AKT PEERLESS™
ENVIRONMENTAL SERVICES

PHASE II ENVIRONMENTAL SITE ASSESSMENT

City of Imlay City / Public Works (Imlay City DPW)
406 East 3rd Street, Imlay City, Lapeer County, Michigan

Client Michigan Department of Environment, Great Lakes, & Energy
525 West Allegan Street
Lansing, Michigan 48909-7973

End User City of Imlay City
150 North Main Street
Imlay City, MI 48444

PROJECT # 3218s2-7-20

DATE February 22, 2024

FIGURES

TABLES

APPENDICES

PHASE II ENVIRONMENTAL SITE ASSESSMENT

406 East 3rd Street, Imlay City, Lapeer County, Michigan
AKT Peerless Project No. 3218s2-7-20

1.0 Introduction

Michigan Department of Environment, Great Lakes, and Energy (EGLE) retained AKT Peerless Environmental Services (AKT Peerless) to conduct a Phase II Environmental Site Assessment (ESA) for the property located at a 406 East 3rd Street in Imlay City, Lapeer County, Michigan (subject property).

This Phase II ESA was conducted in accordance a United States Environmental Protection Agency (USEPA) Brownfields Community Wide Assessment Grant for States and Tribes (CWAGST) Cooperative Agreement, #4B00E03214, and is based on American Society for Testing and Materials (ASTM) Designation E 1903-19 "Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process."

This Phase II ESA scope of work is intended to evaluate the recognized environmental conditions (RECs) presented in Section 2.4.

AKT Peerless' Phase II ESA report documents the field activities, sampling protocols, and laboratory results conducted as part of this assessment. AKT Peerless' Phase II ESA was performed for the benefit of EGLE and the City of Imlay City, who may rely on the contents and conclusions of this report.

2.0 Background

2.1 Site Description and Physical Setting

The subject property is located in the southwest ¼ of the southeast ¼ of Section 17 in Imlay City (T.07N. /R.12E.), Lapeer County, Michigan. The subject property is situated on the south side of East 3rd Street, west of M-53. See the following table for additional subject property details:

Subject Property Identifiers

Address	Tax Identification Number	Owner of Record	Approximate Acreage
406 East 3rd Street	I19-59-100-002-00	City of Imlay City	0.729

Refer to **Figure 1** for a Topographic Location Map and **Figure 2** for a Sample Location Map.

2.2 Subject Property History and Land Use

The subject property was historically associated with a larger parcel of land utilized by the Imlay City Water Works. The northern portion of the subject property contained an 80,000-gallon underground reservoir and cistern from the 1920s through the 1950s. The southwestern portion of the subject property contained a coal storage building and railroad spur from at least the early 1990s to at least the 1950s. The original portion of the subject building was constructed between 1934 and 1941 and was

utilized as the Imlay City Street Department warehouse. An addition to the subject building was constructed by 1973 and the subject building was occupied by the Imlay City Department of Public Works (DPW) until 2011. Petroleum underground storage tanks (USTs) were installed on the subject property in the late 1970s and remained in use through the mid-1990s. The subject building is currently utilized for cold storage purposes by the Imlay City DPW.

2.3 Adjacent Property Land Use

The following table describes the current uses and/or occupants of the adjoining properties, as identified during this Phase I ESA:

Adjoining Property Data

Direction	Address	Current Use / Occupant
Northwest	335 East 3rd Street	Commercial / Multi-tenant
Northeast	395 East 3rd Street	Commercial / Imlay City Police Department
	400 East 3rd Steet	Commercial / Unoccupied
East	420 East 3rd Street	Commercial / Multi-tenant
South	None associated	Grand Trunk Western Railway right-of-way
West	338 East 3rd Street	Commercial / Former Fire Hall

2.4 Previous Environmental Investigations

AKT Peerless reviewed the following reports previously prepared for the subject property.

2.4.1 Phase I ESA Report, July 2023, by AKT Peerless

AKT Peerless completed a Phase I ESA of the subject property on July 14, 2023, performed for EGLE on behalf of Sage Creek Winery Property, LLC in accordance with a USEPA 104k Brownfield Site Assessment (BSA) Grant (Cooperative Agreement No. 4B00E03214) and Practices for All Appropriate Inquires [(AAI), 40 Code of Federal Regulations (CFR) Part 312] and in conformance with the scope and limitations of the ASTM International Standard Practice E 1527-21 (ASTM Practice E 1527). At the time of AKT Peerless' site reconnaissance, the subject property was developed with an approximately 5,000-square foot building that was utilized for cold storage by Imlay City DPW. The exterior of the subject property consisted of asphalt and gravel parking areas, a fence, grassy maintained lawn, and wooded areas.

AKT Peerless' July 2023 Phase I ESA revealed no evidence of known RECs in connection with the subject property, except for the following:

REC 1 - The subject property was formerly utilized as the Imlay City DPW with the use of petroleum USTs. A confirmed release was reported in 1994. Subsurface investigations and free product extraction/recovery operations were conducted from 1994 to 2015. Concentrations of various petroleum constituents have been identified in soil and groundwater exceeding the Michigan EGLE Part 201 Generic Residential Cleanup Criteria (RCC). Based on laboratory analytical results,

the subject property meets the definition of a *facility,* as defined in Part 201 of the Natural Resources and Environmental Protection Act (NREPA), Michigan Public Act (PA) 451, 1994, as amended. In AKT Peerless' opinion, the identified contamination and *facility* status presents a REC to the subject property.

REC 2 - During AKT Peerless' site reconnaissance, significant areas of oil staining were identified within the subject building that extended over seams in the concrete floor. It is likely that automotive or equipment repairs were conducted within the subject building. In AKT Peerless' opinion, the possibility exists that hazardous materials may have impacted the subsurface of this portion of the subject property and presents a REC to the subject property.

REC 3 - Historical fire insurance maps indicate the presence of coal storage and a portion of a rail spur that were located on the subject property from prior to 1890 until at least the 1950s. The historical use of railroad spurs presents a REC due to potential releases of hazardous substance and petroleum products during construction (i.e., fill material and rail tie preservatives) and operation (i.e., dust and vegetation suppression). Further, historical coal storage may have resulted in a release of hazardous substances to the subsurface of the subject property. In AKT Peerless' opinion, historical coal storage operations and the presence of a rail spur present a REC to the subject property.

REC 4 - The northwestern adjoining property was in operation as a foundry and machine shop from at least 1890 through the 1980s with unknown waste handling and housekeeping practices. The potential exists that hazardous materials may have impacted the northwestern adjoining property. Groundwater direction in the area of the subject property was determined to be to the southeast; the possibility exists for contaminant migration towards the subject property. AKT Peerless did not identify any subsurface investigations to assess site conditions of the northwestern adjoining property. In AKT Peerless' opinion, the long-term historical operations of the northwestern adjoining property as a foundry and machine shop present a REC to the subject property.

REC 5 - During the subsurface investigations conducted on the subject property from 1994 to 2015, previously discussed in REC 1, contamination was identified on the northeastern adjoining property that was known as the "old sign shop." In addition, two USTs were identified and removed in January 2002 and two confirmed releases were reported. Identified contamination included several volatile organic compounds (VOCs), naphthalene, and methylnaphthalene within soil, groundwater, and soil vapor exceeding the EGLE Part 201 Generic RCC. In AKT Peerless' opinion, the identified contamination and proximity of the northeastern adjoining property presents a REC to the subject property.

REC 6 - A railroad right-of-way has been present on the southern adjoining property since prior to 1890. The historical use of a railroad right-of-way presents a REC due to potential releases of hazardous substance and petroleum products during construction (i.e., fill material and rail tie preservatives) and operation (i.e., dust and vegetation suppression). In AKT Peerless' opinion, the presence of a railroad right-of-way on the southern adjoining property presents a REC to the subject property.

The July 2023 Phase I ESA did not identify any controlled recognized environmental conditions (CRECs) or historical recognized environmental conditions (HRECs).

2.4.2 Phase I ESA Report Update, December 2023, by AKT Peerless

AKT Peerless conducted a Phase I ESA Update of the subject property as described below in accordance with USEPA Standards and Practices for AAI, 40 CFR Part 312 and ASTM Practice E 1527. This Phase I ESA Update was performed for EGLE and Sage Creek Winery Property, LLC in connection with potential redevelopment and purchase of the subject property utilizing a USEPA 104k Brownfields CWAGST Cooperative Agreement No. 4B00E03214.

AKT Peerless' December 2023 Phase I ESA Update revealed no evidence of known RECs in connection with the subject property, except for the following:

REC 1 - The subject property was utilized for equipment maintenance with USTs by the Imlay City DPW. A confirmed release from the former USTs was reported in 1994. Subsurface investigations were conducted from 1994 to 2015 during response activities to evaluate the 1994 release that identified concentrations of various petroleum constituents in soil and groundwater exceeding the Michigan EGLE Part 201 Generic RCC. Additionally, the results of the 2023 subsurface investigation to evaluate this former site use identified chromium, lead, and various petroleum constituents in soil and/or groundwater exceeding the EGLE Part 201 Generic RCC. Based on laboratory analytical results, the subject property meets the definition of a facility, as defined in Part 201 of the NREPA, Michigan PA 451, 1994, as amended. In AKT Peerless' opinion, the identified contamination and facility status presents a REC to the subject property.

REC 2 - Historical fire insurance maps indicate the presence of coal storage and a portion of a rail spur that were located on the subject property from prior to 1890 until at least the 1950s. The results of AKT Peerless 2023 Phase II ESA activities identified soil and groundwater contamination at the subject property. Several hazardous substances and petroleum products were found within on-site soil and groundwater samples exceeding the current EGLE Part 201 Generic RCC. Further, AKT Peerless observed evidence of non-native fill materials (coal and slag) from below the existing surface cover to 4.5 feet below ground surface (bgs) in select borings. Based on laboratory analytical results, the subject property meets the definition of a *facility,* as defined in Part 201 of the NREPA, Michigan PA 451, 1994, as amended. In AKT Peerless' opinion, the presence of known contamination at the subject property represents a REC.

REC 3 - In 2023, AKT Peerless identified a concentration of perfuorooctanoic acid (PFOA) within an on-site groundwater sample exceeding the current EGLE Part 201 Generic RCC. Based on laboratory analytical results, the subject property meets the definition of a facility, as defined in Part 201 of the NREPA, Michigan PA 451, 1994, as amended. In AKT Peerless' opinion, the presence of known contamination at the subject property represents a REC.

REC 4 - During the subsurface investigations conducted on the subject property from 1994 to 2015, previously discussed in REC 1, contamination was identified on the northeastern adjoining property that was known as the "old sign shop." In addition, two USTs were identified and removed from this adjoining property in January 2002 and two confirmed releases were reported. Identified contamination included petroleum products within soil and groundwater exceeding the EGLE Part 201 Generic RCC. In AKT Peerless' opinion, the identified contamination and proximity of the northeastern adjoining property presents a REC to the subject property.

3.0 Phase II Environmental Site Assessment Activities

The following sections summarize the site assessment activities conducted by AKT Peerless.

3.1 Scope of Assessment

In September 2023, AKT Peerless conducted a subsurface investigation of the subject property that included: (1) the advancement of ten soil borings, (2) the installation of four temporary groundwater monitoring wells, (3) the collection of a water sample from an 80,000-gallon underground reservoir and cistern, (4) the collection of soil and groundwater samples, and (5) the collection of quality control quality assurance (QA/QC) samples for laboratory analyses of select parameters including VOCs, polynuclear aromatic hydrocarbons (PNAs), per- and polyfluoroalkyl substances (PFAS), and Michigan (MI) 10 Metals or select metals (cadmium, chromium, and lead). At the request of EGLE, AKT Peerless collected a groundwater sample from the subject property, to determine if PFAS was released from the western adjoining fire station property and migrated to the subject property over time. Furthermore, at the request of EGLE, a sample was collected from the underground reservoir and cistern to determine if any potential on-site contamination had migrated into this system.

The following samples were submitted for laboratory analyses:

- 11 soil samples for VOCs, PNAs, and Michigan 10 Metals
- Four soil samples for VOCs, PNAs, lead, cadmium, and chromium
- Four groundwater samples for VOCs, PNAs, and MI 10 Metals
- One groundwater sample for VOCs, PNAs, MI 10 Metals, and PFAS.
- Four soil QA/QC samples and five groundwater QA/QC samples

The following table summarizes each REC, the site investigation activities performed to address each REC, and the laboratory parameters used to address each REC.

Summary of Investigation Activity

REC #	Environmental Concern	Investigation Activity	Analytical Parameters
1	Open leaking underground storage tank (LUST) on the subject property with facility level contamination	AKT-5, AKT-6, AKT-7	VOCs, PNAs, Michigan 10 Metals
		AKT-8, AKT-9, AKT-10	VOCs, PNAs, cadmium, chromium, lead
		AKT-7/TMW	VOCs, PNAs, Michigan 10 Metals
2	Oil staining within the subject building	AKT-8, AKT-9, AKT-10	VOCs, PNAs, cadmium, chromium, lead
3	Coal storage and portion of a rail spur	AKT-1	VOCs, PNAs, Michigan 10 Metals or cadmium, chromium, lead
		AKT-1/TMW	VOCs, PNAs, Michigan 10 Metals, PFAS

REC #	Environmental Concern	Investigation Activity	Analytical Parameters
4	Northwestern adjoining property operated as a foundry and machine shop with groundwater direction southeast towards the subject property	AKT-2, AKT-3, AKT-4, W-1	VOCs, PNAs, Michigan 10 Metals
		AKT-2/TMW, AKT-4/TMW	VOCs, PNAs, Michigan 10 Metals
5	Facility level contamination on northeastern adjoining property with two open LUST incidents	AKT-4, AKT-6, W-1	VOCs, PNAs, Michigan 10 Metals
		AKT-4/TMW	VOCs, PNAs, Michigan 10 Metals
6	Railroad right-of way on the southern adjoining property	AKT-1, AKT-5	VOCs, PNAs, Michigan 10 Metals
		AKT-1/TMW	VOCs, PNAs, Michigan 10 Metals, *PFAS

*Note: The July 2023 Phase I ESA conducted by AKT Peerless revealed no evidence of known RECs in connection with the subject property related to the presence of PFAS. However, at the request of EGLE, AKT Peerless collected a groundwater sample to determine if PFAS was released from the western adjoining fire station property and migrated to the subject property over time.

Based on laboratory analytical results, the subject property meets the definition of a facility, as defined in Part 201 of the NREPA, Michigan PA 451, 1994, as amended. In AKT Peerless' opinion, the presence of known contamination at the subject property represents a REC.

3.1.1 Soil Evaluation

On September 20 and 21, 2023, AKT Peerless: (1) advanced ten soil borings (AKT-1 through AKT-10) at the subject property. AKT Peerless used hydraulic drive/direct-push (Geoprobe®) and hand auger sampling techniques and followed the guidance outlined in ASTM publication E1903-19 "Standard Practice of Environmental Site Assessments: Phase II Environmental Site Assessment Process." AKT Peerless collected continuous soil samples from the soil borings in four-foot intervals to the maximum depth explored of 24.0 feet bgs. AKT Peerless personnel inspected, field-screened, and logged the samples collected at each soil boring location.

Refer to Figure 2 for a Sample Location Map. Soil Boring logs are provided in Appendix A.

3.1.2 Groundwater Evaluation

AKT Peerless encountered saturated soil in four (AKT-1/TMW, AKT-2/TMW, AKT-4/TMW, and AKT-7/TMW) of the ten soil borings advanced at the subject property. AKT Peerless installed a temporary groundwater monitor well at these locations. A one-inch PVC riser with a five-foot screen was utilized for each temporary groundwater monitor well. Groundwater sampling was conducted using low-flow sampling methodologies described in the April 1996 United States Environmental Protection Agency (U.S. EPA) document Groundwater Issue titled "Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures". Stabilization data recorded for each well were documented in Low-Flow Sampling Logs included in Appendix A. Refer to Figure 2 for a site map with temporary monitor well locations.

3.1.3 Deviations from the Sampling and Analysis Plan

This Phase II ESA was funded through EGLE's BSA Program. On August 9, 2023, AKT Peerless prepared a Phase II Sampling and Analysis Plan (SAP), on behalf of EGLE and Sage Creek Winery Property, LLC. During the completion of field activities, the following deviations from the approved SAP were made:

- Soil boring locations AKT-3, AKT-6, and AKT-10 were intended to be converted into a temporary monitoring well; however, groundwater was not encountered in sufficient volume to collect a groundwater sample.
- Low-flow sampling was not conducted at temporary monitoring well AKT-2/TMW, due to poor recharge volume.
- Soil boring location AKT-4 was intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered groundwater at 8.0 feet bgs and clay layer at 10.0 to 12.0 feet bgs; therefore, AKT Peerless did not advance this soil boring to the proposed depth.
- Soil boring location AKT-7 was intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered groundwater at 17.0 feet bgs; therefore, AKT Peerless did not advance this soil boring to the proposed depth.
- Soil boring locations AKT-1, AKT2, AKT-3, and AKT-10 were intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered refusal in the form of gravel, compacted sand, or compacted silty sand; therefore, further advancement was not conducted.
- Soil boring location AKT-5 was intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered clay from 8.0 to 20.0 feet bgs; therefore, further advancement was not conducted.
- Soil boring location AKT-8 was intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered clay from 4.0 to 20.0 feet bgs; therefore, further advancement was not conducted.
- Soil boring location AKT-9 was intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered clay from 4.5 to 20.0 feet bgs; therefore, further advancement was not conducted.
- Soil boring location AKT-6 was intended to be advanced to 24.0 feet bgs; however, AKT Peerless encountered strong petroleum odors and elevated PID readings from 9.5 to 14.0 feet bgs. However, petroleum odors and elevated PID readings declined at 16 feet bgs; therefore, further advancement was not conducted.

3.1.4 Quality Assurance/Quality Control (QA/QC)

To ensure the accuracy of data collected during on site activities, AKT Peerless implemented proper QA/QC measures. The QA/QC procedures included but were not limited to: (1) decontamination of sampling equipment before and between sampling events, (2) calibration of field equipment, (3) documentation of field activities, and (4) sample preservation techniques.

3.1.5 Decontamination of Equipment

During sample collection, AKT Peerless adhered to proper decontamination procedures. Sampling equipment was decontaminated using the following methods to minimize potential cross-contamination of soil samples:

- Steam-cleaning or washing and scrubbing the equipment with non-phosphate detergent
- Rinsing the equipment
- Air-drying the equipment

3.1.6 Calibration of Field Equipment

All field instruments were calibrated prior to first use on-site to ensure accuracy. Field instruments utilized during investigation activities at this subject property were a photoionization detector (PID) and a sample scale.

During AKT Peerless' Phase II ESA, a PID was used to screen all soil samples. The PID was maintained in a calibrated condition using 100 ppm isobutylene span gas prior to subsurface investigations.

A sample scale was utilized during soil sampling activities to weigh approximately 10 grams of soil for the methanol preserved samples (i.e., soil samples designated for VOC analysis). The scale was maintained in a calibrated condition using calibration weights in accordance with the manufacturer's specifications.

3.1.7 Documentation of Activities

During AKT Peerless' Phase II ESA activities, subject property conditions (i.e., soil boring locations, weather conditions) were documented. AKT Peerless visually inspected the soil and groundwater samples and prepared a geologic log for each soil boring. The logs include soil characteristics such as: (1) color, (2) composition (e.g., sand, clay, or gravel), (3) soil moisture and water table depth, and (4) signs of possible contamination (i.e., stained or discolored soil, odors). Soil types were classified in accordance with ASTM publication D-2488 "Unified Soil Classification System." All soil and soil gas samples were delivered to EGLE Environmental Laboratory in Lansing, Michigan under chain-of-custody documentation. See Appendix A for AKT Peerless' soil boring and soil gas logs. See Figure 2 for Site Map with Sample Locations.

3.1.8 Sample Preservation Techniques

AKT Peerless collected soil samples according to USEPA Publication SW-846, "Test Methods for Evaluating Solid Waste." Soil samples were collected in laboratory-supplied containers, stored on ice or at approximately 4 degrees Celsius, and submitted under chain-of-custody documentation.

Soil samples collected for VOC analyses were field preserved with methanol in accordance with U.S. EPA Method 5035. Soil samples collected for PNAs and metals analyses were stored in unpreserved, 8-ounce wide-mouth jars.

Groundwater samples collected from temporary wells were collected with a peristaltic pump and dedicated tubing. Groundwater samples for VOC analyses were collected with zero headspace into 40 ml glass vials and preserved with hydrochloric acid. Groundwater samples for metal analyses were collected into plastic bottles and preserved with nitric acid. Groundwater samples collected for analysis of PNAs were collected into 1-liter amber glass jars. Groundwater samples collected for analysis of PFAS were collected in unpreserved, laboratory-supplied plastic containers labeled using a ball point pen and placed in a Ziploc bag (double bagged).

3.1.9 QA/QC Sample Collection

AKT Peerless collected QA/QC samples for soil and water matrices in accordance with AKT Peerless' Quality Assurance Project Plan, dated January 23, 2023, and EGLE - Remediation and Redevelopment Division (RRD) Operational Memorandum No. 2, Attachment 5. The following samples were submitted for laboratory analysis.

Summary of QA/QC Sampling

Number of Assessment Samples & Matrix	Number of QA/QC Samples				
	Field Equipment Blank	Field Duplicate	Trip Blank	Methanol Blank	MS/MSD
Soil	0	1	0	1	1-MS / 1-MSD
Water	1	1	1	NA	1-MS / 1-MSD

NA – Not Applicable

3.2 Laboratory Analysis and Methods

AKT Peerless submitted 15 soil samples, five groundwater samples, as well as five QA/QC samples for soil and five QA/QC samples for groundwater laboratory analyses. The following table summarizes the location, depth, matrix, and laboratory analysis for each sample.

Sample Collection Summary

Sample Identification	Sample Matrix	Soil Sample Interval (feet, bgs)	Laboratory Analytical Parameter(s)
AKT-1s	Soil	1.5-2.0’	VOCs, PNAs, MI 10 Metals
AKT-1d	Soil	9.5-10.0’	VOCs, PNAs, MI 10 Metals
AKT-2s	Soil	1.0-1.5’	VOCs, PNAs, MI 10 Metals
AKT-2d	Soil	11.5-12.0’	VOCs, PNAs, MI 10 Metals
AKT-3s	Soil	1.0-1.5’	VOCs, PNAs, MI 10 Metals
AKT-3d	Soil	17.0-17.5’	VOCs, PNAs, MI 10 Metals
AKT-4s	Soil	1.0-1.5’	VOCs, PNAs, MI 10 Metals
AKT-4d	Soil	7.0-7.5’	VOCs, PNAs, MI 10 Metals
AKT-5	Soil	1.0-1.5’	VOCs, PNAs, MI 10 Metals
AKT-6	Soil	11.5-12.0’	VOCs, PNAs, MI 10 Metals
AKT-7	Soil	16.5-17.0’	VOCs, PNAs, MI 10 Metals
AKT-8	Soil	3.0-3.5’	VOCs, PNAs, cadmium, chromium, lead
AKT-9	Soil	2.0-2.5’	VOCs, PNAs, cadmium, chromium, lead

Sample Identification	Sample Matrix	Soil Sample Interval (feet, bgs)	Laboratory Analytical Parameter(s)
AKT-10	Soil	14.5-15.0’	VOCs, PNAs, cadmium, chromium, lead
AKT-1/TMW	Groundwater	14.0-19.0’	VOCs, PNAs, MI 10 Metals, PFAS
AKT-2/TMW	Groundwater	14.0-19.0’	VOCs, PNAs, MI 10 Metals
AKT-4/TMW	Groundwater	5.0-10.0’	VOCs, PNAs, MI 10 Metals
AKT-7/TMW	Groundwater	13.0-18.0’	VOCs, PNAs, MI 10 Metals
AKT-Dup Soil (AKT-8)	Soil	3.0-3.5’	VOCs, PNAs, cadmium, chromium, lead
AKT-Dup W (AKT-1/TMW)	Groundwater	14.0-19.0’	VOCs, PNAs, MI 10 Metals
MS (AKT-3d)	Soil	17.0-17.5’	VOCs, PNAs, MI 10 Metals
MSD (AKT-3d)	Soil	17.0-17.5’	VOCs, PNAs, MI 10 Metals
MS (AKT-4/TMW)	Groundwater	5.0-10.0’	VOCs, PNAs, MI 10 Metals
MSD (AKT-4/TMW)	Groundwater	5.0-10.0’	VOCs, PNAs, MI 10 Metals
Methanol Blank	Methanol	NA	VOCs
Trip Blank	Water	NA	VOCs
Equipment Blank	Water	NA	VOCs, PNAs, MI 10 Metals, PFAS

The laboratory analyzed the samples for: (1) VOCs in accordance with USEPA Method 8260; (2) PNAs in accordance with USEPA Method 8270; (3) metals in accordance with USEPA Methods 200.8/245.5; and (4) PFAS in accordance with USEPA Method 8327.

4.0 Evaluation and Presentation of Results

4.1 Subsurface Conditions

The following sections summarize the physical soil and groundwater conditions at the subject property.

4.1.1 Soil and Groundwater Conditions based on Published Material

According to the United States Department of Agriculture, “*Soil Survey of Lapeer County, Michigan,”* the soil in the area is classified as the Wawasee loam, 2 to 6 percent slopes. This soil is described as *“well drained loam on moraines on till plains.”*

According to the Michigan Geological Survey Division’s publication, *“Quaternary Geology of Southern Michigan*,” the soil in the area is Lacustrine clay and silt, and is varved in some localities. This soil is

described as gray to dark reddish brown and is varved in some localities. The soil chiefly underlies extensive, flat, low-lying areas formerly inundated by glacial Great Lakes. The thickness ranges from 10 to 30 feet.

Saturated soil was encountered in four of the 10 soil boring locations at depths ranging between 7.5 and 17.5 feet bgs.

4.1.2 Soil and Groundwater Conditions based on Field Observations

During drilling activities, AKT Peerless encountered the following soil types:

- Asphalt, concrete, gravel, or topsoil from the ground surface to 0.5 feet bgs.
- SAND from 0.5 feet bgs cover to approximately 1.0 to 6.0 feet bgs in select borings. Banded layers of sand from 7.5 to 12.0 feet bgs, and 17.0 to 19.0 feet bgs in select borings. This sand consisted of fine to medium grain, brown and black in color, and contained gravel, trace coal, and slag in select borings.
- Clayey sand from 1.0 to 6.0 feet bgs in select borings. This silty sand consisted of fine to medium grain, brown in color, and contained gravel and trace coal.
- Sandstone from 10.5 to 11.5 feet bgs in soil boring, AKT-1. This sandstone was light brown in color.
- SANDY CLAY from 4.0 to 18.0 feet bgs in select borings. This sandy clay was low-stiff to medium stiff, brown in color, and contained gravel.
- SILTY Sand from 9.0 to 19.0 feet bgs in soil borings, AKT-1 and AKT-7. This silty sand was very fine to fine grained and was brown and gray in color.
- CLAY from 2.0 to 4.0 feet bgs, and 6.0 to 11.0 feet bgs in select borings. Banded layers of clay from 1.0 to 7.5 feet bgs, 10.0 to 12.0 feet bgs, as well as 16.0 to 17.0 feet bgs in select borings. Clay from 0.5 feet to 15.0 feet bgs in soil boring location AKT-10. This clay was low-stiff to medium stiffness, brown, and contained trace gravel.

AKT Peerless encountered groundwater in four soil borings at depths ranging between 7.5 and 17.5 feet bgs.

The subsurface soils at the property are consistent with the description of “Lacustrine clay and silt and are varved in some localities” as described in the *Quaternary Geology of Southern Michigan.* See Figure 2 for a Site Map with Sample Locations. See Appendix A for AKT Peerless’ Soil Boring Logs.

4.2 Laboratory Analytical Results

AKT Peerless collected soil and groundwater samples for the purpose of evaluating general site environmental conditions and support future land use planning. When appropriate, analytical results were compared with Michigan EGLE Generic RCC provided in Michigan Administrative Rules 299.1 through 299.50. AKT Peerless also compared the soil and groundwater laboratory analytical results to the EGLE Volatilization to Indoor Air Pathway (VIAP) Screening Levels.

4.2.1 Soil Analytical Results

AKT Peerless submitted 11 soil samples for laboratory analysis of select parameters including VOCs, PNAs, and MI 10 Metals, as well as four soil samples for laboratory analysis of VOCs, PNAs, cadmium, chromium, and lead. The results of the laboratory analyses of the soil samples are summarized in the table below:

Summary of Soil Analytical Results

Parameter	CAS Number	Sample Identification with Criteria Exceedance and Depth	Part 201 Residential Criteria Exceeded/ Established Criteria (µg/kg)	Maximum Concentration (µg/kg)/Sample Location
Arsenic	7440-38-2	AKT-1s (1.5-2.0') AKT-1d (9.5-10.0') AKT-2d (11.5-12.0') AKT-3s (1.0-1.5') AKT-4s (1.0-1.5') AKT-4d (7.0-7.5') AKT-5 (1.0-1.5')	DWP / 4,600 GSIP / 4,600 DC / 7,600	14,000 / AKT-1s
Chromium, Total	7440-47-3	AKT-1s (1.5-2.0') AKT-1d (9.5-10.0') AKT-2s (1.0-1.5') AKT-2d (11.5-12.0') AKT-3s (1.0-1.5') AKT-3d (17.0-17.5') AKT-4s (1.0-1.5') AKT-4d (7.0-7.5') AKT-5 (1.0-1.5') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-9 (2.0-2.5') AKT-10 (14.5-15.0') AKT-Dup Soil (3.0-3.5')	GSIP / 3,300	16,000 / AKT-5, AKT-8
Mercury, Total	7439-97-6	AKT-5 (1.0-1.5')	GSIP / 50 VIAP / 22	100 / AKT-5
Selenium	7782-49-2	AKT-1s (1.5-2.0') AKT-1d (9.5-10.0') AKT-2s (1.0-1.5') AKT-2d (11.5-12.0') AKT-3s (1.0-1.5') AKT-3d (17.0-17.5') AKT-4s (1.0-1.5') AKT-4d (7.0-7.5') AKT-5 (1.0-1.5')	GSIP / 400	1,900 / AKT-1s
Phenanthrene	85-01-8	AKT-1s (1.5-2.0') AKT-9 (2.0-2.5')	GSIP / 2,100 VIAP / 1,700	2,700 / AKT-1s
Benzene	71-43-2	AKT-1s (1.5-2.0')	VIAP /1.7	91 / AKT-1s

Parameter	CAS Number	Sample Identification with Criteria Exceedance and Depth	Part 201 Residential Criteria Exceeded/ Established Criteria (µg/kg)	Maximum Concentration (µg/kg)/Sample Location
Ethylbenzene	100-41-4	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-Dup Soil (3.0-3.5')	DWP / 1,500 GSIP / 360 VIAP / 12	33,000 / AKT-6
n-Heptane	142-82-5	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-Dup Soil (3.0-3.5')	VIAP / 130	15,000 / AKT-6
Hexane	110-54-3	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0')	VIAP / 25	12,000 / AKT-6
Isopropyl benzene	98-82-8	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-Dup Soil (3.0-3.5')	GSIP / 3,200 VIAP / 3.8	4,500 / AKT-6
Methylcyclopentane	96-37-7	AKT-1s (1.5-2.0') AKT-5 (1.0-1.5') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-Dup Soil (3.0-3.5')	VIAP / 29	11,000 / AKT-6
2-Methylnaphthalene	91-57-6	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-Dup Soil (3.0-3.5')	GSIP / 4,200 VIAP / 1,700	27,000 / AKT-6
Naphthalene	91-20-3	AKT-1s (1.5-2.0') AKT-5 (1.0-1.5') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-9 (2.0-2.5') AKT-Dup Soil (3.0-3.5')	GSIP / 730 VIAP / 67	18,000 / AKT-6
n-Propylbenzene	103-65-1	AKT-6 (11.5-12.0') AKT-7 (16.5-17.0')	DWP / 1,600 VIAP / 1,800	17,000 / AKT-6
2,2,4-Trimethylpentane	540-84-1	AKT-6 (11.5-12.0') AKT-7 (16.5-17.0')	C-Sat / 19,000 VIAP / 130	30,000 / AKT-6

Parameter	CAS Number	Sample Identification with Criteria Exceedance and Depth	Part 201 Residential Criteria Exceeded/ Established Criteria (µg/kg)	Maximum Concentration (µg/kg)/Sample Location
Toluene	108-88-3	AKT-6 (11.5-12.0')	DWP / 16,000 GSIP / 5,400 VIAP / 3,700	26,000 / AKT-6
1,2,3-Trimethylbenzene	526-73-8	AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-Dup Soil (3.0-3.5')	GSIP / 570 DWP / 1,800 VIAP / 270	34,000 / AKT-6
1,2,4-Trimethylbenzene	95-63-6	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-Dup Soil (3.0-3.5')	DWP / 2,100 GSIP / 570 C-Sat / 110,000 VIAP / 150	150,000 / AKT-6
1,3,5-Trimethylbenzene	108-67-8	AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-Dup Soil (3.0-3.5')	DWP / 1,800 GSIP / 1,100 VIAP / 100	45,000 / AKT-6
Xylenes	1330-20-7	AKT-1s (1.5-2.0') AKT-6 (11.5-12.0') AKT-7 (16.5-17.0') AKT-8 (3.0-3.5') AKT-Dup Soil (3.0-3.5')	DWP / 5,600 GSIP / 980 C-Sat / 150,000 VIAP / 280	160,000 / AKT-6

Notes:
Sample identification: AKT-# indicates soil boring and (#-#') indicates sample depth in feet.
µg/kg – microgram per kilogram
DWP – Drinking Water Protection Criteria
GSIP – Groundwater Surface Water Interface Protection Criteria
DC – Direct Contact Criteria
C-Sat – Soil Saturation Concentration Screening Levels
VIAP – Volatilization to Indoor Air Interim Action Screening Levels

The results of the laboratory analyses of metals in the soil samples identified concentrations of arsenic, chromium, mercury (total), and/or selenium in subsurface soils at soil boring locations AKT-1, AKT-2, AKT-3, AKT-4, AKT-5, AKT-6, AKT-7, AKT-8, AKT-9, and AKT-10 exceeding EGLE Part 201 Residential Drinking Water Protection (DWP) criteria, Groundwater Surface Water Interface Protection (GSIP) criteria, Direct Contact (DC) criteria, and EGLE September 2020 Residential VIAP screening levels. Additional metals were detected in excess of laboratory method detection limits (MDLs); however, were below EGLE Part 201 RCC.

The results of the laboratory analyses of PNAs in soil samples also identified concentrations of 2-methylnaphthalene, naphthalene, and/or phenanthrene in subsurface soils at soil boring locations AKT-1, AKT-5, AKT-6, AKT-7, AKT-8, and AKT-9 exceeding EGLE Part 201 GSIP criteria and EGLE September 2020

Residential VIAP screening levels. Additional PNAs were detected in excess of laboratory MDL; however, were below EGLE Part 201 RCC and EGLE September 2020 Residential VIAP screening levels.

The results of the laboratory analyses of VOCs in soil samples identified concentrations of benzene, ethylbenzene, n-heptane, hexane, isopropyl benzene, methylcyclopentane, 2-methylnaphthalene, naphthalene, n-propylbenzene, 2,2,4-trimethylpentane, toluene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and/or xylenes in subsurface soils at soil boring locations AKT-1, AKT-5, AKT-6, AKT-7, and AKT-8, exceeding EGLE Part 201 Residential DWP criteria, GSIP criteria, Soil Saturation Concentration (C-Sat) Screening Levels, and/or EGLE September 2020 Residential VIAP screening levels. Additional VOCs were detected in excess of laboratory MDL; however, were below EGLE Part 201 RCC and EGLE September 2020 Residential VIAP screening levels.

Refer to Figure 3 for a site map with soil analytical results exceeding EGLE Part 201 Generic RCC and EGLE September 2020 Residential VIAP screening levels. Refer to Table 1 for a summary of soil analytical results. Refer to Appendix B for a complete analytical laboratory report.

4.2.2 Groundwater Analytical Results

AKT Peerless submitted five groundwater samples for laboratory analysis of VOCs. The results of the laboratory analyses of the groundwater samples are summarized in the table below:

Summary of Groundwater Analytical Results

Parameter	CAS Number	Sample Identification with Criteria Exceedance and Depth	Part 201 Residential Criteria Exceeded/ Established Criteria (ug/L)	Maximum Concentration (ug/L)/Sample Location
Arsenic	7440-38-2	AKT-2/TMW (14-19') AKT-4/TMW (5-10') AKT-7/TMW (13-18')	DW / 10 GSI / 10	140 / AKT-7/TMW
Chromium, Total	7440-47-3	AKT-2/TMW (14-19') AKT-4/TMW (5-10')	GSI / 11	20 / AKT-4/TMW
Lead	7439-92-1	AKT-2/TMW (14-19') AKT-4/TMW (5-10') AKT-7/TMW (13-18')	DW / 4	36 / AKT-4/TMW
Benzene	71-43-2	AKT-7/TMW (13-18')	DW / 5.0 VIAP SG / 1.0 VIAP GNC / 28	180 / AKT-7/TMW
Ethylbenzene	100-41-4	AKT-7/TMW (13-18')	DW / 74 GSI / 18 VIAP SG / 2.8 VIAP GNC / 74	1,100 / AKT-7/TMW

Parameter	CAS Number	Sample Identification with Criteria Exceedance and Depth	Part 201 Residential Criteria Exceeded/ Established Criteria (ug/L)	Maximum Concentration (ug/L)/Sample Location
Isopropyl benzene	98-82-8	AKT-7/TMW (13-18')	GSI / 28 VIAP SG / 0.60 VIAP GNC / 15	36 / AKT-7/TMW
Methylcyclopentane	96-37-7	AKT-7/TMW	VIAP SG / 30	69 / AKT-7/TMW
2-Methylnaphthalene	91-57-6	AKT-7/TMW (13-18')	GSI / 19 VIAP SG / 66	140 / AKT-7/TMW
Naphthalene	91-20-3	AKT-7/TMW (13-18')	GSI / 11 VIAP SG / 4.2 VIAP GNC / 130	470 / AKT-7/TMW
n-Propylbenzene	103-65-1	AKT-7/TMW (13-18')	VIAP SG / 43	75 / AKT-7/TMW
Toluene	108-88-3	AKT-7/TMW (13-18')	DW / 790 GSI / 270 VIAP SG / 300	1,900 / AKT-7/TMW
1,2,3-Trimethylbenzene	526-73-8	AKT-7/TMW (13-18')	DW / 63 GSI / 17 VIAP SG / 43	260/ AKT-7/TMW
1,2,4-Trimethylbenzene	95-63-6	AKT-7/TMW (13-18')	DW / 63 GSI / 17 VIAP SG / 25 VIAP GNC / 670	840 / AKT-7/TMW
1,3,5-Trimethylbenzene	108-67-8	AKT-7/TMW (13-18')	DW / 72 GSI / 45 VIAP SG / 18	190 / AKT-7/TMW
PFOA	335-67-1	AKT-1/TMW (14-19')	DW / 0.008	0.014 / AKT-1/TMW

Notes:
Sample identification: AKT-#/TMW indicates soil boring location/temporary monitoring well and (#-#') indicates sample depth in feet.
ug/L – microgram per liter
DW – Drinking Water Criteria
GSI – Groundwater Surface Water Interface Criteria
VIAP SG - Volatilization to Indoor Air Pathway Shallow Groundwater
VIAP GNC - Volatilization to Indoor Air Pathway Screening Levels - Groundwater Not In Contact

The results of the laboratory analyses of metals in groundwater samples identified concentrations of arsenic, chromium, and/or lead at soil boring locations AKT-2/TMW, AKT-4/TMW, and AKT-7/TMW exceeding the EGLE Part 201 Residential Drinking Water (DW) criteria and/or Groundwater Surface

Water Interface (GSI) criteria. Additional metal compounds were detected above the laboratory MDLs; however, were below EGLE Part 201 RCC.

The results of the laboratory analyses of PNAs in groundwater samples identified concentrations 2-methylnaphthalene and naphthalene at soil boring location AKT-7/TMW exceeding the EGLE Part 201 Residential GSI criteria, and/or EGLE September 2020 Residential VIAP screening levels. No additional PNA compounds were detected above the laboratory MDL.

The results of the laboratory analyses of VOCs in groundwater samples identified concentrations of benzene, ethylbenzene, isopropyl benzene, methylcyclopentane, 2-methylnaphthalene, naphthalene, n-propylbenzene, toluene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at soil boring location AKT-7/TMW exceeding the EGLE Part 201 Residential DW criteria, GSI criteria, and/or EGLE September 2020 Residential VIAP screening levels. Additional VOC compounds were detected above laboratory MDLs; however, were below the EGLE Part 201 RCC and EGLE September 2020 Residential VIAP screening levels.

PFOA was detected at soil boring location AKT-1/TMW, exceeding EGLE Residential DW criteria. Additional PFAS were detected above the laboratory MDL at soil boring location AKT-1/TMW; however, were below EGLE Part 201 RCC.

Select metals were detected within the water sample collected from the on-site underground reservoir/cistern; however, were below the EGLE Part 201 RCC. All PNAs and VOCs were detected below the laboratory MDL. Prior to the collection of the reservoir/cistern sample, AKT Peerless lowered an Interface Probe into the underground reservoir/cistern to determine if multi-phase liquids were present. Based on AKT Peerless' observations and Interface Probe findings, no multi-phase liquids were present.

Based on laboratory analytical results, the subject property meets the definition of a "facility," as defined in Part 201.

Refer to Figure 4 for a site map with groundwater analytical results exceeding EGLE Part 201 RCC and EGLE September 2020 Residential VIAP screening levels. Refer to Table 2 for a summary of groundwater analytical results. Refer to Appendix B for a complete analytical laboratory report.

4.2.3 Quality Assurance/Quality Control Analytical Results

AKT Peerless collected QA/QC samples in accordance with AKT Peerless' Quality Assurance Project Plan, dated January 23, 2023, and the EGLE - RRD Operational Memorandum No. 2, Attachment 5.

Soil

The soil duplicate samples were collected from soil boring AKT-8 and were within the expected limits for VOCs, PNAs, and metals. The MS/MSD samples were within the expected limits for VOCs, PNAs, and metals.

Groundwater

The groundwater duplicate sample collected from the temporary monitoring well location AKT-1/TMW was within the expected limits for VOCs, PNAs, and metals. The MS/MSD samples were within the expected limits for VOCs, PNAs, and metals.

5.0 Summary, Conclusions, and Recommendations

The following sections summarize the investigation conducted by AKT Peerless at the subject property.

5.1 Summary of Environmental Concerns

Based on AKT Peerless' July 2023 Phase I ESA, the following environmental concerns were identified:

- Open LUST on the subject property with *facility* level contamination Historical use of the northwestern portion of Parcel A of the subject property as a gasoline filling station.
- Oil staining within the subject building.
- Coal storage and portion of a rail spur Historical use of the southern portion of Parcel A of the subject property as an automotive dealership/service garage.
- Northwestern adjoining property operated as a foundry and machine shop with groundwater direction southeast towards the subject property.
- *Facility* level contamination on northeastern adjoining property with two open LUST incidents.
- Railroad right-of way on the southern adjoining property.

5.2 Summary of Subsurface Investigation

On September 20 and 21, 2023, AKT Peerless conducted a subsurface investigation at the subject property to further evaluate environmental concerns identified during previous environmental investigations. AKT Peerless: (1) drilled 10 soil borings, (2) installed four temporary monitoring wells, and (3) collected a water sample from an 80,000-gallon underground reservoir and cistern, and (4) collected soil and groundwater samples for laboratory analyses. AKT Peerless submitted soil and groundwater samples for laboratory analyses of select parameters, including VOCs, PNAs, MI 10 Metals, and/or PFAS.

5.3 Conclusions

AKT Peerless conducted soil and groundwater sampling in areas most likely to be impacted by contaminants based on the past use of the subject property. The results of the investigation indicated the following:

SOIL

- Arsenic was detected in subsurface soils at soil boring locations AKT-1, AKT-2, AKT-3, AKT-4, and AKT-5, at concentrations exceeding EGLE Part 201 Generic RCC for DWP, GSIP, and/or DC criteria.
- Chromium was detected in subsurface soils at soil boring locations AKT-1, AKT-2, AKT-3, AKT-4, AKT-5, AKT-6, AKT-7, AKT-8, AKT-9, and AKT-10 at concentrations exceeding EGLE Part 201 Generic RCC for GSIP criteria.
- Mercury, total, was detected in subsurface soils at soil boring locations AKT-5 at a concentration exceeding EGLE Part 201 Generic RCC for GSIP criteria and EGLE September 2020 Residential VIAP screening levels.
- Selenium was detected in subsurface soils at soil boring locations AKT-1, AKT-2, AKT-3, AKT-4, and AKT-5 at concentrations exceeding EGLE Part 201 Generic RCC for GSIP criteria.
- Phenanthrene was detected in subsurface soils at soil boring locations AKT-1 and AKT-9 at concentrations exceeding EGLE Part 201 Generic RCC for GSIP criteria and EGLE September 2020 Residential VIAP screening levels.

- Benzene was detected in subsurface soils at soil boring location AKT-1 at a concentration exceeding EGLE September 2020 Residential VIAP screening levels.
- Ethylbenzene was detected in subsurface soils at soil boring locations AKT-1, AKT-6 and AKT-7 at concentrations exceeding EGLE Part 201 Generic RCC for DWP criteria, GSIP criteria, and/or EGLE September 2020 Residential VIAP screening levels.
- n-Heptane was detected in subsurface soils at soil boring locations AKT-1, AKT-6 and AKT-7 at concentrations exceeding EGLE September 2020 Residential VIAP screening levels.
- Hexane was detected in subsurface soils at soil boring locations AKT-1, AKT-6 and AKT-7 at concentrations exceeding EGLE September 2020 Residential VIAP screening levels.
- Isopropyl benzene was detected in subsurface soils at soil boring location AKT-1, AKT-6, AKT-7 and AKT-8 at a concentration exceeding EGLE Part 201 Generic RCC for GSIP criteria and/or EGLE September 2020 Residential VIAP screening levels.
- 2-Methylnaphthalene was detected in subsurface soils at soil boring locations: AKT-1, AKT-6, AKT-7, and AKT-8, at concentrations exceeding EGLE Part 201 Generic RCC for GSIP criteria and/or EGLE September 2020 Residential VIAP screening levels.
- Naphthalene was detected in subsurface soils at soil boring locations AKT-1, AKT-5, AKT-6, AKT-7, AKT-8, and AKT-9 at concentrations exceeding EGLE Part 201 Generic RCC for GSIP criteria and/or EGLE September 2020 Residential VIAP screening levels.
- n-Propylbenzene was detected in subsurface soils at soil boring locations AKT-6 and AKT-7 at concentrations exceeding EGLE Part 201 Generic RCC for DWP criteria and EGLE September 2020 Residential VIAP screening levels.
- 2,2,4-Trimethylpentane was detected in subsurface soils at soil boring location AKT-6 and AKT-7 at concentrations exceeding EGLE Part 201 Generic RCC for C-Sat screening levels and/or EGLE September 2020 Residential VIAP screening levels.
- Toluene was detected in subsurface soils at soil boring location AKT-6 at a concentration exceeding EGLE Part 201 Generic RCC for DWP criteria, GSIP criteria, and EGLE September 2020 Residential VIAP screening levels.
- 1,2,3-Trimethylbenzene was detected in subsurface soils at soil boring locations AKT-6, AKT-7, and AKT-8 at concentrations exceeding EGLE Part 201 Generic RCC for DWP criteria, GSIP criteria, and/or EGLE September 2020 Residential VIAP screening levels.
- 1,2,4-Trimethylbenzene was detected in subsurface soils at soil boring locations AKT-1, AKT-5, AKT-6, AKT-7, and AKT-8 at concentrations exceeding EGLE Part 201 Generic RCC for DWP criteria, GSIP, C-sat screening levels, and/or EGLE September 2020 Residential VIAP screening levels.
- 1,3,5-Trimethylbenzene was detected in subsurface soils at soil boring locations AKT-6 and AKT-7 at concentrations exceeding EGLE Part 201 Generic RCC for DWP criteria, GSIP criteria, and/or EGLE September 2020 Residential VIAP screening levels.
- Xylenes was detected in subsurface soils at soil boring locations AKT-1, AKT-6, AKT-7, and AKT-8 at concentrations exceeding EGLE Part 201 Generic RCC for DWP criteria, GSIP criteria, C-Sat screening levels, and/or EGLE September 2020 Residential VIAP screening levels.

GROUNDWATER

- Concentrations of arsenic were identified in groundwater samples AKT-2/TMW, AKT-4/TMW, and AKT-7/TMW exceeding EGLE RCC for DW criteria and GSI criteria.
- Concentrations of chromium were identified in groundwater samples AKT-2/TMW and AKT-4/TMW exceeding EGLE RCC for GSI criteria.

- Concentrations of lead were identified in groundwater samples AKT-2/TMW, AKT-4/TMW, and AKT-7/TMW exceeding EGLE RCC for DW criteria.
- A concentration of benzene was identified in groundwater sample AKT-7/TMW exceeding the EGLE RCC for DW criteria and EGLE September 2020 Residential VIAP screening levels.
- A concentration of ethylbenzene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for DW, GSI criteria, and EGLE September 2020 Residential VIAP screening levels.
- A concentration of isopropyl benzene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for GSI criteria and EGLE September 2020 Residential VIAP screening levels.
- A concentration of methylcyclopentane was identified in groundwater sample AKT-7/TMW exceeding EGLE September 2020 Residential VIAP screening levels.
- A concentration of 2-methylnaphthalene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for GSI criteria and EGLE September 2020 Residential VIAP screening levels.
- A concentration of naphthalene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for GSI criteria and EGLE September 2020 Residential VIAP screening levels.
- A concentration of n-Propylbenzene was identified in groundwater sample AKT-7/TMW exceeding EGLE September 2020 Residential VIAP screening levels.
- A concentration of toluene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for DW criteria, GSI criteria, and EGLE September 2020 Residential VIAP screening levels.
- A concentration of 1,2,3-trimethylbenzene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for DW criteria, GSI criteria, and EGLE September 2020 Residential VIAP screening levels.
- A concentration of 1,2,4-trimethylbenzene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for DW criteria, GSI criteria, and EGLE September 2020 Residential VIAP screening levels.
- A concentration of 1,3,5-trimethylbenzene was identified in groundwater sample AKT-7/TMW exceeding EGLE RCC for DW criteria, GSI criteria, and EGLE September 2020 Residential VIAP screening levels.
- A concentration of PFOA was identified in groundwater sample AKT-1/TMW exceeding EGLE RCC for DW criteria.

Based on laboratory analytical results, the subject property meets the definition of a *facility*, as defined in Part 201 of the NREPA, Michigan PA 451, 1994, as amended.

5.4 Recommendations

AKT Peerless recommends the following for the current owner and any future owner/operator(s) at the subject property.

5.4.1 Current Owner

Based on analytical results, the subject property meets the definition of a facility, AKT Peerless recommends conducting a Section 20107(a) Compliance Analysis to assure compliance with Due Care obligations. Due Care obligations include:

- Undertaking measures to prevent exacerbation of existing contamination.
- Exercising due care by undertaking response activities to mitigate unacceptable exposure to hazardous substances, mitigate fire and explosion hazards due to hazardous substances, and allow for the intended use of the subject property in a manner that protects health and safety.

- Taking reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that could result from those acts or omissions.
- Provide notifications to EGLE and others in regard to mitigating fire and explosions hazards, discarded or abandoned containers, contamination migrating beyond property boundaries, as applicable.
- Comply with any land use or resource use restrictions established or relied on in connection with the response activities at the facility.
- Not impede the effectiveness or integrity of any land use or resource restriction employed at the facility in connection with response activities.

5.4.2 Future Owner(s)/Operator(s)

In addition to those recommendations provided in Section 5.4.1, AKT Peerless recommends any future owner(s)/operator(s) prepare a Baseline Environmental Assessment (BEA) report. Section 26(1)(c) of Part 201 provides certain liability protections to a person, who becomes an owner or operator of a *facility* on, or after June 5, 1995, if they comply with both of the following, or unless other defenses apply: a BEA is conducted prior to or within 45 days after the earlier of the date of purchase, occupancy, or foreclosure, and the owner or operator discloses the results of the BEA to EGLE and subsequent purchaser or transferee.

In addition, because the subject property meets the definition of a facility, AKT Peerless recommends conducting a Section 20107(a) Compliance Analysis to assure compliance with Due Care obligations. Due Care obligations include:

- Undertaking measures to prevent exacerbation of existing contamination.
- Exercising due care by undertaking response activities to mitigate unacceptable exposure to hazardous substances, mitigate fire and explosion hazards due to hazardous substances, and allow for the intended use of the subject property in a manner that protects health and safety.
- Taking reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that could result from those acts or omissions.
- Provide notifications to EGLE and others in regard to mitigating fire and explosions hazards, discarded or abandoned containers, contamination migrating beyond property boundaries, as applicable.
- Comply with any land use or resource use restrictions established or relied on in connection with the response activities at the facility.
- Not impede the effectiveness or integrity of any land use or resource restriction employed at the facility in connection with response activities.

A future owner/operator may be required to conduct additional subsurface investigation to further evaluate for exposure pathways and screening levels at the subject property (i.e., drinking water, direct contact, indoor air inhalation, soil saturation) in connection with known contamination to comply with due care obligations.

6.0 Limitations

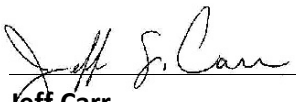
The information and opinions obtained in this report are for the exclusive use of EGLE and City of Imlay City. No distribution to or reliance by other parties may occur without the express written permission of AKT Peerless. AKT Peerless will not distribute this report without your written consent or as required by

law or by a Court order. The information and opinions contained in the report are given in light of that assignment. The report must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein. Any third parties, who have been extended the right to rely on the contents of this report by AKT Peerless (which is expressly required prior to any third-party release), expressly agrees to be bound by the original terms and conditions entered into by AKT Peerless and EGLE.

Subject to the above and the terms and conditions, AKT Peerless accepts responsibility for the competent performance of its duties in executing the assignment and preparing reports in accordance with the normal standards of the profession but disclaims any responsibility for consequential damages. Although AKT Peerless believes that results contained herein are reliable, AKT Peerless cannot warrant or guarantee that the information provided is exhaustive or that the information provided by EGLE, the City of Imlay City, or third parties is complete or accurate.

7.0 Signatures of Environmental Professionals

The following individuals contributed to the completion of this report.



