	----	-----	-----	-----
2-n-Butyl furan					CAS #: 4466-24-4		
10.933	464112	6.25523477	53.0	64	NBS75K.1	4171	77(L)

QC Flag Legend

L - Operator selected an alternate library search match.

Data File: \\192.168.10.12\chem\10airI.i\052219.b\14232.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10475498002
Operator : AFV
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 23-MAY-2019 00:27

Client SDG: 052219.b
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 4466-24-4	2-n-Butyl furan	10.933	53.0	NJ__

Data File: \\192.168.10.12\chem\10air1.i\052219.b\14232.D

Date: 23-MAY-2019 00:27

Client ID:

Sample Info:

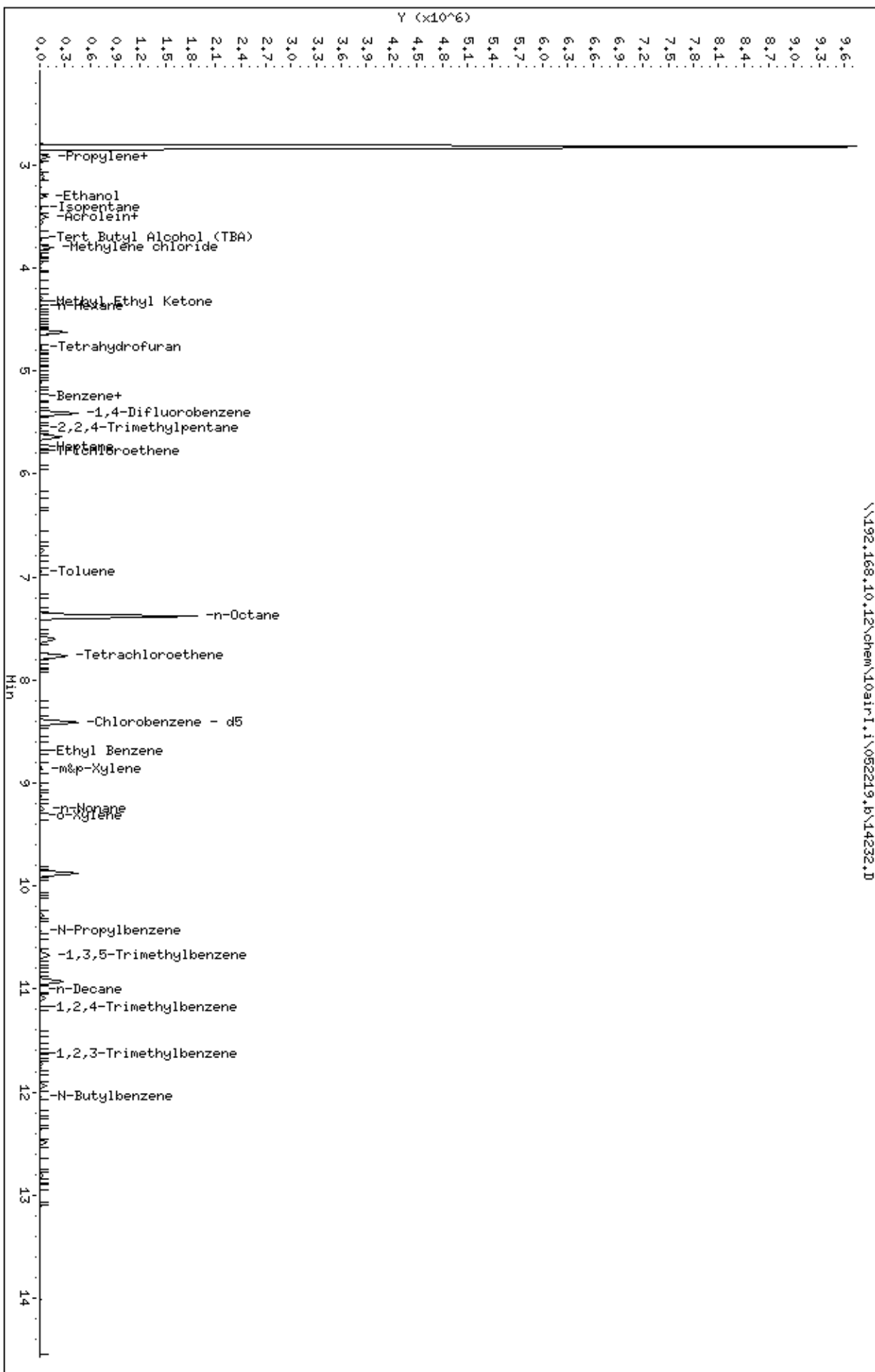
Column phase: DB-5 SN:USD449717H

Instrument: 10air1.i

Operator: AFV

Column diameter: 0.32

\\192.168.10.12\chem\10air1.i\052219.b\14232.D



Data File: \\192.168.10.12\chem\10airI.i\052219.b\14233.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10airI.i\052219.b\14233.D
Lab Smp Id: 10475498003
Inj Date : 23-MAY-2019 00:56
Operator : AFV Inst ID: 10airI.i
Smp Info :
Misc Info : 33816
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10airI.i\052219.b\TO15_136-19.m
Meth Date : 22-May-2019 14:10 avandenbro Quant Type: ISTD
Cal Date : 16-MAY-2019 12:28 Cal File: 13610.D
Als bottle: 33
Dil Factor: 1.83000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNAIRWKS11