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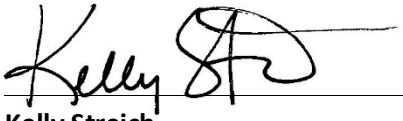

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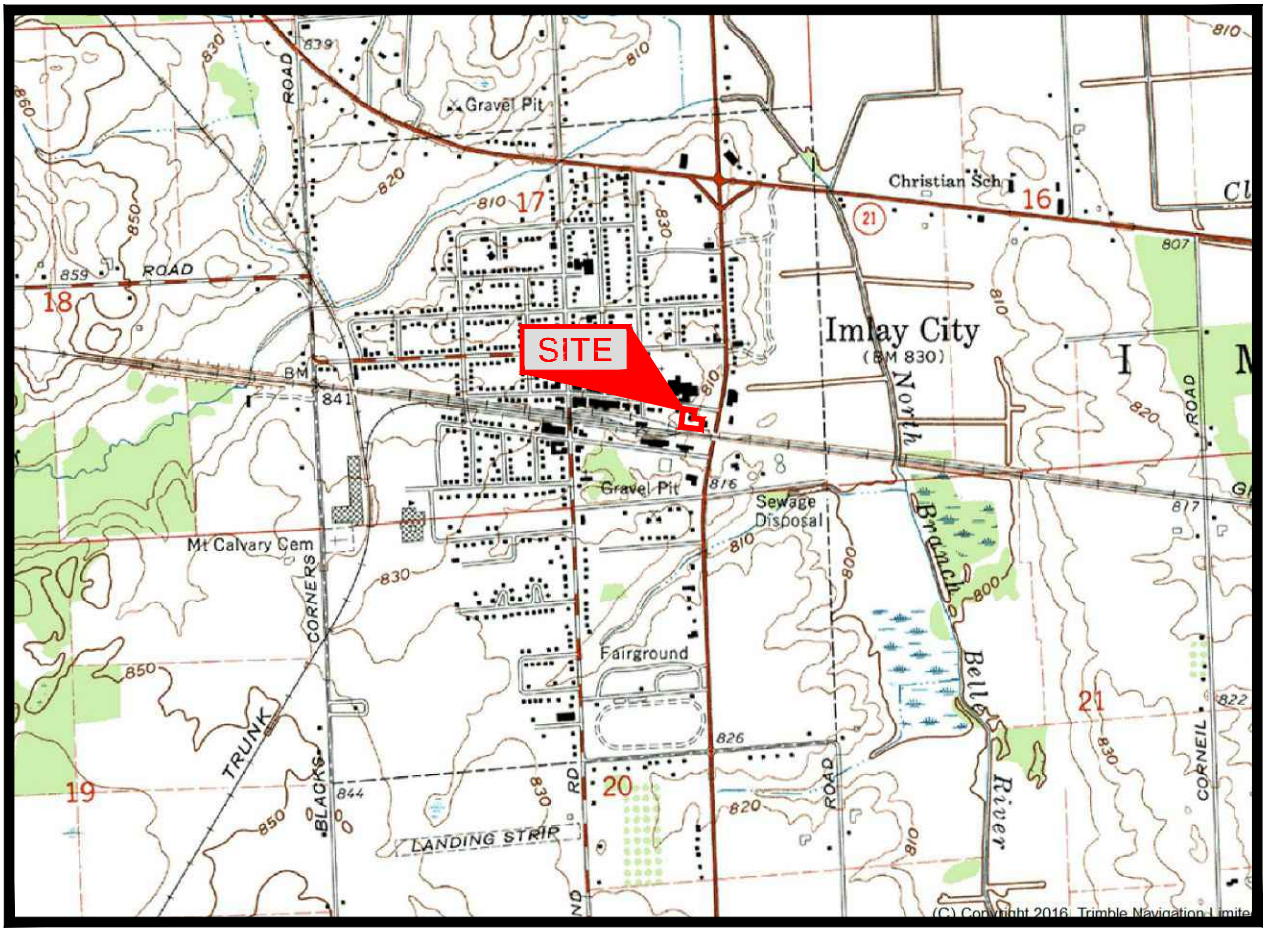
FIGURES

IMLAY CITY QUADRANGLE

MICHIGAN - LAPEER COUNTY

7.5 MINUTE SERIES (TOPOGRAPHIC)



T.7 N.-R.12 E.

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

MICHIGAN
QUADRANGLE LOCATION

IMAGE TAKEN FROM 1963 U.S.G.S. TOPOGRAPHIC MAP

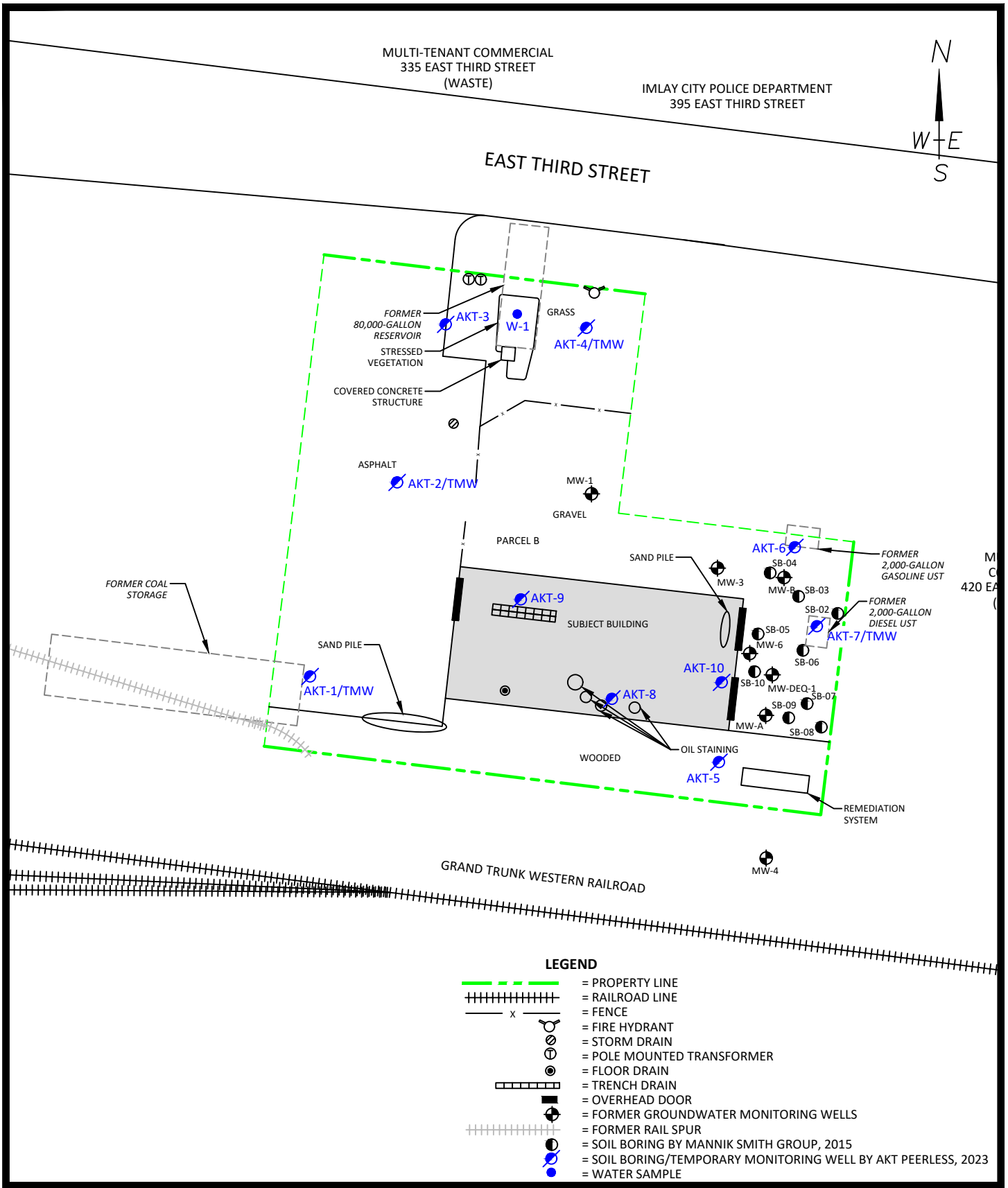
AKT PEERLESS
ENVIRONMENTAL SERVICES

TOPOGRAPHIC LOCATION MAP

406 EAST THIRD STREET
IMLAY CITY, MICHIGAN
PROJECT NUMBER: 3218s2-7-20

DRAWN BY: SES
DATE: 06/15/2023

FIGURE 1



AKT PEERLESS
ENVIRONMENTAL SERVICES

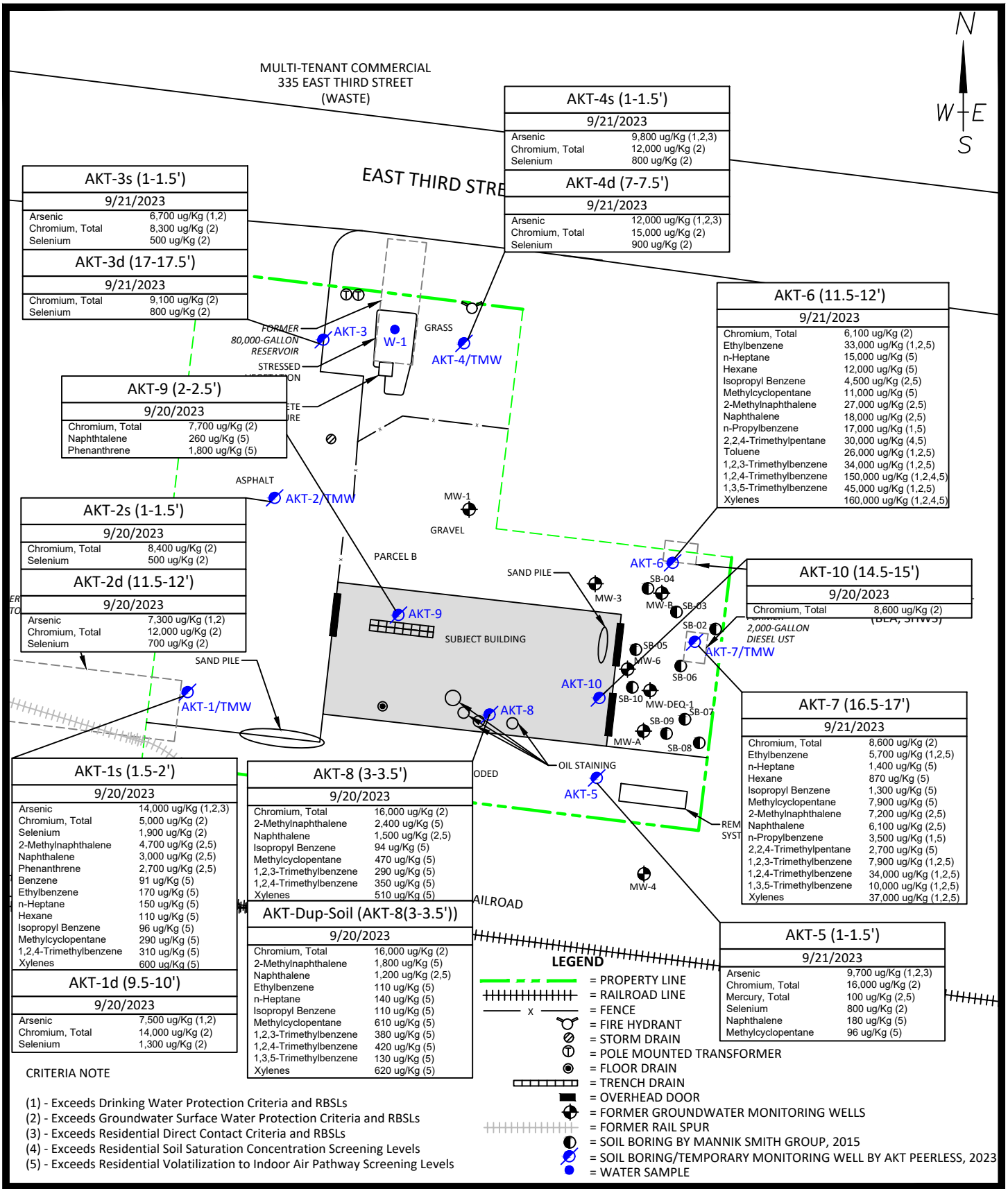
SITE MAP WITH SAMPLE LOCATIONS

406 EAST THIRD STREET
IMLAY CITY, MICHIGAN
PROJECT NUMBER: 3218s2-7-20

DRAWN BY: SES
DATE: 09/27/2023

0 25 50
SCALE: 1" = 50'

FIGURE 2



AKT PEERLESS ENVIRONMENTAL SERVICES

SITE MAP WITH SOIL RESULTS EXCEEDING EGLE RCC

406 EAST THIRD STREET
IMLAY CITY, MICHIGAN
PROJECT NUMBER: 3218s2-7-20

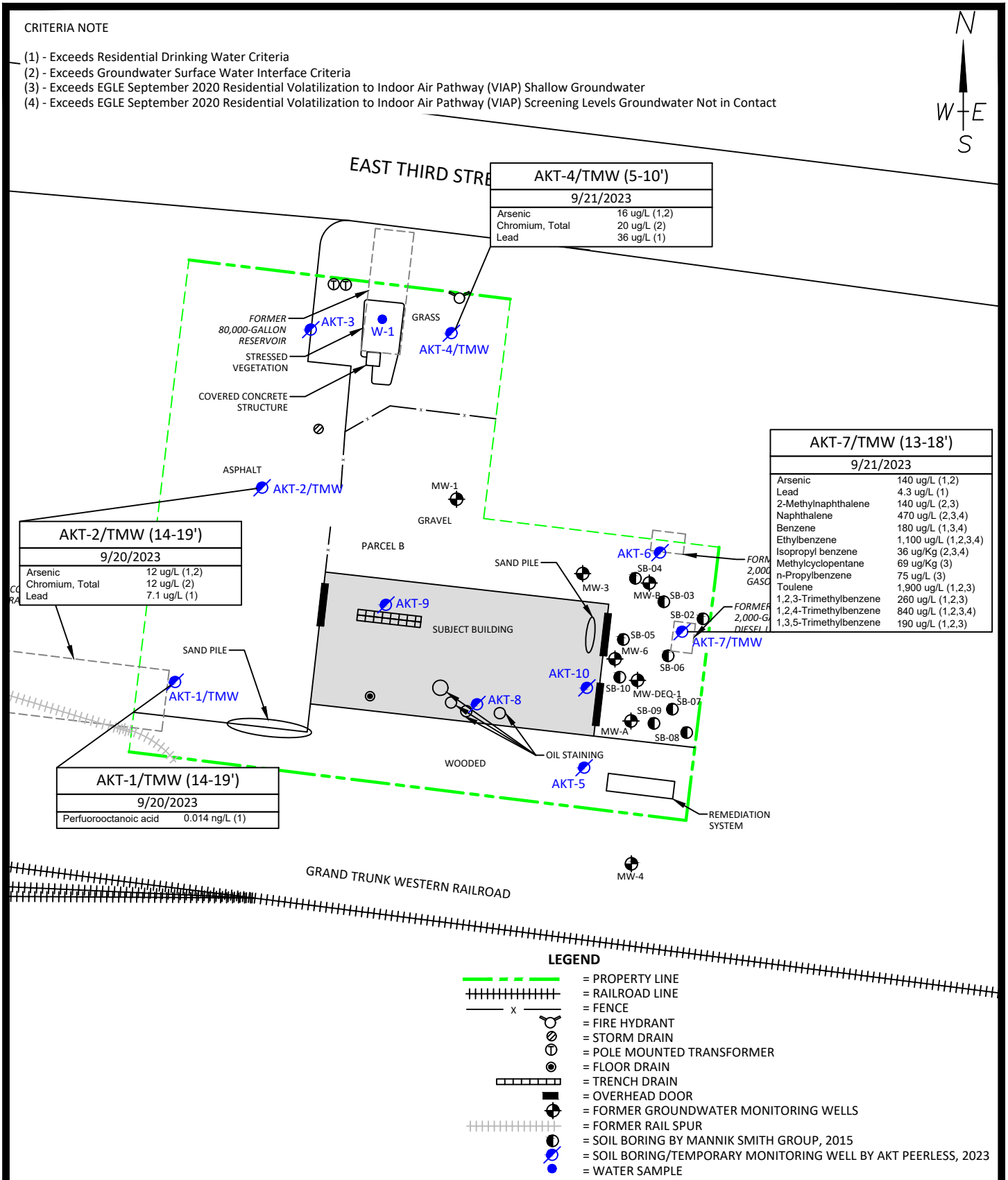
DRAWN BY: SES
DATE: 06/29/2023

0 25 50
SCALE: 1" = 50'

FIGURE 3

CRITERIA NOTE

(1) - Exceeds Residential Drinking Water Criteria
(2) - Exceeds Groundwater Surface Water Interface Criteria
(3) - Exceeds EGLE September 2020 Residential Volatilization to Indoor Air Pathway (VIAP) Shallow Groundwater
(4) - Exceeds EGLE September 2020 Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels Groundwater Not in Contact



LEGEND

- = PROPERTY LINE
- = RAILROAD LINE
- = FENCE
- = FIRE HYDRANT
- = STORM DRAIN
- = POLE MOUNTED TRANSFORMER
- = FLOOR DRAIN
- = TRENCH DRAIN
- = OVERHEAD DOOR
- = FORMER GROUNDWATER MONITORING WELLS
- = FORMER RAIL SPUR
- = SOIL BORING BY MANNIK SMITH GROUP, 2015
- = SOIL BORING/TEMPORARY MONITORING WELL BY AKT PEERLESS, 2023
- = WATER SAMPLE

AKT PEERLESS ENVIRONMENTAL SERVICES

SITE MAP WITH GROUNDWATER RESULTS EXCEEDING EGLE RCC

406 EAST THIRD STREET
IMLAY CITY, MICHIGAN
PROJECT NUMBER: 3218s2-7-20

DRAWN BY: SES
DATE: 06/29/2023

0 25 50
SCALE: 1" = 50'

FIGURE 4

AKT PEERLESS
ENVIRONMENTAL SERVICES

TABLES

AKT PEERLESS
ENVIRONMENTAL SERVICES

Table 1: Summary of EGLE RCC Soil Analytical Results
406 East 3rd Street
Imlay City, MIchigan
AKT Peerless Project No. 3218s2-3-20

Parameters* *(Refer to detailed laboratory report for method reference data)*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria and RBSLs	Residential Soil Volatilization to Indoor Air Inhalation Criteria and RBSLs	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC) and RBSLs	Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation Criteria and RBSLs	Residential Direct Contact Criteria and RBSLs	Residential Soil Saturation Concentration Screening Levels	Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels	Sample Location	AKT-1s	AKT-1d	AKT-2s	AKT-2d	AKT-3s	AKT-3d
													Collection Date	9/20/2023	9/20/2023	9/20/2023	9/20/2023	9/21/2023	9/21/2023
													Depth	1.5-2.0'	9.5-10.0'	1.0-1.5'	11.5-12.0'	1.0-1.5'	17.0-17.5'
Metals ug/Kg																			
Arsenic	7440-38-2	5,800	**4,600**	**4,600**	NLV	NLV	NLV	NLV	7.2E+5	**7,600**	NA	NA		**14,000**	**7,500**	5,300	**7,300**	**6,700**	**4,600**
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7	NA	NA		**43,000**	**23,000**	**31,000**	**22,000**	**17,000**	**19,000**
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5	NA	NA		<200	<200	<200	<200	<200	<200
Chromium, Total	7440-47-3	NA	30,000	**3,300**	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6	NA	NA		**5,000**	**14,000**	**8,400**	**12,000**	**8,300**	**9,100**
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7	NA	NA		**19,000**	**16,000**	**5,700**	**9,800**	**12,000**	**7,200**
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5	NA	NA		**48,000**	**6,500**	**6,700**	**4,800**	**16,000**	**3,600**
Mercury, Total	7439-97-6	130	1,700	**50 (M); 1.2**	48,000	52,000	52,000	52,000	2.0E+7	1.6E+5	NA	**22 (M) nc**		<60	<60	<60	<60	<50	<60
Selenium (B)	7782-49-2	410	4,000	**400**	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6	NA	NA		**1,900**	**1,300**	**500**	**700**	**500**	**800**
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	NLV	NLV	NLV	NLV	6.7E+6	2.5E+6	NA	NA		<100	<100	<100	<100	<100	<100
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8	NA	NA		**54,000**	**37,000**	**25,000**	**30,000**	**40,000**	**22,000**
Semivolatiles, PNAs ug/Kg																			
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.9E+8	8.1E+7	8.1E+7	8.1E+7	1.4E+10	4.1E+7	NA	200,000		<120	<120	<110	<110	<110	<110
Acenaphthylene	208-96-8	NA	5,900	ID	1.6E+6	2.2E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	NA	DATA		<120	<120	<110	<110	<110	<110
Anthracene	120-12-7	NA	41,000	ID	1.0E+9 (D)	1.4E+9	1.4E+9	1.4E+9	6.7E+10	2.3E+8	NA	13,000,000		**200**	<120	<110	<110	<110	<110
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA	160,000		**620**	<120	<110	<110	<110	<110
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	NLV	NLV	NLV	NLV	1.5E+6	2,000	NA	NA		**560**	<230	<220	<230	<22000	<220
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	ID	ID	ID	ID	20,000	NA	NA		**1,100**	<230	<220	<230	<22000	<220
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLV	NLV	NLV	NLV	8.0E+8	2.5E+6	NA	NA		<230	<230	<220	<230	<22000	<220
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	2.0E+5	NA	NA		**330**	<230	<220	<230	<22000	<220
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	ID	ID	ID	ID	2.0E+6	NA	NA		**1,000**	<120	<110	<110	<110	<110
Dibenzo(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	2,000	NA	NA		<230	<230	<220	<230	<22000	<220
Fluoranthene	206-44-0	NA	7.3E+5	5,500	1.0E+9 (D)	7.4E+8	7.4E+8	7.4E+8	9.3E+9	4.6E+7	NA	NA		**1,400**	<120	<110	<110	**220**	<110
Fluorene	86-73-7	NA	3.9E+5	5,300	5.8E+8	1.3E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	NA	470,000		<120	<120	<110	<110	<110	<110
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA	NA		<230	<230	<220	<230	<22000	<220
2-Methylnaphthalene	91-57-6	NA	57,000	**4,200**	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA	**1700 nc**		**4,700**	<290	<280	<280	<270	<270
Naphthalene	91-20-3	NA	35,000	**730**	2.5E+5	3.0E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	NA	**67 (M) ca**		**3,000**	<120	<110	<110	<110	<110
Phenanthrene	85-01-8	NA	56,000	**2,100**	2.8E+6	1.6E+5	1.6E+5	1.6E+5	6.7E+6	1.6E+6	NA	**1700 nc**		**2,700**	<120	<110	<110	**120**	<110
Pyrene	129-00-0	NA	4.8E+5	ID	1.0E+9 (D)	6.5E+8	6.5E+8	6.5E+8	6.7E+9	2.9E+7	NA	25,000,000		**1,200**	<120	<110	<110	**290**	<110
Volatiles, VOCs ug/Kg																			
Benzene (I)	71-43-2	NA	100	4,000 (X)	1,600	13,000	34,000	79,000	3.8E+8	1.8E+5	4.0E+5	**1.7 (M) ca**		**91**	<65	<61	<64	<60	<57
n-Butylbenzene	104-51-8	NA	1,600	ID	ID	ID	ID	ID	2.0E+9	2.5E+6	1.0E+7	550 nc		<72	<65	<61	<64	<60	<57
sec-Butylbenzene	135-98-8	NA	1,600	ID	ID	ID	ID	ID	4.0E+8	2.5E+6	1.0E+7	3800 nc		<72	<65	<61	<64	<60	<57
Ethylbenzene (I)	100-41-4	NA	**1,500**	**360**	87,000	7.2E+5	1.0E+6	2.2E+6	1.0E+10	2.2E+7 (C)	1.4E+5	**12 (M) ca**		**170**	<65	<61	<64	<60	<57
n-Heptane	142-82-5	NA	NA	4.6E+7 (C)	1.5E+06 (C)	2.10E+07	4.40E+07	1.00E+08	2.40E+11	9.9E+8 (C)	2.40E+05	**130 nc**		**150**	<65	<61	<64	<60	<57
Hexane	110-54-3	NA	180,000 (C)	NA	5.1E+5 (C)	3,000,000	3.20E+06	6.20E+06	1.30E+10	92,000,000 (C)	44,000	**25 nc**		**110**	<65	<61	<64	<60	<57
Isopropyl benzene	98-82-8	NA	91,000	**3,200**	4.0E+5 (C)	1.7E+6	1.7E+6	2.8E+6	5.8E+9	2.5E+7 (C)	3.9E+5	**3.8 (M) ca**		**96**	<65	<61	<64	<60	<57
Methylcyclopentane (I)	96-37-7	NA	ID	NA	92,000	2.3E+6	8.2E+6	2.0E+7	4.7E+10	ID	3.5E+5	**29 (M) nc**		**290**	<65	<61	<64	<60	<57
2-Methylnaphthalene	91-57-6	NA	57,000	**4,200**	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA	**1,700 nc**		**510**	<330	<300	<320	<300	<290
Naphthalene	91-20-3	NA	35,000	**730**	2.70E+06	1.50E+06	1.50E+06	1.50E+06	6.70E+08	8.10E+06	NA	**67 (M) ca**		**500**	<330	<300	<320	<300	<290
n-Propylbenzene (I)	103-65-1	NA	**1,600**	ID	ID	ID	ID	ID	1.3E+9	2.5E+6	1.0E+7	**1,800 (DD) dev**		**110**	<65	<61	<64	<60	<57
2,2,4-Trimethylpentane	540-84-1	NA	ID	NA	1.1E+5 (C)	5.2E+6	3.9E+7	9.6E+7	2.3E+11	ID	**19,000**	**130 (M) nc**		<360	<330	<300	<320	<300	<290
Toluene (I)	108-88-3	NA	**16,000**	**5,400**	3.3E+5 (C)	2.8E+6	5.1E+6	1.2E+7	2.7E+10	5.0E+7 (C)	2.5E+5	**3,700 nc**		**510**	<65	<61	<64	<60	<57
1,2,3-Trimethylbenzene (I)	526-73-8	NA	**1,800**	**570**	2.60E+06	1.60E+07	3.80E+08	3.80E+08	8.20E+10	3.20E+07	94,000	**270 (JT) nc**		**130**	<65	<61	<64	<60	<57
1,2,4-Trimethylbenzene (I)	95-63-6	NA	**2,100**	**570**	4.30E+06	2.10E+07	5.00E+08	5.00E+08	8.20E+10	3.20E+07	**1.10E+05**	**150 (JT) nc**		**310**	<65	<61	<64	<60	<57
1,3,5-Trimethylbenzene (I)	108-67-8	NA	**1,800**	**1,100**	2.60E+06	1.60E+07	3.80E+08	3.80E+08	8.20E+10	3.20E+07	94,000	**100 (JT) nc**		**90**	<65	<61	<64	<60	<57
Xylenes (I)	1330-20-7	NA	**5,600**	**980**	6.3E+6 (C)	4.60E+07	6.10E+07	1.30E+08	2.90E+11	4.1E+8 (C)	**1.50E+05**	**280 (J) nc**		**600**	<130	<120	<130	<120	<110
All Remaining VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies		BDL	BDL	BDL	BDL	BDL	BDL

AKT PEERLESS
ENVIRONMENTAL SERVICES

Table 1: Summary of EGLE RCC Soil Analytical Results
406 East 3rd Street
Imlay City, MIchigan
AKT Peerless Project No. 3218s2-3-20

Parameters* *(Refer to detailed laboratory report for method reference data)*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria and RBSLs	Residential Soil Volatilization to Indoor Air Inhalation Criteria and RBSLs	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC) and RBSLs	Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation Criteria and RBSLs	Residential Direct Contact Criteria and RBSLs	Residential Soil Saturation Concentration Screening Levels	Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels	Sample Location	AKT-4s	AKT-4d	AKT-5	AKT-6	AKT-7	AKT-8
													Collection Date	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/20/2023
													Depth	1.0-1.5'	7.0-7.5'	1.0-1.5'	11.5-12.0'	16.5-17.0'	3.0-3.5'
Metals ug/Kg																			
Arsenic	7440-38-2	5,800	**4,600**	**4,600**	NLV	NLV	NLV	NLV	7.2E+5	**7,600**	NA	NA		**9,800**	**12,000**	**9,700**	**4,000**	**3,700**	NS
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7	NA	NA		**40,000**	**45,000**	**43,000**	**10,000**	**10,000**	NS
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5	NA	NA		<200	<200	<200	<200	<200	<200
Chromium, Total	7440-47-3	NA	30,000	**3,300**	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6	NA	NA		**12,000**	**15,000**	**16,000**	**6,100**	**8,600**	**16,000**
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7	NA	NA		**11,000**	**14,000**	**19,000**	**4,800**	**4,400**	NS
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5	NA	NA		**14,000**	**9,200**	**64,000**	**3,100**	**3,800**	**130,000**
Mercury, Total	7439-97-6	130	1,700	**50 (M); 1.2**	48,000	52,000	52,000	52,000	2.0E+7	1.6E+5	NA	**22 (M) nc**		<60	<60	**100**	<50	<60	NS
Selenium (B)	7782-49-2	410	4,000	**400**	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6	NA	NA		**800**	**900**	**800**	**400**	**400**	NS
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	NLV	NLV	NLV	NLV	6.7E+6	2.5E+6	NA	NA		<100	<100	<100	<100	<100	NS
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8	NA	NA		**38,000**	**40,000**	**74,000**	**26,000**	**16,000**	NS
Semivolatiles, PNAs ug/Kg																			
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.9E+8	8.1E+7	8.1E+7	8.1E+7	1.4E+10	4.1E+7	NA	200,000		<110	<120	<110	<110	<110	<140
Acenaphthylene	208-96-8	NA	5,900	ID	1.6E+6	2.2E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	NA	DATA		<110	<120	<110	<110	<110	<140
Anthracene	120-12-7	NA	41,000	ID	1.0E+9 (D)	1.4E+9	1.4E+9	1.4E+9	6.7E+10	2.3E+8	NA	13,000,000		<110	<120	<110	<110	<110	**170**
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA	160,000		<110	<120	**160**	<110	<110	**640**
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	NLV	NLV	NLV	NLV	1.5E+6	2,000	NA	NA		<220	<230	<2300	<220	<230	**580**
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	ID	ID	ID	ID	20,000	NA	NA		<220	<230	<2300	<220	<230	**1,300**
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLV	NLV	NLV	NLV	8.0E+8	2.5E+6	NA	NA		<220	<230	<2300	<220	<230	<280
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	2.0E+5	NA	NA		<220	<230	<2300	<220	<230	**360**
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	ID	ID	ID	ID	2.0E+6	NA	NA		**140**	<120	**200**	<110	<110	**1,100**
Dibenzo(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	2,000	NA	NA		<220	<230	<2300	<220	<230	<280
Fluoranthene	206-44-0	NA	7.3E+5	5,500	1.0E+9 (D)	7.4E+8	7.4E+8	7.4E+8	9.3E+9	4.6E+7	NA	NA		**180**	<120	**310**	<110	<110	**1,100**
Fluorene	86-73-7	NA	3.9E+5	5,300	5.8E+8	1.3E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	NA	470,000		<110	<120	<110	<110	<110	<140
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA	NA		<220	<230	<2300	<220	<230	<280
2-Methylnaphthalene	91-57-6	NA	57,000	**4,200**	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA	**1700 nc**		<280	<290	<280	**8,800**	**5,400**	**2,400**
Naphthalene	91-20-3	NA	35,000	**730**	2.5E+5	3.0E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	NA	**67 (M) ca**		<110	<120	**180**	**3,300**	**3,100**	**1,500**
Phenanthrene	85-01-8	NA	56,000	**2,100**	2.8E+6	1.6E+5	1.6E+5	1.6E+5	6.7E+6	1.6E+6	NA	**1700 nc**		<110	<120	**290**	<110	<110	**1,700**
Pyrene	129-00-0	NA	4.8E+5	ID	1.0E+9 (D)	6.5E+8	6.5E+8	6.5E+8	6.7E+9	2.9E+7	NA	25,000,000		**140**	<120	**410**	<110	<110	**1,100**
Volatiles, VOCs ug/Kg																			
Benzene (I)	71-43-2	NA	100	4,000 (X)	1,600	13,000	34,000	79,000	3.8E+8	1.8E+5	4.0E+5	**1.7 (M) ca**		<61	<67	<65	<2500	<260	<92
n-Butylbenzene	104-51-8	NA	1,600	ID	ID	ID	ID	ID	2.0E+9	2.5E+6	1.0E+7	550 nc		<61	<67	<65	<2500	<260	<92
sec-Butylbenzene	135-98-8	NA	1,600	ID	ID	ID	ID	ID	4.0E+8	2.5E+6	1.0E+7	3800 nc		<61	<67	<65	<2500	**510**	<92
Ethylbenzene (I)	100-41-4	NA	**1,500**	**360**	87,000	7.2E+5	1.0E+6	2.2E+6	1.0E+10	2.2E+7 (C)	1.4E+5	**12 (M) ca**		<61	<67	<65	**33,000**	**5,700**	<92
n-Heptane	142-82-5	NA	NA	4.6E+7 (C)	1.5E+06 (C)	2.10E+07	4.40E+07	1.00E+08	2.40E+11	9.9E+8 (C)	2.40E+05	**130 nc**		<61	<67	<65	**15,000**	**1,400**	<92
Hexane	110-54-3	NA	180,000 (C)	NA	5.1E+5 (C)	3,000,000	3.20E+06	6.20E+06	1.30E+10	92,000,000 (C)	44,000	**25 nc**		<61	<67	<65	**12,000**	**1,000**	<92
Isopropyl benzene	98-82-8	NA	91,000	**3,200**	4.0E+5 (C)	1.7E+6	1.7E+6	2.8E+6	5.8E+9	2.5E+7 (C)	3.9E+5	**3.8 (M) ca**		<61	<67	<65	**4,500**	**870**	**94**
Methylcyclopentane (I)	96-37-7	NA	ID	NA	92,000	2.3E+6	8.2E+6	2.0E+7	4.7E+10	ID	3.5E+5	**29 (M) nc**		<61	<67	**96**	**11,000**	**1,300**	**470**
2-Methylnaphthalene	91-57-6	NA	57,000	**4,200**	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA	**1,700 nc**		<310	<340	<320	**27,000**	**7,200**	**620**
Naphthalene	91-20-3	NA	35,000	**730**	2.70E+06	1.50E+06	1.50E+06	1.50E+06	6.70E+08	8.10E+06	NA	**67 (M) ca**		<310	<340	<320	**18,000**	**6,100**	**640**
n-Propylbenzene (I)	103-65-1	NA	**1,600**	ID	ID	ID	ID	ID	1.3E+9	2.5E+6	1.0E+7	**1,800 (DD) dev**		<61	<67	<65	**17,000**	**3,500**	<92
2,2,4-Trimethylpentane	540-84-1	NA	ID	NA	1.1E+5 (C)	5.2E+6	3.9E+7	9.6E+7	2.3E+11	ID	**19,000**	**130 (M) nc**		<310	<340	<320	**30,000**	**2,700**	<460
Toluene (I)	108-88-3	NA	**16,000**	**5,400**	3.3E+5 (C)	2.8E+6	5.1E+6	1.2E+7	2.7E+10	5.0E+7 (C)	2.5E+5	**3,700 nc**		<61	<67	**79**	**26,000**	**1,900**	**210**
1,2,3-Trimethylbenzene (I)	526-73-8	NA	**1,800**	**570**	2.60E+06	1.60E+07	3.80E+08	3.80E+08	8.20E+10	3.20E+07	94,000	**270 (JT) nc**		<61	<67	<65	**34,000**	**7,900**	**290**
1,2,4-Trimethylbenzene (I)	95-63-6	NA	**2,100**	**570**	4.30E+06	2.10E+07	5.00E+08	5.00E+08	8.20E+10	3.20E+07	**1.10E+05**	**150 (JT) nc**		<61	<67	87	**150,000**	**34,000**	**350**
1,3,5-Trimethylbenzene (I)	108-67-8	NA	**1,800**	**1,100**	2.60E+06	1.60E+07	3.80E+08	3.80E+08	8.20E+10	3.20E+07	94,000	**100 (JT) nc**		<61	<67	<65	**45,000**	**10,000**	**95**
Xylenes (I)	1330-20-7	NA	**5,600**	**980**	6.3E+6 (C)	4.60E+07	6.10E+07	1.30E+08	2.90E+11	4.1E+8 (C)	**1.50E+05**	**280 (J) nc**		<120	<130	<130	**160,000**	**37,000**	**510**
All Remaining VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies		BDL	BDL	BDL	BDL	BDL	BDL

AKT PEERLESS
ENVIRONMENTAL SERVICES

Table 1: Summary of EGLE RCC Soil Analytical Results
406 East 3rd Street
Imlay City, MIchigan
AKT Peerless Project No. 3218s2-3-20

Parameters* *(Refer to detailed laboratory report for method reference data)*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria and RBSLs	Residential Soil Volatilization to Indoor Air Inhalation Criteria and RBSLs	Residential Infinite Source Volatile Soil Inhalation Criteria (VSIC) and RBSLs	Residential Finite VSIC for 5 Meter Source Thickness	Residential Finite VSIC for 2 Meter Source Thickness	Residential Particulate Soil Inhalation Criteria and RBSLs	Residential Direct Contact Criteria and RBSLs	Residential Soil Saturation Concentration Screening Levels	Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels	Sample Location	AKT-9	AKT-10	AKT-Dup Soil (AKT-8)	MS (AKT-3d)	MSD (AKT-3d)	Methanol Blank
													Collection Date	9/20/2023	9/20/2023	9/20/2023	9/21/2023	9/21/2023	9/20/2023
													Depth	2.0-2.5'	14.5-15.0	3.0-3.5'	17.0-17.5'	17.0-17.5'	NA
Metals ug/Kg																			
Arsenic	7440-38-2	5,800	**4,600**	**4,600**	NLV	NLV	NLV	NLV	7.2E+5	**7,600**	NA	NA		NS	NS	NS	**98,000**	**89,000**	NS
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7	NA	NA		NS	NS	NS	**120,000**	**110,000**	NS
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5	NA	NA		<200	<200	<200	**9,800**	**9,500**	NS
Chromium, Total	7440-47-3	NA	30,000	**3,300**	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6	NA	NA		**7,700**	**8,600**	**16,000**	**110,000**	**98,000**	NS
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7	NA	NA		NS	NS	NS	**110,000**	**96,000**	NS
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5	NA	NA		**45,000**	**4,200**	**130,000**	**100,000**	**93,000**	NS
Mercury, Total	7439-97-6	130	1,700	**50 (M); 1.2**	48,000	52,000	52,000	52,000	2.0E+7	1.6E+5	NA	**22 (M) nc**		NS	NS	NS	**500**	**500**	NS
Selenium (B)	7782-49-2	410	4,000	**400**	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6	NA	NA		NS	NS	NS	**100,000**	**92,000**	NS
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	NLV	NLV	NLV	NLV	6.7E+6	2.5E+6	NA	NA		NS	NS	NS	**9,800**	**9,600**	NS
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8	NA	NA		NS	NS	NS	**120,000**	**110,000**	NS
Semivolatiles, PNAs ug/Kg																			
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.9E+8	8.1E+7	8.1E+7	8.1E+7	1.4E+10	4.1E+7	NA	200,000		**140**	<110	<140	**1,900**	**2,100**	NS
Acenaphthylene	208-96-8	NA	5,900	ID	1.6E+6	2.2E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	NA	DATA		<120	<110	<140	**2,000**	**2,200**	NS
Anthracene	120-12-7	NA	41,000	ID	1.0E+9 (D)	1.4E+9	1.4E+9	1.4E+9	6.7E+10	2.3E+8	NA	13,000,000		**410**	<110	**180**	**2,100**	**2,200**	NS
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA	160,000		**710**	<110	**580**	**2,200**	**2,300**	NS
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	NLV	NLV	NLV	NLV	1.5E+6	2,000	NA	NA		**670**	<220	**600**	**2,100**	**2,200**	NS
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	ID	ID	ID	ID	20,000	NA	NA		**910**	<220	**1,300**	**2,100**	**2,200**	NS
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLV	NLV	NLV	NLV	8.0E+8	2.5E+6	NA	NA		<240	<220	<280	**1,900**	**1,900**	NS
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	2.0E+5	NA	NA		**340**	<220	**400**	**2,100**	**2,200**	NS
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	ID	ID	ID	ID	2.0E+6	NA	NA		**680**	<110	**920**	**2,100**	**2,200**	NS
Dibenzo(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	2,000	NA	NA		<240	<220	<280	**1,800**	**1,800**	NS
Fluoranthene	206-44-0	NA	7.3E+5	5,500	1.0E+9 (D)	7.4E+8	7.4E+8	7.4E+8	9.3E+9	4.6E+7	NA	NA		**1,900**	<110	**1,100**	**2,100**	**2,300**	NS
Fluorene	86-73-7	NA	3.9E+5	5,300	5.8E+8	1.3E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	NA	470,000		**180**	<110	<140	**2,100**	**2,200**	NS
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA	NA		<240	<220	<280	**1,800**	**1,900**	NS
2-Methylnaphthalene	91-57-6	NA	57,000	**4,200**	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA	**1700 nc**		<300	<270	**1,800**	**2,100**	**2,200**	NS
Naphthalene	91-20-3	NA	35,000	**730**	2.5E+5	3.0E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	NA	**67 (M) ca**		**260**	<110	**1,200**	**1,800**	**2,000**	NS
Phenanthrene	85-01-8	NA	56,000	**2,100**	2.8E+6	1.6E+5	1.6E+5	1.6E+5	6.7E+6	1.6E+6	NA	**1700 nc**		**1,800**	<110	**1,700**	**2,000**	**2,200**	NS
Pyrene	129-00-0	NA	4.8E+5	ID	1.0E+9 (D)	6.5E+8	6.5E+8	6.5E+8	6.7E+9	2.9E+7	NA	25,000,000		**1,500**	<110	**1,100**	**2,100**	**2,200**	NS
Volatiles, VOCs ug/Kg																			
Benzene (I)	71-43-2	NA	100	4,000 (X)	1,600	13,000	34,000	79,000	3.8E+8	1.8E+5	4.0E+5	**1.7 (M) ca**		<73	<60	<93	**2,800**	**2,900**	<50
n-Butylbenzene	104-51-8	NA	1,600	ID	ID	ID	ID	ID	2.0E+9	2.5E+6	1.0E+7	550 nc		<73	<60	**110**	**2,600**	**3,000**	<50
sec-Butylbenzene	135-98-8	NA	1,600	ID	ID	ID	ID	ID	4.0E+8	2.5E+6	1.0E+7	3800 nc		<73	<60	<93	**2,700**	**3,200**	<50
Ethylbenzene (I)	100-41-4	NA	**1,500**	**360**	87,000	7.2E+5	1.0E+6	2.2E+6	1.0E+10	2.2E+7 (C)	1.4E+5	**12 (M) ca**		<73	<60	**110**	**2,800**	**3,000**	<50
n-Heptane	142-82-5	NA	NA	4.6E+7 (C)	1.5E+06 (C)	2.10E+07	4.40E+07	1.00E+08	2.40E+11	9.9E+8 (C)	2.40E+05	**130 nc**		<73	<60	**140**	**2,600**	**2,900**	<50
Hexane	110-54-3	NA	180,000 (C)	NA	5.1E+5 (C)	3,000,000	3.20E+06	6.20E+06	1.30E+10	92,000,000 (C)	44,000	**25 nc**		<73	<60	<93	**2,500**	**2,600**	<50
Isopropyl benzene	98-82-8	NA	91,000	**3,200**	4.0E+5 (C)	1.7E+6	1.7E+6	2.8E+6	5.8E+9	2.5E+7 (C)	3.9E+5	**3.8 (M) ca**		<73	<60	**110**	**2,800**	**3,200**	<50
Methylcyclopentane (I)	96-37-7	NA	ID	NA	92,000	2.3E+6	8.2E+6	2.0E+7	4.7E+10	ID	3.5E+5	**29 (M) nc**		<73	<60	**610**	**2,900**	**3,100**	<50
2-Methylnaphthalene	91-57-6	NA	57,000	**4,200**	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA	**1,700 nc**		<370	<300	**690**	**2,300**	**2,800**	<250
Naphthalene	91-20-3	NA	35,000	**730**	2.70E+06	1.50E+06	1.50E+06	1.50E+06	6.70E+08	8.10E+06	NA	**67 (M) ca**		<370	<300	**720**	**2,700**	**3,200**	<250
n-Propylbenzene (I)	103-65-1	NA	**1,600**	ID	ID	ID	ID	ID	1.3E+9	2.5E+6	1.0E+7	**1,800 (DD) dev**		<73	<60	**100**	**2,900**	**3,300**	<50
2,2,4-Trimethylpentane	540-84-1	NA	ID	NA	1.1E+5 (C)	5.2E+6	3.9E+7	9.6E+7	2.3E+11	ID	**19,000**	**130 (M) nc**		<370	<300	<460	**2,400**	**2,700**	<250
Toluene (I)	108-88-3	NA	**16,000**	**5,400**	3.3E+5 (C)	2.8E+6	5.1E+6	1.2E+7	2.7E+10	5.0E+7 (C)	2.5E+5	**3,700 nc**		<73	<60	**240**	**2,700**	**3,000**	<50
1,2,3-Trimethylbenzene (I)	526-73-8	NA	**1,800**	**570**	2.60E+06	1.60E+07	3.80E+08	3.80E+08	8.20E+10	3.20E+07	94,000	**270 (JT) nc**		<73	<60	**380**	**2,800**	**3,200**	<50
1,2,4-Trimethylbenzene (I)	95-63-6	NA	**2,100**	**570**	4.30E+06	2.10E+07	5.00E+08	5.00E+08	8.20E+10	3.20E+07	**1.10E+05**	**150 (JT) nc**		<73	<60	**420**	**2,800**	**3,200**	<50
1,3,5-Trimethylbenzene (I)	108-67-8	NA	**1,800**	**1,100**	2.60E+06	1.60E+07	3.80E+08	3.80E+08	8.20E+10	3.20E+07	94,000	**100 (JT) nc**		<73	<60	**130**	**2,800**	**3,300**	<50
Xylenes (I)	1330-20-7	NA	**5,600**	**980**	6.3E+6 (C)	4.60E+07	6.10E+07	1.30E+08	2.90E+11	4.1E+8 (C)	**1.50E+05**	**280 (J) nc**		<150	<120	**620**	**5,800**	**6,200**	<100
All Remaining VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies		BDL	BDL	BDL	Varies	Varies	BDL

AKT PEERLESS ENVIRONMENTAL SERVICES

Table 2: Summary of EGLE RCC Groundwater Analytical Results
406 East 3rd Street
Imlay City, Michigan
AKT Peerless Project No. 3218s2-3-20

Parameters* *(Refer to detailed laboratory report for method reference data)*	Chemical Abstract Service Number	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level	EGLE September 2020 Residential Volatilization to Indoor Air Pathway (VIAP) Shallow Groundwater	EGLE September 2020 Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels Groundwater Not In Contact	Sample ID	AKT-1/TMW	AKT-2/TMW	AKT-4/TMW	AKT-7/TMW	W-1	AKT-Dup W (AKT-1/TMW)	MS (AKT-4/TMW)	MSD (AKT-4/TMW)	Equipment Blank	Trip Blank
									Collection Date	9/20/2023	9/20/2023	9/21/2023	9/21/2023	9/20/2023	9/20/2023	9/21/2023	9/21/2023	9/20/2023	9/20/2023
									Depth	14-19'	14-19'	5-10'	13-18'	NA	14-19'	5-10'	5-10'	NA	NA
Metals, ug/L																			
Arsenic (B)	7440-38-2	**10 (A)**	**10**	NLV	NA	ID	NA	NA		<2.0	**12**	**16**	**140**	**4**	<2.0	**68**	**66**	<1.0	NS
Barium (B)	7440-39-3	2,000 (A)	(G)	NLV	NA	ID	NA	NA		**110**	**330**	**140**	**210**	**39**	**100**	**210**	**210**	<5.0	NS
Cadmium (B)	7440-43-9	5.0 (A)	(G,X)	NLV	NA	ID	NA	NA		<0.2	<0.8	**0.3**	<0.2	<0.2	<0.2	**49**	**48**	<0.2	NS
Chromium, Total (Cr VI criteria)	7440-47-3	100 (A)	**11**	NLV	NA	ID	NA	NA		<2.0	**12**	**20**	**4.9**	**1.2**	<2.0	**75**	**76**	<1.0	NS
Copper (B)	7440-50-8	1,000 (E)	(G)	NLV	NA	ID	NA	NA		<2.0	**16**	**25**	**10**	**10**	<2.0	**74**	**73**	<1.0	NS
Lead (B)	7439-92-1	**4.0 (L)**	(G,X)	NLV	NA	ID	NA	NA		<1.0	**7.1**	**36**	**4.3**	<1.0	<1.0	**80**	**81**	<1.0	NS
Mercury, Total (B, Z)	Varies	2.0 (A)	0.0013	56 (S)	56	ID	0.088 nc	2.5 nc		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**4.1**	**4.1**	<0.2	NS
Selenium (B)	7782-49-2	50 (A)	5.0	NLV	NA	ID	NA	NA		<2.0	<4.0	**1.8**	<1.0	<1.0	<2.0	**48**	**47**	<1.0	NS
Silver (B)	7440-22-4	34	0.2 (M); 0.06	NLV	NA	ID	NA	NA		<0.4	<0.8	<0.2	<0.2	<0.2	<0.4	**46**	**45**	<0.2	NS
Zinc (B)	7440-66-6	2,400	(G)	NLV	NA	ID	NA	NA		<10	**50**	**79**	**7.0**	<5.0	<10	**130**	**130**	<5.0	NS
Semivolatiles, PNAs, ug/L																			
2-Methylnaphthalene	91-57-6	260	**19**	25,000 (S)	24,600	ID	**66 nc**	2,000 nc		<5.0	<5.3	<5.3	**140**	<5.3	<5.0	**34**	**37**	<5.0	NS
Naphthalene	91-20-3	520	**11**	31,000 (S)	31,000	NA	**4.2 (M) ca**	**130 ca**		<1.0	<1.1	<1.1	**470**	<1.1	<1.0	**31**	**35**	<1.0	NS
All remaining PNAs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NS
Volatiles, VOCs, ug/L																			
Benzene (I)	71-43-2	**5.0 (A)**	200 (X)	5,600	1.75E+06	68,000	**1.0 ca**	**28 ca**		<1.0	<1.0	<1.0	**180**	<1.0	<1.0	**51**	**51**	<1.0	<1.0
n-Butylbenzene	104-51-8	80	ID	ID	NA	ID	44 nc	1,100 nc		<1.0	<1.0	<1.0	**12**	<1.0	<1.0	**50**	**51**	<1.0	<1.0
Ethylbenzene (I)	100-41-4	**74 (E)**	**18**	1.10E+05	1.69E+05	43,000	**2.8 ca**	**74 ca**		<1.0	<1.0	<1.0	**1,100**	<1.0	<1.0	**50**	**50**	<1.0	<1.0
Hexane	110-54-3	3,000	NA	12,000 (S)	12,000	12,000 (S)	29 nc	29 (GW) nc		<1.0	<1.0	<1.0	**11**	<1.0	<1.0	**52**	**48**	<1.0	<1.0
Isopropyl benzene	98-82-8	800	**28**	56,000 (S)	56,000	29,000	**0.60 (M) ca**	**15 ca**		<1.0	<1.0	<1.0	**36**	<1.0	<1.0	**50**	**52**	<1.0	<1.0
Methylcyclopentane	96-37-7	ID	NA	22,000	73,890	ID	**30 (M) nc**	93 nc		<1.0	<1.0	<1.0	**69**	<1.0	<1.0	**55**	**49**	<1.0	<1.0
2-Methylnaphthalene	91-57-6	260	**19**	25,000 (S)	24,600	ID	66 nc	2,000 nc		<5.0	<5.0	<5.0	**60**	<5.0	<5.0	**37**	**40**	<5.0	<5.0
Naphthalene	91-20-3	520	**11**	31,000 (S)	31,000	NA	**4.2 (M) ca**	**130 ca**		<5.0	<5.0	<5.0	**280**	<5.0	<5.0	**47**	**50**	<5.0	<5.0
n-Propylbenzene (I)	103-65-1	80	ID	ID	NA	ID	**43 (DD) dev**	6,100 (DD) dev		<1.0	<1.0	<1.0	**75**	<1.0	<1.0	**51**	**52**	<1.0	<1.0
Toluene (I)	108-88-3	**790 (E)**	**270**	5.3E+5 (S)	5.26E+05	61,000	**300 (FF) st**	41,000 nc		<1.0	<1.0	<1.0	**1,900**	<1.0	<1.0	**50**	**50**	<1.0	<1.0
1,2,3-Trimethylbenzene (I)	526-73-8	**63 (E)**	**17**	56,000 (S)	55,890	56,000 (S)	**43 (JT) nc**	1,200 (JT) nc		<1.0	<1.0	<1.0	**260**	<1.0	<1.0	**48**	**50**	<1.0	<1.0
1,2,4-Trimethylbenzene (I)	95-63-6	**63 (E)**	**17**	56,000 (S)	55,890	56,000 (S)	**25 (JT) nc**	**670 (JT) nc**		<1.0	<1.0	<1.0	**840**	<1.0	<1.0	**50**	**51**	<1.0	<1.0
1,3,5-Trimethylbenzene (I)	108-67-8	**72 (E)**	**45**	61,000 (S)	61,150	ID	**18 (JT) nc**	470 (JT) nc		<1.0	<1.0	<1.0	**190**	<1.0	<1.0	**51**	**52**	<1.0	<1.0
All Remaining VOCs	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Per- and Polyfluorinated Substances, PFAS, ng/L																			
Perfluorobutanoic acid (PFBA)	375-22-4	NA	NA	NA	NA	NA	NA	NA		**0.0044**	NS	NS	NS	NS	NS	NS	NS	<0.004	<0.004
Perflurobutane sulfonic acid (PFBS)	375-73-5	0.42 (A)	670 (X)	ID	NA	NA	NA	NA		**0.0034**	NS	NS	NS	NS	NS	NS	NS	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	NA	NA	NA		**0.0027**	NS	NS	NS	NS	NS	NS	NS	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	400 (A)	NA	ID	NA	NA	NA	NA		**0.0037**	NS	NS	NS	NS	NS	NS	NS	<0.002	<0.002
Perfuorooctanoic acid (PFOA)	335-67-1	**0.008 (A)**	0.17 (X)	ID	9.5+06	NA	NA	NA		**0.014**	NS	NS	NS	NS	NS	NS	NS	<0.002	<0.002
Perfluorpentanoic acid (PFPeA)	2706-90-3	NA	NA	NA	NA	NA	NA	NA		**0.0034**	NS	NS	NS	NS	NS	NS	NS	<0.002	<0.002
All remaining PFAS	Varies	Varies	Varies	Varies	Varies	Varies	NA	NA		BDL	NS	NS	NS	NS	NS	NS	NS	BDL	BDL

AKTPEERLESS ENVIRONMENTAL SERVICES

R 299.49 FOOTNOTES FOR GENERIC CLEANUP CRITERIA TABLES

Cleanup Criteria Requirements for Response Activity (formerly the Part 201 Generic Cleanup Criteria and Screening Levels)

(as last revised by EGLE on December 21, 2020)

(A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

(B) Background, as defined in R 299.1(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.

(C) The criterion developed under R 299.20 to R 299.26 exceeds the chemical-specific soil saturation screening level (Csat). The person proposing or implementing response activity shall document whether additional response activity is required to control free-phase liquids or NAPL to protect against risks associated with free-phase liquids by using methods appropriate for the free-phase liquids present. Development of a site-specific Csat or methods presented in R 299.22, R 299.24(5), and R 299.26(8) may be conducted for the relevant exposure pathways.

(D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).

(E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value [as provided in the table in Footnote (E) in R 299.49].

(F) Criterion is based on adverse impacts to plant life and phytotoxicity.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO3/L, use 400 mg CaCO3/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote [See table in Footnote (G) in R 299.49].

(H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/L. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.

(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules.

(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.

(K) Hazardous substance may be flammable or explosive, or both.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(9) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable concentrations of site-specific soil and drinking water concentrations are presented in the [See table in Footnote (L) in R 299.49].

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 µg/kg.

(O) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 µg/kg.

(P) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 µg/kg.

(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.

(R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules.

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, subpart D and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart D and subpart G of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable. [See table in Footnote (T) in R 299.49].

(U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in these rules.

(V) Criterion is the aesthetic drinking water value as required by Section 20120(a)(5) of the NREPA. Concentrations up to 200 ug/L may be acceptable, and still allow for drinking water use, as part of a site-specific cleanup under Section 20120a(2) and 20120b of the NREPA.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the [table in Footnote (X) in R 299.49], except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in [the table in Footnote (G) in R 299.49]. Soil protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

(Y) Source size modifiers shown in the [See table in Footnote (Y) in R 299.49] shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre. The modifier shall be multiplied by the generic soil inhalation criteria shown in the table of generic cleanup criteria to determine the applicable criterion. See Footnote (C) [in R 299.49].

(Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.

(AA) Use 10,000 ug/L where groundwater enters a structure through the use of a water well, sump or other device. Use 28,000 ug/L for all other uses.

(BB) The state drinking water standard for asbestos (fibers greater than 10 micrometers in length) is in units of a million fibers per liter of water (MFL). Soil concentrations of asbestos are determined by polarized light microscopy.