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.830	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

COMPOUND	RT	AREA	AMOUNT
11 Ethanol	3.306	12411	1.618

CONCENTRATIONS				QUANT			
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Urea					CAS #: 57-13-6		
3.215	101233	13.1940495	24.1	42	NBS75K.1	111	11(L)

QC Flag Legend

L - Operator selected an alternate library search match.

Data File: \\192.168.10.12\chem\10airI.i\052219.b\14233.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10475498003
Operator : AFV
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 23-MAY-2019 00:56

Client SDG: 052219.b
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 57-13-6	Urea	3.215	24.1	NJ__

Data File: \\192.168.10.12\chem\10air1.i\052219,b\14233.D

Date: 23-MAY-2019 00:56

Client ID:

Sample Info:

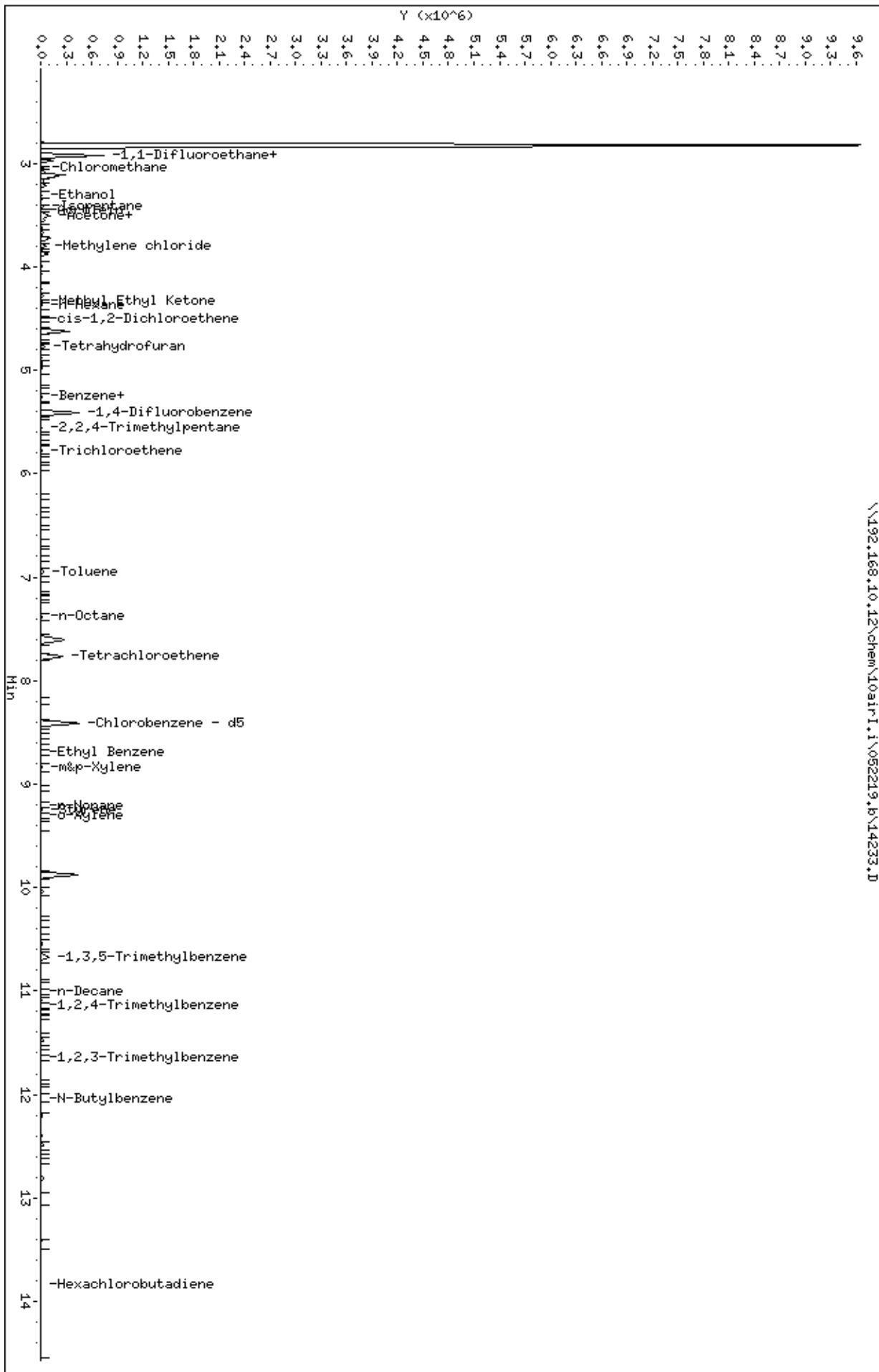
Column phase: DB-5 SN:USD449717H

Instrument: 10air1.i

Operator: AFV

Column diameter: 0.32

\\192.168.10.12\chem\10air1.i\052219,b\14233.D



Data File: \\192.168.10.12\chem\10airI.i\052219.b\14234.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10airI.i\052219.b\14234.D
Lab Smp Id: 10475498004
Inj Date : 23-MAY-2019 01:25
Operator : AFV Inst ID: 10airI.i
Smp Info :
Misc Info : 33816
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10airI.i\052219.b\TO15_136-19.m
Meth Date : 22-May-2019 14:10 avandenbro Quant Type: ISTD
Cal Date : 16-MAY-2019 12:28 Cal File: 13610.D
Als bottle: 34
Dil Factor: 1.77000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNAIRWKS11

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: \\192.168.10.12\chem\10airI.i\052219.b\14234.D
Report Date: 23-May-2019 11:17

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10475498004
Operator : AFV
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 23-MAY-2019 01:25

Client SDG: 052219.b
Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

Data File: \\192.168.10.12\chem\10air1.i\052219.b\14234.D

Date: 23-MAY-2019 01:25

Client ID:

Sample Info:

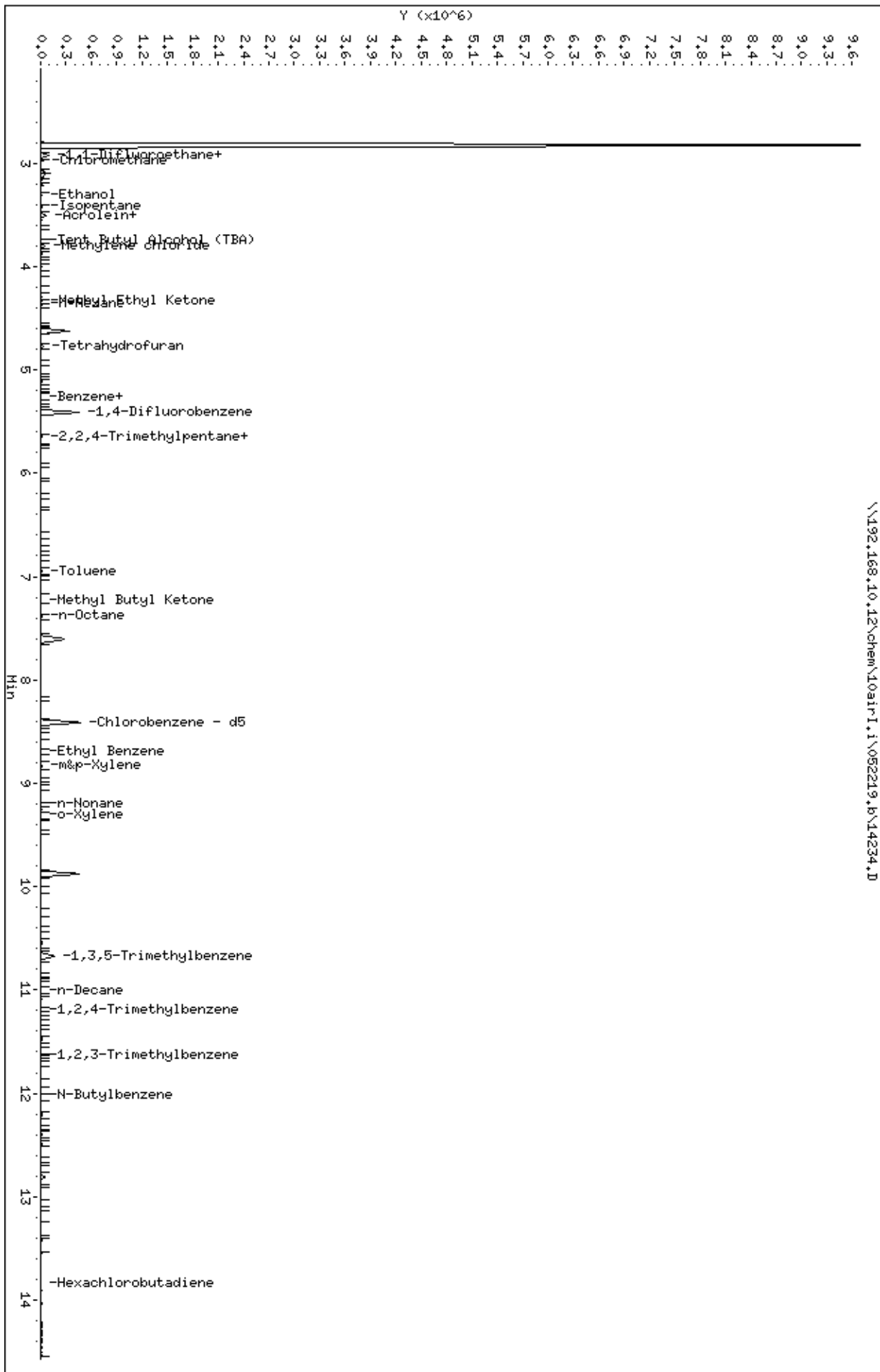
Column phase: DB-5 SN:USD449717H

Instrument: 10air1.i

Operator: AFV

Column diameter: 0.32

\\192.168.10.12\chem\10air1.i\052219.b\14234.D



June 11, 2019

Danny Margarit
Carlson McCain
3890 Pheasant Ridge Drive NE
Minneapolis, MN 55449

RE: Project: Pine City RR
Pace Project No.: 10477195

Dear Danny Margarit:

Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Tina Soltani
tina.soltani@pacelabs.com
(612)607-6384
Project Manager

Enclosures

cc: John Lichter, Carlson McCain



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: Pine City RR

Pace Project No.: 10477195

Minnesota Certification IDs

1700 Elm Street SE, 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 DW Certification #: MN00064

Arkansas WW 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

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

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 Primary 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

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Pine City RR

Pace Project No.: 10477195

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10477195001	XF-4	Solid	05/29/19 08:57	05/31/19 12:11
10477195002	XF-40	Solid	05/29/19 10:11	05/31/19 12:11
10477195003	XF-56	Solid	05/29/19 11:09	05/31/19 12:11
10477195004	XF-68	Solid	05/29/19 11:34	05/31/19 12:11
10477195005	XF-82	Solid	05/29/19 12:22	05/31/19 12:11
10477195006	XF-111	Solid	05/29/19 01:15	05/31/19 12:11
10477195007	XF-128	Solid	05/29/19 13:48	05/31/19 12:11
10477195008	XF-146	Solid	05/29/19 15:18	05/31/19 12:11
10477195009	XF-164	Solid	05/29/19 16:06	05/31/19 12:11
10477195010	XF-190	Solid	05/30/19 09:44	05/31/19 12:11
10477195011	XF-206	Solid	05/30/19 10:12	05/31/19 12:11
10477195012	XF-229	Solid	05/30/19 10:51	05/31/19 12:11
10477195013	XF-252	Solid	05/30/19 11:46	05/31/19 12:11
10477195014	XF-270	Solid	05/30/19 12:15	05/31/19 12:11
10477195015	XF-288	Solid	05/30/19 12:47	05/31/19 12:11
10477195016	XF-314	Solid	05/30/19 13:59	05/31/19 12:11
10477195017	XF-332	Solid	05/30/19 14:26	05/31/19 12:11
10477195018	XF-350	Solid	05/30/19 14:46	05/31/19 12:11
10477195019	XF-364	Solid	05/30/19 15:12	05/31/19 12:11
10477195020	XF-399	Solid	05/30/19 15:57	05/31/19 12:11
10477195021	XF-408	Solid	05/30/19 16:10	05/31/19 12:11

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Pine City RR
Pace Project No.: 10477195

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10477195001	XF-4	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195002	XF-40	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195003	XF-56	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195004	XF-68	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195005	XF-82	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195006	XF-111	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195007	XF-128	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195008	XF-146	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195009	XF-164	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195010	XF-190	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195011	XF-206	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195012	XF-229	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195013	XF-252	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195014	XF-270	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195015	XF-288	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195016	XF-314	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195017	XF-332	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195018	XF-350	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10477195019	XF-364	EPA 6010D	DM	1	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Pine City RR