(CC) Groundwater: The generic GSI criteria are based on the toxicity of unionized ammonia (NH_3); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH_3 in the surface water. This percent NH_3 is a function of the pH and temperature of the receiving surface water and can be estimated using the [table in Footnote (CC) in R 299.49], taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975). The generic approach for estimating NH_3 assumes a default pH of 8 and default temperatures of 68 °F and 85 °F for cold water and warm water surface water, respectively. The resulting NH_3 is 3.8 percent and 7.2 percent for cold water and warm water, respectively. This default percentage shall be multiplied by the total ammonia-nitrogen (NH_3-N) concentration in the groundwater and the resulting NH_3 concentration compared to the applicable GSI criterion. As an alternative, the maximum pH and temperature data from the specific receiving surface water can be used to estimate, from the [table in Footnote (CC) in R 299.49], a lower percent unionized ammonia concentration for comparison to the generic GSI.

Soil: The generic soil GSI protection criteria for unionized ammonia are 580 ug/kg and 1,100 ug/kg for cold water and warm water surface water, respectively.

(DD) Hazardous substance causes developmental effects. Residential direct contact criteria are protective of both prenatal and postnatal exposure. Nonresidential direct contact criteria are protective for a pregnant adult receptor.

(EE) The [values listed in the table in Footnote (EE) in 299.49] are applicable generic GSI criteria as required by Section 20120e of the NREPA.

(FF) The chloride GSI criterion shall be 125 mg/L when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/L when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the total dissolved solids criterion is applicable.

(GG) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived utilizing 25 percent of the lower explosive level for methane. This equates to 1.25 percent or 8.4E+6 ug/m^3.

(HH) The residential criterion for sodium is 230,000 ug/L in accordance with the Sodium Advisory Council recommendation and revised Groundwater Discharge Standards.

(II) The residential drinking water criterion for 1,4-dioxane is not calculated using the equations of R 299.10 or the toxicological and chemical-physical data as shown in Table 4 of R 299.50. The drinking water criterion is calculated using the United States Environmental Protection Agency's (U.S. EPA) "Toxicological Review of 1,4-Dioxane" EPA/635/R-11/003F, September 2013, and the department's residential exposure algorithms to protect both children and adults from unsafe levels of the chemical.

ID Insufficient data to develop criterion.

NA A criterion or value is not available or, in the case of background and CAS numbers, not applicable.

NLL Hazardous substance is not likely to leach under most soil conditions.

NLV Hazardous substance is not likely to volatilize under most conditions.

ug/kg Micrograms per kilogram

ug/L Micrograms per liter

NS Not sampled

BDL Below Laboratory Method Detection Limits

BOLD Exceeds highlighted criteria.

AKTPEERLESS
ENVIRONMENTAL SERVICES

Appendix A

Soil Boring and Soil Gas Logs

AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

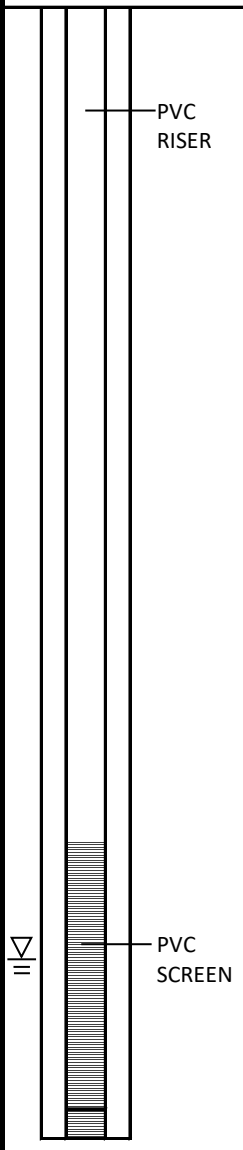
AKT-1/TMW

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	19'
DATE DRILLED:	9/20/2023	DEPTH TO GW:	16'
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	14-19'
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	PVC

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE
						ASPHALT	
			<0.1	SW	Brown	**SAND -** medium grain, with gravel	M
			1	SM	Black	**SAND -** fine grain, with coal debris	M
2		99%		CH	Brown	**CLAY -** low stiffness, trace coal and slag debris	M
			<0.1				
4				SW	Brown	**SAND -** medium grain	M
				CH	Brown	**CLAY -** low stiffness, with gravel	M
6		99%	<0.1				
8							
10		99%	<0.1				
					Light brown	**SANDSTONE LAYER**	D
12				ML	Brown	**SANDY CLAY -** low to medium stiffness, with gravel	M
14		99%	<0.1				
16				SM	Brown	**SILTY SAND -** very fine grain	S
18		99%	<0.1				
						End of boring, refusal due to very compacted silty sand	
20							

TEMPORARY WELL DIAGRAM



AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

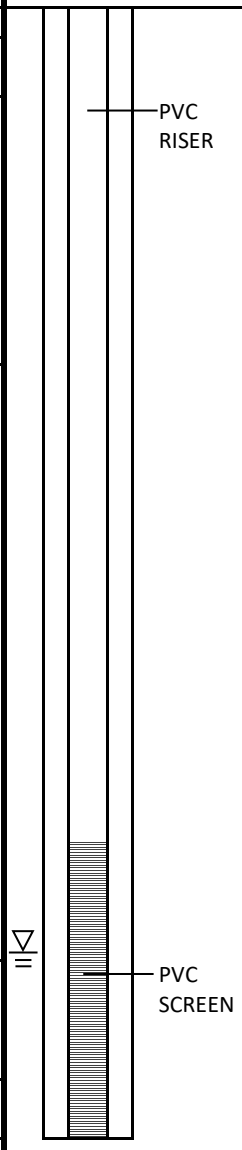
AKT-2/TMW

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	19'
DATE DRILLED:	9/20/2023	DEPTH TO GW:	16'
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	14-19'
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	PVC

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE
						ASPHALT	
				SW	Brown	**SAND -** medium grain, with gravel	D
2		99%	<0.1	SM	Brown	**SAND -** fine grain, trace gravel	M
4							
6		99%	<0.1	CH	Brown	**CLAY -** low to medium stiffness, trace gravel	M
8							
10		99%	<0.1				
12							
14		50%	<0.1				
16				SC	Brown	**SANDY CLAY -** low stiffness, trace gravel	S
18		99%	<0.1	SW	Gray / brown	**SAND -** medium grain, with gravel	M
						End of boring, refusal due to gravel	
20							

TEMPORARY WELL DIAGRAM



AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

AKT-3

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	18'
DATE DRILLED:	9/21/2023	DEPTH TO GW:	17.5'
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	N/A
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	N/A

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
					Dark brown	**TOPSOIL**		
				SW	Dark brown / black	**SAND -** medium grain, with gravel, trace slag and coal	M	
2		99%	<0.1					
				SC	Brown	**CLAYEY SAND -** fine grain	M	
4								
6		99%	<0.1	CH	Brown	**CLAY -** low to medium stiffness, with gravel	M	
8								
10		99%	<0.1					
12								
14		99%	<0.1					
16								
		99%	<0.1					▽
18				SM	Brown	**SAND -** fine grain	S	
						End of boring, refusal due to very compacted sand		
20								

AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

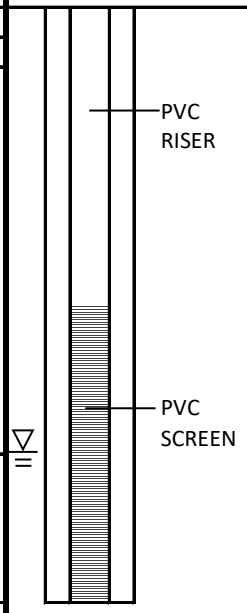
AKT-4/TMW

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	12'
DATE DRILLED:	9/21/2023	DEPTH TO GW:	7.5'
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	5-10'
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	PVC

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE
						TOPSOIL	
				SW	Brown	**SAND -** medium grain	D
				CH	Brown	**CLAY -** low stiffness, with gravel	M
2		99%	<0.1				
4							
6		99%	<0.1				
8				SP	Brown	**SAND -** medium to coarse grain, trace gravel	S
10		99%	<0.1	CH	Brown	**CLAY -** low to medium stiffness, with gravel	M
12						**End of boring**	
14							
16							
18							
20							

TEMPORARY WELL DIAGRAM



AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

AKT-5

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	20'
DATE DRILLED:	9/21/2023	DEPTH TO GW:	N/A
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	N/A
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	N/A

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						GRAVEL		
				SW	Dark brown	**SAND -** medium grain, trace coal and slag	D	
				SC	Brown	**CLAYEY SAND -** medium grain, trace coal and gravel	D	
2		99%	<0.1					
4				ML	Brown	**SANDY CLAY -** low stiffness, with gravel	M	
6		99%	<0.1					
8								
10		99%	<0.1					
12						**End of Boring**		
14								
16								
18								
20								

AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

AKT-6

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	12'
DATE DRILLED:	9/21/2023	DEPTH TO GW:	9.5'
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	N/A
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	N/A

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						GRAVEL		
				SP	Brown	**SAND -** fine to medium grain	D	
2		99%	<0.1					
4				SM	Brown	**SILTY SAND -** very fine to fine grain	M	
6		99%	<0.1					
8			130			Odor at 7'-9.5'		
			108					▽
10		99%		SP	Gray	**SAND -** fine to medium grain, with gravel, odor present	S	
				SM	Brown / gray	**SAND -** very fine to fine grain, odor present	M	
12			999+			**End of boring**		
14								
16								
18								
20								

AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

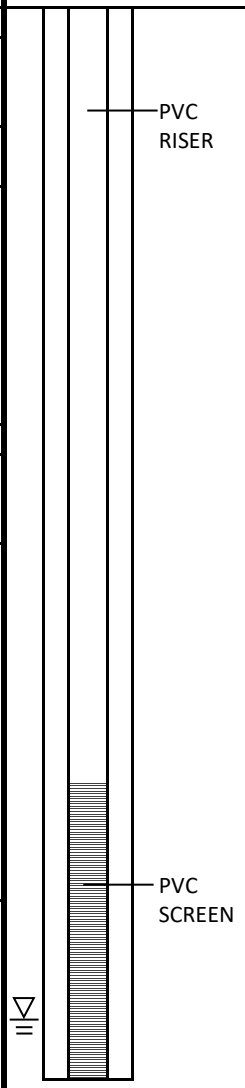
AKT-7/TMW

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	20'
DATE DRILLED:	9/21/2023	DEPTH TO GW:	17'
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	13-18'
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	PVC

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE
						ASPHALT	
				CH	Brown	**CLAY -** low to medium stiffness, with gravel	D
2		99%	<0.1	SM	Brown	**SAND -** fine grain	D
				SC	Brown	**CLAYEY SAND -** fine grain, with gravel	D
4							
6		99%	<0.1				
				SW	Brown	**SAND -** medium to coarse grain	D
8				ML	Brown	**SANDY CLAY -** low stiffness, with gravel	
				SM	Brown / gray	**SILTY SAND -** very fine to fine grain	M
10		99%	<0.1				
12							
			<0.1				
14		99%	5			Odor at 14-15'	
				SW	Gray	**SAND -** medium grain, odor present at 15-20'	M
16			382				
			554				S
18		99%					
			208				
20						**End of boring**	

TEMPORARY WELL DIAGRAM



AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

AKT-8

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	20'
DATE DRILLED:	9/20/2023	DEPTH TO GW:	NA
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	NA
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	NA

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						CONCRETE		
				SM	Brown	**SAND -** fine grain	M	
				CL	Brown	**CLAY -** medium stiffness, trace gravel and brick	M	
2		99%	<0.1					
				CH	Black	**CLAY -** low stiffness, trace coal	M	
4				CH	Brown	**CLAY -** low to medium stiffness, with gravel	M	
6		99%	<0.1					
8								
10		99%	<0.1					
12								
14		99%	<0.1					
16								
18		99%	<0.1					
				SM	Brown	**SAND -** fine grain	M	
20						**End of boring**		

AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

AKT-9

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	20'
DATE DRILLED:	9/20/2023	DEPTH TO GW:	N/A
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	N/A
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	N/A

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						CONCRETE		
				SM	Brown	**SAND -** fine grain	D	
2		99%	<0.1	CH	Dark brown / black	**CLAY -** low stiffness, trace coal debris and brick	D	
4								
				CH	Brown	**CLAY -** low stiffness, with gravel	M	
6		99%	<0.1					
8								
10		99%	<0.1					
12								
14		99%	<0.1					
16				ML	Brown	**SANDY CLAY -** low stiffness, with gravel	M	
18		99%	<0.1					
20								
						End of boring		

AKT PEERLESS ENVIRONMENTAL SERVICES

BORING LOG

406 East Third Street
Imlay City, Michigan
AKT Peerless Project No: 3218s2-3-20

AKT-10

Drawn By: AMB
Date: 9/27/2023

DRILLING COMPANY:	AKT Peerless	WEATHER:	75° F, Sunny
TECHNICIAN:	Karl Primdahl	BORING DEPTH:	15'
DATE DRILLED:	9/20/2023	DEPTH TO GW:	N/A
DRILLING METHOD:	Geoprobe	SCREEN INTERVAL:	N/A
FIELD GEOLOGIST:	Kammie Niswander	SCREEN MATERIAL:	N/A

DEPTH FEET	SAMPLE INTERVAL	% RECOVERY	PID VALUE	USCS SOIL CLASS.	COLOR	GEOLOGIC DESCRIPTION	MOISTURE	TEMPORARY WELL DIAGRAM
						CONCRETE		
				CH	Brown	**CLAY -** low to medium stiffness, with gravel	D	
2		99%	<0.1					
4								
6		99%	<0.1					
8								
10		99%	<0.1					
12								
14		99%	<0.1					
						End of boring, refusal due to gravel		
16								
18								
20								

AKT PEERLESS ENVIRONMENTAL SERVICES	**LOW-FLOW SAMPLING LOG** 406 East Third Street Imlay City, Michigan AKT Peerless Project No: 3218s2-3-20	**AKT-1/TMW**

WEATHER:	63°F, Cloudy	INITIAL STATIC WATER LEVEL (0.01 FEET):	16.00'
TECHNICIAN:	KAS	WELL SCREEN INTERVAL (FEET BGS):	13-18'
PURGING START TIME:	11:00am	WELL SCREEN DIAMETER (INCHES):	1"
STABILIZATION TIME:	11:27am	SAMPLE COLLECTION DATE:	9/20/2023

Time	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	ORP/eh
(Minutes)	(units)	(mS/cm^3)	(NTU)	(mg/L)	(degrees F)	(mV)
0	7.26	10.82	478.0	2.90	60.6	95.7
3	7.29	10.77	445.0	2.04	60.8	62.9
6	7.30	10.79	184.0	2.07	61.2	52.3
9	7.30	10.78	102.0	2.13	61.5	40.5
12	7.30	10.76	88.4	3.77	62.5	33.0
15	7.30	10.74	50.6	3.76	61.3	30.9
18	7.30	10.69	29.0	3.72	61.3	28.2
21	7.30	10.66	27.3	3.74	61.3	26.6
24	7.30	10.66	25.1	3.72	61.3	24.2
27	7.30	10.67	23.5	3.73	61.2	19.4
30						
33						
36						
39						
42						
45						
48						
51						
54						
57						
60						

Notes:

mS/cm^3 - miliSiemens per centimeter cubed
F - Fahrenheit
mV - Millivolts
NTU - Nephelometric Turbidity Units
mg/L - Milligrams per liter

AKT PEERLESS ENVIRONMENTAL SERVICES	**LOW-FLOW SAMPLING LOG** 406 East Third Street Imlay City, Michigan AKT Peerless Project No: 3218s2-3-20	**AKT-2/TMW**

WEATHER:	63°F, Cloudy	INITIAL STATIC WATER LEVEL (0.01 FEET):	16.00'
TECHNICIAN:	KAS	WELL SCREEN INTERVAL (FEET BGS):	14-19'
PURGING START TIME:	11:00am	WELL SCREEN DIAMETER (INCHES):	1"
STABILIZATION TIME:	Ran dry	SAMPLE COLLECTION DATE:	9/20/2023

Time	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	ORP/eh
(Minutes)	(units)	(mS/cm^3)	(NTU)	(mg/L)	(degrees F)	(mV)
0	**Ran dry while purging and could not low flow**					
3						
6						
9						
12						
15						
18						
21						
24						
27						
30						
33						
36						
39						
42						
45						
48						
51						
54						
57						
60						

Notes:

mS/cm^3 - miliSiemens per centimeter cubed
F - Fahrenheit
mV - Millivolts
NTU - Nephelometric Turbidity Units
mg/L - Milligrams per liter

AKT PEERLESS ENVIRONMENTAL SERVICES	**LOW-FLOW SAMPLING LOG** 406 East Third Street Imlay City, Michigan AKT Peerless Project No: 3218s2-3-20	**AKT-4/TMW**

WEATHER:	75°F, Sunny	INITIAL STATIC WATER LEVEL (0.01 FEET):	7.50'
TECHNICIAN:	AMB	WELL SCREEN INTERVAL (FEET BGS):	5-10'
PURGING START TIME:	10:37am	WELL SCREEN DIAMETER (INCHES):	1"
STABILIZATION TIME:	10:55am	SAMPLE COLLECTION DATE:	9/21/2023

Time	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	ORP/eh
(Minutes)	(units)	(mS/cm^3)	(NTU)	(mg/L)	(degrees F)	(mV)
0	7.00	1,09	Overrange	18.90	65.66	61.7
3	7.02	1.08	713.0	21.90	67.10	51.3
6	7.03	1.08	577.0	21.10	67.46	47.1
9	7.04	1.08	529.0	19.50	68.00	39.8
12	7.04	1.08	524.0	19.00	68.72	35.6
15	7.05	1.08	560.0	17.80	68.90	34.4
18	7.05	1.09	598.0	17.20	68.72	27.0
21						
24						
27						
30						
33						
36						
39						
42						
45						
48						
51						
54						
57						
60						

Notes:

mS/cm^3 - miliSiemens per centimeter cubed
F - Fahrenheit
mV - Millivolts
NTU - Nephelometric Turbidity Units
mg/L - Milligrams per liter

AKT PEERLESS ENVIRONMENTAL SERVICES	**LOW-FLOW SAMPLING LOG** 406 East Third Street Imlay City, Michigan AKT Peerless Project No: 3218s2-3-20	**AKT-7/TMW**

WEATHER:	75°F, Sunny	INITIAL STATIC WATER LEVEL (0.01 FEET):	17.00'
TECHNICIAN:	AMB	WELL SCREEN INTERVAL (FEET BGS):	13-18'
PURGING START TIME:	12:44pm	WELL SCREEN DIAMETER (INCHES):	1"
STABILIZATION TIME:	1:05pm	SAMPLE COLLECTION DATE:	9/21/2023

Time	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	ORP/eh
(Minutes)	(units)	(mS/cm^3)	(NTU)	(mg/L)	(degrees F)	(mV)
0	7.07	1.52	Overrange	7.40	68.00	56.4
3	7.07	1.63	946.0	5.20	68.70	-110.3
6	7.05	1.54	650.0	7.70	70.16	-120.0
9	7.04	1.54	449.0	5.30	70.88	-125.0
12	7.04	2.55	191.0	6.00	71.06	-126.3
15	7.03	1.55	136.0	6.50	71.24	-127.5
18	7.03	1.56	116.0	6.20	71.06	-127.9
21	7.02	1.55	110.0	6.40	71.2	-127.6
24						
27						
30						
33						
36						
39						
42						
45						
48						
51						
54						
57						
60						

Notes:

mS/cm^3 - miliSiemens per centimeter cubed
F - Fahrenheit
mV - Millivolts
NTU - Nephelometric Turbidity Units
mg/L - Milligrams per liter

Appendix B

Laboratory Analytical Data

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

08 November 2023

Work Order: 2309323

Price: $7,544.00

Janet Michaluk
EGLE-RRD-LANSING
525 W. Allegan Street
Lansing, MI 48909

RE: IMLAY CITY DPW

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
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FAX: (517) 335-9600

EGLE-RRD-LANSING
525 W. Allegan Street
Lansing MI, 48909

Project: IMLAY CITY DPW
Site Code: 44000116
Project Manager: Janet Michaluk

Reported:
11/08/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
AKT-1s	2309323-01	Soil/Sediment	09/20/2023	09/26/2023	
AKT-1d	2309323-02	Soil/Sediment	09/20/2023	09/26/2023	
AKT-2s	2309323-03	Soil/Sediment	09/20/2023	09/26/2023	
AKT-2d	2309323-04	Soil/Sediment	09/20/2023	09/26/2023	
AKT-3s	2309323-05	Soil/Sediment	09/21/2023	09/26/2023	
AKT-3d	2309323-06	Soil/Sediment	09/21/2023	09/26/2023	
AKT-4s	2309323-07	Soil/Sediment	09/21/2023	09/26/2023	
AKT-4d	2309323-08	Soil/Sediment	09/21/2023	09/26/2023	
AKT-5	2309323-09	Soil/Sediment	09/21/2023	09/26/2023	
AKT-6	2309323-10	Soil/Sediment	09/21/2023	09/26/2023	
AKT-7	2309323-11	Soil/Sediment	09/21/2023	09/26/2023	
AKT-8	2309323-12	Soil/Sediment	09/20/2023	09/26/2023	
AKT-9	2309323-13	Soil/Sediment	09/20/2023	09/26/2023	
AKT-10	2309323-14	Soil/Sediment	09/20/2023	09/26/2023	
AKT-Dup Soil	2309323-15	Soil/Sediment	09/20/2023	09/26/2023	
AKT-3d MS	2309323-16	Soil/Sediment	09/21/2023	09/26/2023	
AKT-3d MSD	2309323-17	Soil/Sediment	09/21/2023	09/26/2023	
Methanol Trip Blank	2309323-18	Soil/Sediment	09/20/2023	09/26/2023	

Notes and Definitions

Y21	Reporting limit(s) (RL) raised due to matrix interference.
Y18	Sample was extracted/analyzed past USEPA maximum allowable holding time due to laboratory error. Data is estimated.
Y17	Probable petroleum product(s) present.
Y11	Unidentified peaks present in sample.
V	Value not available due to dilution.
H	Recommended laboratory holding time was exceeded.
G	Result and reporting limit are estimated due to initial calibration standard criteria failure.
A11	Result is estimated due to high initial verification standard criteria failure.
A09	Result is estimated due to high recovery of batch QC.
A06	Result is estimated due to high continuing calibration standard criteria failure.
A05	Result(s) and reporting limit(s) are estimated due to low continuing calibration standard criteria failure.
A04	Result is estimated due to high matrix spike recovery.
A03	Result(s) and reporting limit(s) are estimated due to low matrix spike recovery.
ND	Indicates the analyte was not detected at or above the method reporting limit (RL)
RL	Reporting Limit
NA	Not Applicable
dry	Sample results reported on a dry weight basis

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

*****Case Narrative*****

Samples were received **9/26/2023 1:30:00PM** for client **EGLE-RRD-LANSING** as a part of project **IMLAY CITY DPW**.

Samples were logged and designated as Work Order # **2309323** on **9/27/2023 9:20:00AM**.

This Report was created **11/8/2023 8:54:29AM**.

Additional Notes/Narrative (if applicable):

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-1s

Lab ID: 2309323-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										**See note Y11, Y18**
630-20-6	1,1,1,2-Tetrachloroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
71-55-6	1,1,1-Trichloroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
79-34-5	1,1,2,2-Tetrachloroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
79-00-5	1,1,2-Trichloroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-34-3	1,1-Dichloroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-35-4	1,1-Dichloroethylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
87-61-6	1,2,3-Trichlorobenzene	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
96-18-4	1,2,3-Trichloropropane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
526-73-8	**1,2,3-Trimethylbenzene**	**130**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
120-82-1	1,2,4-Trichlorobenzene	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
95-63-6	**1,2,4-Trimethylbenzene**	**310**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
96-12-8	1,2-Dibromo-3-chloropropane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
106-93-4	1,2-Dibromoethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
95-50-1	1,2-Dichlorobenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
107-06-2	1,2-Dichloroethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
78-87-5	1,2-Dichloropropane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
108-67-8	**1,3,5-Trimethylbenzene**	**90**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
541-73-1	1,3-Dichlorobenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
106-46-7	1,4-Dichlorobenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
540-84-1	2,2,4-Trimethylpentane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
78-93-3	2-Butanone (MEK)	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
91-57-6	**2-Methylnaphthalene**	**510**	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
67-64-1	2-Propanone (acetone)	ND	1400	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
107-13-1	Acrylonitrile	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
71-43-2	**Benzene**	**91**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
74-97-5	Bromochloromethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-27-4	Bromodichloromethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-25-2	Bromoform	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
74-83-9	Bromomethane	ND	290	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-15-0	Carbon disulfide	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
56-23-5	Carbon tetrachloride	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
108-90-7	Chlorobenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-00-3	Chloroethane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
67-66-3	Chloroform	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
74-87-3	Chloromethane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
156-59-2	cis-1,2-Dichloroethylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
10061-01-5	cis-1,3-Dichloropropylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
110-82-7	Cyclohexane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
124-48-1	Dibromochloromethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
74-95-3	Dibromomethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-1s

Lab ID: 2309323-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										**See note Y11, Y18**
75-71-8	Dichlorodifluoromethane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
60-29-7	Diethyl ether	ND	290	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
108-20-3	Diisopropyl Ether	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
100-41-4	**Ethylbenzene**	**170**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
637-92-3	Ethyltertiarybutylether	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
67-72-1	Hexachloroethane	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
110-54-3	**Hexane**	**110**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
98-82-8	**Isopropylbenzene**	**96**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
1330-20-7	**m & p - Xylene**	**600**	140	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
96-37-7	**Methylcyclopentane**	**290**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-09-2	Methylene chloride	ND	140	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
1634-04-4	Methyltertiarybutylether	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
91-20-3	**Naphthalene**	**500**	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
104-51-8	n-Butylbenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
142-82-5	**n-Heptane**	**150**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
103-65-1	**n-Propylbenzene**	**110**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
95-47-6	**o-Xylene**	**480**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
135-98-8	sec-Butylbenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
100-42-5	Styrene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
98-06-6	tert-Butylbenzene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-65-0	tertiary Butyl Alcohol	ND	3600	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
994-05-8	tertiaryAmylmethylether	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
127-18-4	Tetrachloroethylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
109-99-9	Tetrahydrofuran	ND	360	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
108-88-3	**Toluene**	**510**	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
156-60-5	trans-1,2-Dichloroethylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
10061-02-6	trans-1,3-Dichloropropylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
79-01-6	Trichloroethylene	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-69-4	Trichlorofluoromethane	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
75-01-4	Vinyl chloride	ND	72	ug/kg dry	50	10/13/23	B3J1624	8260	RD	
Surrogate: Bromofluorobenzene			*122 %*	*40-194*		*10/13/23*	B3J1624	*8260*	*RD*	
Surrogate: Dibromofluoromethane			*128 %*	*52-217*		*10/13/23*	B3J1624	*8260*	*RD*	
Surrogate: Toluene-d8			*128 %*	*55-196*		*10/13/23*	B3J1624	*8260*	*RD*	

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MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-1s

Lab ID: 2309323-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	**2-Methylnaphthalene**	**4700**	290	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
120-12-7	**Anthracene**	**200**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
56-55-3	**Benz[a]anthracene**	**620**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
50-32-8	**Benzo[a]pyrene**	**560**	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**1100**	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**330**	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
218-01-9	**Chrysene**	**1000**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
206-44-0	**Fluoranthene**	**1400**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
91-20-3	**Naphthalene**	**3000**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
85-01-8	**Phenanthrene**	**2700**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
129-00-0	**Pyrene**	**1200**	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*98.5 %*	*36-133*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*82.3 %*	*26-123*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*94.1 %*	*36-142*		*10/10/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**85.3**	0.1	%	1	09/29/23	B3I2924	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**14**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**43**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**5.0**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**19**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**48**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**1.9**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**54**	2.0	mg/kg dry	20	10/18/23	B3J0342	200.8	CL	

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Client ID: AKT-1d

Lab ID: 2309323-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
71-55-6	1,1,1-Trichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
79-34-5	1,1,2,2-Tetrachloroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
79-00-5	1,1,2-Trichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-34-3	1,1-Dichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-35-4	1,1-Dichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
87-61-6	1,2,3-Trichlorobenzene	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
96-18-4	1,2,3-Trichloropropane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
526-73-8	1,2,3-Trimethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
120-82-1	1,2,4-Trichlorobenzene	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
95-63-6	1,2,4-Trimethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
96-12-8	1,2-Dibromo-3-chloropropane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
106-93-4	1,2-Dibromoethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
95-50-1	1,2-Dichlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
107-06-2	1,2-Dichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
78-87-5	1,2-Dichloropropane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-67-8	1,3,5-Trimethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
541-73-1	1,3-Dichlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
106-46-7	1,4-Dichlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
540-84-1	2,2,4-Trimethylpentane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
78-93-3	2-Butanone (MEK)	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
91-57-6	2-Methylnaphthalene	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
67-64-1	2-Propanone (acetone)	ND	1300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05, G
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
107-13-1	Acrylonitrile	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
71-43-2	Benzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
74-97-5	Bromochloromethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-27-4	Bromodichloromethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-25-2	Bromoform	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
74-83-9	Bromomethane	ND	260	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-15-0	Carbon disulfide	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
56-23-5	Carbon tetrachloride	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-90-7	Chlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-00-3	Chloroethane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
67-66-3	Chloroform	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
74-87-3	Chloromethane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
156-59-2	cis-1,2-Dichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
10061-01-5	cis-1,3-Dichloropropylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
110-82-7	Cyclohexane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
124-48-1	Dibromochloromethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
74-95-3	Dibromomethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	

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Client ID: AKT-1d

Lab ID: 2309323-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
60-29-7	Diethyl ether	ND	260	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-20-3	Diisopropyl Ether	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
100-41-4	Ethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
637-92-3	Ethyltertiarybutylether	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
67-72-1	Hexachloroethane	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
110-54-3	Hexane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
98-82-8	Isopropylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
1330-20-7	m & p - Xylene	ND	130	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
96-37-7	Methylcyclopentane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-09-2	Methylene chloride	ND	130	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
1634-04-4	Methyltertiarybutylether	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
91-20-3	Naphthalene	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
104-51-8	n-Butylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
142-82-5	n-Heptane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
103-65-1	n-Propylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
95-47-6	o-Xylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
135-98-8	sec-Butylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
100-42-5	Styrene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
98-06-6	tert-Butylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-65-0	tertiary Butyl Alcohol	ND	3300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
994-05-8	tertiaryAmylmethylether	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
127-18-4	Tetrachloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
109-99-9	Tetrahydrofuran	ND	330	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-88-3	Toluene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
156-60-5	trans-1,2-Dichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
10061-02-6	trans-1,3-Dichloropropylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
79-01-6	Trichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-69-4	Trichlorofluoromethane	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-01-4	Vinyl chloride	ND	65	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
Surrogate: Bromofluorobenzene			*108 %*	*40.3-194*		*10/03/23*	B3J0346	*8260*	*RD*	
Surrogate: Dibromofluoromethane			*101 %*	*52.1-217*		*10/03/23*	B3J0346	*8260*	*RD*	
Surrogate: Toluene-d8			*108 %*	*55.4-196*		*10/03/23*	B3J0346	*8260*	*RD*	

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CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	290	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	230	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	230	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	230	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	230	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
218-01-9	Chrysene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	230	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
206-44-0	Fluoranthene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	230	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
85-01-8	Phenanthrene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
129-00-0	Pyrene	ND	120	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*93.2 %*	*36-133*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*76.2 %*	*26-123*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*99.0 %*	*36-142*		*10/09/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**86.9**	0.1	%	1	09/29/23	B3I2924	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**7.5**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**23**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**14**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**16**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**6.5**	1.0	mg/kg dry	10	10/18/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**1.3**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**37**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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Client ID: AKT-2s

Lab ID: 2309323-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
71-55-6	1,1,1-Trichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
79-34-5	1,1,2,2-Tetrachloroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
79-00-5	1,1,2-Trichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-34-3	1,1-Dichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-35-4	1,1-Dichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
87-61-6	1,2,3-Trichlorobenzene	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
96-18-4	1,2,3-Trichloropropane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
526-73-8	1,2,3-Trimethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
120-82-1	1,2,4-Trichlorobenzene	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
95-63-6	1,2,4-Trimethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
96-12-8	1,2-Dibromo-3-chloropropane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
106-93-4	1,2-Dibromoethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
95-50-1	1,2-Dichlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
107-06-2	1,2-Dichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
78-87-5	1,2-Dichloropropane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-67-8	1,3,5-Trimethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
541-73-1	1,3-Dichlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
106-46-7	1,4-Dichlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
540-84-1	2,2,4-Trimethylpentane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
78-93-3	2-Butanone (MEK)	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
91-57-6	2-Methylnaphthalene	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
67-64-1	2-Propanone (acetone)	ND	1200	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05, G
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
107-13-1	Acrylonitrile	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
71-43-2	Benzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
74-97-5	Bromochloromethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-27-4	Bromodichloromethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-25-2	Bromoform	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
74-83-9	Bromomethane	ND	240	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-15-0	Carbon disulfide	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
56-23-5	Carbon tetrachloride	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-90-7	Chlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-00-3	Chloroethane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
67-66-3	Chloroform	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
74-87-3	Chloromethane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
156-59-2	cis-1,2-Dichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
10061-01-5	cis-1,3-Dichloropropylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
110-82-7	Cyclohexane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
124-48-1	Dibromochloromethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
74-95-3	Dibromomethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	

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Client ID: AKT-2s

Lab ID: 2309323-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
60-29-7	Diethyl ether	ND	240	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-20-3	Diisopropyl Ether	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
100-41-4	Ethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
637-92-3	Ethyltertiarybutylether	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
67-72-1	Hexachloroethane	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
110-54-3	Hexane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
98-82-8	Isopropylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
1330-20-7	m & p - Xylene	ND	120	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
96-37-7	Methylcyclopentane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-09-2	Methylene chloride	ND	120	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
1634-04-4	Methyltertiarybutylether	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
91-20-3	Naphthalene	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
104-51-8	n-Butylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
142-82-5	n-Heptane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
103-65-1	n-Propylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
95-47-6	o-Xylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
135-98-8	sec-Butylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
100-42-5	Styrene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
98-06-6	tert-Butylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-65-0	tertiary Butyl Alcohol	ND	3000	ug/kg dry	50	10/03/23	B3J0346	8260	RD	A05
994-05-8	tertiaryAmylmethylether	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
127-18-4	Tetrachloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
109-99-9	Tetrahydrofuran	ND	300	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
108-88-3	Toluene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
156-60-5	trans-1,2-Dichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
10061-02-6	trans-1,3-Dichloropropylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
79-01-6	Trichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-69-4	Trichlorofluoromethane	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
75-01-4	Vinyl chloride	ND	61	ug/kg dry	50	10/03/23	B3J0346	8260	RD	
Surrogate: Bromofluorobenzene			*132 %*	*40.3-194*		*10/03/23*	B3J0346	*8260*	*RD*	
Surrogate: Dibromofluoromethane			*119 %*	*52.1-217*		*10/03/23*	B3J0346	*8260*	*RD*	
Surrogate: Toluene-d8			*128 %*	*55.4-196*		*10/03/23*	B3J0346	*8260*	*RD*	

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Client ID: AKT-2s

Lab ID: 2309323-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	280	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
206-44-0	Fluoranthene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
129-00-0	Pyrene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*92.6 %*	*36-133*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*75.6 %*	*26-123*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*93.9 %*	*36-142*		*10/09/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**89.1**	0.1	%	1	09/29/23	B3I2924	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**5.3**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**31**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**8.4**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**5.7**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**6.7**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.5**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**25**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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Client ID: AKT-2d

Lab ID: 2309323-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	260	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	260	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	130	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	130	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	64	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*111 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*123 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*119 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

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Client ID: AKT-2d

Lab ID: 2309323-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	280	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
206-44-0	Fluoranthene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
129-00-0	Pyrene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*83.0 %*	*36-133*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*83.1 %*	*26-123*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*106 %*	*36-142*		*10/10/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**88.4**	0.1	%	1	09/29/23	B3I2924	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**7.3**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**22**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**12**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**9.8**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**4.8**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.7**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**30**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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Client ID: AKT-3s

Lab ID: 2309323-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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Client ID: AKT-3s

Lab ID: 2309323-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3000	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*109 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*120 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*115 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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Client ID: AKT-3s

Lab ID: 2309323-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17, Y21**
91-57-6	2-Methylnaphthalene	ND	270	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	22000	ug/kg dry	100	10/16/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	22000	ug/kg dry	100	10/16/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	22000	ug/kg dry	100	10/16/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	22000	ug/kg dry	100	10/16/23	B3J0228	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	22000	ug/kg dry	100	10/16/23	B3J0228	8270	MF	
206-44-0	**Fluoranthene**	**220**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	22000	ug/kg dry	100	10/16/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
85-01-8	**Phenanthrene**	**120**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
129-00-0	**Pyrene**	**290**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*87.4 %*	*36-133*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*71.5 %*	*26-123*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*132 %*	*36-142*		*10/10/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**91.4**	0.1	%	1	09/29/23	B3I2924	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**6.7**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**17**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**8.3**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**12**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**16**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.05	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.5**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**40**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-3d

Lab ID: 2309323-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1100	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	230	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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Client ID: AKT-3d

Lab ID: 2309323-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	230	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	110	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	110	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	2900	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	57	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*99.0 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*108 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*107 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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Client ID: AKT-3d

Lab ID: 2309323-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	270	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
206-44-0	Fluoranthene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
129-00-0	Pyrene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*93.6 %*	*36-133*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*73.7 %*	*26-123*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*96.5 %*	*36-142*		*10/09/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**91.9**	0.1	%	1	09/29/23	B3I2924	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**4.6**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**19**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**9.1**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**7.2**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**3.6**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.05	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.8**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**22**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY**

P.O. Box 30270
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Client ID: AKT-4s

Lab ID: 2309323-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3100	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	310	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*119 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*127 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*124 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-4s

Lab ID: 2309323-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	280	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
218-01-9	**Chrysene**	**140**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
206-44-0	**Fluoranthene**	**180**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
129-00-0	**Pyrene**	**140**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*102 %*	*36-133*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*81.6 %*	*26-123*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*103 %*	*36-142*		*10/09/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**89.4**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**9.8**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**40**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**12**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**11**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**14**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.8**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**38**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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FAX: (517) 335-9600

Client ID: AKT-4d

Lab ID: 2309323-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	270	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-4d

Lab ID: 2309323-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	270	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	130	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	130	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3400	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	340	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	67	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*109 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*115 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*115 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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Client ID: AKT-4d

Lab ID: 2309323-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	290	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
56-55-3	Benz[a]anthracene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
218-01-9	Chrysene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
206-44-0	Fluoranthene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	230	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
91-20-3	Naphthalene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
85-01-8	Phenanthrene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
129-00-0	Pyrene	ND	120	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*93.8 %*	*36-133*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*77.1 %*	*26-123*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*103 %*	*36-142*		*10/10/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**85.4**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**12**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**45**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**15**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**14**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**9.2**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.9**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**40**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

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Client ID: AKT-5

Lab ID: 2309323-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**87**	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	260	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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Client ID: AKT-5

Lab ID: 2309323-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	260	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	130	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	**Methylcyclopentane**	**96**	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	130	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	**o-Xylene**	**120**	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	320	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	**Toluene**	**79**	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	65	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*119 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*127 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*125 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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Client ID: AKT-5

Lab ID: 2309323-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17, Y21**
91-57-6	2-Methylnaphthalene	ND	280	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
56-55-3	**Benz[a]anthracene**	**160**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
50-32-8	Benzo[a]pyrene	ND	2300	ug/kg dry	10	10/10/23	B3J0228	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	2300	ug/kg dry	10	10/10/23	B3J0228	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	2300	ug/kg dry	10	10/10/23	B3J0228	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	2300	ug/kg dry	10	10/10/23	B3J0228	8270	MF	
218-01-9	**Chrysene**	**200**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2300	ug/kg dry	10	10/10/23	B3J0228	8270	MF	
206-44-0	**Fluoranthene**	**310**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2300	ug/kg dry	10	10/10/23	B3J0228	8270	MF	
91-20-3	**Naphthalene**	**180**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
85-01-8	**Phenanthrene**	**290**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
129-00-0	**Pyrene**	**410**	110	ug/kg dry	1	10/10/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*101 %*	*36-133*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*81.1 %*	*26-123*		*10/10/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*138 %*	*36-142*		*10/10/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**88.9**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**9.7**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**43**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**16**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**19**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**64**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	**Mercury**	**0.1**	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.8**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**74**	2.0	mg/kg dry	20	10/18/23	B3J0342	200.8	CL	

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MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
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Client ID: AKT-6

Lab ID: 2309323-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										**See note Y11**
630-20-6	1,1,1,2-Tetrachloroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
526-73-8	**1,2,3-Trimethylbenzene**	**34000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**150000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
108-67-8	**1,3,5-Trimethylbenzene**	**45000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
540-84-1	**2,2,4-Trimethylpentane**	**30000**	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
91-57-6	**2-Methylnaphthalene**	**27000**	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	50000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	10000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	

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CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										**See note Y11**
75-71-8	Dichlorodifluoromethane	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	10000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
100-41-4	**Ethylbenzene**	**33000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
110-54-3	**Hexane**	**12000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
98-82-8	**Isopropylbenzene**	**4500**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
1330-20-7	**m & p - Xylene**	**160000**	5000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
96-37-7	**Methylcyclopentane**	**11000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	5000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
91-20-3	**Naphthalene**	**18000**	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
142-82-5	**n-Heptane**	**15000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
103-65-1	**n-Propylbenzene**	**17000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
95-47-6	**o-Xylene**	**40000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	120000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	12000	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
108-88-3	**Toluene**	**26000**	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	2500	ug/kg dry	2000	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*Not Applicable*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	*V*
Surrogate: Dibromofluoromethane			*Not Applicable*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	*V*
Surrogate: Toluene-d8			*Not Applicable*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	*V*

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: AKT-6

Lab ID: 2309323-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	**2-Methylnaphthalene**	**8800**	2700	ug/kg dry	10	10/20/23	B3J0337	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
50-32-8	Benzo[a]pyrene	ND	220	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	220	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	220	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	220	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	220	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
206-44-0	Fluoranthene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	220	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
91-20-3	**Naphthalene**	**3300**	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
129-00-0	Pyrene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
Surrogate: 2-Fluorobiphenyl			*84.5 %*	*36-133*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*61.9 %*	*26-123*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*94.1 %*	*36-142*		*10/18/23*	B3J0337	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**92.0**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**4.0**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**10**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**6.1**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**4.8**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**3.1**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.05	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.4**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**26**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

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Client ID: AKT-7

Lab ID: 2309323-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										**See note Y11**
630-20-6	1,1,1,2-Tetrachloroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
526-73-8	**1,2,3-Trimethylbenzene**	**7900**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**34000**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
108-67-8	**1,3,5-Trimethylbenzene**	**10000**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
540-84-1	**2,2,4-Trimethylpentane**	**2700**	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
91-57-6	**2-Methylnaphthalene**	**7200**	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	5200	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	1000	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	

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Client ID: AKT-7

Lab ID: 2309323-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										**See note Y11**
75-71-8	Dichlorodifluoromethane	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	1000	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
100-41-4	**Ethylbenzene**	**5700**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
110-54-3	**Hexane**	**1000**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
98-82-8	**Isopropylbenzene**	**870**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
1330-20-7	**m & p - Xylene**	**37000**	520	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
96-37-7	**Methylcyclopentane**	**1300**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	520	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
91-20-3	**Naphthalene**	**6100**	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
142-82-5	**n-Heptane**	**1400**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
103-65-1	**n-Propylbenzene**	**3500**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
95-47-6	**o-Xylene**	**12000**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
135-98-8	**sec-Butylbenzene**	**510**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	13000	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	1300	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
108-88-3	**Toluene**	**1900**	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	260	ug/kg dry	200	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*Not Applicable*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	*V*
Surrogate: Dibromofluoromethane			*Not Applicable*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	*V*
Surrogate: Toluene-d8			*Not Applicable*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	*V*

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Client ID: AKT-7

Lab ID: 2309323-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	**2-Methylnaphthalene**	**5400**	290	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
50-32-8	Benzo[a]pyrene	ND	230	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	230	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	230	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	230	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	230	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
206-44-0	Fluoranthene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	230	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
91-20-3	**Naphthalene**	**3100**	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
129-00-0	Pyrene	ND	110	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
Surrogate: 2-Fluorobiphenyl			*108 %*	*36-133*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*81.3 %*	*26-123*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*111 %*	*36-142*		*10/18/23*	B3J0337	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**87.3**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**3.7**	0.5	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**10**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**8.6**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**4.4**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**3.8**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-97-6	Mercury	ND	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**0.4**	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-22-4	Silver	ND	0.1	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**16**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: AKT-8

Lab ID: 2309323-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	**1,2,3-Trimethylbenzene**	**290**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**350**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	**1,3,5-Trimethylbenzene**	**95**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	**2-Methylnaphthalene**	**620**	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1800	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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Client ID: AKT-8

Lab ID: 2309323-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	**Isopropylbenzene**	**94**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	**m & p - Xylene**	**510**	180	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	**Methylcyclopentane**	**470**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	180	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	**Naphthalene**	**640**	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	**o-Xylene**	**490**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	4600	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	460	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	**Toluene**	**210**	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	92	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*119 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*138 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*131 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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Client ID: AKT-8

Lab ID: 2309323-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	**2-Methylnaphthalene**	**2400**	350	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
83-32-9	Acenaphthene	ND	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
208-96-8	Acenaphthylene	ND	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
120-12-7	**Anthracene**	**170**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
56-55-3	**Benz[a]anthracene**	**640**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
50-32-8	**Benzo[a]pyrene**	**580**	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**1300**	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**360**	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
218-01-9	**Chrysene**	**1100**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
206-44-0	**Fluoranthene**	**1100**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
86-73-7	Fluorene	ND	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
91-20-3	**Naphthalene**	**1500**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
85-01-8	**Phenanthrene**	**1700**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
129-00-0	**Pyrene**	**1100**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
Surrogate: 2-Fluorobiphenyl			*94.8 %*	*36-133*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*70.3 %*	*26-123*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*100 %*	*36-142*		*10/18/23*	B3J0337	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**71.5**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**16**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**130**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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Client ID: AKT-9

Lab ID: 2309323-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1500	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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Client ID: AKT-9

Lab ID: 2309323-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	290	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	150	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	150	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3700	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	370	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	73	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*122 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*131 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*126 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
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Client ID: AKT-9

Lab ID: 2309323-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	2-Methylnaphthalene	ND	300	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
83-32-9	**Acenaphthene**	**140**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
208-96-8	Acenaphthylene	ND	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
120-12-7	**Anthracene**	**410**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
56-55-3	**Benz[a]anthracene**	**710**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
50-32-8	**Benzo[a]pyrene**	**670**	240	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**910**	240	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	240	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**340**	240	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
218-01-9	**Chrysene**	**680**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	240	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
206-44-0	**Fluoranthene**	**1900**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
86-73-7	**Fluorene**	**180**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	240	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
91-20-3	**Naphthalene**	**260**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
85-01-8	**Phenanthrene**	**1800**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
129-00-0	**Pyrene**	**1500**	120	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
Surrogate: 2-Fluorobiphenyl			*80.4 %*	*36-133*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*64.0 %*	*26-123*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*88.6 %*	*36-142*		*10/18/23*	B3J0337	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**82.2**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**7.7**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**45**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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ENVIRONMENTAL LABORATORY**

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Client ID: AKT-10

Lab ID: 2309323-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-10

Lab ID: 2309323-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	3000	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	60	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*116 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*121 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*117 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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ENVIRONMENTAL LABORATORY**

P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: AKT-10

Lab ID: 2309323-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	270	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
83-32-9	Acenaphthene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
208-96-8	Acenaphthylene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
120-12-7	Anthracene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
56-55-3	Benz[a]anthracene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
50-32-8	Benzo[a]pyrene	ND	220	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	220	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	220	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	220	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
218-01-9	Chrysene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	220	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
206-44-0	Fluoranthene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
86-73-7	Fluorene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	220	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
91-20-3	Naphthalene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
85-01-8	Phenanthrene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
129-00-0	Pyrene	ND	110	ug/kg dry	1	10/16/23	B3J0337	8270	MF	
Surrogate: 2-Fluorobiphenyl			*94.3 %*	*36-133*		*10/16/23*	B3J0337	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*73.0 %*	*26-123*		*10/16/23*	B3J0337	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*104 %*	*36-142*		*10/16/23*	B3J0337	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**91.6**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**8.6**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**4.2**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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Client ID: AKT-Dup Soil

Lab ID: 2309323-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
526-73-8	**1,2,3-Trimethylbenzene**	**380**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**420**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
108-67-8	**1,3,5-Trimethylbenzene**	**130**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
91-57-6	**2-Methylnaphthalene**	**690**	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1900	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
107-13-1	Acrylonitrile	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
71-43-2	Benzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
74-97-5	Bromochloromethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-27-4	Bromodichloromethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-25-2	Bromoform	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
74-83-9	Bromomethane	ND	370	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-15-0	Carbon disulfide	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
56-23-5	Carbon tetrachloride	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
108-90-7	Chlorobenzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-00-3	Chloroethane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
67-66-3	Chloroform	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
74-87-3	Chloromethane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
110-82-7	Cyclohexane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
124-48-1	Dibromochloromethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
74-95-3	Dibromomethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-Dup Soil

Lab ID: 2309323-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
60-29-7	Diethyl ether	ND	370	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
108-20-3	Diisopropyl Ether	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
100-41-4	**Ethylbenzene**	**110**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
67-72-1	Hexachloroethane	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
110-54-3	Hexane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
98-82-8	**Isopropylbenzene**	**110**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
1330-20-7	**m & p - Xylene**	**620**	190	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
96-37-7	**Methylcyclopentane**	**610**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-09-2	Methylene chloride	ND	190	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
91-20-3	**Naphthalene**	**720**	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
104-51-8	**n-Butylbenzene**	**110**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
142-82-5	**n-Heptane**	**140**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
103-65-1	**n-Propylbenzene**	**100**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
95-47-6	**o-Xylene**	**580**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
135-98-8	sec-Butylbenzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
100-42-5	Styrene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
98-06-6	tert-Butylbenzene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	4600	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
127-18-4	Tetrachloroethylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
109-99-9	Tetrahydrofuran	ND	460	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
108-88-3	**Toluene**	**240**	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
79-01-6	Trichloroethylene	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
75-01-4	Vinyl chloride	ND	93	ug/kg dry	50	10/04/23	B3J0431	8260	SJR	
Surrogate: Bromofluorobenzene			*122 %*	*61-159*		*10/04/23*	B3J0431	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*148 %*	*63-165*		*10/04/23*	B3J0431	*8260*	*SJR*	
Surrogate: Toluene-d8			*138 %*	*62-161*		*10/04/23*	B3J0431	*8260*	*SJR*	

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Client ID: AKT-Dup Soil

Lab ID: 2309323-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	**2-Methylnaphthalene**	**1800**	350	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
83-32-9	Acenaphthene	ND	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
208-96-8	Acenaphthylene	ND	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
120-12-7	**Anthracene**	**180**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
56-55-3	**Benz[a]anthracene**	**580**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
50-32-8	**Benzo[a]pyrene**	**600**	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**1300**	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**400**	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
218-01-9	**Chrysene**	**920**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
206-44-0	**Fluoranthene**	**1100**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
86-73-7	Fluorene	ND	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	280	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
91-20-3	**Naphthalene**	**1200**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
85-01-8	**Phenanthrene**	**1700**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
129-00-0	**Pyrene**	**1100**	140	ug/kg dry	1	10/18/23	B3J0337	8270	MF	
Surrogate: 2-Fluorobiphenyl			*86.1 %*	*36-133*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*62.5 %*	*26-123*		*10/18/23*	B3J0337	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*91.5 %*	*36-142*		*10/18/23*	B3J0337	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**71.8**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**16**	2.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**130**	1.0	mg/kg dry	10	10/16/23	B3J0342	200.8	CL	

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Client ID: AKT-3d MS

Lab ID: 2309323-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	**1,1,1,2-Tetrachloroethane**	**2500**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	**1,1,1-Trichloroethane**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	**1,1,2,2-Tetrachloroethane**	**2400**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	**1,1,2-Trichloroethane**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	**1,1,2-Trichlorotrifluoroethane**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	**1,1-Dichloroethane**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	**1,1-Dichloroethylene**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	**1,2,3-Trichlorobenzene**	**2600**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	**1,2,3-Trichloropropane**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	**1,2,3-Trimethylbenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	**1,2,4-Trichlorobenzene**	**2500**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	**1,2-Dibromo-3-chloropropane**	**2300**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	**1,2-Dibromoethane**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	**1,2-Dichlorobenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	**1,2-Dichloroethane**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	**1,2-Dichloropropane**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	**1,3,5-Trimethylbenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	**1,3-Dichlorobenzene**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	**1,4-Dichlorobenzene**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	**2,2,4-Trimethylpentane**	**2400**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	**2-Butanone (MEK)**	**2600**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	**2-Methylnaphthalene**	**2300**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	**2-Propanone (acetone)**	**2700**	1200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	**Acrylonitrile**	**2500**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	**Benzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	**Bromochloromethane**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	**Bromodichloromethane**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	**Bromoform**	**2300**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	**Bromomethane**	**2700**	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	**Carbon disulfide**	**2400**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	**Carbon tetrachloride**	**2500**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	**Chlorobenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	**Chloroethane**	**2600**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	**Chloroform**	**3000**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	**Chloromethane**	**2800**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	**cis-1,2-Dichloroethylene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	**cis-1,3-Dichloropropylene**	**2500**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	**Cyclohexane**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	**Dibromochloromethane**	**2400**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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Lab ID: 2309323-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
74-95-3	**Dibromomethane**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-71-8	**Dichlorodifluoromethane**	**2900**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	**Diethyl ether**	**2700**	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	**Diisopropyl Ether**	**3000**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	**Ethylbenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	**Ethyltertiarybutylether**	**2800**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	**Hexachloroethane**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	**Hexane**	**2500**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	**Isopropylbenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	**m & p - Xylene**	**5800**	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	**Methylcyclopentane**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	**Methylene chloride**	**2800**	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	**Methyltertiarybutylether**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	**Naphthalene**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	**n-Butylbenzene**	**2600**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	**n-Heptane**	**2600**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	**n-Propylbenzene**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	**o-Xylene**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	**sec-Butylbenzene**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	**Styrene**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	**tert-Butylbenzene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	**tertiary Butyl Alcohol**	**13000**	3000	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	**tertiaryAmylmethylether**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	**Tetrachloroethylene**	**2600**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	**Tetrahydrofuran**	**2600**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	**Toluene**	**2700**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	**trans-1,2-Dichloroethylene**	**2800**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	**trans-1,3-Dichloropropylene**	**2500**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	**Trichloroethylene**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	**Trichlorofluoromethane**	**2900**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	**Vinyl chloride**	**3000**	59	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*104 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*119 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*112 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-3d MS

Lab ID: 2309323-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	**2-Methylnaphthalene**	**2100**	280	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
83-32-9	**Acenaphthene**	**1900**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
208-96-8	**Acenaphthylene**	**2000**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
120-12-7	**Anthracene**	**2100**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
56-55-3	**Benz[a]anthracene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
50-32-8	**Benzo[a]pyrene**	**2100**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**2100**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
191-24-2	**Benzo[g,h,i]perylene**	**1900**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**2100**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
218-01-9	**Chrysene**	**2100**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
53-70-3	**Dibenz[a,h]anthracene**	**1800**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
206-44-0	**Fluoranthene**	**2100**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
86-73-7	**Fluorene**	**2100**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
193-39-5	**Indeno(1,2,3-c,d)pyrene**	**1800**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
91-20-3	**Naphthalene**	**1800**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
85-01-8	**Phenanthrene**	**2000**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
129-00-0	**Pyrene**	**2100**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*99.0 %*	*36-133*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*77.7 %*	*26-123*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*103 %*	*36-142*		*10/09/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**90.1**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**98**	5.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**120**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-43-9	**Cadmium**	**9.8**	2.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**110**	20	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**110**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**100**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7439-97-6	**Mercury**	**0.5**	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**100**	2.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-22-4	**Silver**	**9.8**	1.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**120**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-3d MSD

Lab ID: 2309323-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	**1,1,1,2-Tetrachloroethane**	**2800**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	**1,1,1-Trichloroethane**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	**1,1,2,2-Tetrachloroethane**	**2700**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	**1,1,2-Trichloroethane**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	**1,1,2-Trichlorotrifluoroethane**	**2900**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	**1,1-Dichloroethane**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	**1,1-Dichloroethylene**	**2900**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	**1,2,3-Trichlorobenzene**	**3000**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	**1,2,3-Trichloropropane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	**1,2,3-Trimethylbenzene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	**1,2,4-Trichlorobenzene**	**3000**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	**1,2,4-Trimethylbenzene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	**1,2-Dibromo-3-chloropropane**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	**1,2-Dibromoethane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	**1,2-Dichlorobenzene**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	**1,2-Dichloroethane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	**1,2-Dichloropropane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	**1,3,5-Trimethylbenzene**	**3300**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	**1,3-Dichlorobenzene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	**1,4-Dichlorobenzene**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	**2,2,4-Trimethylpentane**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	**2-Butanone (MEK)**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	**2-Methylnaphthalene**	**2800**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	**2-Propanone (acetone)**	**2800**	1200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**3000**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	**Acrylonitrile**	**2700**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	**Benzene**	**2900**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	**Bromochloromethane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	**Bromodichloromethane**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	**Bromoform**	**2500**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	**Bromomethane**	**2900**	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	**Carbon disulfide**	**2600**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	**Carbon tetrachloride**	**2800**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	**Chlorobenzene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	**Chloroethane**	**2800**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	**Chloroform**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	**Chloromethane**	**2900**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	**cis-1,2-Dichloroethylene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	**cis-1,3-Dichloropropylene**	**2800**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	**Cyclohexane**	**2900**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	**Dibromochloromethane**	**2600**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

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TEL: (517) 335-9800
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Client ID: AKT-3d MSD

Lab ID: 2309323-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
74-95-3	**Dibromomethane**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-71-8	**Dichlorodifluoromethane**	**2900**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	**Diethyl ether**	**2900**	240	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	**Diisopropyl Ether**	**2900**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	**Ethylbenzene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	**Ethyltertiarybutylether**	**3000**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	**Hexachloroethane**	**3100**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	**Hexane**	**2600**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	**Isopropylbenzene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	**m & p - Xylene**	**6200**	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	**Methylcyclopentane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	**Methylene chloride**	**2900**	120	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	**Methyltertiarybutylether**	**2900**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	**Naphthalene**	**3200**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	**n-Butylbenzene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	**n-Heptane**	**2900**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	**n-Propylbenzene**	**3300**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	**o-Xylene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	**sec-Butylbenzene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	**Styrene**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	**tert-Butylbenzene**	**3200**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	**tertiary Butyl Alcohol**	**15000**	3000	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	**tertiaryAmylmethylether**	**3000**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	**Tetrachloroethylene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	**Tetrahydrofuran**	**2900**	300	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	**Toluene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	**trans-1,2-Dichloroethylene**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	**trans-1,3-Dichloropropylene**	**2800**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	**Trichloroethylene**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	**Trichlorofluoromethane**	**3100**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	**Vinyl chloride**	**3000**	61	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*108 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*119 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*111 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: AKT-3d MSD

Lab ID: 2309323-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	**2-Methylnaphthalene**	**2200**	280	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
83-32-9	**Acenaphthene**	**2100**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
208-96-8	**Acenaphthylene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
120-12-7	**Anthracene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
56-55-3	**Benz[a]anthracene**	**2300**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
50-32-8	**Benzo[a]pyrene**	**2200**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**2200**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
191-24-2	**Benzo[g,h,i]perylene**	**1900**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**2200**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
218-01-9	**Chrysene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
53-70-3	**Dibenz[a,h]anthracene**	**1800**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
206-44-0	**Fluoranthene**	**2300**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
86-73-7	**Fluorene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
193-39-5	**Indeno(1,2,3-c,d)pyrene**	**1900**	220	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
91-20-3	**Naphthalene**	**2000**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
85-01-8	**Phenanthrene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
129-00-0	**Pyrene**	**2200**	110	ug/kg dry	1	10/09/23	B3J0228	8270	MF	
Surrogate: 2-Fluorobiphenyl			*107 %*	*36-133*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*82.8 %*	*26-123*		*10/09/23*	B3J0228	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*103 %*	*36-142*		*10/09/23*	B3J0228	*8270*	*MF*	
Inorganics-General Chemistry										
TS	**% Total Solids**	**89.1**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	
Inorganics-Metals										
7440-38-2	**Arsenic**	**89**	5.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-39-3	**Barium**	**110**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-43-9	**Cadmium**	**9.5**	2.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-47-3	**Chromium**	**98**	20	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-50-8	**Copper**	**96**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7439-92-1	**Lead**	**93**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7439-97-6	**Mercury**	**0.5**	0.06	mg/kg dry	1	10/11/23	B3J0925	245.5	JP1	
7782-49-2	**Selenium**	**92**	2.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-22-4	**Silver**	**9.6**	1.0	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	
7440-66-6	**Zinc**	**110**	10	mg/kg dry	100	10/16/23	B3J0342	200.8	CL	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

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FAX: (517) 335-9600

Client ID: Methanol Trip Blank

Lab ID: 2309323-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-55-6	1,1,1-Trichloroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-00-5	1,1,2-Trichloroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-34-3	1,1-Dichloroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-35-4	1,1-Dichloroethylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
87-61-6	1,2,3-Trichlorobenzene	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-18-4	1,2,3-Trichloropropane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
526-73-8	1,2,3-Trimethylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
120-82-1	1,2,4-Trichlorobenzene	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-63-6	1,2,4-Trimethylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-93-4	1,2-Dibromoethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-50-1	1,2-Dichlorobenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-06-2	1,2-Dichloroethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-87-5	1,2-Dichloropropane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-67-8	1,3,5-Trimethylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
541-73-1	1,3-Dichlorobenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
106-46-7	1,4-Dichlorobenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
540-84-1	2,2,4-Trimethylpentane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
78-93-3	2-Butanone (MEK)	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-57-6	2-Methylnaphthalene	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-64-1	2-Propanone (acetone)	ND	1000	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
107-13-1	Acrylonitrile	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
71-43-2	Benzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-97-5	Bromochloromethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-27-4	Bromodichloromethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-25-2	Bromoform	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-83-9	Bromomethane	ND	200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-15-0	Carbon disulfide	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
56-23-5	Carbon tetrachloride	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-90-7	Chlorobenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-00-3	Chloroethane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-66-3	Chloroform	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-87-3	Chloromethane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-59-2	cis-1,2-Dichloroethylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-01-5	cis-1,3-Dichloropropylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-82-7	Cyclohexane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
124-48-1	Dibromochloromethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
74-95-3	Dibromomethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Methanol Trip Blank

Lab ID: 2309323-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
60-29-7	Diethyl ether	ND	200	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-20-3	Diisopropyl Ether	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-41-4	Ethylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
637-92-3	Ethyltertiarybutylether	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
67-72-1	Hexachloroethane	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
110-54-3	Hexane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-82-8	Isopropylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1330-20-7	m & p - Xylene	ND	100	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
96-37-7	Methylcyclopentane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-09-2	Methylene chloride	ND	100	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
1634-04-4	Methyltertiarybutylether	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
91-20-3	Naphthalene	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
104-51-8	n-Butylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
142-82-5	n-Heptane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
103-65-1	n-Propylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
95-47-6	o-Xylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
135-98-8	sec-Butylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
100-42-5	Styrene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
98-06-6	tert-Butylbenzene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-65-0	tertiary Butyl Alcohol	ND	2500	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
994-05-8	tertiaryAmylmethylether	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
127-18-4	Tetrachloroethylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
109-99-9	Tetrahydrofuran	ND	250	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
108-88-3	Toluene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
156-60-5	trans-1,2-Dichloroethylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
10061-02-6	trans-1,3-Dichloropropylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
79-01-6	Trichloroethylene	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-69-4	Trichlorofluoromethane	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
75-01-4	Vinyl chloride	ND	50	ug/kg dry	50	10/03/23	B3J2026	8260	SJR	
Surrogate: Bromofluorobenzene			*94.3 %*	*40.3-194*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Dibromofluoromethane			*99.6 %*	*52.1-217*		*10/03/23*	B3J2026	*8260*	*SJR*	
Surrogate: Toluene-d8			*99.3 %*	*55.4-196*		*10/03/23*	B3J2026	*8260*	*SJR*	

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FAX: (517) 335-9600

Client ID: Methanol Trip Blank

Lab ID: 2309323-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Inorganics-General Chemistry										
TS	**% Total Solids**	**100**	0.1	%	1	09/29/23	B3I2926	2540 G	SG	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0346 - Method: 5035				**Prepared: 10/03/2023**							
Blank (B3J0346-BLK1)											
1,1,1,2-Tetrachloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,1-Trichloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,2,2-Tetrachloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,2-Trichloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,2-Trichlorotrifluoroethane	ND	50	ug/kg wet							10/03/2023	
1,1-Dichloroethane	ND	50	ug/kg wet							10/03/2023	
1,1-Dichloroethylene	ND	50	ug/kg wet							10/03/2023	
1,2,3-Trichlorobenzene	ND	250	ug/kg wet							10/03/2023	
1,2,3-Trichloropropane	ND	50	ug/kg wet							10/03/2023	
1,2,3-Trimethylbenzene	ND	50	ug/kg wet							10/03/2023	
1,2,4-Trichlorobenzene	ND	250	ug/kg wet							10/03/2023	
1,2,4-Trimethylbenzene	ND	50	ug/kg wet							10/03/2023	
1,2-Dibromo-3-chloropropane	ND	250	ug/kg wet							10/03/2023	A05
1,2-Dibromoethane	ND	50	ug/kg wet							10/03/2023	
1,2-Dichlorobenzene	ND	50	ug/kg wet							10/03/2023	
1,2-Dichloroethane	ND	50	ug/kg wet							10/03/2023	
1,2-Dichloropropane	ND	50	ug/kg wet							10/03/2023	
1,3,5-Trimethylbenzene	ND	50	ug/kg wet							10/03/2023	
1,3-Dichlorobenzene	ND	50	ug/kg wet							10/03/2023	
1,4-Dichlorobenzene	ND	50	ug/kg wet							10/03/2023	
2,2,4-Trimethylpentane	ND	250	ug/kg wet							10/03/2023	
2-Butanone (MEK)	ND	250	ug/kg wet							10/03/2023	
2-Methylnaphthalene	ND	250	ug/kg wet							10/03/2023	
2-Propanone (acetone)	ND	1000	ug/kg wet							10/03/2023	A05, G
4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg wet							10/03/2023	
Acrylonitrile	ND	250	ug/kg wet							10/03/2023	
Benzene	ND	50	ug/kg wet							10/03/2023	
Bromochloromethane	ND	50	ug/kg wet							10/03/2023	
Bromodichloromethane	ND	50	ug/kg wet							10/03/2023	
Bromoform	ND	50	ug/kg wet							10/03/2023	A05
Bromomethane	ND	200	ug/kg wet							10/03/2023	
Carbon disulfide	ND	50	ug/kg wet							10/03/2023	
Carbon tetrachloride	ND	50	ug/kg wet							10/03/2023	
Chlorobenzene	ND	50	ug/kg wet							10/03/2023	
Chloroethane	ND	250	ug/kg wet							10/03/2023	
Chloroform	ND	50	ug/kg wet							10/03/2023	
Chloromethane	ND	250	ug/kg wet							10/03/2023	
cis-1,2-Dichloroethylene	ND	50	ug/kg wet							10/03/2023	
cis-1,3-Dichloropropylene	ND	50	ug/kg wet							10/03/2023	
Cyclohexane	ND	250	ug/kg wet							10/03/2023	
Dibromochloromethane	ND	50	ug/kg wet							10/03/2023	A05
Dibromomethane	ND	50	ug/kg wet							10/03/2023	
Dichlorodifluoromethane	ND	250	ug/kg wet							10/03/2023	
Diethyl ether	ND	200	ug/kg wet							10/03/2023	
Diisopropyl Ether	ND	250	ug/kg wet							10/03/2023	
Ethylbenzene	ND	50	ug/kg wet							10/03/2023	
Ethyltertiarybutylether	ND	250	ug/kg wet							10/03/2023	
Hexachloroethane	ND	250	ug/kg wet							10/03/2023	A05
Hexane	ND	50	ug/kg wet							10/03/2023	
Isopropylbenzene	ND	50	ug/kg wet							10/03/2023	
m & p - Xylene	ND	100	ug/kg wet							10/03/2023	
Methylcyclopentane	ND	50	ug/kg wet							10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0346 - Method: 5035				**Prepared: 10/03/2023**							
Blank (B3J0346-BLK1)											
Methylene chloride	ND	100	ug/kg wet							10/03/2023	
Methyltertiarybutylether	ND	50	ug/kg wet							10/03/2023	
Naphthalene	ND	250	ug/kg wet							10/03/2023	
n-Butylbenzene	ND	50	ug/kg wet							10/03/2023	
n-Heptane	ND	50	ug/kg wet							10/03/2023	
n-Propylbenzene	ND	50	ug/kg wet							10/03/2023	
o-Xylene	ND	50	ug/kg wet							10/03/2023	
sec-Butylbenzene	ND	50	ug/kg wet							10/03/2023	
Styrene	ND	50	ug/kg wet							10/03/2023	
tert-Butylbenzene	ND	50	ug/kg wet							10/03/2023	
tertiary Butyl Alcohol	ND	2500	ug/kg wet							10/03/2023	A05
tertiaryAmylmethylether	ND	250	ug/kg wet							10/03/2023	
Tetrachloroethylene	ND	50	ug/kg wet							10/03/2023	
Tetrahydrofuran	ND	250	ug/kg wet							10/03/2023	
Toluene	ND	50	ug/kg wet							10/03/2023	
trans-1,2-Dichloroethylene	ND	50	ug/kg wet							10/03/2023	
trans-1,3-Dichloropropylene	ND	50	ug/kg wet							10/03/2023	
Trichloroethylene	ND	50	ug/kg wet							10/03/2023	
Trichlorofluoromethane	ND	50	ug/kg wet							10/03/2023	
Vinyl chloride	ND	50	ug/kg wet							10/03/2023	
Surrogate: Bromofluorobenzene	*50.1*		ug/L	*50.00*		*100*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*51.2*		ug/L	*50.00*		*102*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*48.0*		ug/L	*50.00*		*96.0*	*55.4-196*			10/03/2023	
LCS (B3J0346-BS1)											
1,1,1,2-Tetrachloroethane	2150	50	ug/kg wet	2500		86.0	70-130			10/03/2023	
1,1,1-Trichloroethane	2400	50	ug/kg wet	2500		95.8	70-130			10/03/2023	
1,1,2,2-Tetrachloroethane	2670	50	ug/kg wet	2500		107	70-130			10/03/2023	
1,1,2-Trichloroethane	2510	50	ug/kg wet	2500		100	70-130			10/03/2023	
1,1,2-Trichlorotrifluoroethane	2630	50	ug/kg wet	2500		105	70-130			10/03/2023	
1,1-Dichloroethane	2770	50	ug/kg wet	2500		111	70-130			10/03/2023	
1,1-Dichloroethylene	2650	50	ug/kg wet	2500		106	70-130			10/03/2023	
1,2,3-Trichlorobenzene	2330	250	ug/kg wet	2500		93.2	70-130			10/03/2023	
1,2,3-Trichloropropane	2810	50	ug/kg wet	2500		112	70-130			10/03/2023	
1,2,3-Trimethylbenzene	2670	50	ug/kg wet	2500		107	70-130			10/03/2023	
1,2,4-Trichlorobenzene	2270	250	ug/kg wet	2500		90.7	70-130			10/03/2023	
1,2,4-Trimethylbenzene	2690	50	ug/kg wet	2500		108	70-130			10/03/2023	
1,2-Dibromo-3-chloropropane	2010	250	ug/kg wet	2500		80.6	70-130			10/03/2023	A05
1,2-Dibromoethane	2430	50	ug/kg wet	2500		97.1	70-130			10/03/2023	
1,2-Dichlorobenzene	2700	50	ug/kg wet	2500		108	70-130			10/03/2023	
1,2-Dichloroethane	2670	50	ug/kg wet	2500		107	70-130			10/03/2023	
1,2-Dichloropropane	2770	50	ug/kg wet	2500		111	70-130			10/03/2023	
1,3,5-Trimethylbenzene	2720	50	ug/kg wet	2500		109	70-130			10/03/2023	
1,3-Dichlorobenzene	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
1,4-Dichlorobenzene	2650	50	ug/kg wet	2500		106	70-130			10/03/2023	
2,2,4-Trimethylpentane	2170	250	ug/kg wet	2500		86.6	70-130			10/03/2023	
2-Butanone (MEK)	2320	250	ug/kg wet	2500		92.7	70-130			10/03/2023	
2-Methylnaphthalene	2010	250	ug/kg wet	2500		80.6	70-130			10/03/2023	
2-Propanone (acetone)	2460	1000	ug/kg wet	2500		98.3	70-130			10/03/2023	A05, G
4-Methyl-2-pentanone (MIBK)	2320	250	ug/kg wet	2500		92.9	70-130			10/03/2023	
Acrylonitrile	2530	250	ug/kg wet	2500		101	70-130			10/03/2023	
Benzene	2720	50	ug/kg wet	2500		109	70-130			10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0346 - Method: 5035				**Prepared: 10/03/2023**							
LCS (B3J0346-BS1)											
Bromochloromethane	2300	50	ug/kg wet	2500		91.9	70-130			10/03/2023	
Bromodichloromethane	2250	50	ug/kg wet	2500		90.1	70-130			10/03/2023	
Bromoform	1780	50	ug/kg wet	2500		71.2	70-130			10/03/2023	A05
Bromomethane	2630	200	ug/kg wet	2500		105	70-130			10/03/2023	
Carbon disulfide	2100	50	ug/kg wet	2500		84.0	70-130			10/03/2023	
Carbon tetrachloride	2190	50	ug/kg wet	2500		87.5	70-130			10/03/2023	
Chlorobenzene	2720	50	ug/kg wet	2500		109	70-130			10/03/2023	
Chloroethane	3170	250	ug/kg wet	2500		127	70-130			10/03/2023	A06
Chloroform	2650	50	ug/kg wet	2500		106	70-130			10/03/2023	
Chloromethane	3130	250	ug/kg wet	2500		125	70-130			10/03/2023	
cis-1,2-Dichloroethylene	2730	50	ug/kg wet	2500		109	70-130			10/03/2023	
cis-1,3-Dichloropropylene	2190	50	ug/kg wet	2500		87.6	70-130			10/03/2023	
Cyclohexane	2530	250	ug/kg wet	2500		101	70-130			10/03/2023	
Dibromochloromethane	1970	50	ug/kg wet	2500		78.8	70-130			10/03/2023	A05
Dibromomethane	2240	50	ug/kg wet	2500		89.7	70-130			10/03/2023	
Dichlorodifluoromethane	3330	250	ug/kg wet	2500		133	70-130			10/03/2023	A09
Diethyl ether	2850	200	ug/kg wet	2500		114	70-130			10/03/2023	
Diisopropyl Ether	2950	250	ug/kg wet	2500		118	70-130			10/03/2023	
Ethylbenzene	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
Ethyltertiarybutylether	2300	250	ug/kg wet	2500		91.8	70-130			10/03/2023	
Hexachloroethane	1900	250	ug/kg wet	2500		75.9	70-130			10/03/2023	A05
Hexane	2820	50	ug/kg wet	2500		113	70-130			10/03/2023	
Isopropylbenzene	2720	50	ug/kg wet	2500		109	70-130			10/03/2023	
m & p - Xylene	5440	100	ug/kg wet	5000		109	70-130			10/03/2023	
Methylcyclopentane	3000	50	ug/kg wet	2500		120	70-130			10/03/2023	A06
Methylene chloride	2810	100	ug/kg wet	2500		112	70-130			10/03/2023	
Methyltertiarybutylether	2150	50	ug/kg wet	2500		85.8	70-130			10/03/2023	
Naphthalene	2450	250	ug/kg wet	2500		98.2	70-130			10/03/2023	
n-Butylbenzene	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
n-Heptane	2490	50	ug/kg wet	2500		99.7	70-130			10/03/2023	
n-Propylbenzene	2830	50	ug/kg wet	2500		113	70-130			10/03/2023	
o-Xylene	2720	50	ug/kg wet	2500		109	70-130			10/03/2023	
sec-Butylbenzene	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
Styrene	2620	50	ug/kg wet	2500		105	70-130			10/03/2023	
tert-Butylbenzene	2650	50	ug/kg wet	2500		106	70-130			10/03/2023	
tertiary Butyl Alcohol	10000	2500	ug/kg wet	12500		80.3	70-130			10/03/2023	A05
tertiaryAmylmethylether	2340	250	ug/kg wet	2500		93.6	70-130			10/03/2023	
Tetrachloroethylene	2520	50	ug/kg wet	2500		101	70-130			10/03/2023	
Tetrahydrofuran	2370	250	ug/kg wet	2500		94.8	70-130			10/03/2023	
Toluene	2730	50	ug/kg wet	2500		109	70-130			10/03/2023	
trans-1,2-Dichloroethylene	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
trans-1,3-Dichloropropylene	2170	50	ug/kg wet	2500		86.7	70-130			10/03/2023	
Trichloroethylene	2600	50	ug/kg wet	2500		104	70-130			10/03/2023	
Trichlorofluoromethane	2760	50	ug/kg wet	2500		110	70-130			10/03/2023	
Vinyl chloride	3050	50	ug/kg wet	2500		122	70-130			10/03/2023	
Surrogate: Bromofluorobenzene	*54.3*		ug/L	*50.00*		*109*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*47.5*		ug/L	*50.00*		*94.9*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*55.2*		ug/L	*50.00*		*110*	*55.4-196*			10/03/2023	
Matrix Spike (B3J0346-MS1)	**Source: 2309336-05**										
1,1,1,2-Tetrachloroethane	2770	67	ug/kg dry	3375	ND	82.0	70-130			10/03/2023	
1,1,1-Trichloroethane	3190	67	ug/kg dry	3375	ND	94.5	70-130			10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0346 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike (B3J0346-MS1)	**Source: 2309336-05**										
1,1,2,2-Tetrachloroethane	3580	67	ug/kg dry	3375	ND	106	70-130			10/03/2023	
1,1,2-Trichloroethane	3360	67	ug/kg dry	3375	ND	99.4	70-130			10/03/2023	
1,1,2-Trichlorotrifluoroethane	3600	67	ug/kg dry	3375	ND	107	70-130			10/03/2023	
1,1-Dichloroethane	3870	67	ug/kg dry	3375	ND	115	70-130			10/03/2023	
1,1-Dichloroethylene	3720	67	ug/kg dry	3375	ND	110	70-130			10/03/2023	
1,2,3-Trichlorobenzene	3040	340	ug/kg dry	3375	ND	90.0	70-130			10/03/2023	
1,2,3-Trichloropropane	3760	67	ug/kg dry	3375	ND	111	70-130			10/03/2023	
1,2,3-Trimethylbenzene	3610	67	ug/kg dry	3375	ND	107	70-130			10/03/2023	
1,2,4-Trichlorobenzene	2950	340	ug/kg dry	3375	ND	87.4	70-130			10/03/2023	
1,2,4-Trimethylbenzene	3610	67	ug/kg dry	3375	ND	107	70-130			10/03/2023	
1,2-Dibromo-3-chloropropane	2580	340	ug/kg dry	3375	ND	76.5	70-130			10/03/2023	A05
1,2-Dibromoethane	3240	67	ug/kg dry	3375	ND	96.0	70-130			10/03/2023	
1,2-Dichlorobenzene	3590	67	ug/kg dry	3375	ND	106	70-130			10/03/2023	
1,2-Dichloroethane	3680	67	ug/kg dry	3375	ND	109	70-130			10/03/2023	
1,2-Dichloropropane	3790	67	ug/kg dry	3375	ND	112	70-130			10/03/2023	
1,3,5-Trimethylbenzene	3660	67	ug/kg dry	3375	ND	108	70-130			10/03/2023	
1,3-Dichlorobenzene	3560	67	ug/kg dry	3375	ND	105	70-130			10/03/2023	
1,4-Dichlorobenzene	3570	67	ug/kg dry	3375	ND	106	70-130			10/03/2023	
2,2,4-Trimethylpentane	2980	340	ug/kg dry	3375	ND	88.4	70-130			10/03/2023	
2-Butanone (MEK)	3510	340	ug/kg dry	3375	ND	104	70-130			10/03/2023	
2-Methylnaphthalene	2680	340	ug/kg dry	3375	ND	79.3	70-130			10/03/2023	
2-Propanone (acetone)	3940	1300	ug/kg dry	3375	ND	117	70-130			10/03/2023	A05, G
4-Methyl-2-pentanone (MIBK)	3220	340	ug/kg dry	3375	ND	95.5	70-130			10/03/2023	
Acrylonitrile	3440	340	ug/kg dry	3375	ND	102	70-130			10/03/2023	
Benzene	3740	67	ug/kg dry	3375	ND	111	70-130			10/03/2023	
Bromochloromethane	3080	67	ug/kg dry	3375	ND	91.2	70-130			10/03/2023	
Bromodichloromethane	3000	67	ug/kg dry	3375	ND	88.9	70-130			10/03/2023	
Bromoform	2230	67	ug/kg dry	3375	ND	66.1	70-130			10/03/2023	A03, A05
Bromomethane	3660	270	ug/kg dry	3375	ND	108	70-130			10/03/2023	
Carbon disulfide	2680	67	ug/kg dry	3375	ND	79.3	70-130			10/03/2023	
Carbon tetrachloride	2820	67	ug/kg dry	3375	ND	83.7	70-130			10/03/2023	
Chlorobenzene	3670	67	ug/kg dry	3375	ND	109	70-130			10/03/2023	
Chloroethane	4310	340	ug/kg dry	3375	ND	128	70-130			10/03/2023	A06
Chloroform	3710	67	ug/kg dry	3375	ND	110	70-130			10/03/2023	
Chloromethane	4400	340	ug/kg dry	3375	ND	130	70-130			10/03/2023	A04
cis-1,2-Dichloroethylene	3840	67	ug/kg dry	3375	ND	114	70-130			10/03/2023	
cis-1,3-Dichloropropylene	2870	67	ug/kg dry	3375	ND	85.1	70-130			10/03/2023	
Cyclohexane	3510	340	ug/kg dry	3375	ND	104	70-130			10/03/2023	
Dibromochloromethane	2550	67	ug/kg dry	3375	ND	75.7	70-130			10/03/2023	A05
Dibromomethane	3050	67	ug/kg dry	3375	ND	90.3	70-130			10/03/2023	
Dichlorodifluoromethane	4590	340	ug/kg dry	3375	ND	136	70-130			10/03/2023	A04
Diethyl ether	3940	270	ug/kg dry	3375	ND	117	70-130			10/03/2023	
Diisopropyl Ether	3980	340	ug/kg dry	3375	ND	118	70-130			10/03/2023	
Ethylbenzene	3620	67	ug/kg dry	3375	ND	107	70-130			10/03/2023	
Ethyltertiarybutylether	3110	340	ug/kg dry	3375	ND	92.3	70-130			10/03/2023	
Hexachloroethane	2290	340	ug/kg dry	3375	ND	68.0	70-130			10/03/2023	A03, A05
Hexane	3900	67	ug/kg dry	3375	ND	115	70-130			10/03/2023	
Isopropylbenzene	3600	67	ug/kg dry	3375	ND	107	70-130			10/03/2023	
m & p - Xylene	7370	130	ug/kg dry	6749	ND	109	70-130			10/03/2023	
Methylcyclopentane	4010	67	ug/kg dry	3375	ND	119	70-130			10/03/2023	A06
Methylene chloride	4040	130	ug/kg dry	3375	ND	120	70-130			10/03/2023	
Methyltertiarybutylether	2860	67	ug/kg dry	3375	ND	84.7	70-130			10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0346 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike (B3J0346-MS1)	**Source: 2309336-05**										
Naphthalene	3270	340	ug/kg dry	3375	ND	96.9	70-130			10/03/2023	
n-Butylbenzene	3570	67	ug/kg dry	3375	ND	106	70-130			10/03/2023	
n-Heptane	3330	67	ug/kg dry	3375	ND	98.7	70-130			10/03/2023	
n-Propylbenzene	3800	67	ug/kg dry	3375	ND	112	70-130			10/03/2023	
o-Xylene	3720	67	ug/kg dry	3375	ND	110	70-130			10/03/2023	
sec-Butylbenzene	3560	67	ug/kg dry	3375	ND	106	70-130			10/03/2023	
Styrene	3540	67	ug/kg dry	3375	ND	105	70-130			10/03/2023	
tert-Butylbenzene	3550	67	ug/kg dry	3375	ND	105	70-130			10/03/2023	
tertiary Butyl Alcohol	13300	3400	ug/kg dry	16870	ND	78.6	70-130			10/03/2023	A05
tertiaryAmylmethylether	3120	340	ug/kg dry	3375	ND	92.4	70-130			10/03/2023	
Tetrachloroethylene	3360	67	ug/kg dry	3375	ND	99.5	70-130			10/03/2023	
Tetrahydrofuran	3480	340	ug/kg dry	3375	ND	103	70-130			10/03/2023	
Toluene	3700	67	ug/kg dry	3375	ND	110	70-130			10/03/2023	
trans-1,2-Dichloroethylene	3790	67	ug/kg dry	3375	ND	112	70-130			10/03/2023	
trans-1,3-Dichloropropylene	2780	67	ug/kg dry	3375	ND	82.5	70-130			10/03/2023	
Trichloroethylene	3510	67	ug/kg dry	3375	ND	104	70-130			10/03/2023	
Trichlorofluoromethane	3850	67	ug/kg dry	3375	ND	114	70-130			10/03/2023	
Vinyl chloride	4280	67	ug/kg dry	3375	ND	127	70-130			10/03/2023	
Surrogate: Bromofluorobenzene	*70.3*		ug/kg dry	*61.63*		*114*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*65.2*		ug/kg dry	*61.63*		*106*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*73.9*		ug/kg dry	*61.63*		*120*	*55.4-196*			10/03/2023	
Matrix Spike Dup (B3J0346-MSD1)	**Source: 2309336-05**										
1,1,1,2-Tetrachloroethane	2980	67	ug/kg dry	3375	ND	88.3	70-130	7.43	30	10/03/2023	
1,1,1-Trichloroethane	3400	67	ug/kg dry	3375	ND	101	70-130	6.53	30	10/03/2023	
1,1,2,2-Tetrachloroethane	3840	67	ug/kg dry	3375	ND	114	70-130	7.01	30	10/03/2023	
1,1,2-Trichloroethane	3530	67	ug/kg dry	3375	ND	105	70-130	5.13	30	10/03/2023	
1,1,2-Trichlorotrifluoroethane	3780	67	ug/kg dry	3375	ND	112	70-130	4.82	30	10/03/2023	
1,1-Dichloroethane	4030	67	ug/kg dry	3375	ND	119	70-130	3.93	30	10/03/2023	
1,1-Dichloroethylene	3780	67	ug/kg dry	3375	ND	112	70-130	1.55	30	10/03/2023	
1,2,3-Trichlorobenzene	3230	340	ug/kg dry	3375	ND	95.8	70-130	6.17	30	10/03/2023	
1,2,3-Trichloropropane	3980	67	ug/kg dry	3375	ND	118	70-130	5.64	30	10/03/2023	
1,2,3-Trimethylbenzene	3780	67	ug/kg dry	3375	ND	112	70-130	4.60	30	10/03/2023	
1,2,4-Trichlorobenzene	3140	340	ug/kg dry	3375	ND	93.0	70-130	6.21	30	10/03/2023	
1,2,4-Trimethylbenzene	3770	67	ug/kg dry	3375	ND	112	70-130	4.55	30	10/03/2023	
1,2-Dibromo-3-chloropropane	2780	340	ug/kg dry	3375	ND	82.3	70-130	7.33	30	10/03/2023	A05
1,2-Dibromoethane	3410	67	ug/kg dry	3375	ND	101	70-130	5.15	30	10/03/2023	
1,2-Dichlorobenzene	3760	67	ug/kg dry	3375	ND	111	70-130	4.64	30	10/03/2023	
1,2-Dichloroethane	3830	67	ug/kg dry	3375	ND	113	70-130	3.98	30	10/03/2023	
1,2-Dichloropropane	3980	67	ug/kg dry	3375	ND	118	70-130	5.04	30	10/03/2023	
1,3,5-Trimethylbenzene	3820	67	ug/kg dry	3375	ND	113	70-130	4.34	30	10/03/2023	
1,3-Dichlorobenzene	3760	67	ug/kg dry	3375	ND	111	70-130	5.49	30	10/03/2023	
1,4-Dichlorobenzene	3730	67	ug/kg dry	3375	ND	110	70-130	4.44	30	10/03/2023	
2,2,4-Trimethylpentane	3120	340	ug/kg dry	3375	ND	92.4	70-130	4.53	30	10/03/2023	
2-Butanone (MEK)	3730	340	ug/kg dry	3375	ND	111	70-130	6.02	30	10/03/2023	
2-Methylnaphthalene	2880	340	ug/kg dry	3375	ND	85.4	70-130	7.42	30	10/03/2023	
2-Propanone (acetone)	4190	1300	ug/kg dry	3375	ND	124	70-130	6.17	30	10/03/2023	A05, G
4-Methyl-2-pentanone (MIBK)	3320	340	ug/kg dry	3375	ND	98.5	70-130	3.12	30	10/03/2023	
Acrylonitrile	3650	340	ug/kg dry	3375	ND	108	70-130	5.93	30	10/03/2023	
Benzene	3900	67	ug/kg dry	3375	ND	116	70-130	4.20	30	10/03/2023	
Bromochloromethane	3270	67	ug/kg dry	3375	ND	96.9	70-130	5.98	30	10/03/2023	
Bromodichloromethane	3230	67	ug/kg dry	3375	ND	95.6	70-130	7.20	30	10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0346 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike Dup (B3J0346-MSD1)	**Source: 2309336-05**										
Bromoform	2410	67	ug/kg dry	3375	ND	71.4	70-130	7.73	30	10/03/2023	A05
Bromomethane	3840	270	ug/kg dry	3375	ND	114	70-130	4.86	30	10/03/2023	
Carbon disulfide	2920	67	ug/kg dry	3375	ND	86.5	70-130	8.63	30	10/03/2023	
Carbon tetrachloride	3050	67	ug/kg dry	3375	ND	90.4	70-130	7.74	30	10/03/2023	
Chlorobenzene	3780	67	ug/kg dry	3375	ND	112	70-130	3.13	30	10/03/2023	
Chloroethane	4580	340	ug/kg dry	3375	ND	136	70-130	6.19	30	10/03/2023	A04, A06
Chloroform	3860	67	ug/kg dry	3375	ND	114	70-130	4.00	30	10/03/2023	
Chloromethane	4550	340	ug/kg dry	3375	ND	135	70-130	3.19	30	10/03/2023	A04
cis-1,2-Dichloroethylene	3940	67	ug/kg dry	3375	ND	117	70-130	2.54	30	10/03/2023	
cis-1,3-Dichloropropylene	3080	67	ug/kg dry	3375	ND	91.2	70-130	6.89	30	10/03/2023	
Cyclohexane	3680	340	ug/kg dry	3375	ND	109	70-130	4.75	30	10/03/2023	
Dibromochloromethane	2660	67	ug/kg dry	3375	ND	78.9	70-130	4.19	30	10/03/2023	A05
Dibromomethane	3160	67	ug/kg dry	3375	ND	93.8	70-130	3.74	30	10/03/2023	
Dichlorodifluoromethane	4680	340	ug/kg dry	3375	ND	139	70-130	2.04	30	10/03/2023	A04
Diethyl ether	4150	270	ug/kg dry	3375	ND	123	70-130	5.07	30	10/03/2023	
Diisopropyl Ether	4260	340	ug/kg dry	3375	ND	126	70-130	6.81	30	10/03/2023	
Ethylbenzene	3770	67	ug/kg dry	3375	ND	112	70-130	4.00	30	10/03/2023	
Ethyltertiarybutylether	3330	340	ug/kg dry	3375	ND	98.6	70-130	6.62	30	10/03/2023	
Hexachloroethane	2550	340	ug/kg dry	3375	ND	75.5	70-130	10.4	30	10/03/2023	A05
Hexane	3890	67	ug/kg dry	3375	ND	115	70-130	0.146	30	10/03/2023	
Isopropylbenzene	3790	67	ug/kg dry	3375	ND	112	70-130	5.40	30	10/03/2023	
m & p - Xylene	7600	130	ug/kg dry	6749	ND	113	70-130	2.97	30	10/03/2023	
Methylcyclopentane	4230	67	ug/kg dry	3375	ND	125	70-130	5.42	30	10/03/2023	A06
Methylene chloride	4160	130	ug/kg dry	3375	ND	123	70-130	2.85	30	10/03/2023	
Methyltertiarybutylether	3080	67	ug/kg dry	3375	ND	91.2	70-130	7.37	30	10/03/2023	
Naphthalene	3540	340	ug/kg dry	3375	ND	105	70-130	7.80	30	10/03/2023	
n-Butylbenzene	3770	67	ug/kg dry	3375	ND	112	70-130	5.40	30	10/03/2023	
n-Heptane	3310	67	ug/kg dry	3375	ND	98.1	70-130	0.589	30	10/03/2023	
n-Propylbenzene	3970	67	ug/kg dry	3375	ND	118	70-130	4.45	30	10/03/2023	
o-Xylene	3800	67	ug/kg dry	3375	ND	113	70-130	2.20	30	10/03/2023	
sec-Butylbenzene	3750	67	ug/kg dry	3375	ND	111	70-130	4.95	30	10/03/2023	
Styrene	3670	67	ug/kg dry	3375	ND	109	70-130	3.73	30	10/03/2023	
tert-Butylbenzene	3740	67	ug/kg dry	3375	ND	111	70-130	5.17	30	10/03/2023	
tertiary Butyl Alcohol	15800	3400	ug/kg dry	16870	ND	93.5	70-130	17.3	30	10/03/2023	A05
tertiaryAmylmethylether	3340	340	ug/kg dry	3375	ND	98.9	70-130	6.82	30	10/03/2023	
Tetrachloroethylene	3400	67	ug/kg dry	3375	ND	101	70-130	1.42	30	10/03/2023	
Tetrahydrofuran	3550	340	ug/kg dry	3375	ND	105	70-130	2.18	30	10/03/2023	
Toluene	3830	67	ug/kg dry	3375	ND	113	70-130	3.52	30	10/03/2023	
trans-1,2-Dichloroethylene	3890	67	ug/kg dry	3375	ND	115	70-130	2.82	30	10/03/2023	
trans-1,3-Dichloropropylene	2970	67	ug/kg dry	3375	ND	87.9	70-130	6.38	30	10/03/2023	
Trichloroethylene	3610	67	ug/kg dry	3375	ND	107	70-130	2.81	30	10/03/2023	
Trichlorofluoromethane	3970	67	ug/kg dry	3375	ND	118	70-130	3.03	30	10/03/2023	
Vinyl chloride	4440	67	ug/kg dry	3375	ND	131	70-130	3.67	30	10/03/2023	A04
Surrogate: Bromofluorobenzene	*72.6*		ug/kg dry	*61.63*		*118*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*67.4*		ug/kg dry	*61.63*		*109*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*76.2*		ug/kg dry	*61.63*		*124*	*55.4-196*			10/03/2023	
Batch B3J0431 - Method: 5035				**Prepared: 10/04/2023**							
Blank (B3J0431-BLK1)											
1,1,1,2-Tetrachloroethane	ND	50	ug/kg wet							10/04/2023	