Pace Project No.: 10477195

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10477195020	XF-399	ASTM D2974	JDL	1	PASI-M
		EPA 6010D	DM	1	PASI-M
10477195021	XF-408	ASTM D2974	JDL	1	PASI-M
		EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-4 **Lab ID: 10477195001** Collected: 05/29/19 08:57 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	10.9	mg/kg	0.72	1	06/07/19 12:22	06/07/19 15:39	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	31.5	%	0.10	1		06/06/19 16:18		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-40 **Lab ID: 10477195002** Collected: 05/29/19 10:11 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	26.2	mg/kg	0.53	1	06/07/19 12:22	06/07/19 15:47	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	10.2	%	0.10	1		06/06/19 16:19		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-56 **Lab ID: 10477195003** Collected: 05/29/19 11:09 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Lead	12.4	mg/kg	0.57	1	06/07/19 12:22	06/07/19 15:49	7439-92-1	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	16.9	%	0.10	1		06/06/19 16:19		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-68 **Lab ID: 10477195004** Collected: 05/29/19 11:34 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	40.4	mg/kg	0.62	1	06/07/19 12:22	06/07/19 15:50	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	24.0	%	0.10	1		06/06/19 16:19		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-82 **Lab ID: 10477195005** Collected: 05/29/19 12:22 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	586	mg/kg	0.78	1	06/07/19 12:22	06/07/19 15:55	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	38.9	%	0.10	1		06/06/19 16:19		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-111 **Lab ID:** 10477195006 Collected: 05/29/19 01:15 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	1720	mg/kg	0.94	1	06/07/19 12:22	06/07/19 15:57	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	48.1	%	0.10	1		06/06/19 16:19		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-128 **Lab ID: 10477195007** Collected: 05/29/19 13:48 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Lead	906	mg/kg	1.5	1	06/07/19 12:22	06/07/19 15:59	7439-92-1	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	66.4	%	0.10	1		06/06/19 16:19		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-146 **Lab ID: 10477195008** Collected: 05/29/19 15:18 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Lead	696	mg/kg	1.2	1	06/07/19 12:22	06/07/19 16:00	7439-92-1	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	62.0	%	0.10	1		06/06/19 16:20		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-164 **Lab ID: 10477195009** Collected: 05/29/19 16:06 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	125	mg/kg	1.0	1	06/07/19 12:22	06/07/19 16:02	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	55.0	%	0.10	1		06/06/19 16:20		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-190 **Lab ID: 10477195010** Collected: 05/30/19 09:44 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Lead	170	mg/kg	0.59	1	06/07/19 12:22	06/07/19 16:04	7439-92-1	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	18.3	%	0.10	1		06/06/19 16:20		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-206 **Lab ID: 10477195011** Collected: 05/30/19 10:12 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	22100	mg/kg	6.1	10	06/07/19 12:22	06/07/19 16:28	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	23.2	%	0.10	1		06/06/19 16:20		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-229 **Lab ID: 10477195012** Collected: 05/30/19 10:51 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	25100	mg/kg	6.4	10	06/07/19 12:22	06/07/19 16:30	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	23.7	%	0.10	1		06/06/19 16:20		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-252 **Lab ID: 10477195013** Collected: 05/30/19 11:46 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Lead	567	mg/kg	1.0	1	06/07/19 12:22	06/07/19 16:12	7439-92-1	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	54.7	%	0.10	1		06/06/19 16:21		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-270 **Lab ID: 10477195014** Collected: 05/30/19 12:15 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	167	mg/kg	0.56	1	06/07/19 12:22	06/07/19 16:17	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	18.7	%	0.10	1		06/06/19 16:21		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-288 **Lab ID: 10477195015** Collected: 05/30/19 12:47 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Lead	829	mg/kg	0.63	1	06/07/19 12:22	06/07/19 16:19	7439-92-1	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	23.3	%	0.10	1		06/06/19 16:21		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-314 **Lab ID: 10477195016** Collected: 05/30/19 13:59 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	401	mg/kg	1.0	1	06/07/19 12:22	06/07/19 16:20	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	52.6	%	0.10	1		06/06/19 16:21		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-332 **Lab ID: 10477195017** Collected: 05/30/19 14:26 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	38.0	mg/kg	0.57	1	06/07/19 12:22	06/07/19 16:22	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	19.7	%	0.10	1		06/06/19 16:21		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-350 **Lab ID: 10477195018** Collected: 05/30/19 14:46 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	3950	mg/kg	0.62	1	06/07/19 12:22	06/07/19 16:23	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	21.1	%	0.10	1		06/06/19 16:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-364 **Lab ID: 10477195019** Collected: 05/30/19 15:12 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	2600	mg/kg	0.60	1	06/07/19 12:22	06/07/19 16:25	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	20.2	%	0.10	1		06/06/19 16:22		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-399 **Lab ID: 10477195020** Collected: 05/30/19 15:57 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	301	mg/kg	0.68	1	06/07/19 12:22	06/07/19 16:27	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	32.9	%	0.10	1		06/06/19 16:59		

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ANALYTICAL RESULTS

Project: Pine City RR

Pace Project No.: 10477195

Sample: XF-408 **Lab ID: 10477195021** Collected: 05/30/19 16:10 Received: 05/31/19 12:11 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3050						
Lead	7.7	mg/kg	0.53	1	06/10/19 12:10	06/11/19 10:08	7439-92-1	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974						
Percent Moisture	11.7	%	0.10	1		06/06/19 16:59		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City RR
Pace Project No.: 10477195

QC Batch:	609903	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050	Analysis Description:	6010D Solids
Associated Lab Samples:	10477195001, 10477195002, 10477195003, 10477195004, 10477195005, 10477195006, 10477195007, 10477195008, 10477195009, 10477195010, 10477195011, 10477195012, 10477195013, 10477195014, 10477195015, 10477195016, 10477195017, 10477195018, 10477195019, 10477195020		

METHOD BLANK:	3296244	Matrix:	Solid
Associated Lab Samples:	10477195001, 10477195002, 10477195003, 10477195004, 10477195005, 10477195006, 10477195007, 10477195008, 10477195009, 10477195010, 10477195011, 10477195012, 10477195013, 10477195014, 10477195015, 10477195016, 10477195017, 10477195018, 10477195019, 10477195020		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	0.49	06/07/19 15:35	