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY**

P.O. Box 30270
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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0431 - Method: 5035				**Prepared: 10/04/2023**							
Blank (B3J0431-BLK1)											
1,1,1-Trichloroethane	ND	50	ug/kg wet							10/04/2023	
1,1,2,2-Tetrachloroethane	ND	50	ug/kg wet							10/04/2023	
1,1,2-Trichloroethane	ND	50	ug/kg wet							10/04/2023	
1,1,2-Trichlorotrifluoroethane	ND	50	ug/kg wet							10/04/2023	
1,1-Dichloroethane	ND	50	ug/kg wet							10/04/2023	
1,1-Dichloroethylene	ND	50	ug/kg wet							10/04/2023	
1,2,3-Trichlorobenzene	ND	250	ug/kg wet							10/04/2023	
1,2,3-Trichloropropane	ND	50	ug/kg wet							10/04/2023	
1,2,3-Trimethylbenzene	ND	50	ug/kg wet							10/04/2023	
1,2,4-Trichlorobenzene	ND	250	ug/kg wet							10/04/2023	
1,2,4-Trimethylbenzene	ND	50	ug/kg wet							10/04/2023	
1,2-Dibromo-3-chloropropane	ND	250	ug/kg wet							10/04/2023	
1,2-Dibromoethane	ND	50	ug/kg wet							10/04/2023	
1,2-Dichlorobenzene	ND	50	ug/kg wet							10/04/2023	
1,2-Dichloroethane	ND	50	ug/kg wet							10/04/2023	
1,2-Dichloropropane	ND	50	ug/kg wet							10/04/2023	
1,3,5-Trimethylbenzene	ND	50	ug/kg wet							10/04/2023	
1,3-Dichlorobenzene	ND	50	ug/kg wet							10/04/2023	
1,4-Dichlorobenzene	ND	50	ug/kg wet							10/04/2023	
2,2,4-Trimethylpentane	ND	250	ug/kg wet							10/04/2023	
2-Butanone (MEK)	ND	250	ug/kg wet							10/04/2023	
2-Methylnaphthalene	ND	250	ug/kg wet							10/04/2023	
2-Propanone (acetone)	ND	1000	ug/kg wet							10/04/2023	
4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg wet							10/04/2023	
Acrylonitrile	ND	250	ug/kg wet							10/04/2023	
Benzene	ND	50	ug/kg wet							10/04/2023	
Bromochloromethane	ND	50	ug/kg wet							10/04/2023	
Bromodichloromethane	ND	50	ug/kg wet							10/04/2023	
Bromoform	ND	50	ug/kg wet							10/04/2023	
Bromomethane	ND	200	ug/kg wet							10/04/2023	
Carbon disulfide	ND	50	ug/kg wet							10/04/2023	
Carbon tetrachloride	ND	50	ug/kg wet							10/04/2023	
Chlorobenzene	ND	50	ug/kg wet							10/04/2023	
Chloroethane	ND	250	ug/kg wet							10/04/2023	
Chloroform	ND	50	ug/kg wet							10/04/2023	
Chloromethane	ND	250	ug/kg wet							10/04/2023	
cis-1,2-Dichloroethylene	ND	50	ug/kg wet							10/04/2023	
cis-1,3-Dichloropropylene	ND	50	ug/kg wet							10/04/2023	
Cyclohexane	ND	250	ug/kg wet							10/04/2023	
Dibromochloromethane	ND	50	ug/kg wet							10/04/2023	
Dibromomethane	ND	50	ug/kg wet							10/04/2023	
Dichlorodifluoromethane	ND	250	ug/kg wet							10/04/2023	
Diethyl ether	ND	200	ug/kg wet							10/04/2023	
Diisopropyl Ether	ND	250	ug/kg wet							10/04/2023	
Ethylbenzene	ND	50	ug/kg wet							10/04/2023	
Ethyltertiarybutylether	ND	250	ug/kg wet							10/04/2023	
Hexachloroethane	ND	250	ug/kg wet							10/04/2023	
Hexane	ND	50	ug/kg wet							10/04/2023	
Isopropylbenzene	ND	50	ug/kg wet							10/04/2023	
m & p - Xylene	ND	100	ug/kg wet							10/04/2023	
Methylcyclopentane	ND	50	ug/kg wet							10/04/2023	
Methylene chloride	ND	100	ug/kg wet							10/04/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0431 - Method: 5035				**Prepared: 10/04/2023**							
Blank (B3J0431-BLK1)											
Methyltertiarybutylether	ND	50	ug/kg wet							10/04/2023	
Naphthalene	ND	250	ug/kg wet							10/04/2023	
n-Butylbenzene	ND	50	ug/kg wet							10/04/2023	
n-Heptane	ND	50	ug/kg wet							10/04/2023	
n-Propylbenzene	ND	50	ug/kg wet							10/04/2023	
o-Xylene	ND	50	ug/kg wet							10/04/2023	
sec-Butylbenzene	ND	50	ug/kg wet							10/04/2023	
Styrene	ND	50	ug/kg wet							10/04/2023	
tert-Butylbenzene	ND	50	ug/kg wet							10/04/2023	
tertiary Butyl Alcohol	ND	2500	ug/kg wet							10/04/2023	
tertiaryAmylmethylether	ND	250	ug/kg wet							10/04/2023	
Tetrachloroethylene	ND	50	ug/kg wet							10/04/2023	
Tetrahydrofuran	ND	250	ug/kg wet							10/04/2023	
Toluene	ND	50	ug/kg wet							10/04/2023	
trans-1,2-Dichloroethylene	ND	50	ug/kg wet							10/04/2023	
trans-1,3-Dichloropropylene	ND	50	ug/kg wet							10/04/2023	
Trichloroethylene	ND	50	ug/kg wet							10/04/2023	
Trichlorofluoromethane	ND	50	ug/kg wet							10/04/2023	
Vinyl chloride	ND	50	ug/kg wet							10/04/2023	
Surrogate: Bromofluorobenzene	*49.8*		ug/L	*50.00*		*99.5*	*61-159*			10/04/2023	
Surrogate: Dibromofluoromethane	*48.9*		ug/L	*50.00*		*97.9*	*63-165*			10/04/2023	
Surrogate: Toluene-d8	*49.2*		ug/L	*50.00*		*98.3*	*62-161*			10/04/2023	
LCS (B3J0431-BS1)											
1,1,1,2-Tetrachloroethane	2470	50	ug/kg wet	2500		98.6	85-121			10/04/2023	
1,1,1-Trichloroethane	2820	50	ug/kg wet	2500		113	83-123			10/04/2023	
1,1,2,2-Tetrachloroethane	2560	50	ug/kg wet	2500		102	77-123			10/04/2023	
1,1,2-Trichloroethane	2610	50	ug/kg wet	2500		105	87-115			10/04/2023	
1,1,2-Trichlorotrifluoroethane	2640	50	ug/kg wet	2500		106	69-130			10/04/2023	
1,1-Dichloroethane	2690	50	ug/kg wet	2500		108	73-127			10/04/2023	
1,1-Dichloroethylene	2630	50	ug/kg wet	2500		105	67-130			10/04/2023	
1,2,3-Trichlorobenzene	2570	250	ug/kg wet	2500		103	86-122			10/04/2023	
1,2,3-Trichloropropane	2600	50	ug/kg wet	2500		104	80-121			10/04/2023	
1,2,3-Trimethylbenzene	2660	50	ug/kg wet	2500		107	88-118			10/04/2023	
1,2,4-Trichlorobenzene	2490	250	ug/kg wet	2500		99.5	84-120			10/04/2023	
1,2,4-Trimethylbenzene	2640	50	ug/kg wet	2500		106	90-121			10/04/2023	
1,2-Dibromo-3-chloropropane	2390	250	ug/kg wet	2500		95.8	84-128			10/04/2023	
1,2-Dibromoethane	2670	50	ug/kg wet	2500		107	89-117			10/04/2023	
1,2-Dichlorobenzene	2640	50	ug/kg wet	2500		106	88-114			10/04/2023	
1,2-Dichloroethane	2710	50	ug/kg wet	2500		108	79-121			10/04/2023	
1,2-Dichloropropane	2700	50	ug/kg wet	2500		108	79-119			10/04/2023	
1,3,5-Trimethylbenzene	2660	50	ug/kg wet	2500		106	89-120			10/04/2023	
1,3-Dichlorobenzene	2730	50	ug/kg wet	2500		109	89-115			10/04/2023	
1,4-Dichlorobenzene	2640	50	ug/kg wet	2500		106	88-114			10/04/2023	
2,2,4-Trimethylpentane	2430	250	ug/kg wet	2500		97.4	71-130			10/04/2023	
2-Butanone (MEK)	2370	250	ug/kg wet	2500		94.9	42-154			10/04/2023	
2-Methylnaphthalene	2240	250	ug/kg wet	2500		89.5	66-114			10/04/2023	
2-Propanone (acetone)	2310	1000	ug/kg wet	2500		92.3	28-191			10/04/2023	
4-Methyl-2-pentanone (MIBK)	2640	250	ug/kg wet	2500		105	71-131			10/04/2023	
Acrylonitrile	2450	250	ug/kg wet	2500		97.9	66-135			10/04/2023	
Benzene	2610	50	ug/kg wet	2500		104	81-115			10/04/2023	
Bromochloromethane	2670	50	ug/kg wet	2500		107	78-121			10/04/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0431 - Method: 5035				**Prepared: 10/04/2023**							
LCS (B3J0431-BS1)											
Bromodichloromethane	2770	50	ug/kg wet	2500		111	84-117			10/04/2023	
Bromoform	2300	50	ug/kg wet	2500		92.1	74-121			10/04/2023	
Bromomethane	2760	200	ug/kg wet	2500		110	59-147			10/04/2023	
Carbon disulfide	2600	50	ug/kg wet	2500		104	64-133			10/04/2023	
Carbon tetrachloride	2460	50	ug/kg wet	2500		98.5	79-124			10/04/2023	
Chlorobenzene	2620	50	ug/kg wet	2500		105	87-112			10/04/2023	
Chloroethane	2720	250	ug/kg wet	2500		109	44-162			10/04/2023	
Chloroform	2850	50	ug/kg wet	2500		114	78-122			10/04/2023	
Chloromethane	3010	250	ug/kg wet	2500		121	68-133			10/04/2023	
cis-1,2-Dichloroethylene	2700	50	ug/kg wet	2500		108	74-127			10/04/2023	
cis-1,3-Dichloropropylene	2500	50	ug/kg wet	2500		100	86-123			10/04/2023	
Cyclohexane	2600	250	ug/kg wet	2500		104	78-121			10/04/2023	
Dibromochloromethane	2330	50	ug/kg wet	2500		93.2	81-122			10/04/2023	
Dibromomethane	2630	50	ug/kg wet	2500		105	85-120			10/04/2023	
Dichlorodifluoromethane	3740	250	ug/kg wet	2500		149	47-159			10/04/2023	
Diethyl ether	2630	200	ug/kg wet	2500		105	67-134			10/04/2023	
Diisopropyl Ether	2550	250	ug/kg wet	2500		102	68-134			10/04/2023	
Ethylbenzene	2610	50	ug/kg wet	2500		104	86-116			10/04/2023	
Ethyltertiarybutylether	2610	250	ug/kg wet	2500		105	76-126			10/04/2023	
Hexachloroethane	2710	250	ug/kg wet	2500		109	79-121			10/04/2023	
Hexane	2400	50	ug/kg wet	2500		96.0	68-136			10/04/2023	
Isopropylbenzene	2670	50	ug/kg wet	2500		107	85-117			10/04/2023	
m & p - Xylene	5450	100	ug/kg wet	5000		109	88-118			10/04/2023	
Methylcyclopentane	2760	50	ug/kg wet	2500		110	77-158			10/04/2023	
Methylene chloride	2670	100	ug/kg wet	2500		107	63-133			10/04/2023	
Methyltertiarybutylether	2610	50	ug/kg wet	2500		104	77-126			10/04/2023	
Naphthalene	2660	250	ug/kg wet	2500		106	90-121			10/04/2023	
n-Butylbenzene	2540	50	ug/kg wet	2500		102	83-125			10/04/2023	
n-Heptane	2570	50	ug/kg wet	2500		103	81-159			10/04/2023	
n-Propylbenzene	2740	50	ug/kg wet	2500		110	87-122			10/04/2023	
o-Xylene	2680	50	ug/kg wet	2500		107	88-117			10/04/2023	
sec-Butylbenzene	2650	50	ug/kg wet	2500		106	86-123			10/04/2023	
Styrene	2710	50	ug/kg wet	2500		108	90-117			10/04/2023	
tert-Butylbenzene	2670	50	ug/kg wet	2500		107	90-122			10/04/2023	
tertiary Butyl Alcohol	13000	2500	ug/kg wet	12500		104	64-152			10/04/2023	
tertiaryAmylmethylether	2630	250	ug/kg wet	2500		105	87-119			10/04/2023	
Tetrachloroethylene	2560	50	ug/kg wet	2500		102	80-118			10/04/2023	
Tetrahydrofuran	2550	250	ug/kg wet	2500		102	63-139			10/04/2023	
Toluene	2570	50	ug/kg wet	2500		103	81-115			10/04/2023	
trans-1,2-Dichloroethylene	2710	50	ug/kg wet	2500		108	74-130			10/04/2023	
trans-1,3-Dichloropropylene	2530	50	ug/kg wet	2500		101	82-126			10/04/2023	
Trichloroethylene	2590	50	ug/kg wet	2500		104	78-115			10/04/2023	
Trichlorofluoromethane	2970	50	ug/kg wet	2500		119	70-136			10/04/2023	
Vinyl chloride	2990	50	ug/kg wet	2500		120	72-132			10/04/2023	
Surrogate: Bromofluorobenzene	*50.8*		ug/L	*50.00*		*102*	*61-159*			10/04/2023	
Surrogate: Dibromofluoromethane	*52.3*		ug/L	*50.00*		*105*	*63-165*			10/04/2023	
Surrogate: Toluene-d8	*49.8*		ug/L	*50.00*		*99.5*	*62-161*			10/04/2023	
Matrix Spike (B3J0431-MS1)	**Source: 2309336-21**										
1,1,1,2-Tetrachloroethane	2880	59	ug/kg dry	2667	ND	108	80-119			10/04/2023	
1,1,1-Trichloroethane	3350	59	ug/kg dry	2667	ND	126	79-119			10/04/2023	A04
1,1,2,2-Tetrachloroethane	2920	59	ug/kg dry	2667	ND	110	64-127			10/04/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0431 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike (B3J0431-MS1)	**Source: 2309336-21**										
1,1,2-Trichloroethane	3100	59	ug/kg dry	2667	ND	116	84-116			10/04/2023	A04
1,1,2-Trichlorotrifluoroethane	3080	59	ug/kg dry	2667	ND	115	68-126			10/04/2023	
1,1-Dichloroethane	3090	59	ug/kg dry	2667	ND	116	72-122			10/04/2023	
1,1-Dichloroethylene	3120	59	ug/kg dry	2667	ND	117	66-125			10/04/2023	
1,2,3-Trichlorobenzene	2870	290	ug/kg dry	2667	ND	108	80-122			10/04/2023	
1,2,3-Trichloropropane	3070	59	ug/kg dry	2667	ND	115	78-121			10/04/2023	
1,2,3-Trimethylbenzene	3080	59	ug/kg dry	2667	ND	116	84-118			10/04/2023	
1,2,4-Trichlorobenzene	2820	290	ug/kg dry	2667	ND	106	78-120			10/04/2023	
1,2,4-Trimethylbenzene	3090	59	ug/kg dry	2667	ND	116	84-122			10/04/2023	
1,2-Dibromo-3-chloropropane	2680	290	ug/kg dry	2667	ND	100	76-130			10/04/2023	
1,2-Dibromoethane	3200	59	ug/kg dry	2667	ND	120	85-117			10/04/2023	A04
1,2-Dichlorobenzene	3010	59	ug/kg dry	2667	ND	113	83-116			10/04/2023	
1,2-Dichloroethane	3250	59	ug/kg dry	2667	ND	122	78-118			10/04/2023	A04
1,2-Dichloropropane	3170	59	ug/kg dry	2667	ND	119	76-117			10/04/2023	A04
1,3,5-Trimethylbenzene	3080	59	ug/kg dry	2667	ND	116	84-119			10/04/2023	
1,3-Dichlorobenzene	3080	59	ug/kg dry	2667	ND	116	83-116			10/04/2023	
1,4-Dichlorobenzene	3030	59	ug/kg dry	2667	ND	114	83-114			10/04/2023	
2,2,4-Trimethylpentane	2930	290	ug/kg dry	2667	ND	110	59-133			10/04/2023	
2-Butanone (MEK)	2840	290	ug/kg dry	2667	ND	106	44-148			10/04/2023	
2-Methylnaphthalene	2720	290	ug/kg dry	2667	ND	102	58-123			10/04/2023	
2-Propanone (acetone)	2940	1200	ug/kg dry	2667	ND	110	29-191			10/04/2023	
4-Methyl-2-pentanone (MIBK)	3020	290	ug/kg dry	2667	ND	113	70-130			10/04/2023	
Acrylonitrile	2780	290	ug/kg dry	2667	ND	104	67-128			10/04/2023	
Benzene	3010	59	ug/kg dry	2667	ND	113	77-115			10/04/2023	
Bromochloromethane	3240	59	ug/kg dry	2667	ND	121	74-120			10/04/2023	A04
Bromodichloromethane	3250	59	ug/kg dry	2667	ND	122	79-116			10/04/2023	A04
Bromoform	2680	59	ug/kg dry	2667	ND	100	69-118			10/04/2023	
Bromomethane	3330	230	ug/kg dry	2667	ND	125	62-136			10/04/2023	
Carbon disulfide	2910	59	ug/kg dry	2667	ND	109	59-127			10/04/2023	
Carbon tetrachloride	2850	59	ug/kg dry	2667	ND	107	73-119			10/04/2023	
Chlorobenzene	3070	59	ug/kg dry	2667	ND	115	81-114			10/04/2023	A04
Chloroethane	3330	290	ug/kg dry	2667	ND	125	52-149			10/04/2023	
Chloroform	3390	59	ug/kg dry	2667	ND	127	76-119			10/04/2023	A04
Chloromethane	3640	290	ug/kg dry	2667	ND	136	64-130			10/04/2023	A04
cis-1,2-Dichloroethylene	3180	59	ug/kg dry	2667	ND	119	73-123			10/04/2023	
cis-1,3-Dichloropropylene	2850	59	ug/kg dry	2667	ND	107	81-119			10/04/2023	
Cyclohexane	3000	290	ug/kg dry	2667	ND	112	74-120			10/04/2023	
Dibromochloromethane	2660	59	ug/kg dry	2667	ND	99.7	75-121			10/04/2023	
Dibromomethane	2990	59	ug/kg dry	2667	ND	112	81-122			10/04/2023	
Dichlorodifluoromethane	4700	290	ug/kg dry	2667	ND	176	43-159			10/04/2023	A04
Diethyl ether	2990	230	ug/kg dry	2667	ND	112	66-133			10/04/2023	
Diisopropyl Ether	3370	290	ug/kg dry	2667	ND	126	68-129			10/04/2023	
Ethylbenzene	3040	59	ug/kg dry	2667	ND	114	80-117			10/04/2023	
Ethyltertiarybutylether	3020	290	ug/kg dry	2667	ND	113	75-123			10/04/2023	
Hexachloroethane	3020	290	ug/kg dry	2667	ND	113	71-118			10/04/2023	
Hexane	2930	59	ug/kg dry	2667	ND	110	59-132			10/04/2023	
Isopropylbenzene	3030	59	ug/kg dry	2667	ND	114	81-117			10/04/2023	
m & p - Xylene	6420	120	ug/kg dry	5334	ND	120	82-118			10/04/2023	A04
Methylcyclopentane	3260	59	ug/kg dry	2667	ND	122	74-152			10/04/2023	
Methylene chloride	3060	120	ug/kg dry	2667	ND	115	62-132			10/04/2023	
Methyltertiarybutylether	3050	59	ug/kg dry	2667	ND	114	78-122			10/04/2023	
Naphthalene	3100	290	ug/kg dry	2667	ND	116	84-130			10/04/2023	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0431 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike (B3J0431-MS1)	**Source: 2309336-21**										
n-Butylbenzene	2860	59	ug/kg dry	2667	ND	107	74-125			10/04/2023	
n-Heptane	3170	59	ug/kg dry	2667	80.2	116	60-164			10/04/2023	
n-Propylbenzene	3140	59	ug/kg dry	2667	ND	118	82-120			10/04/2023	
o-Xylene	3180	59	ug/kg dry	2667	ND	119	83-117			10/04/2023	A04
sec-Butylbenzene	2950	59	ug/kg dry	2667	ND	111	82-120			10/04/2023	
Styrene	3200	59	ug/kg dry	2667	ND	120	84-118			10/04/2023	A04
tert-Butylbenzene	3050	59	ug/kg dry	2667	ND	114	85-120			10/04/2023	
tertiary Butyl Alcohol	13700	2900	ug/kg dry	13330	ND	103	62-140			10/04/2023	
tertiaryAmylmethylether	3010	290	ug/kg dry	2667	ND	113	84-118			10/04/2023	
Tetrachloroethylene	2940	59	ug/kg dry	2667	ND	110	73-119			10/04/2023	
Tetrahydrofuran	2950	290	ug/kg dry	2667	ND	110	64-134			10/04/2023	
Toluene	3050	59	ug/kg dry	2667	ND	114	78-115			10/04/2023	
trans-1,2-Dichloroethylene	3100	59	ug/kg dry	2667	ND	116	73-124			10/04/2023	
trans-1,3-Dichloropropylene	2780	59	ug/kg dry	2667	ND	104	77-122			10/04/2023	
Trichloroethylene	3090	59	ug/kg dry	2667	ND	116	72-121			10/04/2023	
Trichlorofluoromethane	3510	59	ug/kg dry	2667	ND	132	71-129			10/04/2023	A04
Vinyl chloride	3750	59	ug/kg dry	2667	ND	141	69-127			10/04/2023	A04
Surrogate: Bromofluorobenzene	*48.1*		ug/kg dry	*53.34*		*90.1*	*61-159*			10/04/2023	
Surrogate: Dibromofluoromethane	*60.3*		ug/kg dry	*53.34*		*113*	*63-165*			10/04/2023	
Surrogate: Toluene-d8	*54.6*		ug/kg dry	*53.34*		*102*	*62-161*			10/04/2023	
Matrix Spike Dup (B3J0431-MSD1)	**Source: 2309336-21**										
1,1,1,2-Tetrachloroethane	2850	59	ug/kg dry	2667	ND	107	80-119	0.937	14.3	10/04/2023	
1,1,1-Trichloroethane	3180	59	ug/kg dry	2667	ND	119	79-119	5.36	19	10/04/2023	A04
1,1,2,2-Tetrachloroethane	3080	59	ug/kg dry	2667	ND	115	64-127	5.13	13.6	10/04/2023	
1,1,2-Trichloroethane	3110	59	ug/kg dry	2667	ND	117	84-116	0.412	12.9	10/04/2023	A04
1,1,2-Trichlorotrifluoroethane	2700	59	ug/kg dry	2667	ND	101	68-126	12.9	24.6	10/04/2023	
1,1-Dichloroethane	2990	59	ug/kg dry	2667	ND	112	72-122	3.11	20.1	10/04/2023	
1,1-Dichloroethylene	2890	59	ug/kg dry	2667	ND	108	66-125	7.41	24.7	10/04/2023	
1,2,3-Trichlorobenzene	3000	290	ug/kg dry	2667	ND	112	80-122	4.18	14	10/04/2023	
1,2,3-Trichloropropane	3170	59	ug/kg dry	2667	ND	119	78-121	3.49	12.4	10/04/2023	
1,2,3-Trimethylbenzene	3140	59	ug/kg dry	2667	ND	118	84-118	2.03	13.5	10/04/2023	
1,2,4-Trichlorobenzene	2910	290	ug/kg dry	2667	ND	109	78-120	3.46	13.7	10/04/2023	
1,2,4-Trimethylbenzene	3080	59	ug/kg dry	2667	ND	115	84-122	0.495	15.7	10/04/2023	
1,2-Dibromo-3-chloropropane	2920	290	ug/kg dry	2667	ND	109	76-130	8.58	15.3	10/04/2023	
1,2-Dibromoethane	3240	59	ug/kg dry	2667	ND	122	85-117	1.30	11.9	10/04/2023	A04
1,2-Dichlorobenzene	3090	59	ug/kg dry	2667	ND	116	83-116	2.79	13.6	10/04/2023	
1,2-Dichloroethane	3320	59	ug/kg dry	2667	ND	124	78-118	2.05	13.2	10/04/2023	A04
1,2-Dichloropropane	3230	59	ug/kg dry	2667	ND	121	76-117	1.77	14.7	10/04/2023	A04
1,3,5-Trimethylbenzene	3060	59	ug/kg dry	2667	ND	115	84-119	0.716	15.5	10/04/2023	
1,3-Dichlorobenzene	3150	59	ug/kg dry	2667	ND	118	83-116	2.02	13.4	10/04/2023	A04
1,4-Dichlorobenzene	3050	59	ug/kg dry	2667	ND	115	83-114	0.705	13.6	10/04/2023	A04
2,2,4-Trimethylpentane	2550	290	ug/kg dry	2667	ND	95.6	59-133	13.8	29	10/04/2023	
2-Butanone (MEK)	2880	290	ug/kg dry	2667	ND	108	44-148	1.61	16.9	10/04/2023	
2-Methylnaphthalene	2990	290	ug/kg dry	2667	ND	112	58-123	9.51	19.9	10/04/2023	
2-Propanone (acetone)	3070	1200	ug/kg dry	2667	ND	115	29-191	4.48	28.4	10/04/2023	
4-Methyl-2-pentanone (MIBK)	3250	290	ug/kg dry	2667	ND	122	70-130	7.23	13.4	10/04/2023	
Acrylonitrile	2970	290	ug/kg dry	2667	ND	111	67-128	6.48	20.5	10/04/2023	
Benzene	2990	59	ug/kg dry	2667	ND	112	77-115	0.744	16.9	10/04/2023	
Bromochloromethane	3210	59	ug/kg dry	2667	ND	120	74-120	0.905	14.3	10/04/2023	A04
Bromodichloromethane	3300	59	ug/kg dry	2667	ND	124	79-116	1.31	15	10/04/2023	A04
Bromoform	2720	59	ug/kg dry	2667	ND	102	69-118	1.50	12.6	10/04/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0431 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike Dup (B3J0431-MSD1)	**Source: 2309336-21**										
Bromomethane	3150	230	ug/kg dry	2667	ND	118	62-136	5.75	20.1	10/04/2023	
Carbon disulfide	2750	59	ug/kg dry	2667	ND	103	59-127	5.77	29.4	10/04/2023	
Carbon tetrachloride	2680	59	ug/kg dry	2667	ND	101	73-119	5.96	20.9	10/04/2023	
Chlorobenzene	3000	59	ug/kg dry	2667	ND	113	81-114	2.26	15.4	10/04/2023	
Chloroethane	2970	290	ug/kg dry	2667	ND	111	52-149	11.4	23.5	10/04/2023	
Chloroform	3300	59	ug/kg dry	2667	ND	124	76-119	2.49	16.8	10/04/2023	A04
Chloromethane	3550	290	ug/kg dry	2667	ND	133	64-130	2.59	23.9	10/04/2023	A04
cis-1,2-Dichloroethylene	3090	59	ug/kg dry	2667	ND	116	73-123	2.95	17.4	10/04/2023	
cis-1,3-Dichloropropylene	2880	59	ug/kg dry	2667	ND	108	81-119	1.14	13.9	10/04/2023	
Cyclohexane	2820	290	ug/kg dry	2667	ND	106	74-120	5.90	21.6	10/04/2023	
Dibromochloromethane	2720	59	ug/kg dry	2667	ND	102	75-121	2.16	13.6	10/04/2023	
Dibromomethane	3080	59	ug/kg dry	2667	ND	116	81-122	3.17	12.9	10/04/2023	
Dichlorodifluoromethane	4230	290	ug/kg dry	2667	ND	159	43-159	10.5	26.5	10/04/2023	
Diethyl ether	3090	230	ug/kg dry	2667	ND	116	66-133	3.34	20	10/04/2023	
Diisopropyl Ether	3340	290	ug/kg dry	2667	ND	125	68-129	0.702	19.8	10/04/2023	
Ethylbenzene	2970	59	ug/kg dry	2667	ND	111	80-117	2.41	17.2	10/04/2023	
Ethyltertiarybutylether	3080	290	ug/kg dry	2667	ND	116	75-123	1.86	15.1	10/04/2023	
Hexachloroethane	3100	290	ug/kg dry	2667	ND	116	71-118	2.38	15.8	10/04/2023	
Hexane	2370	59	ug/kg dry	2667	ND	88.8	59-132	21.2	33.2	10/04/2023	
Isopropylbenzene	3020	59	ug/kg dry	2667	ND	113	81-117	0.537	16.2	10/04/2023	
m & p - Xylene	6190	120	ug/kg dry	5334	ND	116	82-118	3.75	17.1	10/04/2023	
Methylcyclopentane	2930	59	ug/kg dry	2667	ND	110	74-152	10.6	23.1	10/04/2023	
Methylene chloride	2980	120	ug/kg dry	2667	ND	112	62-132	2.76	23.7	10/04/2023	
Methyltertiarybutylether	3080	59	ug/kg dry	2667	ND	115	78-122	0.989	18.3	10/04/2023	
Naphthalene	3340	290	ug/kg dry	2667	ND	125	84-130	7.36	13.7	10/04/2023	
n-Butylbenzene	2790	59	ug/kg dry	2667	ND	104	74-125	2.45	17.4	10/04/2023	
n-Heptane	2670	59	ug/kg dry	2667	80.2	97.1	60-164	17.1	33.6	10/04/2023	
n-Propylbenzene	3070	59	ug/kg dry	2667	ND	115	82-120	2.37	16.6	10/04/2023	
o-Xylene	3120	59	ug/kg dry	2667	ND	117	83-117	2.06	15.4	10/04/2023	
sec-Butylbenzene	2970	59	ug/kg dry	2667	ND	111	82-120	0.722	15	10/04/2023	
Styrene	3110	59	ug/kg dry	2667	ND	116	84-118	2.86	15.3	10/04/2023	
tert-Butylbenzene	3080	59	ug/kg dry	2667	ND	115	85-120	0.966	14.8	10/04/2023	
tertiary Butyl Alcohol	15300	2900	ug/kg dry	13330	ND	115	62-140	11.2	22.1	10/04/2023	
tertiaryAmylmethylether	3140	290	ug/kg dry	2667	ND	118	84-118	4.21	12.4	10/04/2023	
Tetrachloroethylene	2820	59	ug/kg dry	2667	ND	106	73-119	4.07	21.2	10/04/2023	
Tetrahydrofuran	3050	290	ug/kg dry	2667	ND	114	64-134	3.41	15.9	10/04/2023	
Toluene	2950	59	ug/kg dry	2667	ND	111	78-115	3.34	17.9	10/04/2023	
trans-1,2-Dichloroethylene	2970	59	ug/kg dry	2667	ND	111	73-124	4.23	22.6	10/04/2023	
trans-1,3-Dichloropropylene	2880	59	ug/kg dry	2667	ND	108	77-122	3.47	13.7	10/04/2023	
Trichloroethylene	3010	59	ug/kg dry	2667	ND	113	72-121	2.63	18.5	10/04/2023	
Trichlorofluoromethane	3260	59	ug/kg dry	2667	ND	122	71-129	7.46	22.7	10/04/2023	
Vinyl chloride	3500	59	ug/kg dry	2667	ND	131	69-127	6.82	25.9	10/04/2023	A04
Surrogate: Bromofluorobenzene	*48.8*		ug/kg dry	*53.34*		*91.5*	*61-159*			10/04/2023	
Surrogate: Dibromofluoromethane	*60.0*		ug/kg dry	*53.34*		*113*	*63-165*			10/04/2023	
Surrogate: Toluene-d8	*51.8*		ug/kg dry	*53.34*		*97.1*	*62-161*			10/04/2023	
Batch B3J1624 - Method: 5035				**Prepared: 10/13/2023**							
Blank (B3J1624-BLK1)											
1,1,1,2-Tetrachloroethane	ND	50	ug/kg wet							10/13/2023	
1,1,1-Trichloroethane	ND	50	ug/kg wet							10/13/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1624 - Method: 5035				**Prepared: 10/13/2023**							
Blank (B3J1624-BLK1)											
1,1,2,2-Tetrachloroethane	ND	50	ug/kg wet							10/13/2023	
1,1,2-Trichloroethane	ND	50	ug/kg wet							10/13/2023	
1,1,2-Trichlorotrifluoroethane	ND	50	ug/kg wet							10/13/2023	
1,1-Dichloroethane	ND	50	ug/kg wet							10/13/2023	
1,1-Dichloroethylene	ND	50	ug/kg wet							10/13/2023	
1,2,3-Trichlorobenzene	ND	250	ug/kg wet							10/13/2023	
1,2,3-Trichloropropane	ND	50	ug/kg wet							10/13/2023	
1,2,3-Trimethylbenzene	ND	50	ug/kg wet							10/13/2023	
1,2,4-Trichlorobenzene	ND	250	ug/kg wet							10/13/2023	
1,2,4-Trimethylbenzene	ND	50	ug/kg wet							10/13/2023	
1,2-Dibromo-3-chloropropane	ND	250	ug/kg wet							10/13/2023	
1,2-Dibromoethane	ND	50	ug/kg wet							10/13/2023	
1,2-Dichlorobenzene	ND	50	ug/kg wet							10/13/2023	
1,2-Dichloroethane	ND	50	ug/kg wet							10/13/2023	
1,2-Dichloropropane	ND	50	ug/kg wet							10/13/2023	
1,3,5-Trimethylbenzene	ND	50	ug/kg wet							10/13/2023	
1,3-Dichlorobenzene	ND	50	ug/kg wet							10/13/2023	
1,4-Dichlorobenzene	ND	50	ug/kg wet							10/13/2023	
2,2,4-Trimethylpentane	ND	250	ug/kg wet							10/13/2023	
2-Butanone (MEK)	ND	250	ug/kg wet							10/13/2023	
2-Methylnaphthalene	ND	250	ug/kg wet							10/13/2023	
2-Propanone (acetone)	ND	1000	ug/kg wet							10/13/2023	
4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg wet							10/13/2023	
Acrylonitrile	ND	250	ug/kg wet							10/13/2023	
Benzene	ND	50	ug/kg wet							10/13/2023	
Bromochloromethane	ND	50	ug/kg wet							10/13/2023	
Bromodichloromethane	ND	50	ug/kg wet							10/13/2023	
Bromoform	ND	50	ug/kg wet							10/13/2023	
Bromomethane	ND	200	ug/kg wet							10/13/2023	
Carbon disulfide	ND	50	ug/kg wet							10/13/2023	
Carbon tetrachloride	ND	50	ug/kg wet							10/13/2023	
Chlorobenzene	ND	50	ug/kg wet							10/13/2023	
Chloroethane	ND	250	ug/kg wet							10/13/2023	
Chloroform	ND	50	ug/kg wet							10/13/2023	
Chloromethane	ND	250	ug/kg wet							10/13/2023	
cis-1,2-Dichloroethylene	ND	50	ug/kg wet							10/13/2023	
cis-1,3-Dichloropropylene	ND	50	ug/kg wet							10/13/2023	
Cyclohexane	ND	250	ug/kg wet							10/13/2023	
Dibromochloromethane	ND	50	ug/kg wet							10/13/2023	
Dibromomethane	ND	50	ug/kg wet							10/13/2023	
Dichlorodifluoromethane	ND	250	ug/kg wet							10/13/2023	
Diethyl ether	ND	200	ug/kg wet							10/13/2023	
Diisopropyl Ether	ND	250	ug/kg wet							10/13/2023	
Ethylbenzene	ND	50	ug/kg wet							10/13/2023	
Ethyltertiarybutylether	ND	250	ug/kg wet							10/13/2023	
Hexachloroethane	ND	250	ug/kg wet							10/13/2023	
Hexane	ND	50	ug/kg wet							10/13/2023	
Isopropylbenzene	ND	50	ug/kg wet							10/13/2023	
m & p - Xylene	ND	100	ug/kg wet							10/13/2023	
Methylcyclopentane	ND	50	ug/kg wet							10/13/2023	
Methylene chloride	ND	100	ug/kg wet							10/13/2023	
Methyltertiarybutylether	ND	50	ug/kg wet							10/13/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1624 - Method: 5035				**Prepared: 10/13/2023**							
Blank (B3J1624-BLK1)											
Naphthalene	ND	250	ug/kg wet							10/13/2023	
n-Butylbenzene	ND	50	ug/kg wet							10/13/2023	
n-Heptane	ND	50	ug/kg wet							10/13/2023	
n-Propylbenzene	ND	50	ug/kg wet							10/13/2023	
o-Xylene	ND	50	ug/kg wet							10/13/2023	
sec-Butylbenzene	ND	50	ug/kg wet							10/13/2023	
Styrene	ND	50	ug/kg wet							10/13/2023	
tert-Butylbenzene	ND	50	ug/kg wet							10/13/2023	
tertiary Butyl Alcohol	ND	2500	ug/kg wet							10/13/2023	
tertiaryAmylmethylether	ND	250	ug/kg wet							10/13/2023	
Tetrachloroethylene	ND	50	ug/kg wet							10/13/2023	
Tetrahydrofuran	ND	250	ug/kg wet							10/13/2023	
Toluene	ND	50	ug/kg wet							10/13/2023	
trans-1,2-Dichloroethylene	ND	50	ug/kg wet							10/13/2023	
trans-1,3-Dichloropropylene	ND	50	ug/kg wet							10/13/2023	
Trichloroethylene	ND	50	ug/kg wet							10/13/2023	
Trichlorofluoromethane	ND	50	ug/kg wet							10/13/2023	
Vinyl chloride	ND	50	ug/kg wet							10/13/2023	
Surrogate: Bromofluorobenzene	*47.5*		ug/L	*50.00*		*95.1*	*40-194*			10/13/2023	
Surrogate: Dibromofluoromethane	*49.3*		ug/L	*50.00*		*98.7*	*52-217*			10/13/2023	
Surrogate: Toluene-d8	*48.2*		ug/L	*50.00*		*96.4*	*55-196*			10/13/2023	
LCS (B3J1624-BS1)											
1,1,1,2-Tetrachloroethane	2360	50	ug/kg wet	2500		94.3	70-130			10/13/2023	
1,1,1-Trichloroethane	2690	50	ug/kg wet	2500		108	70-130			10/13/2023	
1,1,2,2-Tetrachloroethane	2770	50	ug/kg wet	2500		111	70-130			10/13/2023	
1,1,2-Trichloroethane	2710	50	ug/kg wet	2500		108	70-130			10/13/2023	
1,1,2-Trichlorotrifluoroethane	2700	50	ug/kg wet	2500		108	70-130			10/13/2023	
1,1-Dichloroethane	2800	50	ug/kg wet	2500		112	70-130			10/13/2023	
1,1-Dichloroethylene	2570	50	ug/kg wet	2500		103	70-130			10/13/2023	
1,2,3-Trichlorobenzene	2440	250	ug/kg wet	2500		97.6	70-130			10/13/2023	
1,2,3-Trichloropropane	2530	50	ug/kg wet	2500		101	70-130			10/13/2023	
1,2,3-Trimethylbenzene	2520	50	ug/kg wet	2500		101	70-130			10/13/2023	
1,2,4-Trichlorobenzene	2410	250	ug/kg wet	2500		96.5	70-130			10/13/2023	
1,2,4-Trimethylbenzene	2560	50	ug/kg wet	2500		102	70-130			10/13/2023	
1,2-Dibromo-3-chloropropane	2300	250	ug/kg wet	2500		92.1	70-130			10/13/2023	
1,2-Dibromoethane	2710	50	ug/kg wet	2500		108	70-130			10/13/2023	
1,2-Dichlorobenzene	2550	50	ug/kg wet	2500		102	70-130			10/13/2023	
1,2-Dichloroethane	2610	50	ug/kg wet	2500		105	70-130			10/13/2023	
1,2-Dichloropropane	2660	50	ug/kg wet	2500		106	70-130			10/13/2023	
1,3,5-Trimethylbenzene	2610	50	ug/kg wet	2500		104	70-130			10/13/2023	
1,3-Dichlorobenzene	2590	50	ug/kg wet	2500		104	70-130			10/13/2023	
1,4-Dichlorobenzene	2560	50	ug/kg wet	2500		102	70-130			10/13/2023	
2,2,4-Trimethylpentane	2590	250	ug/kg wet	2500		104	70-130			10/13/2023	
2-Butanone (MEK)	2520	250	ug/kg wet	2500		101	70-130			10/13/2023	
2-Methylnaphthalene	2150	250	ug/kg wet	2500		86.2	70-130			10/13/2023	
2-Propanone (acetone)	2800	1000	ug/kg wet	2500		112	70-130			10/13/2023	A11
4-Methyl-2-pentanone (MIBK)	2430	250	ug/kg wet	2500		97.1	70-130			10/13/2023	
Acrylonitrile	3040	250	ug/kg wet	2500		122	70-130			10/13/2023	
Benzene	2590	50	ug/kg wet	2500		103	70-130			10/13/2023	
Bromochloromethane	2510	50	ug/kg wet	2500		100	70-130			10/13/2023	
Bromodichloromethane	2380	50	ug/kg wet	2500		95.1	70-130			10/13/2023	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1624 - Method: 5035				**Prepared: 10/13/2023**							
LCS (B3J1624-BS1)											
Bromoform	2260	50	ug/kg wet	2500		90.3	70-130			10/13/2023	
Bromomethane	2900	200	ug/kg wet	2500		116	70-130			10/13/2023	
Carbon disulfide	2510	50	ug/kg wet	2500		100	70-130			10/13/2023	
Carbon tetrachloride	2590	50	ug/kg wet	2500		104	70-130			10/13/2023	
Chlorobenzene	2550	50	ug/kg wet	2500		102	70-130			10/13/2023	
Chloroethane	2800	250	ug/kg wet	2500		112	70-130			10/13/2023	
Chloroform	2740	50	ug/kg wet	2500		110	70-130			10/13/2023	
Chloromethane	2990	250	ug/kg wet	2500		120	70-130			10/13/2023	
cis-1,2-Dichloroethylene	2680	50	ug/kg wet	2500		107	70-130			10/13/2023	
cis-1,3-Dichloropropylene	2470	50	ug/kg wet	2500		98.9	70-130			10/13/2023	
Cyclohexane	2670	250	ug/kg wet	2500		107	70-130			10/13/2023	
Dibromochloromethane	2280	50	ug/kg wet	2500		91.2	70-130			10/13/2023	
Dibromomethane	2540	50	ug/kg wet	2500		102	70-130			10/13/2023	
Dichlorodifluoromethane	2990	250	ug/kg wet	2500		120	70-130			10/13/2023	A06, A11
Diethyl ether	2920	200	ug/kg wet	2500		117	70-130			10/13/2023	
Diisopropyl Ether	2860	250	ug/kg wet	2500		114	70-130			10/13/2023	
Ethylbenzene	2590	50	ug/kg wet	2500		104	70-130			10/13/2023	
Ethyltertiarybutylether	2870	250	ug/kg wet	2500		115	70-130			10/13/2023	
Hexachloroethane	2050	250	ug/kg wet	2500		81.9	70-130			10/13/2023	
Hexane	2930	50	ug/kg wet	2500		117	70-130			10/13/2023	
Isopropylbenzene	2560	50	ug/kg wet	2500		103	70-130			10/13/2023	
m & p - Xylene	5310	100	ug/kg wet	5000		106	70-130			10/13/2023	
Methylcyclopentane	2950	50	ug/kg wet	2500		118	70-130			10/13/2023	
Methylene chloride	2660	100	ug/kg wet	2500		106	70-130			10/13/2023	
Methyltertiarybutylether	2500	50	ug/kg wet	2500		100	70-130			10/13/2023	
Naphthalene	2550	250	ug/kg wet	2500		102	70-130			10/13/2023	
n-Butylbenzene	2600	50	ug/kg wet	2500		104	70-130			10/13/2023	
n-Heptane	3030	50	ug/kg wet	2500		121	70-130			10/13/2023	
n-Propylbenzene	2660	50	ug/kg wet	2500		106	70-130			10/13/2023	
o-Xylene	2680	50	ug/kg wet	2500		107	70-130			10/13/2023	
sec-Butylbenzene	2590	50	ug/kg wet	2500		104	70-130			10/13/2023	
Styrene	2620	50	ug/kg wet	2500		105	70-130			10/13/2023	
tert-Butylbenzene	2550	50	ug/kg wet	2500		102	70-130			10/13/2023	
tertiary Butyl Alcohol	19200	2500	ug/kg wet	12500		154	70-130			10/13/2023	A06, A09, A11
tertiaryAmylmethylether	2790	250	ug/kg wet	2500		111	70-130			10/13/2023	
Tetrachloroethylene	2560	50	ug/kg wet	2500		102	70-130			10/13/2023	
Tetrahydrofuran	2790	250	ug/kg wet	2500		112	70-130			10/13/2023	
Toluene	2520	50	ug/kg wet	2500		101	70-130			10/13/2023	
trans-1,2-Dichloroethylene	2790	50	ug/kg wet	2500		111	70-130			10/13/2023	
trans-1,3-Dichloropropylene	2450	50	ug/kg wet	2500		97.9	70-130			10/13/2023	
Trichloroethylene	2460	50	ug/kg wet	2500		98.2	70-130			10/13/2023	
Trichlorofluoromethane	2730	50	ug/kg wet	2500		109	70-130			10/13/2023	
Vinyl chloride	2850	50	ug/kg wet	2500		114	70-130			10/13/2023	
Surrogate: Bromofluorobenzene	*50.9*		ug/L	*50.00*		*102*	*40-194*			10/13/2023	
Surrogate: Dibromofluoromethane	*51.0*		ug/L	*50.00*		*102*	*52-217*			10/13/2023	
Surrogate: Toluene-d8	*51.1*		ug/L	*50.00*		*102*	*55-196*			10/13/2023	
Matrix Spike (B3J1624-MS1)	**Source: 2310064-10**										
1,1,1,2-Tetrachloroethane	3060	66	ug/kg dry	3317	ND	92.3	70-130			10/13/2023	
1,1,1-Trichloroethane	3590	66	ug/kg dry	3317	ND	108	70-130			10/13/2023	
1,1,2,2-Tetrachloroethane	3510	66	ug/kg dry	3317	ND	106	70-130			10/13/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1624 - Method: 5035				**Prepared: 10/11/2023**							
Matrix Spike (B3J1624-MS1)	**Source: 2310064-10**										
1,1,2-Trichloroethane	3670	66	ug/kg dry	3317	ND	111	70-130			10/13/2023	
1,1,2-Trichlorotrifluoroethane	3600	66	ug/kg dry	3317	ND	109	70-130			10/13/2023	
1,1-Dichloroethane	3700	66	ug/kg dry	3317	ND	112	70-130			10/13/2023	
1,1-Dichloroethylene	3430	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
1,2,3-Trichlorobenzene	3220	330	ug/kg dry	3317	ND	96.9	70-130			10/13/2023	
1,2,3-Trichloropropane	3490	66	ug/kg dry	3317	ND	105	70-130			10/13/2023	
1,2,3-Trimethylbenzene	3340	66	ug/kg dry	3317	ND	101	70-130			10/13/2023	
1,2,4-Trichlorobenzene	3150	330	ug/kg dry	3317	ND	94.9	70-130			10/13/2023	
1,2,4-Trimethylbenzene	3390	66	ug/kg dry	3317	ND	102	70-130			10/13/2023	
1,2-Dibromo-3-chloropropane	2990	330	ug/kg dry	3317	ND	90.2	70-130			10/13/2023	
1,2-Dibromoethane	3570	66	ug/kg dry	3317	ND	108	70-130			10/13/2023	
1,2-Dichlorobenzene	3360	66	ug/kg dry	3317	ND	101	70-130			10/13/2023	
1,2-Dichloroethane	3580	66	ug/kg dry	3317	ND	108	70-130			10/13/2023	
1,2-Dichloropropane	3690	66	ug/kg dry	3317	ND	111	70-130			10/13/2023	
1,3,5-Trimethylbenzene	3440	66	ug/kg dry	3317	ND	104	70-130			10/13/2023	
1,3-Dichlorobenzene	3400	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
1,4-Dichlorobenzene	3340	66	ug/kg dry	3317	ND	101	70-130			10/13/2023	
2,2,4-Trimethylpentane	3340	330	ug/kg dry	3317	ND	101	70-130			10/13/2023	
2-Butanone (MEK)	3590	330	ug/kg dry	3317	ND	108	70-130			10/13/2023	
2-Methylnaphthalene	2850	330	ug/kg dry	3317	ND	86.0	70-130			10/13/2023	
2-Propanone (acetone)	4640	1300	ug/kg dry	3317	ND	140	70-130			10/13/2023	A04, A11
4-Methyl-2-pentanone (MIBK)	3350	330	ug/kg dry	3317	ND	101	70-130			10/13/2023	
Acrylonitrile	4060	330	ug/kg dry	3317	ND	122	70-130			10/13/2023	
Benzene	3570	66	ug/kg dry	3317	ND	108	70-130			10/13/2023	
Bromochloromethane	3320	66	ug/kg dry	3317	ND	100	70-130			10/13/2023	
Bromodichloromethane	3060	66	ug/kg dry	3317	ND	92.3	70-130			10/13/2023	
Bromoform	2800	66	ug/kg dry	3317	ND	84.5	70-130			10/13/2023	
Bromomethane	3690	270	ug/kg dry	3317	ND	111	70-130			10/13/2023	
Carbon disulfide	3020	66	ug/kg dry	3317	ND	91.2	70-130			10/13/2023	
Carbon tetrachloride	3410	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
Chlorobenzene	3450	66	ug/kg dry	3317	ND	104	70-130			10/13/2023	
Chloroethane	3510	330	ug/kg dry	3317	ND	106	70-130			10/13/2023	
Chloroform	3690	66	ug/kg dry	3317	ND	111	70-130			10/13/2023	
Chloromethane	3970	330	ug/kg dry	3317	ND	120	70-130			10/13/2023	
cis-1,2-Dichloroethylene	3610	66	ug/kg dry	3317	ND	109	70-130			10/13/2023	
cis-1,3-Dichloropropylene	3230	66	ug/kg dry	3317	ND	97.4	70-130			10/13/2023	
Cyclohexane	3510	330	ug/kg dry	3317	ND	106	70-130			10/13/2023	
Dibromochloromethane	2890	66	ug/kg dry	3317	ND	87.2	70-130			10/13/2023	
Dibromomethane	3420	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
Dichlorodifluoromethane	3980	330	ug/kg dry	3317	ND	120	70-130			10/13/2023	A06, A11
Diethyl ether	3860	270	ug/kg dry	3317	ND	116	70-130			10/13/2023	
Diisopropyl Ether	3800	330	ug/kg dry	3317	ND	115	70-130			10/13/2023	
Ethylbenzene	3410	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
Ethyltertiarybutylether	3860	330	ug/kg dry	3317	ND	116	70-130			10/13/2023	
Hexachloroethane	2520	330	ug/kg dry	3317	ND	75.9	70-130			10/13/2023	
Hexane	3800	66	ug/kg dry	3317	ND	115	70-130			10/13/2023	
Isopropylbenzene	3400	66	ug/kg dry	3317	ND	102	70-130			10/13/2023	
m & p - Xylene	7080	130	ug/kg dry	6634	ND	107	70-130			10/13/2023	
Methylcyclopentane	3920	66	ug/kg dry	3317	ND	118	70-130			10/13/2023	
Methylene chloride	3600	130	ug/kg dry	3317	ND	109	70-130			10/13/2023	
Methyltertiarybutylether	3340	66	ug/kg dry	3317	ND	101	70-130			10/13/2023	
Naphthalene	3440	330	ug/kg dry	3317	ND	104	70-130			10/13/2023	

Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1624 - Method: 5035				**Prepared: 10/11/2023**							
Matrix Spike (B3J1624-MS1)	**Source: 2310064-10**										
n-Butylbenzene	3420	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
n-Heptane	3860	66	ug/kg dry	3317	ND	116	70-130			10/13/2023	
n-Propylbenzene	3530	66	ug/kg dry	3317	ND	106	70-130			10/13/2023	
o-Xylene	3590	66	ug/kg dry	3317	ND	108	70-130			10/13/2023	
sec-Butylbenzene	3360	66	ug/kg dry	3317	ND	101	70-130			10/13/2023	
Styrene	3490	66	ug/kg dry	3317	ND	105	70-130			10/13/2023	
tert-Butylbenzene	3370	66	ug/kg dry	3317	ND	102	70-130			10/13/2023	
tertiary Butyl Alcohol	29400	3300	ug/kg dry	16580	ND	177	70-130			10/13/2023	A04, A06, A11
tertiaryAmylmethylether	3730	330	ug/kg dry	3317	ND	113	70-130			10/13/2023	
Tetrachloroethylene	3400	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
Tetrahydrofuran	3760	330	ug/kg dry	3317	ND	113	70-130			10/13/2023	
Toluene	3410	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
trans-1,2-Dichloroethylene	3650	66	ug/kg dry	3317	ND	110	70-130			10/13/2023	
trans-1,3-Dichloropropylene	3180	66	ug/kg dry	3317	ND	96.0	70-130			10/13/2023	
Trichloroethylene	3430	66	ug/kg dry	3317	ND	103	70-130			10/13/2023	
Trichlorofluoromethane	3630	66	ug/kg dry	3317	ND	110	70-130			10/13/2023	
Vinyl chloride	3750	66	ug/kg dry	3317	ND	113	70-130			10/13/2023	
Surrogate: Bromofluorobenzene	*75.0*		ug/kg dry	*60.35*		*124*	*40-194*			10/13/2023	
Surrogate: Dibromofluoromethane	*78.7*		ug/kg dry	*60.35*		*130*	*52-217*			10/13/2023	
Surrogate: Toluene-d8	*79.1*		ug/kg dry	*60.35*		*131*	*55-196*			10/13/2023	
Matrix Spike Dup (B3J1624-MSD1)	**Source: 2310064-10**										
1,1,1,2-Tetrachloroethane	3360	66	ug/kg dry	3317	ND	101	70-130	9.23	30	10/13/2023	
1,1,1-Trichloroethane	3760	66	ug/kg dry	3317	ND	113	70-130	4.70	30	10/13/2023	
1,1,2,2-Tetrachloroethane	3730	66	ug/kg dry	3317	ND	112	70-130	6.09	30	10/13/2023	
1,1,2-Trichloroethane	3890	66	ug/kg dry	3317	ND	117	70-130	5.91	30	10/13/2023	
1,1,2-Trichlorotrifluoroethane	3470	66	ug/kg dry	3317	ND	105	70-130	3.78	30	10/13/2023	
1,1-Dichloroethane	3690	66	ug/kg dry	3317	ND	111	70-130	0.365	30	10/13/2023	
1,1-Dichloroethylene	3410	66	ug/kg dry	3317	ND	103	70-130	0.391	30	10/13/2023	
1,2,3-Trichlorobenzene	3550	330	ug/kg dry	3317	ND	107	70-130	9.87	30	10/13/2023	
1,2,3-Trichloropropane	3830	66	ug/kg dry	3317	ND	115	70-130	9.17	30	10/13/2023	
1,2,3-Trimethylbenzene	3720	66	ug/kg dry	3317	ND	112	70-130	10.8	30	10/13/2023	
1,2,4-Trichlorobenzene	3480	330	ug/kg dry	3317	ND	105	70-130	10.1	30	10/13/2023	
1,2,4-Trimethylbenzene	3780	66	ug/kg dry	3317	ND	114	70-130	10.9	30	10/13/2023	
1,2-Dibromo-3-chloropropane	3290	330	ug/kg dry	3317	ND	99.3	70-130	9.61	30	10/13/2023	
1,2-Dibromoethane	3830	66	ug/kg dry	3317	ND	116	70-130	7.12	30	10/13/2023	
1,2-Dichlorobenzene	3730	66	ug/kg dry	3317	ND	112	70-130	10.3	30	10/13/2023	
1,2-Dichloroethane	3660	66	ug/kg dry	3317	ND	110	70-130	2.29	30	10/13/2023	
1,2-Dichloropropane	3780	66	ug/kg dry	3317	ND	114	70-130	2.34	30	10/13/2023	
1,3,5-Trimethylbenzene	3850	66	ug/kg dry	3317	ND	116	70-130	11.2	30	10/13/2023	
1,3-Dichlorobenzene	3780	66	ug/kg dry	3317	ND	114	70-130	10.4	30	10/13/2023	
1,4-Dichlorobenzene	3720	66	ug/kg dry	3317	ND	112	70-130	10.6	30	10/13/2023	
2,2,4-Trimethylpentane	3650	330	ug/kg dry	3317	ND	110	70-130	8.75	30	10/13/2023	
2-Butanone (MEK)	3470	330	ug/kg dry	3317	ND	105	70-130	3.43	30	10/13/2023	
2-Methylnaphthalene	3240	330	ug/kg dry	3317	ND	97.6	70-130	12.6	30	10/13/2023	
2-Propanone (acetone)	4350	1300	ug/kg dry	3317	ND	131	70-130	6.38	30	10/13/2023	A04, A11
4-Methyl-2-pentanone (MIBK)	3500	330	ug/kg dry	3317	ND	105	70-130	4.21	30	10/13/2023	
Acrylonitrile	4050	330	ug/kg dry	3317	ND	122	70-130	0.393	30	10/13/2023	
Benzene	3660	66	ug/kg dry	3317	ND	110	70-130	2.37	30	10/13/2023	
Bromochloromethane	3560	66	ug/kg dry	3317	ND	107	70-130	6.95	30	10/13/2023	
Bromodichloromethane	3230	66	ug/kg dry	3317	ND	97.5	70-130	5.50	30	10/13/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1624 - Method: 5035				**Prepared: 10/11/2023**							
Matrix Spike Dup (B3J1624-MSD1)	**Source: 2310064-10**										
Bromoform	3090	66	ug/kg dry	3317	ND	93.3	70-130	9.93	30	10/13/2023	
Bromomethane	3670	270	ug/kg dry	3317	ND	111	70-130	0.763	30	10/13/2023	
Carbon disulfide	3160	66	ug/kg dry	3317	ND	95.3	70-130	4.48	30	10/13/2023	
Carbon tetrachloride	3500	66	ug/kg dry	3317	ND	106	70-130	2.74	30	10/13/2023	
Chlorobenzene	3700	66	ug/kg dry	3317	ND	112	70-130	7.07	30	10/13/2023	
Chloroethane	3730	330	ug/kg dry	3317	ND	112	70-130	6.00	30	10/13/2023	
Chloroform	3600	66	ug/kg dry	3317	ND	109	70-130	2.42	30	10/13/2023	
Chloromethane	3910	330	ug/kg dry	3317	ND	118	70-130	1.55	30	10/13/2023	
cis-1,2-Dichloroethylene	3550	66	ug/kg dry	3317	ND	107	70-130	1.73	30	10/13/2023	
cis-1,3-Dichloropropylene	3370	66	ug/kg dry	3317	ND	102	70-130	4.21	30	10/13/2023	
Cyclohexane	3590	330	ug/kg dry	3317	ND	108	70-130	2.29	30	10/13/2023	
Dibromochloromethane	3170	66	ug/kg dry	3317	ND	95.6	70-130	9.12	30	10/13/2023	
Dibromomethane	3590	66	ug/kg dry	3317	ND	108	70-130	4.86	30	10/13/2023	
Dichlorodifluoromethane	3960	330	ug/kg dry	3317	ND	119	70-130	0.665	30	10/13/2023	A06, A11
Diethyl ether	3780	270	ug/kg dry	3317	ND	114	70-130	2.01	30	10/13/2023	
Diisopropyl Ether	3740	330	ug/kg dry	3317	ND	113	70-130	1.66	30	10/13/2023	
Ethylbenzene	3700	66	ug/kg dry	3317	ND	112	70-130	8.37	30	10/13/2023	
Ethyltertiarybutylether	3850	330	ug/kg dry	3317	ND	116	70-130	0.183	30	10/13/2023	
Hexachloroethane	2820	330	ug/kg dry	3317	ND	85.1	70-130	11.5	30	10/13/2023	
Hexane	3720	66	ug/kg dry	3317	ND	112	70-130	2.27	30	10/13/2023	
Isopropylbenzene	3750	66	ug/kg dry	3317	ND	113	70-130	9.86	30	10/13/2023	
m & p - Xylene	7630	130	ug/kg dry	6634	ND	115	70-130	7.54	30	10/13/2023	
Methylcyclopentane	3810	66	ug/kg dry	3317	ND	115	70-130	2.76	30	10/13/2023	
Methylene chloride	3520	130	ug/kg dry	3317	ND	106	70-130	2.17	30	10/13/2023	
Methyltertiarybutylether	3250	66	ug/kg dry	3317	ND	98.0	70-130	2.60	30	10/13/2023	
Naphthalene	3850	330	ug/kg dry	3317	ND	116	70-130	11.2	30	10/13/2023	
n-Butylbenzene	3790	66	ug/kg dry	3317	ND	114	70-130	10.1	30	10/13/2023	
n-Heptane	4060	66	ug/kg dry	3317	ND	122	70-130	5.07	30	10/13/2023	
n-Propylbenzene	3890	66	ug/kg dry	3317	ND	117	70-130	9.87	30	10/13/2023	
o-Xylene	3880	66	ug/kg dry	3317	ND	117	70-130	7.77	30	10/13/2023	
sec-Butylbenzene	3730	66	ug/kg dry	3317	ND	112	70-130	10.4	30	10/13/2023	
Styrene	3750	66	ug/kg dry	3317	ND	113	70-130	7.31	30	10/13/2023	
tert-Butylbenzene	3750	66	ug/kg dry	3317	ND	113	70-130	10.7	30	10/13/2023	
tertiary Butyl Alcohol	29500	3300	ug/kg dry	16580	ND	178	70-130	0.321	30	10/13/2023	A04, A06, A11
tertiaryAmylmethylether	3850	330	ug/kg dry	3317	ND	116	70-130	3.20	30	10/13/2023	
Tetrachloroethylene	3680	66	ug/kg dry	3317	ND	111	70-130	7.82	30	10/13/2023	
Tetrahydrofuran	3640	330	ug/kg dry	3317	ND	110	70-130	3.11	30	10/13/2023	
Toluene	3680	66	ug/kg dry	3317	ND	111	70-130	7.73	30	10/13/2023	
trans-1,2-Dichloroethylene	3580	66	ug/kg dry	3317	ND	108	70-130	1.93	30	10/13/2023	
trans-1,3-Dichloropropylene	3310	66	ug/kg dry	3317	ND	99.9	70-130	4.03	30	10/13/2023	
Trichloroethylene	3630	66	ug/kg dry	3317	ND	109	70-130	5.55	30	10/13/2023	
Trichlorofluoromethane	3600	66	ug/kg dry	3317	ND	108	70-130	1.04	30	10/13/2023	
Vinyl chloride	3730	66	ug/kg dry	3317	ND	112	70-130	0.471	30	10/13/2023	
Surrogate: Bromofluorobenzene	*83.3*		ug/kg dry	*60.35*		*138*	*40-194*			10/13/2023	
Surrogate: Dibromofluoromethane	*82.3*		ug/kg dry	*60.35*		*136*	*52-217*			10/13/2023	
Surrogate: Toluene-d8	*84.9*		ug/kg dry	*60.35*		*141*	*55-196*			10/13/2023	
Batch B3J2026 - Method: 5035				**Prepared: 10/03/2023**							
Blank (B3J2026-BLK1)											

MICHIGAN DEPARTMENT OF
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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J2026 - Method: 5035				**Prepared: 10/03/2023**							
Blank (B3J2026-BLK1)											
1,1,1,2-Tetrachloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,1-Trichloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,2,2-Tetrachloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,2-Trichloroethane	ND	50	ug/kg wet							10/03/2023	
1,1,2-Trichlorotrifluoroethane	ND	50	ug/kg wet							10/03/2023	
1,1-Dichloroethane	ND	50	ug/kg wet							10/03/2023	
1,1-Dichloroethylene	ND	50	ug/kg wet							10/03/2023	
1,2,3-Trichlorobenzene	ND	250	ug/kg wet							10/03/2023	
1,2,3-Trichloropropane	ND	50	ug/kg wet							10/03/2023	
1,2,3-Trimethylbenzene	ND	50	ug/kg wet							10/03/2023	
1,2,4-Trichlorobenzene	ND	250	ug/kg wet							10/03/2023	
1,2,4-Trimethylbenzene	ND	50	ug/kg wet							10/03/2023	
1,2-Dibromo-3-chloropropane	ND	250	ug/kg wet							10/03/2023	
1,2-Dibromoethane	ND	50	ug/kg wet							10/03/2023	
1,2-Dichlorobenzene	ND	50	ug/kg wet							10/03/2023	
1,2-Dichloroethane	ND	50	ug/kg wet							10/03/2023	
1,2-Dichloropropane	ND	50	ug/kg wet							10/03/2023	
1,3,5-Trimethylbenzene	ND	50	ug/kg wet							10/03/2023	
1,3-Dichlorobenzene	ND	50	ug/kg wet							10/03/2023	
1,4-Dichlorobenzene	ND	50	ug/kg wet							10/03/2023	
2,2,4-Trimethylpentane	ND	250	ug/kg wet							10/03/2023	
2-Butanone (MEK)	ND	250	ug/kg wet							10/03/2023	
2-Methylnaphthalene	ND	250	ug/kg wet							10/03/2023	
2-Propanone (acetone)	ND	1000	ug/kg wet							10/03/2023	
4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg wet							10/03/2023	
Acrylonitrile	ND	250	ug/kg wet							10/03/2023	
Benzene	ND	50	ug/kg wet							10/03/2023	
Bromochloromethane	ND	50	ug/kg wet							10/03/2023	
Bromodichloromethane	ND	50	ug/kg wet							10/03/2023	
Bromoform	ND	50	ug/kg wet							10/03/2023	
Bromomethane	ND	200	ug/kg wet							10/03/2023	
Carbon disulfide	ND	50	ug/kg wet							10/03/2023	
Carbon tetrachloride	ND	50	ug/kg wet							10/03/2023	
Chlorobenzene	ND	50	ug/kg wet							10/03/2023	
Chloroethane	ND	250	ug/kg wet							10/03/2023	
Chloroform	ND	50	ug/kg wet							10/03/2023	
Chloromethane	ND	250	ug/kg wet							10/03/2023	
cis-1,2-Dichloroethylene	ND	50	ug/kg wet							10/03/2023	
cis-1,3-Dichloropropylene	ND	50	ug/kg wet							10/03/2023	
Cyclohexane	ND	250	ug/kg wet							10/03/2023	
Dibromochloromethane	ND	50	ug/kg wet							10/03/2023	
Dibromomethane	ND	50	ug/kg wet							10/03/2023	
Dichlorodifluoromethane	ND	250	ug/kg wet							10/03/2023	
Diethyl ether	ND	200	ug/kg wet							10/03/2023	
Diisopropyl Ether	ND	250	ug/kg wet							10/03/2023	
Ethylbenzene	ND	50	ug/kg wet							10/03/2023	
Ethyltertiarybutylether	ND	250	ug/kg wet							10/03/2023	
Hexachloroethane	ND	250	ug/kg wet							10/03/2023	
Hexane	ND	50	ug/kg wet							10/03/2023	
Isopropylbenzene	ND	50	ug/kg wet							10/03/2023	
m & p - Xylene	ND	100	ug/kg wet							10/03/2023	
Methylcyclopentane	ND	50	ug/kg wet							10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J2026 - Method: 5035				**Prepared: 10/03/2023**							
Blank (B3J2026-BLK1)											
Methylene chloride	ND	100	ug/kg wet							10/03/2023	
Methyltertiarybutylether	ND	50	ug/kg wet							10/03/2023	
Naphthalene	ND	250	ug/kg wet							10/03/2023	
n-Butylbenzene	ND	50	ug/kg wet							10/03/2023	
n-Heptane	ND	50	ug/kg wet							10/03/2023	
n-Propylbenzene	ND	50	ug/kg wet							10/03/2023	
o-Xylene	ND	50	ug/kg wet							10/03/2023	
sec-Butylbenzene	ND	50	ug/kg wet							10/03/2023	
Styrene	ND	50	ug/kg wet							10/03/2023	
tert-Butylbenzene	ND	50	ug/kg wet							10/03/2023	
tertiary Butyl Alcohol	ND	2500	ug/kg wet							10/03/2023	
tertiaryAmylmethylether	ND	250	ug/kg wet							10/03/2023	
Tetrachloroethylene	ND	50	ug/kg wet							10/03/2023	
Tetrahydrofuran	ND	250	ug/kg wet							10/03/2023	
Toluene	ND	50	ug/kg wet							10/03/2023	
trans-1,2-Dichloroethylene	ND	50	ug/kg wet							10/03/2023	
trans-1,3-Dichloropropylene	ND	50	ug/kg wet							10/03/2023	
Trichloroethylene	ND	50	ug/kg wet							10/03/2023	
Trichlorofluoromethane	ND	50	ug/kg wet							10/03/2023	
Vinyl chloride	ND	50	ug/kg wet							10/03/2023	
Surrogate: Bromofluorobenzene	*50.7*		ug/L	*50.00*		*101*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*48.0*		ug/L	*50.00*		*96.0*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*50.2*		ug/L	*50.00*		*100*	*55.4-196*			10/03/2023	
LCS (B3J2026-BS1)											
1,1,1,2-Tetrachloroethane	2440	50	ug/kg wet	2500		97.6	70-130			10/03/2023	
1,1,1-Trichloroethane	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
1,1,2,2-Tetrachloroethane	2600	50	ug/kg wet	2500		104	70-130			10/03/2023	
1,1,2-Trichloroethane	2550	50	ug/kg wet	2500		102	70-130			10/03/2023	
1,1,2-Trichlorotrifluoroethane	2390	50	ug/kg wet	2500		95.8	70-130			10/03/2023	
1,1-Dichloroethane	2560	50	ug/kg wet	2500		102	70-130			10/03/2023	
1,1-Dichloroethylene	2450	50	ug/kg wet	2500		98.0	70-130			10/03/2023	
1,2,3-Trichlorobenzene	2650	250	ug/kg wet	2500		106	70-130			10/03/2023	
1,2,3-Trichloropropane	2620	50	ug/kg wet	2500		105	70-130			10/03/2023	
1,2,3-Trimethylbenzene	2680	50	ug/kg wet	2500		107	70-130			10/03/2023	
1,2,4-Trichlorobenzene	2620	250	ug/kg wet	2500		105	70-130			10/03/2023	
1,2,4-Trimethylbenzene	2690	50	ug/kg wet	2500		108	70-130			10/03/2023	
1,2-Dibromo-3-chloropropane	2370	250	ug/kg wet	2500		94.9	70-130			10/03/2023	
1,2-Dibromoethane	2710	50	ug/kg wet	2500		108	70-130			10/03/2023	
1,2-Dichlorobenzene	2710	50	ug/kg wet	2500		108	70-130			10/03/2023	
1,2-Dichloroethane	2600	50	ug/kg wet	2500		104	70-130			10/03/2023	
1,2-Dichloropropane	2640	50	ug/kg wet	2500		106	70-130			10/03/2023	
1,3,5-Trimethylbenzene	2730	50	ug/kg wet	2500		109	70-130			10/03/2023	
1,3-Dichlorobenzene	2750	50	ug/kg wet	2500		110	70-130			10/03/2023	
1,4-Dichlorobenzene	2700	50	ug/kg wet	2500		108	70-130			10/03/2023	
2,2,4-Trimethylpentane	2180	250	ug/kg wet	2500		87.1	70-130			10/03/2023	
2-Butanone (MEK)	2400	250	ug/kg wet	2500		96.1	70-130			10/03/2023	
2-Methylnaphthalene	2410	250	ug/kg wet	2500		96.3	70-130			10/03/2023	
2-Propanone (acetone)	2490	1000	ug/kg wet	2500		99.5	70-130			10/03/2023	
4-Methyl-2-pentanone (MIBK)	2580	250	ug/kg wet	2500		103	70-130			10/03/2023	
Acrylonitrile	2470	250	ug/kg wet	2500		98.6	70-130			10/03/2023	
Benzene	2500	50	ug/kg wet	2500		99.9	70-130			10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J2026 - Method: 5035				**Prepared: 10/03/2023**							
LCS (B3J2026-BS1)											
Bromochloromethane	2610	50	ug/kg wet	2500		105	70-130			10/03/2023	
Bromodichloromethane	2720	50	ug/kg wet	2500		109	70-130			10/03/2023	
Bromoform	2300	50	ug/kg wet	2500		91.8	70-130			10/03/2023	
Bromomethane	2490	200	ug/kg wet	2500		99.4	70-130			10/03/2023	
Carbon disulfide	2380	50	ug/kg wet	2500		95.0	70-130			10/03/2023	
Carbon tetrachloride	2330	50	ug/kg wet	2500		93.3	70-130			10/03/2023	
Chlorobenzene	2630	50	ug/kg wet	2500		105	70-130			10/03/2023	
Chloroethane	2320	250	ug/kg wet	2500		92.9	70-130			10/03/2023	
Chloroform	2760	50	ug/kg wet	2500		111	70-130			10/03/2023	
Chloromethane	2490	250	ug/kg wet	2500		99.8	70-130			10/03/2023	
cis-1,2-Dichloroethylene	2600	50	ug/kg wet	2500		104	70-130			10/03/2023	
cis-1,3-Dichloropropylene	2440	50	ug/kg wet	2500		97.6	70-130			10/03/2023	
Cyclohexane	2460	250	ug/kg wet	2500		98.2	70-130			10/03/2023	
Dibromochloromethane	2330	50	ug/kg wet	2500		93.3	70-130			10/03/2023	
Dibromomethane	2540	50	ug/kg wet	2500		102	70-130			10/03/2023	
Dichlorodifluoromethane	2430	250	ug/kg wet	2500		97.4	70-130			10/03/2023	
Diethyl ether	2540	200	ug/kg wet	2500		102	70-130			10/03/2023	
Diisopropyl Ether	2500	250	ug/kg wet	2500		100	70-130			10/03/2023	
Ethylbenzene	2550	50	ug/kg wet	2500		102	70-130			10/03/2023	
Ethyltertiarybutylether	2540	250	ug/kg wet	2500		102	70-130			10/03/2023	
Hexachloroethane	2690	250	ug/kg wet	2500		107	70-130			10/03/2023	
Hexane	2220	50	ug/kg wet	2500		88.8	70-130			10/03/2023	
Isopropylbenzene	2690	50	ug/kg wet	2500		108	70-130			10/03/2023	
m & p - Xylene	5390	100	ug/kg wet	5000		108	70-130			10/03/2023	
Methylcyclopentane	2540	50	ug/kg wet	2500		102	70-130			10/03/2023	
Methylene chloride	2560	100	ug/kg wet	2500		102	70-130			10/03/2023	
Methyltertiarybutylether	2530	50	ug/kg wet	2500		101	70-130			10/03/2023	
Naphthalene	2750	250	ug/kg wet	2500		110	70-130			10/03/2023	
n-Butylbenzene	2600	50	ug/kg wet	2500		104	70-130			10/03/2023	
n-Heptane	2430	50	ug/kg wet	2500		97.1	70-130			10/03/2023	
n-Propylbenzene	2770	50	ug/kg wet	2500		111	70-130			10/03/2023	
o-Xylene	2670	50	ug/kg wet	2500		107	70-130			10/03/2023	
sec-Butylbenzene	2700	50	ug/kg wet	2500		108	70-130			10/03/2023	
Styrene	2700	50	ug/kg wet	2500		108	70-130			10/03/2023	
tert-Butylbenzene	2740	50	ug/kg wet	2500		110	70-130			10/03/2023	
tertiary Butyl Alcohol	12200	2500	ug/kg wet	12500		97.9	70-130			10/03/2023	
tertiaryAmylmethylether	2530	250	ug/kg wet	2500		101	70-130			10/03/2023	
Tetrachloroethylene	2500	50	ug/kg wet	2500		100	70-130			10/03/2023	
Tetrahydrofuran	2490	250	ug/kg wet	2500		99.5	70-130			10/03/2023	
Toluene	2550	50	ug/kg wet	2500		102	70-130			10/03/2023	
trans-1,2-Dichloroethylene	2570	50	ug/kg wet	2500		103	70-130			10/03/2023	
trans-1,3-Dichloropropylene	2400	50	ug/kg wet	2500		95.8	70-130			10/03/2023	
Trichloroethylene	2490	50	ug/kg wet	2500		99.5	70-130			10/03/2023	
Trichlorofluoromethane	2580	50	ug/kg wet	2500		103	70-130			10/03/2023	
Vinyl chloride	2590	50	ug/kg wet	2500		104	70-130			10/03/2023	
Surrogate: Bromofluorobenzene	*50.5*		ug/L	*50.00*		*101*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*50.0*		ug/L	*50.00*		*99.9*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*49.4*		ug/L	*50.00*		*98.9*	*55.4-196*			10/03/2023	
Matrix Spike (B3J2026-MS1)	**Source: 2309323-06**										
1,1,1,2-Tetrachloroethane	2450	57	ug/kg dry	2860	ND	85.6	70-130			10/03/2023	
1,1,1-Trichloroethane	2740	57	ug/kg dry	2860	ND	95.8	70-130			10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J2026 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike (B3J2026-MS1)	**Source: 2309323-06**										
1,1,2,2-Tetrachloroethane	2320	57	ug/kg dry	2860	ND	81.1	70-130			10/03/2023	
1,1,2-Trichloroethane	2620	57	ug/kg dry	2860	ND	91.7	70-130			10/03/2023	
1,1,2-Trichlorotrifluoroethane	2570	57	ug/kg dry	2860	ND	90.0	70-130			10/03/2023	
1,1-Dichloroethane	2730	57	ug/kg dry	2860	ND	95.4	70-130			10/03/2023	
1,1-Dichloroethylene	2560	57	ug/kg dry	2860	ND	89.5	70-130			10/03/2023	
1,2,3-Trichlorobenzene	2460	290	ug/kg dry	2860	ND	86.1	70-130			10/03/2023	
1,2,3-Trichloropropane	2660	57	ug/kg dry	2860	ND	93.1	70-130			10/03/2023	
1,2,3-Trimethylbenzene	2660	57	ug/kg dry	2860	ND	93.0	70-130			10/03/2023	
1,2,4-Trichlorobenzene	2400	290	ug/kg dry	2860	ND	84.0	70-130			10/03/2023	
1,2,4-Trimethylbenzene	2700	57	ug/kg dry	2860	ND	94.5	70-130			10/03/2023	
1,2-Dibromo-3-chloropropane	2210	290	ug/kg dry	2860	ND	77.4	70-130			10/03/2023	
1,2-Dibromoethane	2780	57	ug/kg dry	2860	ND	97.3	70-130			10/03/2023	
1,2-Dichlorobenzene	2700	57	ug/kg dry	2860	ND	94.4	70-130			10/03/2023	
1,2-Dichloroethane	2800	57	ug/kg dry	2860	ND	97.7	70-130			10/03/2023	
1,2-Dichloropropane	2770	57	ug/kg dry	2860	ND	96.9	70-130			10/03/2023	
1,3,5-Trimethylbenzene	2710	57	ug/kg dry	2860	ND	94.7	70-130			10/03/2023	
1,3-Dichlorobenzene	2750	57	ug/kg dry	2860	ND	96.3	70-130			10/03/2023	
1,4-Dichlorobenzene	2640	57	ug/kg dry	2860	ND	92.4	70-130			10/03/2023	
2,2,4-Trimethylpentane	2300	290	ug/kg dry	2860	ND	80.6	70-130			10/03/2023	
2-Butanone (MEK)	2460	290	ug/kg dry	2860	ND	86.0	70-130			10/03/2023	
2-Methylnaphthalene	2230	290	ug/kg dry	2860	ND	77.9	70-130			10/03/2023	
2-Propanone (acetone)	2580	1100	ug/kg dry	2860	ND	90.1	70-130			10/03/2023	
4-Methyl-2-pentanone (MIBK)	2640	290	ug/kg dry	2860	ND	92.2	70-130			10/03/2023	
Acrylonitrile	2430	290	ug/kg dry	2860	ND	84.9	70-130			10/03/2023	
Benzene	2670	57	ug/kg dry	2860	ND	93.3	70-130			10/03/2023	
Bromochloromethane	2730	57	ug/kg dry	2860	ND	95.6	70-130			10/03/2023	
Bromodichloromethane	2710	57	ug/kg dry	2860	ND	94.6	70-130			10/03/2023	
Bromoform	2240	57	ug/kg dry	2860	ND	78.2	70-130			10/03/2023	
Bromomethane	2580	230	ug/kg dry	2860	ND	90.4	70-130			10/03/2023	
Carbon disulfide	2330	57	ug/kg dry	2860	ND	81.6	70-130			10/03/2023	
Carbon tetrachloride	2450	57	ug/kg dry	2860	ND	85.6	70-130			10/03/2023	
Chlorobenzene	2690	57	ug/kg dry	2860	ND	94.1	70-130			10/03/2023	
Chloroethane	2540	290	ug/kg dry	2860	ND	88.8	70-130			10/03/2023	
Chloroform	2910	57	ug/kg dry	2860	ND	102	70-130			10/03/2023	
Chloromethane	2650	290	ug/kg dry	2860	ND	92.8	70-130			10/03/2023	
cis-1,2-Dichloroethylene	2720	57	ug/kg dry	2860	ND	95.2	70-130			10/03/2023	
cis-1,3-Dichloropropylene	2440	57	ug/kg dry	2860	ND	85.4	70-130			10/03/2023	
Cyclohexane	2590	290	ug/kg dry	2860	ND	90.7	70-130			10/03/2023	
Dibromochloromethane	2340	57	ug/kg dry	2860	ND	81.7	70-130			10/03/2023	
Dibromomethane	2600	57	ug/kg dry	2860	ND	90.8	70-130			10/03/2023	
Dichlorodifluoromethane	2810	290	ug/kg dry	2860	ND	98.2	70-130			10/03/2023	
Diethyl ether	2570	230	ug/kg dry	2860	ND	90.0	70-130			10/03/2023	
Diisopropyl Ether	2930	290	ug/kg dry	2860	ND	103	70-130			10/03/2023	
Ethylbenzene	2680	57	ug/kg dry	2860	ND	93.6	70-130			10/03/2023	
Ethyltertiarybutylether	2660	290	ug/kg dry	2860	ND	93.1	70-130			10/03/2023	
Hexachloroethane	2550	290	ug/kg dry	2860	ND	89.3	70-130			10/03/2023	
Hexane	2390	57	ug/kg dry	2860	ND	83.7	70-130			10/03/2023	
Isopropylbenzene	2660	57	ug/kg dry	2860	ND	93.0	70-130			10/03/2023	
m & p - Xylene	5540	110	ug/kg dry	5721	ND	96.9	70-130			10/03/2023	
Methylcyclopentane	2760	57	ug/kg dry	2860	ND	96.5	70-130			10/03/2023	
Methylene chloride	2680	110	ug/kg dry	2860	ND	93.6	70-130			10/03/2023	
Methyltertiarybutylether	2670	57	ug/kg dry	2860	ND	93.2	70-130			10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J2026 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike (B3J2026-MS1)	**Source: 2309323-06**										
Naphthalene	2630	290	ug/kg dry	2860	ND	91.8	70-130			10/03/2023	
n-Butylbenzene	2510	57	ug/kg dry	2860	ND	87.7	70-130			10/03/2023	
n-Heptane	2480	57	ug/kg dry	2860	ND	86.7	70-130			10/03/2023	
n-Propylbenzene	2780	57	ug/kg dry	2860	ND	97.1	70-130			10/03/2023	
o-Xylene	2760	57	ug/kg dry	2860	ND	96.4	70-130			10/03/2023	
sec-Butylbenzene	2610	57	ug/kg dry	2860	ND	91.1	70-130			10/03/2023	
Styrene	2790	57	ug/kg dry	2860	ND	97.4	70-130			10/03/2023	
tert-Butylbenzene	2670	57	ug/kg dry	2860	ND	93.3	70-130			10/03/2023	
tertiary Butyl Alcohol	12400	2900	ug/kg dry	14300	ND	86.6	70-130			10/03/2023	
tertiaryAmylmethylether	2640	290	ug/kg dry	2860	ND	92.1	70-130			10/03/2023	
Tetrachloroethylene	2540	57	ug/kg dry	2860	ND	88.9	70-130			10/03/2023	
Tetrahydrofuran	2530	290	ug/kg dry	2860	ND	88.5	70-130			10/03/2023	
Toluene	2640	57	ug/kg dry	2860	ND	92.2	70-130			10/03/2023	
trans-1,2-Dichloroethylene	2670	57	ug/kg dry	2860	ND	93.4	70-130			10/03/2023	
trans-1,3-Dichloropropylene	2370	57	ug/kg dry	2860	ND	83.0	70-130			10/03/2023	
Trichloroethylene	2790	57	ug/kg dry	2860	ND	97.7	70-130			10/03/2023	
Trichlorofluoromethane	2830	57	ug/kg dry	2860	ND	99.1	70-130			10/03/2023	
Vinyl chloride	2840	57	ug/kg dry	2860	ND	99.4	70-130			10/03/2023	
Surrogate: Bromofluorobenzene	*53.9*		ug/kg dry	*52.80*		*102*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*61.7*		ug/kg dry	*52.80*		*117*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*58.0*		ug/kg dry	*52.80*		*110*	*55.4-196*			10/03/2023	
Matrix Spike Dup (B3J2026-MSD1)	**Source: 2309323-06**										
1,1,1,2-Tetrachloroethane	2660	57	ug/kg dry	2860	ND	93.1	70-130	8.41	30	10/03/2023	
1,1,1-Trichloroethane	2980	57	ug/kg dry	2860	ND	104	70-130	8.56	30	10/03/2023	
1,1,2,2-Tetrachloroethane	2580	57	ug/kg dry	2860	ND	90.1	70-130	10.5	30	10/03/2023	
1,1,2-Trichloroethane	2830	57	ug/kg dry	2860	ND	99.1	70-130	7.76	30	10/03/2023	
1,1,2-Trichlorotrifluoroethane	2710	57	ug/kg dry	2860	ND	94.6	70-130	5.00	30	10/03/2023	
1,1-Dichloroethane	2850	57	ug/kg dry	2860	ND	99.6	70-130	4.32	30	10/03/2023	
1,1-Dichloroethylene	2730	57	ug/kg dry	2860	ND	95.4	70-130	6.39	30	10/03/2023	
1,2,3-Trichlorobenzene	2860	290	ug/kg dry	2860	ND	100	70-130	15.0	30	10/03/2023	
1,2,3-Trichloropropane	2920	57	ug/kg dry	2860	ND	102	70-130	9.21	30	10/03/2023	
1,2,3-Trimethylbenzene	3030	57	ug/kg dry	2860	ND	106	70-130	13.1	30	10/03/2023	
1,2,4-Trichlorobenzene	2860	290	ug/kg dry	2860	ND	100	70-130	17.4	30	10/03/2023	
1,2,4-Trimethylbenzene	3030	57	ug/kg dry	2860	ND	106	70-130	11.4	30	10/03/2023	
1,2-Dibromo-3-chloropropane	2530	290	ug/kg dry	2860	ND	88.3	70-130	13.1	30	10/03/2023	
1,2-Dibromoethane	2890	57	ug/kg dry	2860	ND	101	70-130	3.64	30	10/03/2023	
1,2-Dichlorobenzene	2970	57	ug/kg dry	2860	ND	104	70-130	9.50	30	10/03/2023	
1,2-Dichloroethane	2950	57	ug/kg dry	2860	ND	103	70-130	5.48	30	10/03/2023	
1,2-Dichloropropane	2920	57	ug/kg dry	2860	ND	102	70-130	5.09	30	10/03/2023	
1,3,5-Trimethylbenzene	3070	57	ug/kg dry	2860	ND	107	70-130	12.6	30	10/03/2023	
1,3-Dichlorobenzene	3050	57	ug/kg dry	2860	ND	107	70-130	10.3	30	10/03/2023	
1,4-Dichlorobenzene	2940	57	ug/kg dry	2860	ND	103	70-130	10.7	30	10/03/2023	
2,2,4-Trimethylpentane	2580	290	ug/kg dry	2860	ND	90.1	70-130	11.2	30	10/03/2023	
2-Butanone (MEK)	2530	290	ug/kg dry	2860	ND	88.5	70-130	2.91	30	10/03/2023	
2-Methylnaphthalene	2660	290	ug/kg dry	2860	ND	93.1	70-130	17.8	30	10/03/2023	
2-Propanone (acetone)	2670	1100	ug/kg dry	2860	ND	93.2	70-130	3.36	30	10/03/2023	
4-Methyl-2-pentanone (MIBK)	2820	290	ug/kg dry	2860	ND	98.5	70-130	6.69	30	10/03/2023	
Acrylonitrile	2530	290	ug/kg dry	2860	ND	88.4	70-130	4.01	30	10/03/2023	
Benzene	2770	57	ug/kg dry	2860	ND	96.9	70-130	3.83	30	10/03/2023	
Bromochloromethane	2940	57	ug/kg dry	2860	ND	103	70-130	7.42	30	10/03/2023	
Bromodichloromethane	3000	57	ug/kg dry	2860	ND	105	70-130	10.2	30	10/03/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J2026 - Method: 5035				**Prepared: 09/29/2023**							
Matrix Spike Dup (B3J2026-MSD1)	**Source: 2309323-06**										
Bromoform	2390	57	ug/kg dry	2860	ND	83.5	70-130	6.49	30	10/03/2023	
Bromomethane	2730	230	ug/kg dry	2860	ND	95.3	70-130	5.34	30	10/03/2023	
Carbon disulfide	2470	57	ug/kg dry	2860	ND	86.5	70-130	5.84	30	10/03/2023	
Carbon tetrachloride	2600	57	ug/kg dry	2860	ND	90.9	70-130	6.00	30	10/03/2023	
Chlorobenzene	2860	57	ug/kg dry	2860	ND	100	70-130	6.21	30	10/03/2023	
Chloroethane	2630	290	ug/kg dry	2860	ND	91.9	70-130	3.46	30	10/03/2023	
Chloroform	3060	57	ug/kg dry	2860	ND	107	70-130	5.23	30	10/03/2023	
Chloromethane	2710	290	ug/kg dry	2860	ND	94.6	70-130	1.93	30	10/03/2023	
cis-1,2-Dichloroethylene	2870	57	ug/kg dry	2860	ND	100	70-130	5.27	30	10/03/2023	
cis-1,3-Dichloropropylene	2640	57	ug/kg dry	2860	ND	92.3	70-130	7.69	30	10/03/2023	
Cyclohexane	2770	290	ug/kg dry	2860	ND	96.8	70-130	6.58	30	10/03/2023	
Dibromochloromethane	2480	57	ug/kg dry	2860	ND	86.6	70-130	5.80	30	10/03/2023	
Dibromomethane	2790	57	ug/kg dry	2860	ND	97.5	70-130	7.06	30	10/03/2023	
Dichlorodifluoromethane	2760	290	ug/kg dry	2860	ND	96.6	70-130	1.64	30	10/03/2023	
Diethyl ether	2720	230	ug/kg dry	2860	ND	95.2	70-130	5.62	30	10/03/2023	
Diisopropyl Ether	2720	290	ug/kg dry	2860	ND	95.3	70-130	7.42	30	10/03/2023	
Ethylbenzene	2850	57	ug/kg dry	2860	ND	99.6	70-130	6.27	30	10/03/2023	
Ethyltertiarybutylether	2820	290	ug/kg dry	2860	ND	98.6	70-130	5.78	30	10/03/2023	
Hexachloroethane	2930	290	ug/kg dry	2860	ND	102	70-130	13.7	30	10/03/2023	
Hexane	2460	57	ug/kg dry	2860	ND	86.1	70-130	2.77	30	10/03/2023	
Isopropylbenzene	3010	57	ug/kg dry	2860	ND	105	70-130	12.4	30	10/03/2023	
m & p - Xylene	5900	110	ug/kg dry	5721	ND	103	70-130	6.22	30	10/03/2023	
Methylcyclopentane	2930	57	ug/kg dry	2860	ND	103	70-130	6.09	30	10/03/2023	
Methylene chloride	2710	110	ug/kg dry	2860	ND	94.8	70-130	1.35	30	10/03/2023	
Methyltertiarybutylether	2760	57	ug/kg dry	2860	ND	96.4	70-130	3.35	30	10/03/2023	
Naphthalene	3030	290	ug/kg dry	2860	ND	106	70-130	14.4	30	10/03/2023	
n-Butylbenzene	2850	57	ug/kg dry	2860	ND	99.6	70-130	12.7	30	10/03/2023	
n-Heptane	2730	57	ug/kg dry	2860	ND	95.4	70-130	9.58	30	10/03/2023	
n-Propylbenzene	3110	57	ug/kg dry	2860	ND	109	70-130	11.4	30	10/03/2023	
o-Xylene	2990	57	ug/kg dry	2860	ND	104	70-130	7.95	30	10/03/2023	
sec-Butylbenzene	2990	57	ug/kg dry	2860	ND	104	70-130	13.5	30	10/03/2023	
Styrene	2930	57	ug/kg dry	2860	ND	102	70-130	4.90	30	10/03/2023	
tert-Butylbenzene	3040	57	ug/kg dry	2860	ND	106	70-130	13.2	30	10/03/2023	
tertiary Butyl Alcohol	13700	2900	ug/kg dry	14300	ND	95.7	70-130	9.98	30	10/03/2023	
tertiaryAmylmethylether	2810	290	ug/kg dry	2860	ND	98.2	70-130	6.40	30	10/03/2023	
Tetrachloroethylene	2800	57	ug/kg dry	2860	ND	98.0	70-130	9.69	30	10/03/2023	
Tetrahydrofuran	2710	290	ug/kg dry	2860	ND	94.8	70-130	6.85	30	10/03/2023	
Toluene	2790	57	ug/kg dry	2860	ND	97.5	70-130	5.54	30	10/03/2023	
trans-1,2-Dichloroethylene	2860	57	ug/kg dry	2860	ND	100	70-130	6.96	30	10/03/2023	
trans-1,3-Dichloropropylene	2610	57	ug/kg dry	2860	ND	91.2	70-130	9.41	30	10/03/2023	
Trichloroethylene	2950	57	ug/kg dry	2860	ND	103	70-130	5.52	30	10/03/2023	
Trichlorofluoromethane	2930	57	ug/kg dry	2860	ND	102	70-130	3.35	30	10/03/2023	
Vinyl chloride	2840	57	ug/kg dry	2860	ND	99.5	70-130	0.0407	30	10/03/2023	
Surrogate: Bromofluorobenzene	*55.3*		ug/kg dry	*52.80*		*105*	*40.3-194*			10/03/2023	
Surrogate: Dibromofluoromethane	*61.2*		ug/kg dry	*52.80*		*116*	*52.1-217*			10/03/2023	
Surrogate: Toluene-d8	*57.2*		ug/kg dry	*52.80*		*108*	*55.4-196*			10/03/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0228 - Method: 3545 Soil SVOC				**Prepared: 10/02/2023**							
Blank (B3J0228-BLK1)											
2-Methylnaphthalene	ND	250	ug/kg wet							10/09/2023	
Acenaphthene	ND	100	ug/kg wet							10/09/2023	
Acenaphthylene	ND	100	ug/kg wet							10/09/2023	
Anthracene	ND	100	ug/kg wet							10/09/2023	
Benz[a]anthracene	ND	100	ug/kg wet							10/09/2023	
Benzo[a]pyrene	ND	200	ug/kg wet							10/09/2023	
Benzo[b]fluoranthene	ND	200	ug/kg wet							10/09/2023	
Benzo[g,h,i]perylene	ND	200	ug/kg wet							10/09/2023	
Benzo[k]fluoranthene	ND	200	ug/kg wet							10/09/2023	
Chrysene	ND	100	ug/kg wet							10/09/2023	
Dibenz[a,h]anthracene	ND	200	ug/kg wet							10/09/2023	
Fluoranthene	ND	100	ug/kg wet							10/09/2023	
Fluorene	ND	100	ug/kg wet							10/09/2023	
Indeno(1,2,3-c,d)pyrene	ND	200	ug/kg wet							10/09/2023	
Naphthalene	ND	100	ug/kg wet							10/09/2023	
Phenanthrene	ND	100	ug/kg wet							10/09/2023	
Pyrene	ND	100	ug/kg wet							10/09/2023	
Surrogate: 2-Fluorobiphenyl	*1670*		ug/kg wet	*2000*		*83.6*	*36-133*			10/09/2023	
Surrogate: Nitrobenzene-d5	*1640*		ug/kg wet	*2000*		*82.2*	*26-123*			10/09/2023	
Surrogate: p-Terphenyl-d14	*2160*		ug/kg wet	*2000*		*108*	*36-142*			10/09/2023	
LCS (B3J0228-BS1)											
2-Methylnaphthalene	1640	250	ug/kg wet	2000		82.2	38.6-94.3			10/09/2023	
Acenaphthene	1610	100	ug/kg wet	2000		80.6	43.6-101.5			10/09/2023	
Acenaphthylene	1790	100	ug/kg wet	2000		89.3	46.3-108.7			10/09/2023	
Anthracene	1800	100	ug/kg wet	2000		89.8	48.9-106.4			10/09/2023	
Benz[a]anthracene	1990	100	ug/kg wet	2000		99.6	53.1-107.9			10/09/2023	
Benzo[a]pyrene	1920	200	ug/kg wet	2000		95.9	47.5-113.5			10/09/2023	
Benzo[b]fluoranthene	1880	200	ug/kg wet	2000		94.1	49.8-112.3			10/09/2023	
Benzo[g,h,i]perylene	2130	200	ug/kg wet	2000		106	25.7-120.5			10/09/2023	
Benzo[k]fluoranthene	1880	200	ug/kg wet	2000		93.8	49.6-112.4			10/09/2023	
Chrysene	1900	100	ug/kg wet	2000		94.9	54-109.3			10/09/2023	
Dibenz[a,h]anthracene	1800	200	ug/kg wet	2000		89.9	32.7-127			10/09/2023	
Fluoranthene	1890	100	ug/kg wet	2000		94.7	48.8-112.4			10/09/2023	
Fluorene	1760	100	ug/kg wet	2000		88.1	45.9-103.5			10/09/2023	
Indeno(1,2,3-c,d)pyrene	1970	200	ug/kg wet	2000		98.3	36.6-126.1			10/09/2023	
Naphthalene	1580	100	ug/kg wet	2000		79.1	36.2-91.2			10/09/2023	
Phenanthrene	1750	100	ug/kg wet	2000		87.7	50.9-105.9			10/09/2023	
Pyrene	1790	100	ug/kg wet	2000		89.6	46.2-113.7			10/09/2023	
Surrogate: 2-Fluorobiphenyl	*1720*		ug/kg wet	*2000*		*85.8*	*36-133*			10/09/2023	
Surrogate: Nitrobenzene-d5	*1690*		ug/kg wet	*2000*		*84.5*	*26-123*			10/09/2023	
Surrogate: p-Terphenyl-d14	*2100*		ug/kg wet	*2000*		*105*	*36-142*			10/09/2023	
LCS Dup (B3J0228-BSD1)											
2-Methylnaphthalene	1640	250	ug/kg wet	2000		81.8	38.6-94.3	0.474	28.1	10/09/2023	
Acenaphthene	1600	100	ug/kg wet	2000		79.8	43.6-101.5	0.983	26.1	10/09/2023	
Acenaphthylene	1770	100	ug/kg wet	2000		88.6	46.3-108.7	0.820	27.3	10/09/2023	
Anthracene	1800	100	ug/kg wet	2000		90.2	48.9-106.4	0.426	24.2	10/09/2023	
Benz[a]anthracene	1990	100	ug/kg wet	2000		99.3	53.1-107.9	0.382	24.5	10/09/2023	
Benzo[a]pyrene	1920	200	ug/kg wet	2000		95.9	47.5-113.5	0.0509	25.9	10/09/2023	
Benzo[b]fluoranthene	1860	200	ug/kg wet	2000		93.0	49.8-112.3	1.11	26.1	10/09/2023	
Benzo[g,h,i]perylene	2070	200	ug/kg wet	2000		104	25.7-120.5	2.78	37.8	10/09/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0228 - Method: 3545 Soil SVOC				**Prepared: 10/02/2023**							
LCS Dup (B3J0228-BSD1)											
Benzo[k]fluoranthene	1880	200	ug/kg wet	2000		94.1	49.6-112.4	0.321	25.7	10/09/2023	
Chrysene	1910	100	ug/kg wet	2000		95.3	54-109.3	0.332	24.4	10/09/2023	
Dibenz[a,h]anthracene	1780	200	ug/kg wet	2000		89.1	32.7-127	0.948	40.3	10/09/2023	
Fluoranthene	1900	100	ug/kg wet	2000		94.9	48.8-112.4	0.271	27.9	10/09/2023	
Fluorene	1750	100	ug/kg wet	2000		87.4	45.9-103.5	0.840	25.2	10/09/2023	
Indeno(1,2,3-c,d)pyrene	1940	200	ug/kg wet	2000		97.2	36.6-126.1	1.14	34.3	10/09/2023	
Naphthalene	1560	100	ug/kg wet	2000		78.1	36.2-91.2	1.23	27.4	10/09/2023	
Phenanthrene	1760	100	ug/kg wet	2000		87.9	50.9-105.9	0.246	23.3	10/09/2023	
Pyrene	1790	100	ug/kg wet	2000		89.4	46.2-113.7	0.232	27.9	10/09/2023	
Surrogate: 2-Fluorobiphenyl	*1710*		ug/kg wet	*2000*		*85.3*	*36-133*			10/09/2023	
Surrogate: Nitrobenzene-d5	*1670*		ug/kg wet	*2000*		*83.5*	*26-123*			10/09/2023	
Surrogate: p-Terphenyl-d14	*2090*		ug/kg wet	*2000*		*104*	*36-142*			10/09/2023	
Matrix Spike (B3J0228-MS1)	**Source: 2309323-06**										
2-Methylnaphthalene	2020	270	ug/kg dry	2175	ND	93.0	31.4-113.4			10/09/2023	
Acenaphthene	1880	110	ug/kg dry	2175	ND	86.3	41.1-113.8			10/09/2023	
Acenaphthylene	1930	110	ug/kg dry	2175	ND	88.7	46.8-117.3			10/09/2023	
Anthracene	2050	110	ug/kg dry	2175	ND	94.4	33.6-131			10/09/2023	
Benz[a]anthracene	2130	110	ug/kg dry	2175	ND	97.8	32.3-137.5			10/09/2023	
Benzo[a]pyrene	2070	220	ug/kg dry	2175	ND	95.0	33.4-140			10/09/2023	
Benzo[b]fluoranthene	2020	220	ug/kg dry	2175	ND	92.8	22.2-153.3			10/09/2023	
Benzo[g,h,i]perylene	1840	220	ug/kg dry	2175	ND	84.4	11.3-135			10/09/2023	
Benzo[k]fluoranthene	2070	220	ug/kg dry	2175	ND	95.3	34.8-138.7			10/09/2023	
Chrysene	2080	110	ug/kg dry	2175	ND	95.5	34.2-135.8			10/09/2023	
Dibenz[a,h]anthracene	1740	220	ug/kg dry	2175	ND	80.0	15.1-151.4			10/09/2023	
Fluoranthene	2090	110	ug/kg dry	2175	ND	95.9	15.2-153			10/09/2023	
Fluorene	2100	110	ug/kg dry	2175	ND	96.5	40.2-118.3			10/09/2023	
Indeno(1,2,3-c,d)pyrene	1780	220	ug/kg dry	2175	ND	81.9	18.8-148.7			10/09/2023	
Naphthalene	1780	110	ug/kg dry	2175	ND	81.7	26.4-107.8			10/09/2023	
Phenanthrene	2010	110	ug/kg dry	2175	ND	92.2	23.1-144.2			10/09/2023	
Pyrene	2110	110	ug/kg dry	2175	ND	96.8	24.1-148.9			10/09/2023	
Surrogate: 2-Fluorobiphenyl	*2150*		ug/kg dry	*2175*		*99.0*	*36-133*			10/09/2023	
Surrogate: Nitrobenzene-d5	*1690*		ug/kg dry	*2175*		*77.7*	*26-123*			10/09/2023	
Surrogate: p-Terphenyl-d14	*2240*		ug/kg dry	*2175*		*103*	*36-142*			10/09/2023	
Matrix Spike Dup (B3J0228-MSD1)	**Source: 2309323-06**										
2-Methylnaphthalene	2140	270	ug/kg dry	2175	ND	98.3	31.4-113.4	5.56	35.6	10/09/2023	
Acenaphthene	2010	110	ug/kg dry	2175	ND	92.4	41.1-113.8	6.86	32.4	10/09/2023	
Acenaphthylene	2170	110	ug/kg dry	2175	ND	99.9	46.8-117.3	11.9	32.4	10/09/2023	
Anthracene	2140	110	ug/kg dry	2175	ND	98.3	33.6-131	4.06	49.4	10/09/2023	
Benz[a]anthracene	2190	110	ug/kg dry	2175	ND	101	32.3-137.5	3.01	47.3	10/09/2023	
Benzo[a]pyrene	2140	220	ug/kg dry	2175	ND	98.2	33.4-140	3.37	45	10/09/2023	
Benzo[b]fluoranthene	2140	220	ug/kg dry	2175	ND	98.4	22.2-153.3	5.93	45.7	10/09/2023	
Benzo[g,h,i]perylene	1870	220	ug/kg dry	2175	ND	85.8	11.3-135	1.62	45	10/09/2023	
Benzo[k]fluoranthene	2130	220	ug/kg dry	2175	ND	97.8	34.8-138.7	2.52	41	10/09/2023	
Chrysene	2150	110	ug/kg dry	2175	ND	99.0	34.2-135.8	3.55	45.5	10/09/2023	
Dibenz[a,h]anthracene	1750	220	ug/kg dry	2175	ND	80.3	15.1-151.4	0.292	64.9	10/09/2023	
Fluoranthene	2180	110	ug/kg dry	2175	ND	100	15.2-153	4.56	53.9	10/09/2023	
Fluorene	2180	110	ug/kg dry	2175	ND	100	40.2-118.3	3.62	36.8	10/09/2023	
Indeno(1,2,3-c,d)pyrene	1840	220	ug/kg dry	2175	ND	84.6	18.8-148.7	3.21	46.1	10/09/2023	
Naphthalene	1900	110	ug/kg dry	2175	ND	87.5	26.4-107.8	6.86	36.8	10/09/2023	
Phenanthrene	2130	110	ug/kg dry	2175	ND	97.7	23.1-144.2	5.80	52.6	10/09/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0228 - Method: 3545 Soil SVOC				**Prepared: 10/02/2023**							
Matrix Spike Dup (B3J0228-MSD1)	**Source: 2309323-06**										
Pyrene	2140	110	ug/kg dry	2175	ND	98.2	24.1-148.9	1.41	53.6	10/09/2023	
Surrogate: 2-Fluorobiphenyl	*2320*		ug/kg dry	*2175*		*107*	*36-133*			10/09/2023	
Surrogate: Nitrobenzene-d5	*1800*		ug/kg dry	*2175*		*82.8*	*26-123*			10/09/2023	
Surrogate: p-Terphenyl-d14	*2240*		ug/kg dry	*2175*		*103*	*36-142*			10/09/2023	
Batch B3J0337 - Method: 3545 Soil SVOC				**Prepared: 10/03/2023**							
Blank (B3J0337-BLK1)											
2-Methylnaphthalene	ND	250	ug/kg wet							10/10/2023	
Acenaphthene	ND	100	ug/kg wet							10/10/2023	
Acenaphthylene	ND	100	ug/kg wet							10/10/2023	
Anthracene	ND	100	ug/kg wet							10/10/2023	
Benz[a]anthracene	ND	100	ug/kg wet							10/10/2023	
Benzo[a]pyrene	ND	200	ug/kg wet							10/10/2023	
Benzo[b]fluoranthene	ND	200	ug/kg wet							10/10/2023	
Benzo[g,h,i]perylene	ND	200	ug/kg wet							10/10/2023	
Benzo[k]fluoranthene	ND	200	ug/kg wet							10/10/2023	
Chrysene	ND	100	ug/kg wet							10/10/2023	
Dibenz[a,h]anthracene	ND	200	ug/kg wet							10/10/2023	
Fluoranthene	ND	100	ug/kg wet							10/10/2023	
Fluorene	ND	100	ug/kg wet							10/10/2023	
Indeno(1,2,3-c,d)pyrene	ND	200	ug/kg wet							10/10/2023	
Naphthalene	ND	100	ug/kg wet							10/10/2023	
Phenanthrene	ND	100	ug/kg wet							10/10/2023	
Pyrene	ND	100	ug/kg wet							10/10/2023	
Surrogate: 2-Fluorobiphenyl	*1630*		ug/kg wet	*2000*		*81.7*	*36-133*			10/10/2023	
Surrogate: Nitrobenzene-d5	*1640*		ug/kg wet	*2000*		*81.8*	*26-123*			10/10/2023	
Surrogate: p-Terphenyl-d14	*2170*		ug/kg wet	*2000*		*109*	*36-142*			10/10/2023	
LCS (B3J0337-BS1)											
2-Methylnaphthalene	1660	250	ug/kg wet	2000		82.8	38.6-94.3			10/10/2023	
Acenaphthene	1620	100	ug/kg wet	2000		81.0	43.6-101.5			10/10/2023	
Acenaphthylene	1790	100	ug/kg wet	2000		89.4	46.3-108.7			10/10/2023	
Anthracene	1800	100	ug/kg wet	2000		90.2	48.9-106.4			10/10/2023	
Benz[a]anthracene	2020	100	ug/kg wet	2000		101	53.1-107.9			10/10/2023	
Benzo[a]pyrene	1970	200	ug/kg wet	2000		98.5	47.5-113.5			10/10/2023	
Benzo[b]fluoranthene	1900	200	ug/kg wet	2000		95.0	49.8-112.3			10/10/2023	
Benzo[g,h,i]perylene	2120	200	ug/kg wet	2000		106	25.7-120.5			10/10/2023	
Benzo[k]fluoranthene	1960	200	ug/kg wet	2000		98.1	49.6-112.4			10/10/2023	
Chrysene	1940	100	ug/kg wet	2000		96.8	54-109.3			10/10/2023	
Dibenz[a,h]anthracene	1810	200	ug/kg wet	2000		90.7	32.7-127			10/10/2023	
Fluoranthene	1910	100	ug/kg wet	2000		95.7	48.8-112.4			10/10/2023	
Fluorene	1790	100	ug/kg wet	2000		89.3	45.9-103.5			10/10/2023	
Indeno(1,2,3-c,d)pyrene	1980	200	ug/kg wet	2000		98.9	36.6-126.1			10/10/2023	
Naphthalene	1580	100	ug/kg wet	2000		78.8	36.2-91.2			10/10/2023	
Phenanthrene	1780	100	ug/kg wet	2000		89.1	50.9-105.9			10/10/2023	
Pyrene	1860	100	ug/kg wet	2000		93.1	46.2-113.7			10/10/2023	
Surrogate: 2-Fluorobiphenyl	*1730*		ug/kg wet	*2000*		*86.7*	*36-133*			10/10/2023	
Surrogate: Nitrobenzene-d5	*1690*		ug/kg wet	*2000*		*84.4*	*26-123*			10/10/2023	
Surrogate: p-Terphenyl-d14	*2160*		ug/kg wet	*2000*		*108*	*36-142*			10/10/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0337 - Method: 3545 Soil SVOC				**Prepared: 10/03/2023**							
LCS Dup (B3J0337-BSD1)											
2-Methylnaphthalene	1650	250	ug/kg wet	2000		82.7	38.6-94.3	0.150	28.1	10/10/2023	
Acenaphthene	1640	100	ug/kg wet	2000		81.8	43.6-101.5	0.914	26.1	10/10/2023	
Acenaphthylene	1800	100	ug/kg wet	2000		89.9	46.3-108.7	0.615	27.3	10/10/2023	
Anthracene	1790	100	ug/kg wet	2000		89.7	48.9-106.4	0.553	24.2	10/10/2023	
Benz[a]anthracene	2040	100	ug/kg wet	2000		102	53.1-107.9	0.878	24.5	10/10/2023	
Benzo[a]pyrene	1970	200	ug/kg wet	2000		98.7	47.5-113.5	0.208	25.9	10/10/2023	
Benzo[b]fluoranthene	1900	200	ug/kg wet	2000		94.8	49.8-112.3	0.125	26.1	10/10/2023	
Benzo[g,h,i]perylene	2100	200	ug/kg wet	2000		105	25.7-120.5	0.928	37.8	10/10/2023	
Benzo[k]fluoranthene	1960	200	ug/kg wet	2000		98.0	49.6-112.4	0.138	25.7	10/10/2023	
Chrysene	1940	100	ug/kg wet	2000		96.8	54-109.3	0.0397	24.4	10/10/2023	
Dibenz[a,h]anthracene	1810	200	ug/kg wet	2000		90.4	32.7-127	0.333	40.3	10/10/2023	
Fluoranthene	1910	100	ug/kg wet	2000		95.5	48.8-112.4	0.231	27.9	10/10/2023	
Fluorene	1800	100	ug/kg wet	2000		90.0	45.9-103.5	0.710	25.2	10/10/2023	
Indeno(1,2,3-c,d)pyrene	1970	200	ug/kg wet	2000		98.4	36.6-126.1	0.537	34.3	10/10/2023	
Naphthalene	1580	100	ug/kg wet	2000		78.9	36.2-91.2	0.0741	27.4	10/10/2023	
Phenanthrene	1750	100	ug/kg wet	2000		87.7	50.9-105.9	1.57	23.3	10/10/2023	
Pyrene	1860	100	ug/kg wet	2000		93.0	46.2-113.7	0.0821	27.9	10/10/2023	
Surrogate: 2-Fluorobiphenyl	*1750*		ug/kg wet	*2000*		*87.4*	*36-133*			10/10/2023	
Surrogate: Nitrobenzene-d5	*1700*		ug/kg wet	*2000*		*85.2*	*26-123*			10/10/2023	
Surrogate: p-Terphenyl-d14	*2200*		ug/kg wet	*2000*		*110*	*36-142*			10/10/2023	
Matrix Spike (B3J0337-MS1)	**Source: 2309284-01**										
2-Methylnaphthalene	1640	260	ug/kg dry	2101	ND	77.9	31.4-113.4			10/10/2023	
Acenaphthene	1620	110	ug/kg dry	2101	ND	77.0	41.1-113.8			10/10/2023	
Acenaphthylene	1790	110	ug/kg dry	2101	ND	85.1	46.8-117.3			10/10/2023	
Anthracene	1790	110	ug/kg dry	2101	ND	85.3	33.6-131			10/10/2023	
Benz[a]anthracene	2010	110	ug/kg dry	2101	ND	95.4	32.3-137.5			10/10/2023	
Benzo[a]pyrene	1950	210	ug/kg dry	2101	ND	92.9	33.4-140			10/10/2023	
Benzo[b]fluoranthene	1900	210	ug/kg dry	2101	ND	90.3	22.2-153.3			10/10/2023	
Benzo[g,h,i]perylene	2080	210	ug/kg dry	2101	ND	98.9	11.3-135			10/10/2023	
Benzo[k]fluoranthene	1930	210	ug/kg dry	2101	ND	91.9	34.8-138.7			10/10/2023	
Chrysene	1920	110	ug/kg dry	2101	ND	91.2	34.2-135.8			10/10/2023	
Dibenz[a,h]anthracene	1800	210	ug/kg dry	2101	ND	85.5	15.1-151.4			10/10/2023	
Fluoranthene	1900	110	ug/kg dry	2101	ND	90.6	15.2-153			10/10/2023	
Fluorene	1780	110	ug/kg dry	2101	ND	84.6	40.2-118.3			10/10/2023	
Indeno(1,2,3-c,d)pyrene	1950	210	ug/kg dry	2101	ND	92.9	18.8-148.7			10/10/2023	
Naphthalene	1570	110	ug/kg dry	2101	ND	74.5	26.4-107.8			10/10/2023	
Phenanthrene	1770	110	ug/kg dry	2101	ND	84.1	23.1-144.2			10/10/2023	
Pyrene	1850	110	ug/kg dry	2101	ND	88.1	24.1-148.9			10/10/2023	
Surrogate: 2-Fluorobiphenyl	*1730*		ug/kg dry	*2101*		*82.4*	*36-133*			10/10/2023	
Surrogate: Nitrobenzene-d5	*1680*		ug/kg dry	*2101*		*79.9*	*26-123*			10/10/2023	
Surrogate: p-Terphenyl-d14	*2180*		ug/kg dry	*2101*		*104*	*36-142*			10/10/2023	
Matrix Spike Dup (B3J0337-MSD1)	**Source: 2309284-01**										
2-Methylnaphthalene	1720	260	ug/kg dry	2101	ND	82.0	31.4-113.4	5.14	35.6	10/10/2023	
Acenaphthene	1700	110	ug/kg dry	2101	ND	80.8	41.1-113.8	4.70	32.4	10/10/2023	
Acenaphthylene	1860	110	ug/kg dry	2101	ND	88.4	46.8-117.3	3.78	32.4	10/10/2023	
Anthracene	1860	110	ug/kg dry	2101	ND	88.7	33.6-131	3.89	49.4	10/10/2023	
Benz[a]anthracene	2080	110	ug/kg dry	2101	ND	99.1	32.3-137.5	3.72	47.3	10/10/2023	
Benzo[a]pyrene	2040	210	ug/kg dry	2101	ND	97.0	33.4-140	4.40	45	10/10/2023	
Benzo[b]fluoranthene	1960	210	ug/kg dry	2101	ND	93.3	22.2-153.3	3.32	45.7	10/10/2023	
Benzo[g,h,i]perylene	2110	210	ug/kg dry	2101	ND	100	11.3-135	1.43	45	10/10/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0337 - Method: 3545 Soil SVOC				**Prepared: 10/03/2023**							
Matrix Spike Dup (B3J0337-MSD1)	**Source: 2309284-01**										
Benzo[k]fluoranthene	1990	210	ug/kg dry	2101	ND	94.7	34.8-138.7	2.96	41	10/10/2023	
Chrysene	2020	110	ug/kg dry	2101	ND	96.2	34.2-135.8	5.29	45.5	10/10/2023	
Dibenz[a,h]anthracene	1850	210	ug/kg dry	2101	ND	88.0	15.1-151.4	2.87	64.9	10/10/2023	
Fluoranthene	1990	110	ug/kg dry	2101	ND	94.8	15.2-153	4.51	53.9	10/10/2023	
Fluorene	1860	110	ug/kg dry	2101	ND	88.3	40.2-118.3	4.27	36.8	10/10/2023	
Indeno(1,2,3-c,d)pyrene	2010	210	ug/kg dry	2101	ND	95.6	18.8-148.7	2.79	46.1	10/10/2023	
Naphthalene	1640	110	ug/kg dry	2101	ND	78.1	26.4-107.8	4.60	36.8	10/10/2023	
Phenanthrene	1840	110	ug/kg dry	2101	ND	87.6	23.1-144.2	4.09	52.6	10/10/2023	
Pyrene	1920	110	ug/kg dry	2101	ND	91.5	24.1-148.9	3.77	53.6	10/10/2023	
Surrogate: 2-Fluorobiphenyl	*1830*		ug/kg dry	*2101*		*87.0*	*36-133*			10/10/2023	
Surrogate: Nitrobenzene-d5	*1780*		ug/kg dry	*2101*		*84.9*	*26-123*			10/10/2023	
Surrogate: p-Terphenyl-d14	*2260*		ug/kg dry	*2101*		*107*	*36-142*			10/10/2023	

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Inorganics-General Chemistry - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2924 - Method: Solids				**Prepared: 09/29/2023**							
Duplicate (B3I2924-DUP1)	**Source: 2309316-05**										
% Total Solids	45.8	0.1	%		43.0			6.17	20	09/29/2023	
Duplicate (B3I2924-DUP2)	**Source: 2309316-06**										
% Total Solids	27.7	0.1	%		29.8			7.28	20	09/29/2023	
Batch B3I2926 - Method: Solids				**Prepared: 09/29/2023**							
Duplicate (B3I2926-DUP1)	**Source: 2309323-07**										
% Total Solids	91.2	0.1	%		89.4			2.03	20	09/29/2023	
Duplicate (B3I2926-DUP2)	**Source: 2309323-08**										
% Total Solids	84.9	0.1	%		85.4			0.580	20	09/29/2023	

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MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Inorganics-Metals - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0342 - Method: 3050				**Prepared: 10/03/2023**							
Blank (B3J0342-BLK1)											
Arsenic	ND	0.5	mg/kg dry							10/16/2023	
Barium	ND	1.0	mg/kg dry							10/16/2023	
Cadmium	ND	0.2	mg/kg dry							10/16/2023	
Chromium	ND	2.0	mg/kg dry							10/16/2023	
Copper	ND	1.0	mg/kg dry							10/16/2023	
Lead	ND	1.0	mg/kg dry							10/16/2023	
Selenium	ND	0.2	mg/kg dry							10/16/2023	
Silver	ND	0.1	mg/kg dry							10/16/2023	
Zinc	ND	1.0	mg/kg dry							10/16/2023	
LCS (B3J0342-BS1)											
Arsenic	91.8	5.0	mg/kg dry	100.0		91.8	85-115			10/16/2023	
Barium	99.2	10	mg/kg dry	100.0		99.2	85-115			10/16/2023	
Cadmium	9.8	2.0	mg/kg dry	10.00		98.5	85-115			10/16/2023	
Chromium	99.0	20	mg/kg dry	100.0		99.0	85-115			10/16/2023	
Copper	98.5	10	mg/kg dry	100.0		98.5	85-115			10/16/2023	
Lead	98.8	10	mg/kg dry	100.0		98.8	85-115			10/16/2023	
Selenium	96.4	2.0	mg/kg dry	100.0		96.4	85-115			10/16/2023	
Silver	10.0	1.0	mg/kg dry	10.00		99.7	85-115			10/16/2023	
Zinc	95.7	10	mg/kg dry	100.0		95.7	85-115			10/16/2023	
Matrix Spike (B3J0342-MS1)	**Source: 2309323-06**										
Arsenic	97.8	5.0	mg/kg dry	100.0	4.6	93.2	70-130			10/16/2023	
Barium	117	10	mg/kg dry	100.0	18.7	98.6	70-130			10/16/2023	
Cadmium	9.8	2.0	mg/kg dry	10.00	ND	97.9	70-130			10/16/2023	
Chromium	110	20	mg/kg dry	100.0	9.1	101	70-130			10/16/2023	
Copper	106	10	mg/kg dry	100.0	7.2	98.8	70-130			10/16/2023	
Lead	100	10	mg/kg dry	100.0	3.6	96.7	70-130			10/16/2023	
Selenium	99.6	2.0	mg/kg dry	100.0	0.8	98.9	70-130			10/16/2023	
Silver	9.8	1.0	mg/kg dry	10.00	ND	97.8	70-130			10/16/2023	
Zinc	123	10	mg/kg dry	100.0	22.3	101	70-130			10/16/2023	
Matrix Spike Dup (B3J0342-MSD1)	**Source: 2309323-06**										
Arsenic	89.3	5.0	mg/kg dry	100.0	4.6	84.7	70-130	9.04	20	10/16/2023	
Barium	109	10	mg/kg dry	100.0	18.7	89.9	70-130	7.71	20	10/16/2023	
Cadmium	9.5	2.0	mg/kg dry	10.00	ND	95.4	70-130	2.52	20	10/16/2023	
Chromium	98.1	20	mg/kg dry	100.0	9.1	89.0	70-130	11.5	20	10/16/2023	
Copper	96.0	10	mg/kg dry	100.0	7.2	88.8	70-130	9.88	20	10/16/2023	
Lead	92.6	10	mg/kg dry	100.0	3.6	89.1	70-130	7.90	20	10/16/2023	
Selenium	91.6	2.0	mg/kg dry	100.0	0.8	90.9	70-130	8.41	20	10/16/2023	
Silver	9.6	1.0	mg/kg dry	10.00	ND	95.6	70-130	2.20	20	10/16/2023	
Zinc	110	10	mg/kg dry	100.0	22.3	88.0	70-130	11.0	20	10/16/2023	
Batch B3J0925 - Method: 245.5				**Prepared: 10/09/2023**							
Blank (B3J0925-BLK1)											
Mercury	ND	0.05	mg/kg wet							10/11/2023	
Blank (B3J0925-BLK2)											
Mercury	ND	0.05	mg/kg wet							10/11/2023	
LCS (B3J0925-BS1)											
Mercury	0.4	0.05	mg/kg wet	0.4000		98.5	85-115			10/11/2023	

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FAX: (517) 335-9600

Inorganics-Metals - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0925 - Method: 245.5				**Prepared: 10/09/2023**							
LCS (B3J0925-BS2)											
Mercury	0.4	0.05	mg/kg wet	0.4000		101	85-115			10/11/2023	
Matrix Spike (B3J0925-MS1)	**Source: 2309321-02**										
Mercury	0.4	0.05	mg/kg dry	0.4115	0.002	99.9	70-130			10/11/2023	
Matrix Spike (B3J0925-MS2)	**Source: 2309323-06**										
Mercury	0.4	0.05	mg/kg dry	0.4351	0.006	100	70-130			10/11/2023	
Matrix Spike (B3J0925-MS3)	**Source: 2309377-08**										
Mercury	0.5	0.06	mg/kg dry	0.4578	0.004	101	70-130			10/11/2023	
Matrix Spike (B3J0925-MS4)	**Source: 2309323-03**										
Mercury	0.5	0.06	mg/kg dry	0.4487	0.02	100	70-130			10/11/2023	
Matrix Spike Dup (B3J0925-MSD1)	**Source: 2309321-02**										
Mercury	0.4	0.05	mg/kg dry	0.4115	0.002	101	70-130	0.927	20	10/11/2023	
Matrix Spike Dup (B3J0925-MSD2)	**Source: 2309323-06**										
Mercury	0.4	0.05	mg/kg dry	0.4351	0.006	101	70-130	0.804	20	10/11/2023	
Matrix Spike Dup (B3J0925-MSD3)	**Source: 2309377-08**										
Mercury	0.5	0.06	mg/kg dry	0.4578	0.004	102	70-130	1.29	20	10/11/2023	
Reference (B3J0925-SRM1)											
Mercury	0.4	0.05	mg/kg wet	0.4000		94.9	0-200			10/11/2023	

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

Analysis Request Sheet

32186 2

Lab Work Order Number	Project Name	Matrix
2309323	Imlay City DPW / 406 East 3rd Street, Imlay City, MI	SOIL/SEDIMENT

Location ID:	Program: 201	CC Email 1: carri@aktpeerless.com	Project TAT Days:	Sample Collector: Kammie Niswander
Dept-Division-District: RRD - Lansing Central	Activity:	CC Email 2: niswanderk@aktpeerless.com	Project Due Date:	Sample Collector Phone: 989-844-6442
State Project Manager: Janet Michaluk	Funding Source:	CC Email 3:	Accept Analysis hold time codes: ROI S.C	Contract Firm: AKT Peerless
State Project Manager Email: MichalukJ@michigan.gov	Location Code: C033	Overflow Lab Choice 1:		Contract Firm Primary Contact: Jeff Carr
State Project Manager Phone: 517-643-0314	SUD Location Code:	Overflow Lab Choice 2:		Primary Contact Phone: 989-754-9896

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01	AKT-1s	9/20/2023	10:30am	2	PID:0
2	02	AKT-1d	9/20/2023	10:35am	2	PID:0
3	03	AKT-2s	9/20/2023	12:25pm	2	PID:0
4	04	AKT-2d	9/20/2023	12:30pm	2	PID:0
5	05	AKT-3s	9/21/2023	9:40am	2	PID:0
6	06	AKT-3d	9/21/2023	9:45am	2	PID:0 MS/MSD
7	07	AKT-4s	9/21/2023	10:35am	2	PID:0
8	08	AKT-4d	9/21/2023	10:40am	2	PID:0
9	09	AKT-5	9/21/2023	2:15pm	2	PID:0
10	10	AKT-6	9/21/2023	1:25pm	2	PID:999+

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic

Volatiles - Full List	1 2 3 4 5 6 7 8 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10
GRO	1 2 3 4 5 6 7 8 9 10
1,4 Dioxane	1 2 3 4 5 6 7 8 9 10

OS - Pesticides, PCBs

Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10
Pesticides only	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10

BNA - Base Neutral Acids

BNAs	1 2 3 4 5 6 7 8 9 10
PNAs only	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10

Organic Specialty Requests

Library search - Volatiles	1 2 3 4 5 6 7 8 9 10
Library search - SemiVols	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10
DRO / ORO	1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

OpMemo2 - Total (Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	1 2 3 4 5 6 7 8 9 10
Michigan10 - Total (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	1 2 3 4 5 6 7 8 9 10

MS - TOTAL METALS

Silver - Ag	1 2 3 4 5 6 7 8 9 10
Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Arsenic - As	1 2 3 4 5 6 7 8 9 10
Barium - Ba	1 2 3 4 5 6 7 8 9 10
Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Copper - Cu	1 2 3 4 5 6 7 8 9 10
Iron - Fe	1 2 3 4 5 6 7 8 9 10
Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Lithium - Li	1 2 3 4 5 6 7 8 9 10
Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Lead - Pb	1 2 3 4 5 6 7 8 9 10
Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Selenium - Se	1 2 3 4 5 6 7 8 9 10
Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Uranium - U	1 2 3 4 5 6 7 8 9 10
Vanadium - V	1 2 3 4 5 6 7 8 9 10
Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Potassium - K	1 2 3 4 5 6 7 8 9 10
Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Sodium - Na	1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GS - General Chemistry	
Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
Available Cyanide - CN	1 2 3 4 5 6 7 8 9 10

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	Kammie Niswander AKT	AKT Storage	9/20/23 7:00pm
Signature:	Kammie Niswander	Kammie Niswander	9/21/23 4:00pm
Print Name & Org.	AKT Storage	Melissa Smith	9/26/23 1330
Signature:			
Print Name & Org.			
Signature:			

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

Analysis Request Sheet

EGLE

Lab Work Order Number	Project Name	Matrix
2309328	Imlay City DPW / 406 East 3rd Street, Imlay City, MI	SOIL/SEDIMENT

Location ID	Program: 201	CC Email 1: carrj@aktpeerless.com	Project TAT Days	Sample Collector: Kammie Niswander
Dept-Division-District: RRD - Lansing Central	Activity	CC Email 2: niswanderk@aktpeerless.com	Project Due Date	Sample Collector Phone: 989-844-6442
State Project Manager: Janet Michaluk	Funding Source	CC Email 3		Contract Firm: AKT Peerless
State Project Manager Email: MichalukJ@michigan.gov	Location Code: C033	Overflow Lab Choice 1	Accept Analysis hold time codes	Contract Firm Primary Contact: Jeff Carr
State Project Manager Phone: 517-643-0314	SUD Location Code	Overflow Lab Choice 2		Primary Contact Phone: 989-754-9896

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	11	AKT-7	9/21/2023	12:30pm	2	PID:0
2	12	AKT-8	9/20/2023	4:45pm	2	PID:0
3	13	AKT-9	9/20/2023	1:50pm	2	PID:0
4	14	AKT-10	9/20/2023	3:35pm	2	PID:0
5	15	AKT-Dup Soil	9/20/2023		2	
6	16	MS – AKT 3cl	9/21/2023		2	
7	17	MSD – AKT 3cl	9/21/2023		2	
8	18	Methanol Trip Blank	9/20/2023		1	
9						
10						

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic
- Volatiles - Full List: 1 2 3 4 5 6 7 8 9 10 (1 2 3 4 5 6 7 8 circled)
- BTEX/MTBE/TMB only: 1 2 3 4 5 6 7 8 9 10
- Chlorinated only: 1 2 3 4 5 6 7 8 9 10
- GRO: 1 2 3 4 5 6 7 8 9 10
- 1,4 Dioxane: 1 2 3 4 5 6 7 8 9 10

OS - Pesticides, PCBs
- Pesticides & PCBs: 1 2 3 4 5 6 7 8 9 10
- Pesticides only: 1 2 3 4 5 6 7 8 9 10
- PCBs only: 1 2 3 4 5 6 7 8 9 10
- Toxaphene: 1 2 3 4 5 6 7 8 9 10

BNA - Base Neutral Acids
- BNAs: 1 2 3 4 5 6 7 8 9 10
- PNAs only: 1 2 3 4 5 6 7 8 9 10 (1 2 3 4 5 6 7 circled)
- BNs only: 1 2 3 4 5 6 7 8 9 10

Organic Specialty Requests
- Library search - Volatiles: 1 2 3 4 5 6 7 8 9 10
- Library search - SemiVols: 1 2 3 4 5 6 7 8 9 10
- Finger Print: 1 2 3 4 5 6 7 8 9 10
- DRO / ORO: 1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

- OpMemo2 - Total: 1 2 3 4 5 6 7 8 9 10 (Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)
- Michigan10 - Total: 1 2 3 4 5 6 7 8 9 10 (1 2 6 7 circled) (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)

MS - TOTAL METALS

- Silver - Ag: 1 2 3 4 5 6 7 8 9 10
- Aluminum - Al: 1 2 3 4 5 6 7 8 9 10
- Arsenic - As: 1 2 3 4 5 6 7 8 9 10
- Barium - Ba: 1 2 3 4 5 6 7 8 9 10
- Beryllium - Be: 1 2 3 4 5 6 7 8 9 10
- Cadmium - Cd: 1 (2 3 4 5) 6 7 8 9 10
- Cobalt - Co: 1 2 3 4 5 6 7 8 9 10
- Chromium - Cr: 1 (2 3 4 5) 6 7 8 9 10
- Copper - Cu: 1 2 3 4 5 6 7 8 9 10
- Iron - Fe: 1 2 3 4 5 6 7 8 9 10
- Mercury - Hg: 1 2 3 4 5 6 7 8 9 10
- Lithium - Li: 1 2 3 4 5 6 7 8 9 10
- Manganese - Mn: 1 2 3 4 5 6 7 8 9 10
- Molybdenum - Mo: 1 2 3 4 5 6 7 8 9 10
- Nickel - Ni: 1 2 3 4 5 6 7 8 9 10
- Lead - Pb: 1 (2 3 4 5) 6 7 8 9 10
- Antimony - Sb: 1 2 3 4 5 6 7 8 9 10
- Selenium - Se: 1 2 3 4 5 6 7 8 9 10
- Strontium - Sr: 1 2 3 4 5 6 7 8 9 10
- Titanium - Ti: 1 2 3 4 5 6 7 8 9 10
- Thallium - Tl: 1 2 3 4 5 6 7 8 9 10
- Uranium - U: 1 2 3 4 5 6 7 8 9 10
- Vanadium - V: 1 2 3 4 5 6 7 8 9 10
- Zinc - Zn: 1 2 3 4 5 6 7 8 9 10
- Calcium - Ca: 1 2 3 4 5 6 7 8 9 10
- Potassium - K: 1 2 3 4 5 6 7 8 9 10
- Magnesium - Mg: 1 2 3 4 5 6 7 8 9 10
- Sodium - Na: 1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GS - General Chemistry
- Total Cyanide - CN: 1 2 3 4 5 6 7 8 9 10
- Available Cyanide - CN: 1 2 3 4 5 6 7 8 9 10

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	Kammie Niswander AKT	AKT Storage	9/20/23 7:00pm
Signature:			9/21/23 4:00pm
Print Name & Org.	AKT Storage	Melisse Smith	
Signature:			9/26/23 1330
Print Name & Org.			
Signature:			

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

24 October 2023

Work Order: 2309322

Price: $3,589.00

Janet Michaluk
EGLE-RRD-LANSING
525 W. Allegan Street
Lansing, MI 48909

RE: IMLAY CITY DPW

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

MICHIGAN DEPARTMENT OF
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EGLE-RRD-LANSING
525 W. Allegan Street
Lansing MI, 48909

Project: IMLAY CITY DPW
Site Code: 44000116
Project Manager: Janet Michaluk

Reported:
10/24/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
AKT-1/TMW	2309322-01	Water	09/20/2023	09/26/2023	
AKT-2/TMW	2309322-02	Water	09/20/2023	09/26/2023	
AKT-4/TMW	2309322-03	Water	09/21/2023	09/26/2023	
AKT-7/TMW	2309322-04	Water	09/21/2023	09/26/2023	
W-1	2309322-05	Water	09/20/2023	09/26/2023	
AKT-Dup W	2309322-06	Water	09/20/2023	09/26/2023	
MS-4/TMW	2309322-07	Water	09/21/2023	09/26/2023	
MSD-4/TMW	2309322-08	Water	09/21/2023	09/26/2023	
Trip Blank	2309322-09	Water	09/20/2023	09/26/2023	
Equipment Blank	2309322-10	Water	09/20/2023	09/26/2023	

Notes and Definitions

Y17	Probable petroleum product(s) present.
I	Dilution required due to matrix interference; reporting limit (RL) raised.
A04	Result is estimated due to high matrix spike recovery.
100	The concentration reported for this compound is possibly elevated due to the co-elution of one or more non-target compounds.
ND	Indicates the analyte was not detected at or above the method reporting limit (RL)
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **9/26/2023 1:22:00PM** for client **EGLE-RRD-LANSING** as a part of project **IMLAY CITY DPW**.