LABORATORY CONTROL SAMPLE:	3296245					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	49	48.8	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	3296246			3296247								
Parameter	Units	10477195001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	10.9	71.6	70.3	73.1	71.7	87	87	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City RR

Pace Project No.: 10477195

QC Batch: 611602

Analysis Method: EPA 6010D

QC Batch Method: EPA 3050

Analysis Description: 6010D Solids

Associated Lab Samples: 10477195021

METHOD BLANK: 3304681

Matrix: Solid

Associated Lab Samples: 10477195021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	ND	0.49	06/11/19 10:05	

LABORATORY CONTROL SAMPLE: 3304682

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	45.9	47.1	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3304683 3304684

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10477195021 Result	Spike Conc.	Spike Conc.	Conc.								
Lead	mg/kg	7.7	55.5	53.5	57.3	55.1	89	89	75-125	4	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City RR

Pace Project No.: 10477195

QC Batch: 610905

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10477195001, 10477195002, 10477195003, 10477195004, 10477195005, 10477195006, 10477195007, 10477195008, 10477195009, 10477195010, 10477195011, 10477195012, 10477195013, 10477195014, 10477195015, 10477195016, 10477195017, 10477195018, 10477195019

SAMPLE DUPLICATE: 3300767

Parameter	Units	10477195019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.2	20.9	4	30	

SAMPLE DUPLICATE: 3301628

Parameter	Units	10477195001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	31.5	41.7	28	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Pine City RR

Pace Project No.: 10477195

QC Batch: 610936

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10477195020, 10477195021

SAMPLE DUPLICATE: 3300848

Parameter	Units	10477195020 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	32.9	32.2	2	30	

SAMPLE DUPLICATE: 3300849

Parameter	Units	10477224005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.7	9.9	7	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Pine City RR

Pace Project No.: 10477195

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Pine City RR
Pace Project No.: 10477195

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10477195001	XF-4	EPA 3050	609903	EPA 6010D	611431
10477195002	XF-40	EPA 3050	609903	EPA 6010D	611431
10477195003	XF-56	EPA 3050	609903	EPA 6010D	611431
10477195004	XF-68	EPA 3050	609903	EPA 6010D	611431
10477195005	XF-82	EPA 3050	609903	EPA 6010D	611431
10477195006	XF-111	EPA 3050	609903	EPA 6010D	611431
10477195007	XF-128	EPA 3050	609903	EPA 6010D	611431
10477195008	XF-146	EPA 3050	609903	EPA 6010D	611431
10477195009	XF-164	EPA 3050	609903	EPA 6010D	611431
10477195010	XF-190	EPA 3050	609903	EPA 6010D	611431
10477195011	XF-206	EPA 3050	609903	EPA 6010D	611431
10477195012	XF-229	EPA 3050	609903	EPA 6010D	611431
10477195013	XF-252	EPA 3050	609903	EPA 6010D	611431
10477195014	XF-270	EPA 3050	609903	EPA 6010D	611431
10477195015	XF-288	EPA 3050	609903	EPA 6010D	611431
10477195016	XF-314	EPA 3050	609903	EPA 6010D	611431
10477195017	XF-332	EPA 3050	609903	EPA 6010D	611431
10477195018	XF-350	EPA 3050	609903	EPA 6010D	611431
10477195019	XF-364	EPA 3050	609903	EPA 6010D	611431
10477195020	XF-399	EPA 3050	609903	EPA 6010D	611431
10477195021	XF-408	EPA 3050	611602	EPA 6010D	611972
10477195001	XF-4	ASTM D2974	610905		
10477195002	XF-40	ASTM D2974	610905		
10477195003	XF-56	ASTM D2974	610905		
10477195004	XF-68	ASTM D2974	610905		
10477195005	XF-82	ASTM D2974	610905		
10477195006	XF-111	ASTM D2974	610905		
10477195007	XF-128	ASTM D2974	610905		
10477195008	XF-146	ASTM D2974	610905		
10477195009	XF-164	ASTM D2974	610905		
10477195010	XF-190	ASTM D2974	610905		
10477195011	XF-206	ASTM D2974	610905		
10477195012	XF-229	ASTM D2974	610905		
10477195013	XF-252	ASTM D2974	610905		
10477195014	XF-270	ASTM D2974	610905		
10477195015	XF-288	ASTM D2974	610905		
10477195016	XF-314	ASTM D2974	610905		
10477195017	XF-332	ASTM D2974	610905		
10477195018	XF-350	ASTM D2974	610905		
10477195019	XF-364	ASTM D2974	610905		
10477195020	XF-399	ASTM D2974	610936		
10477195021	XF-408	ASTM D2974	610936		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Carlson McCan	Report To: Danny Margarit	Attention:	Company Name:	Page: 1 of 2	2285507
Address: 3890 Pleasant Ridge Drive	Copy To: John Liciter	Company Name:	Address:	REGULATORY AGENCY	
Blaine, MN 55449	Purchase Order No.:	Address:	Pace Quote Reference:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
Email To: Danny Margarit	Project Name: Pine City RR	<input type="checkbox"/> UST	Pace Project Manager:	<input type="checkbox"/> RCRA	<input type="checkbox"/> DRINKING WATER
Phone:	Project Number:	<input type="checkbox"/> OTHER	Face Profile #:	Site Location	STATE: MN
Requested Due Date/TAT:					

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	Matrix Codes DW WT WW P SL OL WP AR TS OT	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)	Pace Project No. / Lab I.D.
				COMPOSITE START	COMPOSITE END/GRAB							
1	XF-4			DATE: 5/29/19	TIME: 857	G	SLG	1	Unpreserved			001
2	XF-40			DATE: 10/1	TIME: 1109				HNO ₃			002
3	XF-56			DATE: 1/34	TIME: 1202				H ₂ SO ₄			003
4	XF-68			DATE: 1/15	TIME: 1348				NaOH			004
5	XF-82			DATE: 1578	TIME: 1606				HCl			005
6	XF-111			DATE: 5/29/19	TIME: 944				Na ₂ S ₂ O ₃			006
7	XF-128			DATE: 10/12	TIME: 1051				Methanol			007
8	XF-146			DATE: 5/31	TIME: 5/31				Other			008
9	XF-164											009
10	XF-190											010
11	XF-206											011
12	XF-229											012

WO#: 10477195

10477195

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Received on	Temp in °C	Sealed Cooler	Custody	Samples Intact
	<i>[Signature]</i>	5/31		<i>[Signature]</i>	5/31	12:11	2.8	Y	Y	Y	Y
							2.8	Y	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE: *[Signature]*

PRINT Name of SAMPLER: **Danny Margarit**

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YY): **5/31/19**

F-ALL-C-010-rev.00, 09Nov2017

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:
 Company: Carlson McLean Inc.
 Address: 480 Pleasant Ridge Dr NE
Blaine, MN 55424
 Email To: Danny Margaret
 Phone: _____ Fax: _____
 Requested Due Date/TAT: _____

Section B Required Project Information:
 Report To: Danny Margaret
 Copy To: John Lichte
 Purchase Order No.: _____
 Project Name: Pine City RR
 Project Number: _____

Section C Invoice Information:
 Attention: _____
 Company Name: _____
 Address: _____
 Pace Quote Reference: _____
 Pace Project Manager: _____
 Pace Profile #: 39868

Page: 2 of 2
 2285508

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____
 Site Location: MN
 STATE: _____

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / / /) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE DW Drinking Water WT Water WW Waste Water P Product SL Soil/Solid OL Oil WP Wipe AR Air TS Tissue OT Other	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MATRIX CODE (see valid codes to left)	# 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	DATE	TIME				
1	XF-252				RG		1	Unpreserved								013	
2	XF-270						1									014	
3	XF-288						1									015	
4	XF-314						1									016	
5	XF-332						1									017	
6	XF-350						1									018	
7	XF-364						1									019	
8	XF-399						2									020	
9	XF-408						2									021	
10																	
11																	
12																	

ADDITIONAL COMMENTS
double check
5131

RELINQUISHED BY / AFFILIATION
[Signature]
 DATE: 5/31/12 TIME: _____

ACCEPTED BY / AFFILIATION
[Signature]
 DATE: 5/31/12 TIME: _____

SAMPLE CONDITIONS
 Received on Ice (Y/N): Y
 Custody Sealed Cooler (Y/N): Y
 Samples Intact (Y/N): Y

Temp in °C: _____

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Danny Margaret
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YYYY): 5/31/12

ORIGINAL

Sample Condition Upon Receipt **Client Name:** Carlson McCain Inc. **Project #:** **WO#: 10477195**

Courier: Fed Ex UPS USPS Client
 Pace SpeeDee Commercial See Exception

Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No **Seals Intact?** Yes No **Biological Tissue Frozen?** Yes No N/A

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

Thermometer: T1(0461) T2(1336) T3(0459)
 T4(0254) T5(0489) **Type of Ice:** Wet Blue None Dry Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 5.00 °C **Average Corrected Temp (no temp blank only):** _____ °C See Exceptions

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 2.8 °C

USDA Regulated Soil: (N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** Carl 5/31/19

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 and Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Field Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: _____ See Exception <input type="checkbox"/>
Matrix: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other _____	
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12. Sample # _____ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide)	Positive for Res. <input type="checkbox"/> Yes <input type="checkbox"/> No See Exception <input type="checkbox"/>
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Chlorine? <input type="checkbox"/> Yes <input type="checkbox"/> No pH Paper Lot# _____
	Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. _____ See Exception <input type="checkbox"/>
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Pace Trip Blank Lot # (if purchased): _____
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