Samples were logged and designated as Work Order # **2309322** on **9/26/2023 1:53:00PM**.

This Report was created **10/24/2023 9:17:18AM**.

Additional Notes/Narrative (if applicable):

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-1/TMW

Lab ID: 2309322-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-1/TMW

Lab ID: 2309322-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*102 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*103 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*100 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

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Client ID: AKT-1/TMW

Lab ID: 2309322-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	Naphthalene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*59.4 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*61.2 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*92.8 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	Arsenic	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-39-3	**Barium**	**110**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	Cadmium	ND	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	Chromium	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-50-8	Copper	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7439-92-1	Lead	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	Selenium	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-22-4	Silver	ND	0.4	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-66-6	Zinc	ND	10	ug/L	2	10/16/23	B3J0321	200.8	ARH	I

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Client ID: AKT-2/TMW

Lab ID: 2309322-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

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Lab ID: 2309322-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*98.8 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*101 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*99.1 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-2/TMW

Lab ID: 2309322-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	5.3	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	Naphthalene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*52.2 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*53.8 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*76.8 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	**Arsenic**	**12**	4.0	ug/L	4	10/17/23	B3J0321	200.8	ARH	
7440-39-3	**Barium**	**330**	20	ug/L	4	10/17/23	B3J0321	200.8	ARH	
7440-43-9	Cadmium	ND	0.8	ug/L	4	10/17/23	B3J0321	200.8	ARH	I
7440-47-3	**Chromium**	**12**	4.0	ug/L	4	10/17/23	B3J0321	200.8	ARH	
7440-50-8	**Copper**	**16**	4.0	ug/L	4	10/17/23	B3J0321	200.8	ARH	
7439-92-1	**Lead**	**7.1**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	Selenium	ND	4.0	ug/L	4	10/16/23	B3J0321	200.8	ARH	I
7440-22-4	Silver	ND	0.8	ug/L	4	10/16/23	B3J0321	200.8	ARH	I
7440-66-6	**Zinc**	**50**	20	ug/L	4	10/17/23	B3J0321	200.8	ARH	

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P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: AKT-4/TMW

Lab ID: 2309322-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

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Client ID: AKT-4/TMW

Lab ID: 2309322-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*101 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

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TEL: (517) 335-9800
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Client ID: AKT-4/TMW

Lab ID: 2309322-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	5.3	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	Naphthalene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*60.3 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*62.4 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*91.4 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	**Arsenic**	**16**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-39-3	**Barium**	**140**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	**Cadmium**	**0.3**	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	**Chromium**	**20**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-50-8	**Copper**	**25**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-92-1	**Lead**	**36**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	**Selenium**	**1.8**	1.0	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-22-4	Silver	ND	0.2	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-66-6	**Zinc**	**79**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	

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P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: AKT-7/TMW

Lab ID: 2309322-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-34-3	1,1-Dichloroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
526-73-8	**1,2,3-Trimethylbenzene**	**260**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
95-63-6	**1,2,4-Trimethylbenzene**	**840**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
106-93-4	1,2-Dibromoethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
107-06-2	1,2-Dichloroethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
78-87-5	1,2-Dichloropropane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
108-67-8	**1,3,5-Trimethylbenzene**	**190**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
78-93-3	2-Butanone (MEK)	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
91-57-6	**2-Methylnaphthalene**	**60**	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
67-64-1	2-Propanone (acetone)	ND	210	ug/L	10.5	09/27/23	B3I2723	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
107-13-1	Acrylonitrile	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
71-43-2	**Benzene**	**180**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
74-97-5	Bromochloromethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-27-4	Bromodichloromethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-25-2	Bromoform	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
74-83-9	Bromomethane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-15-0	Carbon disulfide	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
56-23-5	Carbon tetrachloride	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
108-90-7	Chlorobenzene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-00-3	Chloroethane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
67-66-3	Chloroform	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
74-87-3	Chloromethane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
110-82-7	Cyclohexane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
124-48-1	Dibromochloromethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
74-95-3	Dibromomethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-7/TMW

Lab ID: 2309322-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
60-29-7	Diethyl ether	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
108-20-3	Diisopropyl Ether	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
100-41-4	**Ethylbenzene**	**1100**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
67-72-1	Hexachloroethane	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
110-54-3	**Hexane**	**11**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
98-82-8	**Isopropylbenzene**	**36**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
1330-20-7	**m & p - Xylene**	**5300**	42	ug/L	21	09/28/23	B3I2723	8260	JT	
96-37-7	**Methylcyclopentane**	**69**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-09-2	Methylene chloride	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
91-20-3	**Naphthalene**	**280**	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
104-51-8	**n-Butylbenzene**	**12**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	100
142-82-5	n-Heptane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
103-65-1	**n-Propylbenzene**	**75**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
95-47-6	**o-Xylene**	**2500**	21	ug/L	21	09/28/23	B3I2723	8260	JT	
135-98-8	sec-Butylbenzene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
100-42-5	Styrene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
98-06-6	tert-Butylbenzene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	520	ug/L	10.5	09/27/23	B3I2723	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
127-18-4	Tetrachloroethylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
109-99-9	Tetrahydrofuran	ND	52	ug/L	10.5	09/27/23	B3I2723	8260	JT	
108-88-3	**Toluene**	**1900**	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
79-01-6	Trichloroethylene	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-69-4	Trichlorofluoromethane	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
75-01-4	Vinyl chloride	ND	10	ug/L	10.5	09/27/23	B3I2723	8260	JT	
Surrogate: Bromofluorobenzene			*103 %*	*85-115*		*09/27/23*	B3I2723	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*98.1 %*	*82.7-115*		*09/27/23*	B3I2723	*8260*	*JT*	
Surrogate: Toluene-d8			*102 %*	*85-115*		*09/27/23*	B3I2723	*8260*	*JT*	

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Lab ID: 2309322-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										**See note Y17**
91-57-6	**2-Methylnaphthalene**	**140**	50	ug/L	10	10/02/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	**Naphthalene**	**470**	10	ug/L	10	10/02/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*63.5 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*96.8 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*83.5 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	**Arsenic**	**140**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-39-3	**Barium**	**210**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	Cadmium	ND	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	**Chromium**	**4.9**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-50-8	**Copper**	**10**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-92-1	**Lead**	**4.3**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	Selenium	ND	1.0	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-22-4	Silver	ND	0.2	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-66-6	**Zinc**	**7.0**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	

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Client ID: W-1

Lab ID: 2309322-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

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Lab ID: 2309322-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*102 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*104 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: W-1

Lab ID: 2309322-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	5.3	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	Naphthalene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*61.0 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*63.0 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*90.7 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	**Arsenic**	**4.2**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-39-3	**Barium**	**39**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	Cadmium	ND	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	**Chromium**	**1.2**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-50-8	**Copper**	**10**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-92-1	Lead	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	Selenium	ND	1.0	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-22-4	Silver	ND	0.2	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-66-6	Zinc	ND	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: AKT-Dup W

Lab ID: 2309322-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

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Lab ID: 2309322-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*93.9 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*94.2 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*91.5 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

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Client ID: AKT-Dup W

Lab ID: 2309322-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	Naphthalene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*57.9 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*59.9 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*70.5 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	Arsenic	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-39-3	**Barium**	**100**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	Cadmium	ND	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	Chromium	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-50-8	Copper	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7439-92-1	Lead	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	Selenium	ND	2.0	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-22-4	Silver	ND	0.4	ug/L	2	10/16/23	B3J0321	200.8	ARH	I
7440-66-6	Zinc	ND	10	ug/L	2	10/16/23	B3J0321	200.8	ARH	I

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P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: MS-4/TMW

Lab ID: 2309322-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	**1,1,1,2-Tetrachloroethane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	**1,1,1-Trichloroethane**	**53**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	**1,1,2,2-Tetrachloroethane**	**48**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	**1,1,2-Trichloroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	**1,1,2-Trichlorotrifluoroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	**1,1-Dichloroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	**1,1-Dichloroethylene**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	**1,2,3-Trichlorobenzene**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	**1,2,3-Trichloropropane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	**1,2,3-Trimethylbenzene**	**48**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	**1,2,4-Trichlorobenzene**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	**1,2,4-Trimethylbenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	**1,2-Dibromo-3-chloropropane**	**48**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	**1,2-Dibromoethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	**1,2-Dichlorobenzene**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	**1,2-Dichloroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	**1,2-Dichloropropane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	**1,3,5-Trimethylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	**1,3-Dichlorobenzene**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	**1,4-Dichlorobenzene**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	**2,2,4-Trimethylpentane**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	**2-Butanone (MEK)**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	**2-Methylnaphthalene**	**37**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	**2-Propanone (acetone)**	**51**	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	**Acrylonitrile**	**46**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	**Benzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	**Bromochloromethane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	**Bromodichloromethane**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	**Bromoform**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	**Bromomethane**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	**Carbon disulfide**	**47**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	**Carbon tetrachloride**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	**Chlorobenzene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	**Chloroethane**	**52**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	**Chloroform**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	**Chloromethane**	**53**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	**cis-1,2-Dichloroethylene**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	**cis-1,3-Dichloropropylene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	**Cyclohexane**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	**Dibromochloromethane**	**48**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: MS-4/TMW

Lab ID: 2309322-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
74-95-3	**Dibromomethane**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-71-8	**Dichlorodifluoromethane**	**58**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	**Diethyl ether**	**48**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	**Diisopropyl Ether**	**48**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	**Ethylbenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	**Ethyltertiarybutylether**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	**Hexachloroethane**	**48**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	**Hexane**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	**Isopropylbenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	**m & p - Xylene**	**100**	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	**Methylcyclopentane**	**55**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	**Methylene chloride**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	**Methyltertiarybutylether**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	**Naphthalene**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	**n-Butylbenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	**n-Heptane**	**55**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	**n-Propylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	**o-Xylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	**sec-Butylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	**Styrene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	**tert-Butylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	**tertiary Butyl Alcohol**	**230**	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	**tertiaryAmylmethylether**	**48**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	**Tetrachloroethylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	**Tetrahydrofuran**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	**Toluene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	**trans-1,2-Dichloroethylene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	**trans-1,3-Dichloropropylene**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	**Trichloroethylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	**Trichlorofluoromethane**	**55**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	**Vinyl chloride**	**55**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*98.2 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*101 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

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Client ID: MS-4/TMW

Lab ID: 2309322-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	**2-Methylnaphthalene**	**34**	5.3	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	**Acenaphthene**	**36**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	**Acenaphthylene**	**39**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	**Anthracene**	**41**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	**Benz[a]anthracene**	**49**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	**Benzo[a]pyrene**	**45**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**45**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	**Benzo[g,h,i]perylene**	**39**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**45**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	**Chrysene**	**46**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	**Dibenz[a,h]anthracene**	**33**	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	**Fluoranthene**	**46**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	**Fluorene**	**40**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	**Indeno(1,2,3-c,d)pyrene**	**38**	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	**Naphthalene**	**31**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	**Phenanthrene**	**41**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	**Pyrene**	**45**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*60.7 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*58.2 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*83.0 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	**Arsenic**	**68**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-39-3	**Barium**	**210**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	**Cadmium**	**49**	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	**Chromium**	**75**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-50-8	**Copper**	**74**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-92-1	**Lead**	**80**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	**Mercury**	**4.1**	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	**Selenium**	**48**	1.0	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-22-4	**Silver**	**46**	0.2	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-66-6	**Zinc**	**130**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	

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Client ID: MSD-4/TMW

Lab ID: 2309322-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	**1,1,1,2-Tetrachloroethane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-55-6	**1,1,1-Trichloroethane**	**54**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-34-5	**1,1,2,2-Tetrachloroethane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-00-5	**1,1,2-Trichloroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
76-13-1	**1,1,2-Trichlorotrifluoroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-34-3	**1,1-Dichloroethane**	**53**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-35-4	**1,1-Dichloroethylene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
87-61-6	**1,2,3-Trichlorobenzene**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-18-4	**1,2,3-Trichloropropane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
526-73-8	**1,2,3-Trimethylbenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
120-82-1	**1,2,4-Trichlorobenzene**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-63-6	**1,2,4-Trimethylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-12-8	**1,2-Dibromo-3-chloropropane**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-93-4	**1,2-Dibromoethane**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-50-1	**1,2-Dichlorobenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-06-2	**1,2-Dichloroethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-87-5	**1,2-Dichloropropane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-67-8	**1,3,5-Trimethylbenzene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
541-73-1	**1,3-Dichlorobenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
106-46-7	**1,4-Dichlorobenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
540-84-1	**2,2,4-Trimethylpentane**	**46**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
78-93-3	**2-Butanone (MEK)**	**46**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-57-6	**2-Methylnaphthalene**	**40**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-64-1	**2-Propanone (acetone)**	**50**	20	ug/L	1	09/28/23	B3I2802	8260	JT	
108-10-1	**4-Methyl-2-pentanone (MIBK)**	**48**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
107-13-1	**Acrylonitrile**	**47**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
71-43-2	**Benzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-97-5	**Bromochloromethane**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-27-4	**Bromodichloromethane**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-25-2	**Bromoform**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-83-9	**Bromomethane**	**54**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-15-0	**Carbon disulfide**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
56-23-5	**Carbon tetrachloride**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-90-7	**Chlorobenzene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-00-3	**Chloroethane**	**52**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-66-3	**Chloroform**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
74-87-3	**Chloromethane**	**54**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-59-2	**cis-1,2-Dichloroethylene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-01-5	**cis-1,3-Dichloropropylene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-82-7	**Cyclohexane**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
124-48-1	**Dibromochloromethane**	**48**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	

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CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
74-95-3	**Dibromomethane**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-71-8	**Dichlorodifluoromethane**	**57**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
60-29-7	**Diethyl ether**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-20-3	**Diisopropyl Ether**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-41-4	**Ethylbenzene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
637-92-3	**Ethyltertiarybutylether**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
67-72-1	**Hexachloroethane**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
110-54-3	**Hexane**	**48**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-82-8	**Isopropylbenzene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1330-20-7	**m & p - Xylene**	**100**	2.0	ug/L	1	09/28/23	B3I2802	8260	JT	
96-37-7	**Methylcyclopentane**	**49**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-09-2	**Methylene chloride**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
1634-04-4	**Methyltertiarybutylether**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
91-20-3	**Naphthalene**	**50**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
104-51-8	**n-Butylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
142-82-5	**n-Heptane**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
103-65-1	**n-Propylbenzene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
95-47-6	**o-Xylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
135-98-8	**sec-Butylbenzene**	**51**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
100-42-5	**Styrene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
98-06-6	**tert-Butylbenzene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-65-0	**tertiary Butyl Alcohol**	**240**	50	ug/L	1	09/28/23	B3I2802	8260	JT	
994-05-8	**tertiaryAmylmethylether**	**49**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
127-18-4	**Tetrachloroethylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
109-99-9	**Tetrahydrofuran**	**52**	5.0	ug/L	1	09/28/23	B3I2802	8260	JT	
108-88-3	**Toluene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
156-60-5	**trans-1,2-Dichloroethylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
10061-02-6	**trans-1,3-Dichloropropylene**	**50**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
79-01-6	**Trichloroethylene**	**52**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-69-4	**Trichlorofluoromethane**	**55**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
75-01-4	**Vinyl chloride**	**56**	1.0	ug/L	1	09/28/23	B3I2802	8260	JT	
Surrogate: Bromofluorobenzene			*99.9 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*99.6 %*	*82.7-115*		*09/28/23*	B3I2802	*8260*	*JT*	
Surrogate: Toluene-d8			*99.6 %*	*85-115*		*09/28/23*	B3I2802	*8260*	*JT*	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: MSD-4/TMW

Lab ID: 2309322-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	**2-Methylnaphthalene**	**37**	5.3	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	**Acenaphthene**	**38**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	**Acenaphthylene**	**42**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	**Anthracene**	**43**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	**Benz[a]anthracene**	**51**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	**Benzo[a]pyrene**	**48**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	**Benzo[b]fluoranthene**	**49**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	**Benzo[g,h,i]perylene**	**42**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	**Benzo[k]fluoranthene**	**48**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	**Chrysene**	**49**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	**Dibenz[a,h]anthracene**	**36**	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	**Fluoranthene**	**48**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	**Fluorene**	**42**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	**Indeno(1,2,3-c,d)pyrene**	**41**	2.1	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	**Naphthalene**	**35**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	**Phenanthrene**	**43**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	**Pyrene**	**47**	1.1	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*62.1 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*60.9 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*85.4 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	**Arsenic**	**66**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-39-3	**Barium**	**210**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	**Cadmium**	**48**	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	**Chromium**	**76**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-50-8	**Copper**	**73**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-92-1	**Lead**	**81**	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	**Mercury**	**4.1**	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	**Selenium**	**47**	1.0	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-22-4	**Silver**	**45**	0.2	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-66-6	**Zinc**	**130**	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Trip Blank

Lab ID: 2309322-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/27/23	B3I2723	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Trip Blank

Lab ID: 2309322-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/27/23	B3I2723	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/27/23	B3I2723	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
Surrogate: Bromofluorobenzene			*103 %*	*85-115*		*09/27/23*	B3I2723	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*09/27/23*	B3I2723	*8260*	*JT*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*09/27/23*	B3I2723	*8260*	*JT*	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Equipment Blank

Lab ID: 2309322-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/27/23	B3I2723	8260	JT	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
71-43-2	Benzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Equipment Blank

Lab ID: 2309322-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Volatiles										
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
110-54-3	Hexane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/27/23	B3I2723	8260	JT	
96-37-7	Methylcyclopentane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
142-82-5	n-Heptane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
100-42-5	Styrene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/27/23	B3I2723	8260	JT	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/27/23	B3I2723	8260	JT	
108-88-3	Toluene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/27/23	B3I2723	8260	JT	
Surrogate: Bromofluorobenzene			*102 %*	*85-115*		*09/27/23*	B3I2723	*8260*	*JT*	
Surrogate: Dibromofluoromethane			*104 %*	*82.7-115*		*09/27/23*	B3I2723	*8260*	*JT*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*09/27/23*	B3I2723	*8260*	*JT*	

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Client ID: Equipment Blank

Lab ID: 2309322-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-Semivolatiles										
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/29/23	B3I2737	8270	MF	
83-32-9	Acenaphthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
208-96-8	Acenaphthylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
120-12-7	Anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
56-55-3	Benz[a]anthracene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
50-32-8	Benzo[a]pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
205-99-2	Benzo[b]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
191-24-2	Benzo[g,h,i]perylene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
207-08-9	Benzo[k]fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
218-01-9	Chrysene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
53-70-3	Dibenz[a,h]anthracene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
206-44-0	Fluoranthene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
86-73-7	Fluorene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	2.0	ug/L	1	09/29/23	B3I2737	8270	MF	
91-20-3	Naphthalene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
85-01-8	Phenanthrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
129-00-0	Pyrene	ND	1.0	ug/L	1	09/29/23	B3I2737	8270	MF	
Surrogate: 2-Fluorobiphenyl			*63.4 %*	*20-101*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: Nitrobenzene-d5			*65.1 %*	*13-100*		*09/29/23*	B3I2737	*8270*	*MF*	
Surrogate: p-Terphenyl-d14			*89.3 %*	*18-150*		*09/29/23*	B3I2737	*8270*	*MF*	
Inorganics-Metals										
7440-38-2	Arsenic	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-39-3	Barium	ND	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-43-9	Cadmium	ND	0.2	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-47-3	Chromium	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7440-50-8	Copper	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-92-1	Lead	ND	1.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	
7439-97-6	Mercury	ND	0.2	ug/L	1	10/17/23	B3J1732	245.1	JP1	
7782-49-2	Selenium	ND	1.0	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-22-4	Silver	ND	0.2	ug/L	1	10/16/23	B3J0321	200.8	ARH	
7440-66-6	Zinc	ND	5.0	ug/L	1	10/09/23	B3J0321	200.8	ARH	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2723 - Method: 5030				**Prepared: 09/27/2023**							
Blank (B3I2723-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							09/27/2023	
1,1,1-Trichloroethane	ND	1.0	ug/L							09/27/2023	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							09/27/2023	
1,1,2-Trichloroethane	ND	1.0	ug/L							09/27/2023	
1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L							09/27/2023	
1,1-Dichloroethane	ND	1.0	ug/L							09/27/2023	
1,1-Dichloroethylene	ND	1.0	ug/L							09/27/2023	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							09/27/2023	
1,2,3-Trichloropropane	ND	1.0	ug/L							09/27/2023	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							09/27/2023	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							09/27/2023	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							09/27/2023	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L							09/27/2023	
1,2-Dibromoethane	ND	1.0	ug/L							09/27/2023	
1,2-Dichlorobenzene	ND	1.0	ug/L							09/27/2023	
1,2-Dichloroethane	ND	1.0	ug/L							09/27/2023	
1,2-Dichloropropane	ND	1.0	ug/L							09/27/2023	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							09/27/2023	
1,3-Dichlorobenzene	ND	1.0	ug/L							09/27/2023	
1,4-Dichlorobenzene	ND	1.0	ug/L							09/27/2023	
2,2,4-Trimethylpentane	ND	5.0	ug/L							09/27/2023	
2-Butanone (MEK)	ND	5.0	ug/L							09/27/2023	
2-Methylnaphthalene	ND	5.0	ug/L							09/27/2023	
2-Propanone (acetone)	ND	20	ug/L							09/27/2023	
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							09/27/2023	
Acrylonitrile	ND	5.0	ug/L							09/27/2023	
Benzene	ND	1.0	ug/L							09/27/2023	
Bromochloromethane	ND	1.0	ug/L							09/27/2023	
Bromodichloromethane	ND	1.0	ug/L							09/27/2023	
Bromoform	ND	1.0	ug/L							09/27/2023	
Bromomethane	ND	5.0	ug/L							09/27/2023	
Carbon disulfide	ND	1.0	ug/L							09/27/2023	
Carbon tetrachloride	ND	1.0	ug/L							09/27/2023	
Chlorobenzene	ND	1.0	ug/L							09/27/2023	
Chloroethane	ND	5.0	ug/L							09/27/2023	
Chloroform	ND	1.0	ug/L							09/27/2023	
Chloromethane	ND	5.0	ug/L							09/27/2023	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							09/27/2023	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							09/27/2023	
Cyclohexane	ND	5.0	ug/L							09/27/2023	
Dibromochloromethane	ND	1.0	ug/L							09/27/2023	
Dibromomethane	ND	1.0	ug/L							09/27/2023	
Dichlorodifluoromethane	ND	5.0	ug/L							09/27/2023	
Diethyl ether	ND	5.0	ug/L							09/27/2023	
Diisopropyl Ether	ND	5.0	ug/L							09/27/2023	
Ethylbenzene	ND	1.0	ug/L							09/27/2023	
Ethyltertiarybutylether	ND	5.0	ug/L							09/27/2023	
Hexachloroethane	ND	5.0	ug/L							09/27/2023	
Hexane	ND	1.0	ug/L							09/27/2023	
Isopropylbenzene	ND	1.0	ug/L							09/27/2023	
m & p - Xylene	ND	2.0	ug/L							09/27/2023	
Methylcyclopentane	ND	1.0	ug/L							09/27/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2723 - Method: 5030				**Prepared: 09/27/2023**							
Blank (B3I2723-BLK1)											
Methylene chloride	ND	5.0	ug/L							09/27/2023	
Methyltertiarybutylether	ND	1.0	ug/L							09/27/2023	
Naphthalene	ND	5.0	ug/L							09/27/2023	
n-Butylbenzene	ND	1.0	ug/L							09/27/2023	
n-Heptane	ND	1.0	ug/L							09/27/2023	
n-Propylbenzene	ND	1.0	ug/L							09/27/2023	
o-Xylene	ND	1.0	ug/L							09/27/2023	
sec-Butylbenzene	ND	1.0	ug/L							09/27/2023	
Styrene	ND	1.0	ug/L							09/27/2023	
tert-Butylbenzene	ND	1.0	ug/L							09/27/2023	
tertiary Butyl Alcohol	ND	50	ug/L							09/27/2023	
tertiaryAmylmethylether	ND	5.0	ug/L							09/27/2023	
Tetrachloroethylene	ND	1.0	ug/L							09/27/2023	
Tetrahydrofuran	ND	5.0	ug/L							09/27/2023	
Toluene	ND	1.0	ug/L							09/27/2023	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							09/27/2023	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							09/27/2023	
Trichloroethylene	ND	1.0	ug/L							09/27/2023	
Trichlorofluoromethane	ND	1.0	ug/L							09/27/2023	
Vinyl chloride	ND	1.0	ug/L							09/27/2023	
Surrogate: Bromofluorobenzene	*50.2*		ug/L	*50.00*		*100*	*85-115*			09/27/2023	
Surrogate: Dibromofluoromethane	*50.7*		ug/L	*50.00*		*101*	*82.7-115*			09/27/2023	
Surrogate: Toluene-d8	*49.6*		ug/L	*50.00*		*99.2*	*85-115*			09/27/2023	
LCS (B3I2723-BS1)											
1,1,1,2-Tetrachloroethane	46.2	1.0	ug/L	50.00		92.5	70-130			09/27/2023	
1,1,1-Trichloroethane	47.8	1.0	ug/L	50.00		95.6	70-130			09/27/2023	
1,1,2,2-Tetrachloroethane	49.4	1.0	ug/L	50.00		98.8	70-130			09/27/2023	
1,1,2-Trichloroethane	49.5	1.0	ug/L	50.00		99.0	70-130			09/27/2023	
1,1,2-Trichlorotrifluoroethane	40.6	1.0	ug/L	50.00		81.2	70-130			09/27/2023	
1,1-Dichloroethane	47.3	1.0	ug/L	50.00		94.6	70-130			09/27/2023	
1,1-Dichloroethylene	43.1	1.0	ug/L	50.00		86.2	70-130			09/27/2023	
1,2,3-Trichlorobenzene	50.2	5.0	ug/L	50.00		100	70-130			09/27/2023	
1,2,3-Trichloropropane	49.4	1.0	ug/L	50.00		98.8	70-130			09/27/2023	
1,2,3-Trimethylbenzene	47.6	1.0	ug/L	50.00		95.2	70-130			09/27/2023	
1,2,4-Trichlorobenzene	50.2	5.0	ug/L	50.00		100	70-130			09/27/2023	
1,2,4-Trimethylbenzene	48.6	1.0	ug/L	50.00		97.1	70-130			09/27/2023	
1,2-Dibromo-3-chloropropane	52.1	5.0	ug/L	50.00		104	70-130			09/27/2023	
1,2-Dibromoethane	49.2	1.0	ug/L	50.00		98.3	70-130			09/27/2023	
1,2-Dichlorobenzene	48.4	1.0	ug/L	50.00		96.9	70-130			09/27/2023	
1,2-Dichloroethane	48.9	1.0	ug/L	50.00		97.8	70-130			09/27/2023	
1,2-Dichloropropane	48.8	1.0	ug/L	50.00		97.7	70-130			09/27/2023	
1,3,5-Trimethylbenzene	48.9	1.0	ug/L	50.00		97.8	70-130			09/27/2023	
1,3-Dichlorobenzene	49.5	1.0	ug/L	50.00		99.0	70-130			09/27/2023	
1,4-Dichlorobenzene	48.9	1.0	ug/L	50.00		97.8	70-130			09/27/2023	
2,2,4-Trimethylpentane	40.8	5.0	ug/L	50.00		81.6	70-130			09/27/2023	
2-Butanone (MEK)	45.7	5.0	ug/L	50.00		91.4	70-130			09/27/2023	
2-Methylnaphthalene	43.0	5.0	ug/L	50.00		86.0	70-130			09/27/2023	
2-Propanone (acetone)	49.3	20	ug/L	50.00		98.7	70-130			09/27/2023	
4-Methyl-2-pentanone (MIBK)	49.2	5.0	ug/L	50.00		98.4	70-130			09/27/2023	
Acrylonitrile	46.7	5.0	ug/L	50.00		93.4	70-130			09/27/2023	
Benzene	46.7	1.0	ug/L	50.00		93.5	70-130			09/27/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2723 - Method: 5030				**Prepared: 09/27/2023**							
LCS (B3I2723-BS1)											
Bromochloromethane	48.1	1.0	ug/L	50.00		96.2	70-130			09/27/2023	
Bromodichloromethane	48.8	1.0	ug/L	50.00		97.5	70-130			09/27/2023	
Bromoform	49.3	1.0	ug/L	50.00		98.6	70-130			09/27/2023	
Bromomethane	47.9	5.0	ug/L	50.00		95.8	70-130			09/27/2023	
Carbon disulfide	42.1	1.0	ug/L	50.00		84.3	70-130			09/27/2023	
Carbon tetrachloride	44.0	1.0	ug/L	50.00		88.0	70-130			09/27/2023	
Chlorobenzene	48.0	1.0	ug/L	50.00		96.1	70-130			09/27/2023	
Chloroethane	45.6	5.0	ug/L	50.00		91.2	70-130			09/27/2023	
Chloroform	48.3	1.0	ug/L	50.00		96.6	70-130			09/27/2023	
Chloromethane	49.4	5.0	ug/L	50.00		98.8	70-130			09/27/2023	
cis-1,2-Dichloroethylene	46.4	1.0	ug/L	50.00		92.7	70-130			09/27/2023	
cis-1,3-Dichloropropylene	50.1	1.0	ug/L	50.00		100	70-130			09/27/2023	
Cyclohexane	40.6	5.0	ug/L	50.00		81.3	70-130			09/27/2023	
Dibromochloromethane	46.8	1.0	ug/L	50.00		93.7	70-130			09/27/2023	
Dibromomethane	48.5	1.0	ug/L	50.00		97.1	70-130			09/27/2023	
Dichlorodifluoromethane	45.6	5.0	ug/L	50.00		91.2	70-130			09/27/2023	
Diethyl ether	46.0	5.0	ug/L	50.00		92.0	70-130			09/27/2023	
Diisopropyl Ether	46.7	5.0	ug/L	50.00		93.3	70-130			09/27/2023	
Ethylbenzene	45.6	1.0	ug/L	50.00		91.3	70-130			09/27/2023	
Ethyltertiarybutylether	48.3	5.0	ug/L	50.00		96.6	70-130			09/27/2023	
Hexachloroethane	47.6	5.0	ug/L	50.00		95.2	70-130			09/27/2023	
Hexane	41.8	1.0	ug/L	50.00		83.6	70-130			09/27/2023	
Isopropylbenzene	48.2	1.0	ug/L	50.00		96.4	70-130			09/27/2023	
m & p - Xylene	94.9	2.0	ug/L	100.0		94.9	70-130			09/27/2023	
Methylcyclopentane	41.1	1.0	ug/L	50.00		82.2	70-130			09/27/2023	
Methylene chloride	46.1	5.0	ug/L	50.00		92.3	70-130			09/27/2023	
Methyltertiarybutylether	50.7	1.0	ug/L	50.00		101	70-130			09/27/2023	
Naphthalene	51.6	5.0	ug/L	50.00		103	70-130			09/27/2023	
n-Butylbenzene	48.3	1.0	ug/L	50.00		96.5	70-130			09/27/2023	
n-Heptane	47.5	1.0	ug/L	50.00		95.0	70-130			09/27/2023	
n-Propylbenzene	48.7	1.0	ug/L	50.00		97.4	70-130			09/27/2023	
o-Xylene	47.8	1.0	ug/L	50.00		95.6	70-130			09/27/2023	
sec-Butylbenzene	47.7	1.0	ug/L	50.00		95.4	70-130			09/27/2023	
Styrene	48.1	1.0	ug/L	50.00		96.2	70-130			09/27/2023	
tert-Butylbenzene	48.1	1.0	ug/L	50.00		96.1	70-130			09/27/2023	
tertiary Butyl Alcohol	250	50	ug/L	250.0		100	70-130			09/27/2023	
tertiaryAmylmethylether	48.8	5.0	ug/L	50.00		97.6	70-130			09/27/2023	
Tetrachloroethylene	45.8	1.0	ug/L	50.00		91.5	70-130			09/27/2023	
Tetrahydrofuran	51.4	5.0	ug/L	50.00		103	70-130			09/27/2023	
Toluene	46.0	1.0	ug/L	50.00		91.9	70-130			09/27/2023	
trans-1,2-Dichloroethylene	46.3	1.0	ug/L	50.00		92.5	70-130			09/27/2023	
trans-1,3-Dichloropropylene	50.4	1.0	ug/L	50.00		101	70-130			09/27/2023	
Trichloroethylene	47.6	1.0	ug/L	50.00		95.3	70-130			09/27/2023	
Trichlorofluoromethane	44.0	1.0	ug/L	50.00		88.0	70-130			09/27/2023	
Vinyl chloride	47.2	1.0	ug/L	50.00		94.4	70-130			09/27/2023	
Surrogate: Bromofluorobenzene	*50.9*		ug/L	*50.00*		*102*	*85-115*			09/27/2023	
Surrogate: Dibromofluoromethane	*49.8*		ug/L	*50.00*		*99.7*	*82.7-115*			09/27/2023	
Surrogate: Toluene-d8	*49.6*		ug/L	*50.00*		*99.2*	*85-115*			09/27/2023	
Matrix Spike (B3I2723-MS1)	**Source: 2309311-10**										
1,1,1,2-Tetrachloroethane	48.5	1.0	ug/L	50.00	ND	97.0	70-130			09/28/2023	
1,1,1-Trichloroethane	53.0	1.0	ug/L	50.00	ND	106	70-130			09/28/2023	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2723 - Method: 5030				**Prepared: 09/28/2023**							
Matrix Spike (B3I2723-MS1)	**Source: 2309311-10**										
1,1,2,2-Tetrachloroethane	49.0	1.0	ug/L	50.00	ND	97.9	70-130			09/28/2023	
1,1,2-Trichloroethane	49.9	1.0	ug/L	50.00	ND	99.8	70-130			09/28/2023	
1,1,2-Trichlorotrifluoroethane	52.5	1.0	ug/L	50.00	ND	105	70-130			09/28/2023	
1,1-Dichloroethane	52.2	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
1,1-Dichloroethylene	50.3	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,2,3-Trichlorobenzene	50.4	5.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,2,3-Trichloropropane	49.0	1.0	ug/L	50.00	ND	98.0	70-130			09/28/2023	
1,2,3-Trimethylbenzene	49.1	1.0	ug/L	50.00	ND	98.3	70-130			09/28/2023	
1,2,4-Trichlorobenzene	50.4	5.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,2,4-Trimethylbenzene	50.4	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,2-Dibromo-3-chloropropane	50.0	5.0	ug/L	50.00	ND	100	70-130			09/28/2023	
1,2-Dibromoethane	49.2	1.0	ug/L	50.00	ND	98.5	70-130			09/28/2023	
1,2-Dichlorobenzene	49.6	1.0	ug/L	50.00	ND	99.1	70-130			09/28/2023	
1,2-Dichloroethane	50.2	1.0	ug/L	50.00	ND	100	70-130			09/28/2023	
1,2-Dichloropropane	50.4	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,3,5-Trimethylbenzene	51.6	1.0	ug/L	50.00	ND	103	70-130			09/28/2023	
1,3-Dichlorobenzene	50.5	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,4-Dichlorobenzene	50.0	1.0	ug/L	50.00	ND	100	70-130			09/28/2023	
2,2,4-Trimethylpentane	48.8	5.0	ug/L	50.00	ND	97.7	70-130			09/28/2023	
2-Butanone (MEK)	52.6	5.0	ug/L	50.00	ND	105	70-130			09/28/2023	
2-Methylnaphthalene	43.7	5.0	ug/L	50.00	ND	87.4	70-130			09/28/2023	
2-Propanone (acetone)	67.3	20	ug/L	50.00	ND	135	70-130			09/28/2023	A04
4-Methyl-2-pentanone (MIBK)	51.6	5.0	ug/L	50.00	ND	103	70-130			09/28/2023	
Acrylonitrile	47.7	5.0	ug/L	50.00	ND	95.4	70-130			09/28/2023	
Benzene	49.9	1.0	ug/L	50.00	ND	99.7	70-130			09/28/2023	
Bromochloromethane	48.7	1.0	ug/L	50.00	ND	97.4	70-130			09/28/2023	
Bromodichloromethane	50.0	1.0	ug/L	50.00	ND	99.9	70-130			09/28/2023	
Bromoform	48.7	1.0	ug/L	50.00	ND	97.5	70-130			09/28/2023	
Bromomethane	53.6	5.0	ug/L	50.00	ND	107	70-130			09/28/2023	
Carbon disulfide	48.6	1.0	ug/L	50.00	ND	97.1	70-130			09/28/2023	
Carbon tetrachloride	49.9	1.0	ug/L	50.00	ND	99.8	70-130			09/28/2023	
Chlorobenzene	50.5	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Chloroethane	52.0	5.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Chloroform	52.4	1.0	ug/L	50.00	ND	105	70-130			09/28/2023	
Chloromethane	55.0	5.0	ug/L	50.00	ND	110	70-130			09/28/2023	
cis-1,2-Dichloroethylene	50.2	1.0	ug/L	50.00	ND	100	70-130			09/28/2023	
cis-1,3-Dichloropropylene	50.1	1.0	ug/L	50.00	ND	100	70-130			09/28/2023	
Cyclohexane	49.5	5.0	ug/L	50.00	ND	98.9	70-130			09/28/2023	
Dibromochloromethane	47.3	1.0	ug/L	50.00	ND	94.7	70-130			09/28/2023	
Dibromomethane	49.1	1.0	ug/L	50.00	ND	98.1	70-130			09/28/2023	
Dichlorodifluoromethane	58.1	5.0	ug/L	50.00	ND	116	70-130			09/28/2023	
Diethyl ether	47.9	5.0	ug/L	50.00	ND	95.7	70-130			09/28/2023	
Diisopropyl Ether	49.1	5.0	ug/L	50.00	ND	98.1	70-130			09/28/2023	
Ethylbenzene	48.9	1.0	ug/L	50.00	ND	97.8	70-130			09/28/2023	
Ethyltertiarybutylether	49.2	5.0	ug/L	50.00	ND	98.4	70-130			09/28/2023	
Hexachloroethane	48.8	5.0	ug/L	50.00	ND	97.7	70-130			09/28/2023	
Hexane	51.8	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Isopropylbenzene	51.2	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
m & p - Xylene	102	2.0	ug/L	100.0	ND	102	70-130			09/28/2023	
Methylcyclopentane	53.9	1.0	ug/L	50.00	ND	108	70-130			09/28/2023	
Methylene chloride	49.8	5.0	ug/L	50.00	ND	99.6	70-130			09/28/2023	
Methyltertiarybutylether	50.8	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2723 - Method: 5030				**Prepared: 09/28/2023**							
Matrix Spike (B3I2723-MS1)	**Source: 2309311-10**										
Naphthalene	51.5	5.0	ug/L	50.00	ND	103	70-130			09/28/2023	
n-Butylbenzene	50.7	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
n-Heptane	54.9	1.0	ug/L	50.00	ND	110	70-130			09/28/2023	
n-Propylbenzene	52.1	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
o-Xylene	50.4	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
sec-Butylbenzene	51.8	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Styrene	51.0	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
tert-Butylbenzene	51.5	1.0	ug/L	50.00	ND	103	70-130			09/28/2023	
tertiary Butyl Alcohol	258	50	ug/L	250.0	ND	103	70-130			09/28/2023	
tertiaryAmylmethylether	48.1	5.0	ug/L	50.00	ND	96.3	70-130			09/28/2023	
Tetrachloroethylene	51.1	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
Tetrahydrofuran	48.7	5.0	ug/L	50.00	ND	97.4	70-130			09/28/2023	
Toluene	55.4	1.0	ug/L	50.00	5.98	98.8	70-130			09/28/2023	
trans-1,2-Dichloroethylene	52.5	1.0	ug/L	50.00	ND	105	70-130			09/28/2023	
trans-1,3-Dichloropropylene	49.6	1.0	ug/L	50.00	ND	99.1	70-130			09/28/2023	
Trichloroethylene	52.9	1.0	ug/L	50.00	ND	106	70-130			09/28/2023	
Trichlorofluoromethane	55.2	1.0	ug/L	50.00	ND	110	70-130			09/28/2023	
Vinyl chloride	56.6	1.0	ug/L	50.00	ND	113	70-130			09/28/2023	
Surrogate: Bromofluorobenzene	*50.0*		ug/L	*50.00*		*100*	*85-115*			09/28/2023	
Surrogate: Dibromofluoromethane	*50.6*		ug/L	*50.00*		*101*	*82.7-115*			09/28/2023	
Surrogate: Toluene-d8	*49.5*		ug/L	*50.00*		*99.0*	*85-115*			09/28/2023	
Matrix Spike Dup (B3I2723-MSD1)	**Source: 2309311-10**										
1,1,1,2-Tetrachloroethane	48.8	1.0	ug/L	50.00	ND	97.6	70-130	0.697	30	09/28/2023	
1,1,1-Trichloroethane	54.0	1.0	ug/L	50.00	ND	108	70-130	1.79	30	09/28/2023	
1,1,2,2-Tetrachloroethane	48.7	1.0	ug/L	50.00	ND	97.5	70-130	0.457	30	09/28/2023	
1,1,2-Trichloroethane	50.3	1.0	ug/L	50.00	ND	101	70-130	0.748	30	09/28/2023	
1,1,2-Trichlorotrifluoroethane	49.9	1.0	ug/L	50.00	ND	99.9	70-130	4.98	30	09/28/2023	
1,1-Dichloroethane	52.2	1.0	ug/L	50.00	ND	104	70-130	0.151	30	09/28/2023	
1,1-Dichloroethylene	49.7	1.0	ug/L	50.00	ND	99.4	70-130	1.25	30	09/28/2023	
1,2,3-Trichlorobenzene	50.5	5.0	ug/L	50.00	ND	101	70-130	0.120	30	09/28/2023	
1,2,3-Trichloropropane	48.8	1.0	ug/L	50.00	ND	97.6	70-130	0.403	30	09/28/2023	
1,2,3-Trimethylbenzene	48.9	1.0	ug/L	50.00	ND	97.8	70-130	0.450	30	09/28/2023	
1,2,4-Trichlorobenzene	50.5	5.0	ug/L	50.00	ND	101	70-130	0.120	30	09/28/2023	
1,2,4-Trimethylbenzene	49.9	1.0	ug/L	50.00	ND	99.7	70-130	1.00	30	09/28/2023	
1,2-Dibromo-3-chloropropane	50.9	5.0	ug/L	50.00	ND	102	70-130	1.76	30	09/28/2023	
1,2-Dibromoethane	50.6	1.0	ug/L	50.00	ND	101	70-130	2.81	30	09/28/2023	
1,2-Dichlorobenzene	49.3	1.0	ug/L	50.00	ND	98.6	70-130	0.520	30	09/28/2023	
1,2-Dichloroethane	50.4	1.0	ug/L	50.00	ND	101	70-130	0.258	30	09/28/2023	
1,2-Dichloropropane	50.9	1.0	ug/L	50.00	ND	102	70-130	1.07	30	09/28/2023	
1,3,5-Trimethylbenzene	51.0	1.0	ug/L	50.00	ND	102	70-130	1.20	30	09/28/2023	
1,3-Dichlorobenzene	50.3	1.0	ug/L	50.00	ND	101	70-130	0.288	30	09/28/2023	
1,4-Dichlorobenzene	49.3	1.0	ug/L	50.00	ND	98.6	70-130	1.46	30	09/28/2023	
2,2,4-Trimethylpentane	45.6	5.0	ug/L	50.00	ND	91.3	70-130	6.74	30	09/28/2023	
2-Butanone (MEK)	53.3	5.0	ug/L	50.00	ND	107	70-130	1.28	30	09/28/2023	
2-Methylnaphthalene	45.0	5.0	ug/L	50.00	ND	89.9	70-130	2.80	30	09/28/2023	
2-Propanone (acetone)	64.8	20	ug/L	50.00	ND	130	70-130	3.83	30	09/28/2023	
4-Methyl-2-pentanone (MIBK)	51.5	5.0	ug/L	50.00	ND	103	70-130	0.278	30	09/28/2023	
Acrylonitrile	47.5	5.0	ug/L	50.00	ND	95.0	70-130	0.462	30	09/28/2023	
Benzene	50.6	1.0	ug/L	50.00	ND	101	70-130	1.47	30	09/28/2023	
Bromochloromethane	49.3	1.0	ug/L	50.00	ND	98.5	70-130	1.12	30	09/28/2023	
Bromodichloromethane	50.5	1.0	ug/L	50.00	ND	101	70-130	1.05	30	09/28/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2723 - Method: 5030				**Prepared: 09/28/2023**							
Matrix Spike Dup (B3I2723-MSD1)	**Source: 2309311-10**										
Bromoform	49.6	1.0	ug/L	50.00	ND	99.1	70-130	1.67	30	09/28/2023	
Bromomethane	53.6	5.0	ug/L	50.00	ND	107	70-130	0.102	30	09/28/2023	
Carbon disulfide	48.4	1.0	ug/L	50.00	ND	96.8	70-130	0.303	30	09/28/2023	
Carbon tetrachloride	52.0	1.0	ug/L	50.00	ND	104	70-130	4.19	30	09/28/2023	
Chlorobenzene	51.8	1.0	ug/L	50.00	ND	104	70-130	2.40	30	09/28/2023	
Chloroethane	51.2	5.0	ug/L	50.00	ND	102	70-130	1.53	30	09/28/2023	
Chloroform	51.8	1.0	ug/L	50.00	ND	104	70-130	1.06	30	09/28/2023	
Chloromethane	53.8	5.0	ug/L	50.00	ND	108	70-130	2.14	30	09/28/2023	
cis-1,2-Dichloroethylene	50.6	1.0	ug/L	50.00	ND	101	70-130	0.783	30	09/28/2023	
cis-1,3-Dichloropropylene	50.9	1.0	ug/L	50.00	ND	102	70-130	1.56	30	09/28/2023	
Cyclohexane	48.8	5.0	ug/L	50.00	ND	97.6	70-130	1.32	30	09/28/2023	
Dibromochloromethane	47.7	1.0	ug/L	50.00	ND	95.4	70-130	0.777	30	09/28/2023	
Dibromomethane	49.8	1.0	ug/L	50.00	ND	99.6	70-130	1.46	30	09/28/2023	
Dichlorodifluoromethane	56.8	5.0	ug/L	50.00	ND	114	70-130	2.27	30	09/28/2023	
Diethyl ether	48.4	5.0	ug/L	50.00	ND	96.8	70-130	1.13	30	09/28/2023	
Diisopropyl Ether	49.1	5.0	ug/L	50.00	ND	98.2	70-130	0.0293	30	09/28/2023	
Ethylbenzene	49.8	1.0	ug/L	50.00	ND	99.7	70-130	1.93	30	09/28/2023	
Ethyltertiarybutylether	49.0	5.0	ug/L	50.00	ND	98.0	70-130	0.434	30	09/28/2023	
Hexachloroethane	49.3	5.0	ug/L	50.00	ND	98.6	70-130	0.992	30	09/28/2023	
Hexane	48.9	1.0	ug/L	50.00	ND	97.7	70-130	5.87	30	09/28/2023	
Isopropylbenzene	50.8	1.0	ug/L	50.00	ND	102	70-130	0.737	30	09/28/2023	
m & p - Xylene	102	2.0	ug/L	100.0	ND	102	70-130	0.643	30	09/28/2023	
Methylcyclopentane	49.0	1.0	ug/L	50.00	ND	98.1	70-130	9.36	30	09/28/2023	
Methylene chloride	49.6	5.0	ug/L	50.00	ND	99.2	70-130	0.369	30	09/28/2023	
Methyltertiarybutylether	51.5	1.0	ug/L	50.00	ND	103	70-130	1.27	30	09/28/2023	
Naphthalene	51.5	5.0	ug/L	50.00	ND	103	70-130	0.00777	30	09/28/2023	
n-Butylbenzene	49.9	1.0	ug/L	50.00	ND	99.8	70-130	1.59	30	09/28/2023	
n-Heptane	50.9	1.0	ug/L	50.00	ND	102	70-130	7.54	30	09/28/2023	
n-Propylbenzene	51.3	1.0	ug/L	50.00	ND	103	70-130	1.54	30	09/28/2023	
o-Xylene	51.1	1.0	ug/L	50.00	ND	102	70-130	1.45	30	09/28/2023	
sec-Butylbenzene	51.2	1.0	ug/L	50.00	ND	102	70-130	1.12	30	09/28/2023	
Styrene	52.0	1.0	ug/L	50.00	ND	104	70-130	2.02	30	09/28/2023	
tert-Butylbenzene	51.4	1.0	ug/L	50.00	ND	103	70-130	0.297	30	09/28/2023	
tertiary Butyl Alcohol	261	50	ug/L	250.0	ND	104	70-130	1.02	30	09/28/2023	
tertiaryAmylmethylether	49.1	5.0	ug/L	50.00	ND	98.2	70-130	1.99	30	09/28/2023	
Tetrachloroethylene	50.5	1.0	ug/L	50.00	ND	101	70-130	1.30	30	09/28/2023	
Tetrahydrofuran	47.8	5.0	ug/L	50.00	ND	95.6	70-130	1.84	30	09/28/2023	
Toluene	55.9	1.0	ug/L	50.00	5.98	99.8	70-130	0.944	30	09/28/2023	
trans-1,2-Dichloroethylene	51.8	1.0	ug/L	50.00	ND	104	70-130	1.37	30	09/28/2023	
trans-1,3-Dichloropropylene	50.8	1.0	ug/L	50.00	ND	102	70-130	2.40	30	09/28/2023	
Trichloroethylene	52.5	1.0	ug/L	50.00	ND	105	70-130	0.908	30	09/28/2023	
Trichlorofluoromethane	54.2	1.0	ug/L	50.00	ND	108	70-130	1.78	30	09/28/2023	
Vinyl chloride	56.3	1.0	ug/L	50.00	ND	113	70-130	0.456	30	09/28/2023	
Surrogate: Bromofluorobenzene	*50.3*		ug/L	*50.00*		*101*	*85-115*			09/28/2023	
Surrogate: Dibromofluoromethane	*51.0*		ug/L	*50.00*		*102*	*82.7-115*			09/28/2023	
Surrogate: Toluene-d8	*50.3*		ug/L	*50.00*		*101*	*85-115*			09/28/2023	
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
Blank (B3I2802-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							09/28/2023	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
Blank (B3I2802-BLK1)											
1,1,1-Trichloroethane	ND	1.0	ug/L							09/28/2023	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							09/28/2023	
1,1,2-Trichloroethane	ND	1.0	ug/L							09/28/2023	
1,1,2-Trichlorotrifluoroethane	ND	1.0	ug/L							09/28/2023	
1,1-Dichloroethane	ND	1.0	ug/L							09/28/2023	
1,1-Dichloroethylene	ND	1.0	ug/L							09/28/2023	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							09/28/2023	
1,2,3-Trichloropropane	ND	1.0	ug/L							09/28/2023	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							09/28/2023	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							09/28/2023	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							09/28/2023	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L							09/28/2023	
1,2-Dibromoethane	ND	1.0	ug/L							09/28/2023	
1,2-Dichlorobenzene	ND	1.0	ug/L							09/28/2023	
1,2-Dichloroethane	ND	1.0	ug/L							09/28/2023	
1,2-Dichloropropane	ND	1.0	ug/L							09/28/2023	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							09/28/2023	
1,3-Dichlorobenzene	ND	1.0	ug/L							09/28/2023	
1,4-Dichlorobenzene	ND	1.0	ug/L							09/28/2023	
2,2,4-Trimethylpentane	ND	5.0	ug/L							09/28/2023	
2-Butanone (MEK)	ND	5.0	ug/L							09/28/2023	
2-Methylnaphthalene	ND	5.0	ug/L							09/28/2023	
2-Propanone (acetone)	ND	20	ug/L							09/28/2023	
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							09/28/2023	
Acrylonitrile	ND	5.0	ug/L							09/28/2023	
Benzene	ND	1.0	ug/L							09/28/2023	
Bromochloromethane	ND	1.0	ug/L							09/28/2023	
Bromodichloromethane	ND	1.0	ug/L							09/28/2023	
Bromoform	ND	1.0	ug/L							09/28/2023	
Bromomethane	ND	5.0	ug/L							09/28/2023	
Carbon disulfide	ND	1.0	ug/L							09/28/2023	
Carbon tetrachloride	ND	1.0	ug/L							09/28/2023	
Chlorobenzene	ND	1.0	ug/L							09/28/2023	
Chloroethane	ND	5.0	ug/L							09/28/2023	
Chloroform	ND	1.0	ug/L							09/28/2023	
Chloromethane	ND	5.0	ug/L							09/28/2023	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							09/28/2023	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							09/28/2023	
Cyclohexane	ND	5.0	ug/L							09/28/2023	
Dibromochloromethane	ND	1.0	ug/L							09/28/2023	
Dibromomethane	ND	1.0	ug/L							09/28/2023	
Dichlorodifluoromethane	ND	5.0	ug/L							09/28/2023	
Diethyl ether	ND	5.0	ug/L							09/28/2023	
Diisopropyl Ether	ND	5.0	ug/L							09/28/2023	
Ethylbenzene	ND	1.0	ug/L							09/28/2023	
Ethyltertiarybutylether	ND	5.0	ug/L							09/28/2023	
Hexachloroethane	ND	5.0	ug/L							09/28/2023	
Hexane	ND	1.0	ug/L							09/28/2023	
Isopropylbenzene	ND	1.0	ug/L							09/28/2023	
m & p - Xylene	ND	2.0	ug/L							09/28/2023	
Methylcyclopentane	ND	1.0	ug/L							09/28/2023	
Methylene chloride	ND	5.0	ug/L							09/28/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
Blank (B3I2802-BLK1)											
Methyltertiarybutylether	ND	1.0	ug/L							09/28/2023	
Naphthalene	ND	5.0	ug/L							09/28/2023	
n-Butylbenzene	ND	1.0	ug/L							09/28/2023	
n-Heptane	ND	1.0	ug/L							09/28/2023	
n-Propylbenzene	ND	1.0	ug/L							09/28/2023	
o-Xylene	ND	1.0	ug/L							09/28/2023	
sec-Butylbenzene	ND	1.0	ug/L							09/28/2023	
Styrene	ND	1.0	ug/L							09/28/2023	
tert-Butylbenzene	ND	1.0	ug/L							09/28/2023	
tertiary Butyl Alcohol	ND	50	ug/L							09/28/2023	
tertiaryAmylmethylether	ND	5.0	ug/L							09/28/2023	
Tetrachloroethylene	ND	1.0	ug/L							09/28/2023	
Tetrahydrofuran	ND	5.0	ug/L							09/28/2023	
Toluene	ND	1.0	ug/L							09/28/2023	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							09/28/2023	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							09/28/2023	
Trichloroethylene	ND	1.0	ug/L							09/28/2023	
Trichlorofluoromethane	ND	1.0	ug/L							09/28/2023	
Vinyl chloride	ND	1.0	ug/L							09/28/2023	
Surrogate: Bromofluorobenzene	*51.0*		ug/L	*50.00*		*102*	*85-115*			09/28/2023	
Surrogate: Dibromofluoromethane	*51.2*		ug/L	*50.00*		*102*	*82.7-115*			09/28/2023	
Surrogate: Toluene-d8	*50.0*		ug/L	*50.00*		*100*	*85-115*			09/28/2023	
LCS (B3I2802-BS1)											
1,1,1,2-Tetrachloroethane	47.9	1.0	ug/L	50.00		95.8	70-130			09/28/2023	
1,1,1-Trichloroethane	49.1	1.0	ug/L	50.00		98.2	70-130			09/28/2023	
1,1,2,2-Tetrachloroethane	49.6	1.0	ug/L	50.00		99.3	70-130			09/28/2023	
1,1,2-Trichloroethane	50.5	1.0	ug/L	50.00		101	70-130			09/28/2023	
1,1,2-Trichlorotrifluoroethane	44.7	1.0	ug/L	50.00		89.4	70-130			09/28/2023	
1,1-Dichloroethane	49.6	1.0	ug/L	50.00		99.3	70-130			09/28/2023	
1,1-Dichloroethylene	44.8	1.0	ug/L	50.00		89.6	70-130			09/28/2023	
1,2,3-Trichlorobenzene	50.3	5.0	ug/L	50.00		101	70-130			09/28/2023	
1,2,3-Trichloropropane	49.5	1.0	ug/L	50.00		99.0	70-130			09/28/2023	
1,2,3-Trimethylbenzene	47.6	1.0	ug/L	50.00		95.1	70-130			09/28/2023	
1,2,4-Trichlorobenzene	50.3	5.0	ug/L	50.00		101	70-130			09/28/2023	
1,2,4-Trimethylbenzene	48.9	1.0	ug/L	50.00		97.7	70-130			09/28/2023	
1,2-Dibromo-3-chloropropane	51.2	5.0	ug/L	50.00		102	70-130			09/28/2023	
1,2-Dibromoethane	51.1	1.0	ug/L	50.00		102	70-130			09/28/2023	
1,2-Dichlorobenzene	49.1	1.0	ug/L	50.00		98.1	70-130			09/28/2023	
1,2-Dichloroethane	49.5	1.0	ug/L	50.00		99.1	70-130			09/28/2023	
1,2-Dichloropropane	50.2	1.0	ug/L	50.00		100	70-130			09/28/2023	
1,3,5-Trimethylbenzene	48.8	1.0	ug/L	50.00		97.6	70-130			09/28/2023	
1,3-Dichlorobenzene	49.4	1.0	ug/L	50.00		98.8	70-130			09/28/2023	
1,4-Dichlorobenzene	49.4	1.0	ug/L	50.00		98.8	70-130			09/28/2023	
2,2,4-Trimethylpentane	46.1	5.0	ug/L	50.00		92.2	70-130			09/28/2023	
2-Butanone (MEK)	47.9	5.0	ug/L	50.00		95.9	70-130			09/28/2023	
2-Methylnaphthalene	43.3	5.0	ug/L	50.00		86.7	70-130			09/28/2023	
2-Propanone (acetone)	50.6	20	ug/L	50.00		101	70-130			09/28/2023	
4-Methyl-2-pentanone (MIBK)	49.2	5.0	ug/L	50.00		98.4	70-130			09/28/2023	
Acrylonitrile	47.9	5.0	ug/L	50.00		95.7	70-130			09/28/2023	
Benzene	47.8	1.0	ug/L	50.00		95.7	70-130			09/28/2023	
Bromochloromethane	48.6	1.0	ug/L	50.00		97.2	70-130			09/28/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
LCS (B3I2802-BS1)											
Bromodichloromethane	50.5	1.0	ug/L	50.00		101	70-130			09/28/2023	
Bromoform	52.0	1.0	ug/L	50.00		104	70-130			09/28/2023	
Bromomethane	50.0	5.0	ug/L	50.00		100	70-130			09/28/2023	
Carbon disulfide	44.4	1.0	ug/L	50.00		88.7	70-130			09/28/2023	
Carbon tetrachloride	45.8	1.0	ug/L	50.00		91.6	70-130			09/28/2023	
Chlorobenzene	49.5	1.0	ug/L	50.00		98.9	70-130			09/28/2023	
Chloroethane	47.1	5.0	ug/L	50.00		94.3	70-130			09/28/2023	
Chloroform	49.3	1.0	ug/L	50.00		98.6	70-130			09/28/2023	
Chloromethane	50.9	5.0	ug/L	50.00		102	70-130			09/28/2023	
cis-1,2-Dichloroethylene	48.0	1.0	ug/L	50.00		96.0	70-130			09/28/2023	
cis-1,3-Dichloropropylene	50.9	1.0	ug/L	50.00		102	70-130			09/28/2023	
Cyclohexane	43.0	5.0	ug/L	50.00		86.0	70-130			09/28/2023	
Dibromochloromethane	49.1	1.0	ug/L	50.00		98.2	70-130			09/28/2023	
Dibromomethane	49.1	1.0	ug/L	50.00		98.1	70-130			09/28/2023	
Dichlorodifluoromethane	49.3	5.0	ug/L	50.00		98.5	70-130			09/28/2023	
Diethyl ether	48.4	5.0	ug/L	50.00		96.9	70-130			09/28/2023	
Diisopropyl Ether	48.3	5.0	ug/L	50.00		96.7	70-130			09/28/2023	
Ethylbenzene	47.3	1.0	ug/L	50.00		94.6	70-130			09/28/2023	
Ethyltertiarybutylether	49.8	5.0	ug/L	50.00		99.5	70-130			09/28/2023	
Hexachloroethane	48.3	5.0	ug/L	50.00		96.7	70-130			09/28/2023	
Hexane	46.8	1.0	ug/L	50.00		93.6	70-130			09/28/2023	
Isopropylbenzene	48.0	1.0	ug/L	50.00		96.1	70-130			09/28/2023	
m & p - Xylene	98.0	2.0	ug/L	100.0		98.0	70-130			09/28/2023	
Methylcyclopentane	45.8	1.0	ug/L	50.00		91.6	70-130			09/28/2023	
Methylene chloride	47.8	5.0	ug/L	50.00		95.6	70-130			09/28/2023	
Methyltertiarybutylether	51.8	1.0	ug/L	50.00		104	70-130			09/28/2023	
Naphthalene	51.0	5.0	ug/L	50.00		102	70-130			09/28/2023	
n-Butylbenzene	49.1	1.0	ug/L	50.00		98.1	70-130			09/28/2023	
n-Heptane	50.8	1.0	ug/L	50.00		102	70-130			09/28/2023	
n-Propylbenzene	49.4	1.0	ug/L	50.00		98.8	70-130			09/28/2023	
o-Xylene	49.3	1.0	ug/L	50.00		98.7	70-130			09/28/2023	
sec-Butylbenzene	48.4	1.0	ug/L	50.00		96.8	70-130			09/28/2023	
Styrene	50.7	1.0	ug/L	50.00		101	70-130			09/28/2023	
tert-Butylbenzene	48.6	1.0	ug/L	50.00		97.3	70-130			09/28/2023	
tertiary Butyl Alcohol	253	50	ug/L	250.0		101	70-130			09/28/2023	
tertiaryAmylmethylether	49.4	5.0	ug/L	50.00		98.9	70-130			09/28/2023	
Tetrachloroethylene	48.4	1.0	ug/L	50.00		96.9	70-130			09/28/2023	
Tetrahydrofuran	50.0	5.0	ug/L	50.00		100	70-130			09/28/2023	
Toluene	47.3	1.0	ug/L	50.00		94.6	70-130			09/28/2023	
trans-1,2-Dichloroethylene	48.6	1.0	ug/L	50.00		97.1	70-130			09/28/2023	
trans-1,3-Dichloropropylene	51.3	1.0	ug/L	50.00		103	70-130			09/28/2023	
Trichloroethylene	48.4	1.0	ug/L	50.00		96.9	70-130			09/28/2023	
Trichlorofluoromethane	47.3	1.0	ug/L	50.00		94.5	70-130			09/28/2023	
Vinyl chloride	49.9	1.0	ug/L	50.00		99.8	70-130			09/28/2023	
Surrogate: Bromofluorobenzene	*50.6*		ug/L	*50.00*		*101*	*85-115*			09/28/2023	
Surrogate: Dibromofluoromethane	*49.9*		ug/L	*50.00*		*99.7*	*82.7-115*			09/28/2023	
Surrogate: Toluene-d8	*50.6*		ug/L	*50.00*		*101*	*85-115*			09/28/2023	
Matrix Spike (B3I2802-MS1)	**Source: 2309322-03**										
1,1,1,2-Tetrachloroethane	49.2	1.0	ug/L	50.00	ND	98.5	70-130			09/28/2023	
1,1,1-Trichloroethane	53.3	1.0	ug/L	50.00	ND	107	70-130			09/28/2023	
1,1,2,2-Tetrachloroethane	48.4	1.0	ug/L	50.00	ND	96.8	70-130			09/28/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
Matrix Spike (B3I2802-MS1)	**Source: 2309322-03**										
1,1,2-Trichloroethane	51.1	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
1,1,2-Trichlorotrifluoroethane	51.4	1.0	ug/L	50.00	ND	103	70-130			09/28/2023	
1,1-Dichloroethane	50.7	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,1-Dichloroethylene	49.4	1.0	ug/L	50.00	ND	98.8	70-130			09/28/2023	
1,2,3-Trichlorobenzene	47.0	5.0	ug/L	50.00	ND	94.0	70-130			09/28/2023	
1,2,3-Trichloropropane	49.3	1.0	ug/L	50.00	ND	98.6	70-130			09/28/2023	
1,2,3-Trimethylbenzene	48.3	1.0	ug/L	50.00	ND	96.6	70-130			09/28/2023	
1,2,4-Trichlorobenzene	47.0	5.0	ug/L	50.00	ND	94.0	70-130			09/28/2023	
1,2,4-Trimethylbenzene	49.9	1.0	ug/L	50.00	ND	99.9	70-130			09/28/2023	
1,2-Dibromo-3-chloropropane	48.4	5.0	ug/L	50.00	ND	96.8	70-130			09/28/2023	
1,2-Dibromoethane	50.9	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
1,2-Dichlorobenzene	49.1	1.0	ug/L	50.00	ND	98.1	70-130			09/28/2023	
1,2-Dichloroethane	50.6	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,2-Dichloropropane	50.7	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,3,5-Trimethylbenzene	50.6	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
1,3-Dichlorobenzene	49.3	1.0	ug/L	50.00	ND	98.6	70-130			09/28/2023	
1,4-Dichlorobenzene	49.1	1.0	ug/L	50.00	ND	98.2	70-130			09/28/2023	
2,2,4-Trimethylpentane	48.6	5.0	ug/L	50.00	ND	97.2	70-130			09/28/2023	
2-Butanone (MEK)	46.5	5.0	ug/L	50.00	ND	93.1	70-130			09/28/2023	
2-Methylnaphthalene	36.7	5.0	ug/L	50.00	ND	73.4	70-130			09/28/2023	
2-Propanone (acetone)	50.7	20	ug/L	50.00	ND	101	70-130			09/28/2023	
4-Methyl-2-pentanone (MIBK)	47.2	5.0	ug/L	50.00	ND	94.3	70-130			09/28/2023	
Acrylonitrile	46.0	5.0	ug/L	50.00	ND	91.9	70-130			09/28/2023	
Benzene	50.7	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Bromochloromethane	49.2	1.0	ug/L	50.00	ND	98.5	70-130			09/28/2023	
Bromodichloromethane	50.3	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Bromoform	50.6	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Bromomethane	49.9	5.0	ug/L	50.00	ND	99.7	70-130			09/28/2023	
Carbon disulfide	47.2	1.0	ug/L	50.00	ND	94.5	70-130			09/28/2023	
Carbon tetrachloride	50.7	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Chlorobenzene	51.8	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Chloroethane	52.0	5.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Chloroform	50.9	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
Chloromethane	53.1	5.0	ug/L	50.00	ND	106	70-130			09/28/2023	
cis-1,2-Dichloroethylene	49.0	1.0	ug/L	50.00	ND	98.0	70-130			09/28/2023	
cis-1,3-Dichloropropylene	50.1	1.0	ug/L	50.00	ND	100	70-130			09/28/2023	
Cyclohexane	50.0	5.0	ug/L	50.00	ND	100	70-130			09/28/2023	
Dibromochloromethane	48.3	1.0	ug/L	50.00	ND	96.6	70-130			09/28/2023	
Dibromomethane	50.0	1.0	ug/L	50.00	ND	100	70-130			09/28/2023	
Dichlorodifluoromethane	57.7	5.0	ug/L	50.00	ND	115	70-130			09/28/2023	
Diethyl ether	47.6	5.0	ug/L	50.00	ND	95.2	70-130			09/28/2023	
Diisopropyl Ether	47.6	5.0	ug/L	50.00	ND	95.1	70-130			09/28/2023	
Ethylbenzene	50.4	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Ethyltertiarybutylether	47.2	5.0	ug/L	50.00	ND	94.4	70-130			09/28/2023	
Hexachloroethane	48.2	5.0	ug/L	50.00	ND	96.5	70-130			09/28/2023	
Hexane	51.8	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Isopropylbenzene	50.3	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
m & p - Xylene	103	2.0	ug/L	100.0	ND	103	70-130			09/28/2023	
Methylcyclopentane	55.1	1.0	ug/L	50.00	ND	110	70-130			09/28/2023	
Methylene chloride	48.6	5.0	ug/L	50.00	ND	97.2	70-130			09/28/2023	
Methyltertiarybutylether	49.4	1.0	ug/L	50.00	ND	98.8	70-130			09/28/2023	
Naphthalene	47.3	5.0	ug/L	50.00	ND	94.6	70-130			09/28/2023	