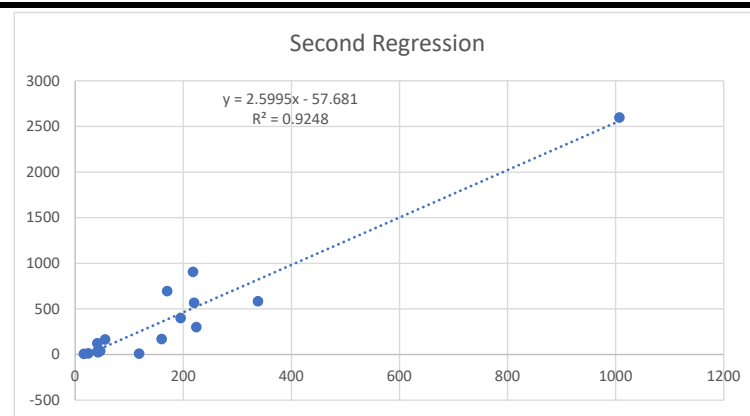
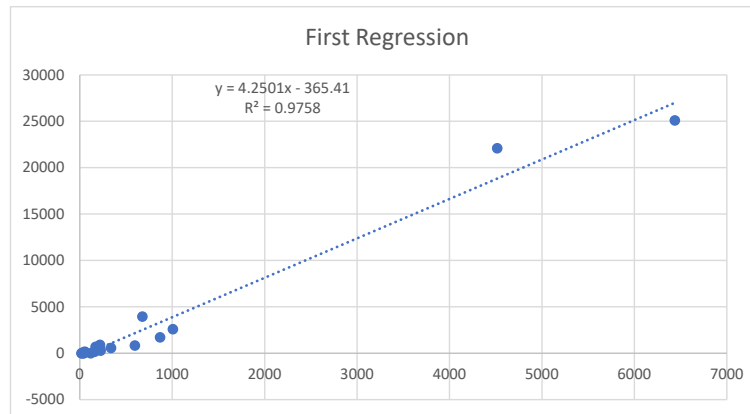
Project Manager Review: Jana Blair **Date:** 6/3/19

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).

Labeled by: Clif

APPENDIX D

Sample Location	XRF Reading	Analytical Result	Calculated Result	Residual
XF-4	118	10.9	136	-125
XF-40	42	26.2	-187	213
XF-56	24	12.4	-263	276
XF-68	46	40.4	-170	210
XF-82	338	586	1,071	-485
XF-111	867	1720	3,319	-1,599
XF-128	218	906	561	345
XF-146	170	696	357	339
XF-164	41	125	-191	316
XF-190	160	170	315	-145
XF-206	4515	22100	18,824	3,276
XF-229	6437	25100	26,992	-1,892
XF-252	220	567	570	-3
XF-270	55	167	-132	299
XF-288	596	829	2,168	-1,339
XF-314	195	401	463	-62
XF-332	41	38	-191	229
XF-350	676	3950	2,508	1,442
XF-364	1007	2600	3,914	-1,314
XF-399	224	301	587	-286
XF-408	16	7.7	-297	305
<hr/>				
XF-4	118	10.9	249.06	-238.16
XF-40	42	26.2	51.498	-25.298
XF-56	24	12.4	4.707	7.693
XF-68	46	40.4	61.896	-21.496
XF-82	338	586	820.95	-234.95
XF-111				
XF-128	218	906	509.01	396.99
XF-146	170	696	384.234	311.766
XF-164	41	125	48.8985	76.1015
XF-190	160	170	358.239	-188.239
XF-206				
XF-229				
XF-252	220	567	514.209	52.791
XF-270	55	167	85.2915	81.7085
XF-288				
XF-314	195	401	449.2215	-48.2215
XF-332	41	38	48.8985	-10.8985
XF-350				
XF-364	1007	2600	2560.0155	39.9845
XF-399	224	301	524.607	-223.607
XF-408	16	7.7	-16.089	23.789



A scatterplot was created by plotting the XRF readings against analytical results, for each location where an analytical sample was collected. A "line of best fit," otherwise known as a "trendline," was calculated by excel which gave a slope and intercept of a simple linear equation that approximates the relationship between the XRF reading and the analytical result. The R-squared value is a measure of the equation's accuracy. A linear equation that fits the data perfectly will have an R-squared value of 1 and an equation that does not describe the data at all will have an R-squared value of 0.

After the first trendline was calculated, the XRF readings were plugged into the newly created equation and theoretical results were calculated. These calculated results were then subtracted from the actual analytical results. The difference for each sample, known as the "residual," shows the difference between the trendline and the actual analytical result for that XRF reading. Using a trial and error method, data points were removed from the regression, until the most accurate trendline was calculated. Five data points were found to be outliers and removed (XF-111, -206, -229, -288, and -350). The second linear regression, without these data points, fit the data the best, producing the highest R-squared value (0.9248), while minimizing the residuals (ie, more accurately describing the data). Thus the equation from the second regression was used to adjust the XRF values collected in the field.