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
Matrix Spike (B3I2802-MS1)	**Source: 2309322-03**										
n-Butylbenzene	49.7	1.0	ug/L	50.00	ND	99.5	70-130			09/28/2023	
n-Heptane	55.3	1.0	ug/L	50.00	ND	111	70-130			09/28/2023	
n-Propylbenzene	51.5	1.0	ug/L	50.00	ND	103	70-130			09/28/2023	
o-Xylene	51.6	1.0	ug/L	50.00	ND	103	70-130			09/28/2023	
sec-Butylbenzene	50.7	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
Styrene	52.2	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
tert-Butylbenzene	50.8	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
tertiary Butyl Alcohol	230	50	ug/L	250.0	ND	91.9	70-130			09/28/2023	
tertiaryAmylmethylether	48.3	5.0	ug/L	50.00	ND	96.5	70-130			09/28/2023	
Tetrachloroethylene	51.6	1.0	ug/L	50.00	ND	103	70-130			09/28/2023	
Tetrahydrofuran	49.8	5.0	ug/L	50.00	ND	99.7	70-130			09/28/2023	
Toluene	50.4	1.0	ug/L	50.00	ND	101	70-130			09/28/2023	
trans-1,2-Dichloroethylene	51.0	1.0	ug/L	50.00	ND	102	70-130			09/28/2023	
trans-1,3-Dichloropropylene	49.2	1.0	ug/L	50.00	ND	98.5	70-130			09/28/2023	
Trichloroethylene	51.8	1.0	ug/L	50.00	ND	104	70-130			09/28/2023	
Trichlorofluoromethane	54.8	1.0	ug/L	50.00	ND	110	70-130			09/28/2023	
Vinyl chloride	55.2	1.0	ug/L	50.00	ND	110	70-130			09/28/2023	
Surrogate: Bromofluorobenzene	*49.1*		ug/L	*50.00*		*98.2*	*85-115*			09/28/2023	
Surrogate: Dibromofluoromethane	*50.4*		ug/L	*50.00*		*101*	*82.7-115*			09/28/2023	
Surrogate: Toluene-d8	*50.5*		ug/L	*50.00*		*101*	*85-115*			09/28/2023	
Matrix Spike Dup (B3I2802-MSD1)	**Source: 2309322-03**										
1,1,1,2-Tetrachloroethane	49.0	1.0	ug/L	50.00	ND	98.0	70-130	0.500	30	09/28/2023	
1,1,1-Trichloroethane	53.9	1.0	ug/L	50.00	ND	108	70-130	1.04	30	09/28/2023	
1,1,2,2-Tetrachloroethane	48.6	1.0	ug/L	50.00	ND	97.3	70-130	0.468	30	09/28/2023	
1,1,2-Trichloroethane	51.3	1.0	ug/L	50.00	ND	103	70-130	0.297	30	09/28/2023	
1,1,2-Trichlorotrifluoroethane	50.6	1.0	ug/L	50.00	ND	101	70-130	1.44	30	09/28/2023	
1,1-Dichloroethane	52.9	1.0	ug/L	50.00	ND	106	70-130	4.23	30	09/28/2023	
1,1-Dichloroethylene	50.6	1.0	ug/L	50.00	ND	101	70-130	2.33	30	09/28/2023	
1,2,3-Trichlorobenzene	49.0	5.0	ug/L	50.00	ND	98.0	70-130	4.24	30	09/28/2023	
1,2,3-Trichloropropane	49.4	1.0	ug/L	50.00	ND	98.8	70-130	0.168	30	09/28/2023	
1,2,3-Trimethylbenzene	49.9	1.0	ug/L	50.00	ND	99.8	70-130	3.21	30	09/28/2023	
1,2,4-Trichlorobenzene	49.0	5.0	ug/L	50.00	ND	98.0	70-130	4.24	30	09/28/2023	
1,2,4-Trimethylbenzene	51.2	1.0	ug/L	50.00	ND	102	70-130	2.54	30	09/28/2023	
1,2-Dibromo-3-chloropropane	49.5	5.0	ug/L	50.00	ND	99.0	70-130	2.25	30	09/28/2023	
1,2-Dibromoethane	50.4	1.0	ug/L	50.00	ND	101	70-130	1.05	30	09/28/2023	
1,2-Dichlorobenzene	50.2	1.0	ug/L	50.00	ND	100	70-130	2.19	30	09/28/2023	
1,2-Dichloroethane	51.0	1.0	ug/L	50.00	ND	102	70-130	0.760	30	09/28/2023	
1,2-Dichloropropane	51.5	1.0	ug/L	50.00	ND	103	70-130	1.47	30	09/28/2023	
1,3,5-Trimethylbenzene	51.7	1.0	ug/L	50.00	ND	103	70-130	2.02	30	09/28/2023	
1,3-Dichlorobenzene	50.6	1.0	ug/L	50.00	ND	101	70-130	2.68	30	09/28/2023	
1,4-Dichlorobenzene	50.8	1.0	ug/L	50.00	ND	102	70-130	3.35	30	09/28/2023	
2,2,4-Trimethylpentane	45.6	5.0	ug/L	50.00	ND	91.3	70-130	6.26	30	09/28/2023	
2-Butanone (MEK)	45.9	5.0	ug/L	50.00	ND	91.8	70-130	1.41	30	09/28/2023	
2-Methylnaphthalene	40.1	5.0	ug/L	50.00	ND	80.2	70-130	8.79	30	09/28/2023	
2-Propanone (acetone)	50.4	20	ug/L	50.00	ND	101	70-130	0.535	30	09/28/2023	
4-Methyl-2-pentanone (MIBK)	48.0	5.0	ug/L	50.00	ND	95.9	70-130	1.64	30	09/28/2023	
Acrylonitrile	46.9	5.0	ug/L	50.00	ND	93.8	70-130	2.02	30	09/28/2023	
Benzene	50.5	1.0	ug/L	50.00	ND	101	70-130	0.426	30	09/28/2023	
Bromochloromethane	50.3	1.0	ug/L	50.00	ND	101	70-130	2.10	30	09/28/2023	
Bromodichloromethane	51.0	1.0	ug/L	50.00	ND	102	70-130	1.44	30	09/28/2023	
Bromoform	50.3	1.0	ug/L	50.00	ND	101	70-130	0.723	30	09/28/2023	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2802 - Method: 5030				**Prepared: 09/28/2023**							
Matrix Spike Dup (B3I2802-MSD1)	**Source: 2309322-03**										
Bromomethane	54.1	5.0	ug/L	50.00	ND	108	70-130	8.20	30	09/28/2023	
Carbon disulfide	48.8	1.0	ug/L	50.00	ND	97.6	70-130	3.27	30	09/28/2023	
Carbon tetrachloride	51.4	1.0	ug/L	50.00	ND	103	70-130	1.44	30	09/28/2023	
Chlorobenzene	51.6	1.0	ug/L	50.00	ND	103	70-130	0.421	30	09/28/2023	
Chloroethane	51.9	5.0	ug/L	50.00	ND	104	70-130	0.207	30	09/28/2023	
Chloroform	52.2	1.0	ug/L	50.00	ND	104	70-130	2.53	30	09/28/2023	
Chloromethane	54.5	5.0	ug/L	50.00	ND	109	70-130	2.55	30	09/28/2023	
cis-1,2-Dichloroethylene	50.7	1.0	ug/L	50.00	ND	101	70-130	3.43	30	09/28/2023	
cis-1,3-Dichloropropylene	50.6	1.0	ug/L	50.00	ND	101	70-130	0.916	30	09/28/2023	
Cyclohexane	49.9	5.0	ug/L	50.00	ND	99.8	70-130	0.281	30	09/28/2023	
Dibromochloromethane	48.3	1.0	ug/L	50.00	ND	96.7	70-130	0.0401	30	09/28/2023	
Dibromomethane	50.0	1.0	ug/L	50.00	ND	100	70-130	0.0538	30	09/28/2023	
Dichlorodifluoromethane	57.3	5.0	ug/L	50.00	ND	115	70-130	0.707	30	09/28/2023	
Diethyl ether	49.5	5.0	ug/L	50.00	ND	99.0	70-130	3.86	30	09/28/2023	
Diisopropyl Ether	48.9	5.0	ug/L	50.00	ND	97.9	70-130	2.90	30	09/28/2023	
Ethylbenzene	50.1	1.0	ug/L	50.00	ND	100	70-130	0.635	30	09/28/2023	
Ethyltertiarybutylether	49.5	5.0	ug/L	50.00	ND	98.9	70-130	4.67	30	09/28/2023	
Hexachloroethane	49.9	5.0	ug/L	50.00	ND	99.8	70-130	3.42	30	09/28/2023	
Hexane	47.6	1.0	ug/L	50.00	ND	95.1	70-130	8.47	30	09/28/2023	
Isopropylbenzene	51.5	1.0	ug/L	50.00	ND	103	70-130	2.37	30	09/28/2023	
m & p - Xylene	103	2.0	ug/L	100.0	ND	103	70-130	0.0806	30	09/28/2023	
Methylcyclopentane	49.3	1.0	ug/L	50.00	ND	98.6	70-130	11.0	30	09/28/2023	
Methylene chloride	49.7	5.0	ug/L	50.00	ND	99.4	70-130	2.28	30	09/28/2023	
Methyltertiarybutylether	51.0	1.0	ug/L	50.00	ND	102	70-130	3.13	30	09/28/2023	
Naphthalene	49.7	5.0	ug/L	50.00	ND	99.4	70-130	4.98	30	09/28/2023	
n-Butylbenzene	50.8	1.0	ug/L	50.00	ND	102	70-130	2.15	30	09/28/2023	
n-Heptane	49.8	1.0	ug/L	50.00	ND	99.6	70-130	10.4	30	09/28/2023	
n-Propylbenzene	51.6	1.0	ug/L	50.00	ND	103	70-130	0.286	30	09/28/2023	
o-Xylene	51.8	1.0	ug/L	50.00	ND	104	70-130	0.446	30	09/28/2023	
sec-Butylbenzene	51.4	1.0	ug/L	50.00	ND	103	70-130	1.28	30	09/28/2023	
Styrene	52.2	1.0	ug/L	50.00	ND	104	70-130	0.101	30	09/28/2023	
tert-Butylbenzene	52.2	1.0	ug/L	50.00	ND	104	70-130	2.64	30	09/28/2023	
tertiary Butyl Alcohol	242	50	ug/L	250.0	ND	96.8	70-130	5.21	30	09/28/2023	
tertiaryAmylmethylether	48.8	5.0	ug/L	50.00	ND	97.7	70-130	1.17	30	09/28/2023	
Tetrachloroethylene	52.2	1.0	ug/L	50.00	ND	104	70-130	1.19	30	09/28/2023	
Tetrahydrofuran	51.8	5.0	ug/L	50.00	ND	104	70-130	3.81	30	09/28/2023	
Toluene	49.9	1.0	ug/L	50.00	ND	99.8	70-130	1.04	30	09/28/2023	
trans-1,2-Dichloroethylene	52.4	1.0	ug/L	50.00	ND	105	70-130	2.83	30	09/28/2023	
trans-1,3-Dichloropropylene	50.1	1.0	ug/L	50.00	ND	100	70-130	1.79	30	09/28/2023	
Trichloroethylene	52.4	1.0	ug/L	50.00	ND	105	70-130	1.02	30	09/28/2023	
Trichlorofluoromethane	54.9	1.0	ug/L	50.00	ND	110	70-130	0.212	30	09/28/2023	
Vinyl chloride	56.0	1.0	ug/L	50.00	ND	112	70-130	1.50	30	09/28/2023	
Surrogate: Bromofluorobenzene	*50.0*		ug/L	*50.00*		*99.9*	*85-115*			09/28/2023	
Surrogate: Dibromofluoromethane	*49.8*		ug/L	*50.00*		*99.6*	*82.7-115*			09/28/2023	
Surrogate: Toluene-d8	*49.8*		ug/L	*50.00*		*99.6*	*85-115*			09/28/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2737 - Method: 3510 Water SVOC				**Prepared: 09/27/2023**							
Blank (B3I2737-BLK1)											
2-Methylnaphthalene	ND	5.0	ug/L							09/29/2023	
Acenaphthene	ND	1.0	ug/L							09/29/2023	
Acenaphthylene	ND	1.0	ug/L							09/29/2023	
Anthracene	ND	1.0	ug/L							09/29/2023	
Benz[a]anthracene	ND	1.0	ug/L							09/29/2023	
Benzo[a]pyrene	ND	1.0	ug/L							09/29/2023	
Benzo[b]fluoranthene	ND	1.0	ug/L							09/29/2023	
Benzo[g,h,i]perylene	ND	1.0	ug/L							09/29/2023	
Benzo[k]fluoranthene	ND	1.0	ug/L							09/29/2023	
Chrysene	ND	1.0	ug/L							09/29/2023	
Dibenz[a,h]anthracene	ND	2.0	ug/L							09/29/2023	
Fluoranthene	ND	1.0	ug/L							09/29/2023	
Fluorene	ND	1.0	ug/L							09/29/2023	
Indeno(1,2,3-c,d)pyrene	ND	2.0	ug/L							09/29/2023	
Naphthalene	ND	1.0	ug/L							09/29/2023	
Phenanthrene	ND	1.0	ug/L							09/29/2023	
Pyrene	ND	1.0	ug/L							09/29/2023	
Surrogate: 2-Fluorobiphenyl	*14.2*		ug/L	*25.00*		*56.9*	*20-101*			09/29/2023	
Surrogate: Nitrobenzene-d5	*15.1*		ug/L	*25.00*		*60.2*	*13-100*			09/29/2023	
Surrogate: p-Terphenyl-d14	*23.6*		ug/L	*25.00*		*94.5*	*18-150*			09/29/2023	
LCS (B3I2737-BS1)											
2-Methylnaphthalene	32.6	5.0	ug/L	50.00		65.3	25.3-79.1			09/29/2023	
Acenaphthene	34.5	1.0	ug/L	50.00		68.9	35.2-90.9			09/29/2023	
Acenaphthylene	38.1	1.0	ug/L	50.00		76.2	38.7-99.1			09/29/2023	
Anthracene	40.8	1.0	ug/L	50.00		81.6	53.9-106.8			09/29/2023	
Benz[a]anthracene	49.3	1.0	ug/L	50.00		98.7	52.5-113.7			09/29/2023	
Benzo[a]pyrene	46.8	1.0	ug/L	50.00		93.7	43.7-118			09/29/2023	
Benzo[b]fluoranthene	48.1	1.0	ug/L	50.00		96.2	44.1-118.6			09/29/2023	
Benzo[g,h,i]perylene	42.2	1.0	ug/L	50.00		84.3	25.8-127			09/29/2023	
Benzo[k]fluoranthene	46.6	1.0	ug/L	50.00		93.3	41.9-117.7			09/29/2023	
Chrysene	47.2	1.0	ug/L	50.00		94.3	53.1-114.9			09/29/2023	
Dibenz[a,h]anthracene	35.3	2.0	ug/L	50.00		70.7	23.4-134.7			09/29/2023	
Fluoranthene	44.9	1.0	ug/L	50.00		89.7	55-112.1			09/29/2023	
Fluorene	38.8	1.0	ug/L	50.00		77.6	42-98			09/29/2023	
Indeno(1,2,3-c,d)pyrene	40.9	2.0	ug/L	50.00		81.9	29.1-133.2			09/29/2023	
Naphthalene	30.8	1.0	ug/L	50.00		61.6	22-76.8			09/29/2023	
Phenanthrene	40.0	1.0	ug/L	50.00		80.0	54.5-102.4			09/29/2023	
Pyrene	45.4	1.0	ug/L	50.00		90.9	54.2-110.5			09/29/2023	
Surrogate: 2-Fluorobiphenyl	*16.1*		ug/L	*25.00*		*64.2*	*20-101*			09/29/2023	
Surrogate: Nitrobenzene-d5	*16.0*		ug/L	*25.00*		*63.9*	*13-100*			09/29/2023	
Surrogate: p-Terphenyl-d14	*23.9*		ug/L	*25.00*		*95.6*	*18-150*			09/29/2023	
LCS Dup (B3I2737-BSD1)											
2-Methylnaphthalene	34.4	5.0	ug/L	50.00		68.8	25.3-79.1	5.25	21.8	09/29/2023	
Acenaphthene	35.6	1.0	ug/L	50.00		71.2	35.2-90.9	3.31	19.1	09/29/2023	
Acenaphthylene	39.3	1.0	ug/L	50.00		78.6	38.7-99.1	3.16	18	09/29/2023	
Anthracene	41.0	1.0	ug/L	50.00		82.1	53.9-106.8	0.622	15	09/29/2023	
Benz[a]anthracene	49.1	1.0	ug/L	50.00		98.1	52.5-113.7	0.555	16	09/29/2023	
Benzo[a]pyrene	46.6	1.0	ug/L	50.00		93.1	43.7-118	0.553	22.8	09/29/2023	
Benzo[b]fluoranthene	47.4	1.0	ug/L	50.00		94.9	44.1-118.6	1.35	23.4	09/29/2023	
Benzo[g,h,i]perylene	41.2	1.0	ug/L	50.00		82.5	25.8-127	2.20	32.2	09/29/2023	

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MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2737 - Method: 3510 Water SVOC				**Prepared: 09/27/2023**							
LCS Dup (B3I2737-BSD1)											
Benzo[k]fluoranthene	46.0	1.0	ug/L	50.00		92.0	41.9-117.7	1.34	22.8	09/29/2023	
Chrysene	46.9	1.0	ug/L	50.00		93.8	53.1-114.9	0.526	16.3	09/29/2023	
Dibenz[a,h]anthracene	35.3	2.0	ug/L	50.00		70.5	23.4-134.7	0.212	29.8	09/29/2023	
Fluoranthene	45.4	1.0	ug/L	50.00		90.8	55-112.1	1.18	16.3	09/29/2023	
Fluorene	39.6	1.0	ug/L	50.00		79.2	42-98	2.05	16.4	09/29/2023	
Indeno(1,2,3-c,d)pyrene	40.5	2.0	ug/L	50.00		81.1	29.1-133.2	0.958	29.3	09/29/2023	
Naphthalene	32.4	1.0	ug/L	50.00		64.7	22-76.8	4.95	24.2	09/29/2023	
Phenanthrene	40.1	1.0	ug/L	50.00		80.2	54.5-102.4	0.246	15	09/29/2023	
Pyrene	44.8	1.0	ug/L	50.00		89.7	54.2-110.5	1.30	18.6	09/29/2023	
Surrogate: 2-Fluorobiphenyl	*15.5*		ug/L	*25.00*		*61.9*	*20-101*			09/29/2023	
Surrogate: Nitrobenzene-d5	*15.5*		ug/L	*25.00*		*61.8*	*13-100*			09/29/2023	
Surrogate: p-Terphenyl-d14	*21.9*		ug/L	*25.00*		*87.7*	*18-150*			09/29/2023	
Matrix Spike (B3I2737-MS1)	**Source: 2309322-03**										
2-Methylnaphthalene	34.1	5.3	ug/L	53.19	ND	64.1	13.4-95.1			09/29/2023	
Acenaphthene	35.6	1.1	ug/L	53.19	ND	66.9	35.2-95.8			09/29/2023	
Acenaphthylene	39.1	1.1	ug/L	53.19	ND	73.5	38.3-103.1			09/29/2023	
Anthracene	41.4	1.1	ug/L	53.19	ND	77.8	54.2-105.4			09/29/2023	
Benz[a]anthracene	48.5	1.1	ug/L	53.19	ND	91.2	39.8-119.3			09/29/2023	
Benzo[a]pyrene	45.0	1.1	ug/L	53.19	ND	84.5	30-125.5			09/29/2023	
Benzo[b]fluoranthene	45.4	1.1	ug/L	53.19	ND	85.3	29.9-124.8			09/29/2023	
Benzo[g,h,i]perylene	38.9	1.1	ug/L	53.19	ND	73.0	10-133.9			09/29/2023	
Benzo[k]fluoranthene	44.8	1.1	ug/L	53.19	ND	84.3	28.6-120.8			09/29/2023	
Chrysene	46.2	1.1	ug/L	53.19	ND	86.9	39.3-119.7			09/29/2023	
Dibenz[a,h]anthracene	32.9	2.1	ug/L	53.19	ND	61.9	10-140.4			09/29/2023	
Fluoranthene	46.0	1.1	ug/L	53.19	ND	86.6	53.7-110.6			09/29/2023	
Fluorene	40.4	1.1	ug/L	53.19	ND	75.9	43.6-100.7			09/29/2023	
Indeno(1,2,3-c,d)pyrene	37.8	2.1	ug/L	53.19	ND	71.0	12.4-140.5			09/29/2023	
Naphthalene	31.3	1.1	ug/L	53.19	ND	58.8	10-104.5			09/29/2023	
Phenanthrene	41.3	1.1	ug/L	53.19	ND	77.6	55.4-103.2			09/29/2023	
Pyrene	44.9	1.1	ug/L	53.19	ND	84.4	49.1-113.8			09/29/2023	
Surrogate: 2-Fluorobiphenyl	*16.2*		ug/L	*26.60*		*60.7*	*20-101*			09/29/2023	
Surrogate: Nitrobenzene-d5	*15.5*		ug/L	*26.60*		*58.2*	*13-100*			09/29/2023	
Surrogate: p-Terphenyl-d14	*22.1*		ug/L	*26.60*		*83.0*	*18-150*			09/29/2023	
Matrix Spike Dup (B3I2737-MSD1)	**Source: 2309322-03**										
2-Methylnaphthalene	37.0	5.3	ug/L	53.19	ND	69.5	13.4-95.1	8.13	54.2	09/29/2023	
Acenaphthene	37.8	1.1	ug/L	53.19	ND	71.0	35.2-95.8	5.99	34.5	09/29/2023	
Acenaphthylene	41.5	1.1	ug/L	53.19	ND	78.1	38.3-103.1	6.05	35	09/29/2023	
Anthracene	43.2	1.1	ug/L	53.19	ND	81.2	54.2-105.4	4.22	15	09/29/2023	
Benz[a]anthracene	51.0	1.1	ug/L	53.19	ND	95.8	39.8-119.3	4.93	21.1	09/29/2023	
Benzo[a]pyrene	48.3	1.1	ug/L	53.19	ND	90.8	30-125.5	7.09	27.1	09/29/2023	
Benzo[b]fluoranthene	48.9	1.1	ug/L	53.19	ND	92.0	29.9-124.8	7.58	27.2	09/29/2023	
Benzo[g,h,i]perylene	42.2	1.1	ug/L	53.19	ND	79.3	10-133.9	8.24	35.9	09/29/2023	
Benzo[k]fluoranthene	48.3	1.1	ug/L	53.19	ND	90.8	28.6-120.8	7.43	26.7	09/29/2023	
Chrysene	48.8	1.1	ug/L	53.19	ND	91.7	39.3-119.7	5.34	22.2	09/29/2023	
Dibenz[a,h]anthracene	35.9	2.1	ug/L	53.19	ND	67.5	10-140.4	8.54	39.2	09/29/2023	
Fluoranthene	47.9	1.1	ug/L	53.19	ND	90.1	53.7-110.6	3.98	18.2	09/29/2023	
Fluorene	42.3	1.1	ug/L	53.19	ND	79.5	43.6-100.7	4.71	24.7	09/29/2023	
Indeno(1,2,3-c,d)pyrene	41.3	2.1	ug/L	53.19	ND	77.7	12.4-140.5	8.99	33.5	09/29/2023	
Naphthalene	34.8	1.1	ug/L	53.19	ND	65.4	10-104.5	10.5	71.1	09/29/2023	
Phenanthrene	43.1	1.1	ug/L	53.19	ND	81.0	55.4-103.2	4.19	15	09/29/2023	

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Organics-Semivolatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3I2737 - Method: 3510 Water SVOC				**Prepared: 09/27/2023**							
Matrix Spike Dup (B3I2737-MSD1)	**Source: 2309322-03**										
Pyrene	46.7	1.1	ug/L	53.19	ND	87.9	49.1-113.8	4.06	18.9	09/29/2023	
Surrogate: 2-Fluorobiphenyl	*16.5*		ug/L	*26.60*		*62.1*	*20-101*			09/29/2023	
Surrogate: Nitrobenzene-d5	*16.2*		ug/L	*26.60*		*60.9*	*13-100*			09/29/2023	
Surrogate: p-Terphenyl-d14	*22.7*		ug/L	*26.60*		*85.4*	*18-150*			09/29/2023	

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Inorganics-Metals - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0321 - Method: 200.7/200.8				**Prepared: 10/03/2023**							
Blank (B3J0321-BLK1)											
Arsenic	ND	1.0	ug/L							10/09/2023	
Barium	ND	5.0	ug/L							10/09/2023	
Cadmium	ND	0.2	ug/L							10/09/2023	
Chromium	ND	1.0	ug/L							10/09/2023	
Copper	ND	1.0	ug/L							10/09/2023	
Lead	ND	1.0	ug/L							10/09/2023	
Selenium	ND	1.0	ug/L							10/16/2023	
Silver	ND	0.2	ug/L							10/16/2023	
Zinc	ND	5.0	ug/L							10/09/2023	
LCS (B3J0321-BS1)											
Arsenic	53.1	1.0	ug/L	50.00		106	85-115			10/09/2023	
Barium	52.0	5.0	ug/L	50.00		104	85-115			10/09/2023	
Cadmium	50.1	0.2	ug/L	50.00		100	85-115			10/09/2023	
Chromium	52.3	1.0	ug/L	50.00		105	85-115			10/09/2023	
Copper	52.5	1.0	ug/L	50.00		105	85-115			10/09/2023	
Lead	48.9	1.0	ug/L	50.00		97.9	85-115			10/09/2023	
Selenium	51.6	1.0	ug/L	50.00		103	85-115			10/16/2023	
Silver	47.2	0.2	ug/L	50.00		94.4	85-115			10/16/2023	
Zinc	52.7	5.0	ug/L	50.00		105	85-115			10/09/2023	
Matrix Spike (B3J0321-MS1)	**Source: 2309322-03**										
Arsenic	67.6	1.0	ug/L	50.00	16.5	102	70-130			10/09/2023	
Barium	208	5.0	ug/L	50.00	144	127	70-130			10/09/2023	
Cadmium	49.2	0.2	ug/L	50.00	0.3	97.8	70-130			10/09/2023	
Chromium	75.5	1.0	ug/L	50.00	19.8	111	70-130			10/09/2023	
Copper	73.7	1.0	ug/L	50.00	24.8	97.6	70-130			10/09/2023	
Lead	80.3	1.0	ug/L	50.00	36.3	87.9	70-130			10/09/2023	
Selenium	47.8	1.0	ug/L	50.00	1.8	92.2	70-130			10/16/2023	
Silver	45.6	0.2	ug/L	50.00	0.06	91.0	70-130			10/16/2023	
Zinc	133	5.0	ug/L	50.00	78.9	108	70-130			10/09/2023	
Matrix Spike Dup (B3J0321-MSD1)	**Source: 2309322-03**										
Arsenic	65.8	1.0	ug/L	50.00	16.5	98.7	70-130	2.64	20	10/09/2023	
Barium	206	5.0	ug/L	50.00	144	123	70-130	1.08	20	10/09/2023	
Cadmium	47.9	0.2	ug/L	50.00	0.3	95.2	70-130	2.67	20	10/09/2023	
Chromium	76.5	1.0	ug/L	50.00	19.8	113	70-130	1.33	20	10/09/2023	
Copper	72.6	1.0	ug/L	50.00	24.8	95.5	70-130	1.42	20	10/09/2023	
Lead	81.5	1.0	ug/L	50.00	36.3	90.3	70-130	1.48	20	10/09/2023	
Selenium	46.7	1.0	ug/L	50.00	1.8	89.8	70-130	2.52	20	10/16/2023	
Silver	44.7	0.2	ug/L	50.00	0.06	89.4	70-130	1.80	20	10/16/2023	
Zinc	129	5.0	ug/L	50.00	78.9	99.9	70-130	3.06	20	10/09/2023	
Batch B3J1732 - Method: 245.1				**Prepared: 10/17/2023**							
Blank (B3J1732-BLK1)											
Mercury	ND	0.2	ug/L							10/17/2023	
LCS (B3J1732-BS1)											
Mercury	4.0	0.2	ug/L	4.000		100	85-115			10/17/2023	
Matrix Spike (B3J1732-MS1)	**Source: 2309322-03**										
Mercury	4.1	0.2	ug/L	4.000	0.2	99.7	70-130			10/17/2023	

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Inorganics-Metals - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J1732 - Method: 245.1				**Prepared: 10/17/2023**							
Matrix Spike (B3J1732-MS2)	**Source: 2309378-03**										
Mercury	4.0	0.2	ug/L	4.000	ND	100	70-130			10/17/2023	
Matrix Spike Dup (B3J1732-MSD1)	**Source: 2309322-03**										
Mercury	4.1	0.2	ug/L	4.000	0.2	98.7	70-130	0.982	20	10/17/2023	
Matrix Spike Dup (B3J1732-MSD2)	**Source: 2309378-03**										
Mercury	3.9	0.2	ug/L	4.000	ND	98.7	70-130	1.58	20	10/17/2023	
Reference (B3J1732-SRM1)											
Mercury	3.9	0.2	ug/L	4.000		98.6	0-200			10/17/2023	

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

Analysis Request Sheet

EGLE

Lab Work Order Number	Project Name	Matrix
2309322	Imlay City DPW / 406 East 3rd Street, Imlay City, MI	WATER

Location ID	Program: 201	CC Email 1: carrj@aktpeerless.com	Project TAT Days	Sample Collector: Kammie Niswander
Dept-Division-District: RRD - Lansing Central	Activity	CC Email 2: niswanderk@aktpeerless.com	Project Due Date	Sample Collector Phone: 989-844-6442
State Project Manager: Janet Michaluk	Funding Source	CC Email 3	RUSH Accept Analysis hold time codes	Contract Firm: AKT Peerless
State Project Manager Email: MichalukJ@michigan.gov	Location Code: C033	Overflow Lab Choice 1		Contract Firm Primary Contact: Jeff Carr
State Project Manager Phone: 517-643-0314	SUD Location Code	Overflow Lab Choice 2		Primary Contact Phone: 989-754-9896

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01	AKT-1/TMW	9/20/2023	11:41am	6	
2	02	AKT-2/TMW	9/20/2023	1:10pm	5	
3	03	AKT-4/TMW	9/21/2023	10:56am	6	
4	04	AKT-7/TMW	9/21/2023	1:15pm	6	
5	05	W-1	9/20/2023	9:15am	6	
6	06	AKT-Dup W	9/20/2023		6	
7	07	MS - 4 | TMW	9/21/2023		6	
8	08	MSD - 4 | TMW	9/21/2023		6	
9	09	Trip Blank	9/20/2023		1	
10	10	Equipment Blank	9/20/2023		6	

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic	
Volatiles - Full List	1 2 3 4 5 6 7 8 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10
GRO	1 2 3 4 5 6 7 8 9 10
1,4 Dioxane	1 2 3 4 5 6 7 8 9 10
METH - Methane, Ethane, Ethene	
Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10
ON - Pesticides, PCBs	
Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10
Pesticides only	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10
Chlordane	1 2 3 4 5 6 7 8 9 10
BNA - Base Neutral Acids	
BNAs	1 2 3 4 5 6 7 8 9 10
PNAs only	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10
Acids only	1 2 3 4 5 6 7 8 9 10
Organic Specialty Request	
PFAS	1 2 3 4 5 6 7 8 9 10
Library search - Volatiles	1 2 3 4 5 6 7 8 9 10
Library search - SemiVols	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10
DRO / ORO	1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

OpMemo2 - Total	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Dissolved	1 2 3 4 5 6 7 8 9 10
(Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	
Michigan10 - Total	1 2 3 4 5 6 7 8 9 10
Michigan10 - Dissolved	1 2 3 4 5 6 7 8 9 10
(As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	

MAD - DISSOLVED METALS

Diss - Silver - Ag	1 2 3 4 5 6 7 8 9 10
Diss - Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Diss - Arsenic - As	1 2 3 4 5 6 7 8 9 10
Diss - Boron - B	1 2 3 4 5 6 7 8 9 10
Diss - Barium - Ba	1 2 3 4 5 6 7 8 9 10
Diss - Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Diss - Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Diss - Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Diss - Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Diss - Copper - Cu	1 2 3 4 5 6 7 8 9 10
Diss - Iron - Fe	1 2 3 4 5 6 7 8 9 10
Diss - Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Diss - Lithium - Li	1 2 3 4 5 6 7 8 9 10
Diss - Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Diss - Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Diss - Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Diss - Lead - Pb	1 2 3 4 5 6 7 8 9 10
Diss - Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Diss - Selenium - Se	1 2 3 4 5 6 7 8 9 10
Diss - Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Diss - Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Diss - Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Diss - Uranium - U	1 2 3 4 5 6 7 8 9 10
Diss - Vanadium - V	1 2 3 4 5 6 7 8 9 10
Diss - Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Diss - Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Diss - Potassium - K	1 2 3 4 5 6 7 8 9 10
Diss - Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Diss - Sodium - Na	1 2 3 4 5 6 7 8 9 10
Diss - Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
MD - Metals Dissolved	
Lab Filtration	1 2 3 4 5 6 7 8 9 10

MA - TOTAL METALS

Silver - Ag	1 2 3 4 5 6 7 8 9 10
Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Arsenic - As	1 2 3 4 5 6 7 8 9 10
Boron - B	1 2 3 4 5 6 7 8 9 10
Barium - Ba	1 2 3 4 5 6 7 8 9 10
Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Copper - Cu	1 2 3 4 5 6 7 8 9 10
Iron - Fe	1 2 3 4 5 6 7 8 9 10
Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Lithium - Li	1 2 3 4 5 6 7 8 9 10
Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Lead - Pb	1 2 3 4 5 6 7 8 9 10
Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Selenium - Se	1 2 3 4 5 6 7 8 9 10
Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Uranium - U	1 2 3 4 5 6 7 8 9 10
Vanadium - V	1 2 3 4 5 6 7 8 9 10
Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Potassium - K	1 2 3 4 5 6 7 8 9 10
Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Sodium - Na	1 2 3 4 5 6 7 8 9 10
Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
LHG - Low Level Mercury	
Mercury Low Level - Hg	1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GB	Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
GCN	Available Cyanide - CN (Amenable / Weak Acid Dissociable)	1 2 3 4 5 6 7 8 9 10
CA	Chlorophyll	1 2 3 4 5 6 7 8 9 10
GN	Ortho Phosphate - OP	1 2 3 4 5 6 7 8 9 10
GN	Diss Ortho Phosphate -*FF	1 2 3 4 5 6 7 8 9 10
GN	Nitrite - NO_2	1 2 3 4 5 6 7 8 9 10
GN	Nitrate - NO_3 (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Suspended Solids - SS	1 2 3 4 5 6 7 8 9 10
GN	Dissolved Solids - TDS	1 2 3 4 5 6 7 8 9 10
MN	Diss Solids - TDS (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Turbidity	1 2 3 4 5 6 7 8 9 10
MN	Total Alkalinity	1 2 3 4 5 6 7 8 9 10
MN	Bicarb/Carb Alkalinity (includes Total Alkalinity)	1 2 3 4 5 6 7 8 9 10
MN	Chloride - Cl	1 2 3 4 5 6 7 8 9 10
MN	Fluoride - F	1 2 3 4 5 6 7 8 9 10
MN	Sulfate - SO4	1 2 3 4 5 6 7 8 9 10
MN	Diss Chromium 6 -*FF	1 2 3 4 5 6 7 8 9 10
MN	Conductivity	1 2 3 4 5 6 7 8 9 10
MN	pH	1 2 3 4 5 6 7 8 9 10
GA	Chem Oxyg Dem - COD	1 2 3 4 5 6 7 8 9 10
GA	Diss Org Carbon - DOC-*FF	1 2 3 4 5 6 7 8 9 10
GN	Diss Org Carbon - DOC (LF) (Lab - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GA	Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
GA	Ammonia - NH3	1 2 3 4 5 6 7 8 9 10
GA	Nitrate+Nitrite - NO3+NO2	1 2 3 4 5 6 7 8 9 10
GA	Kjeldahl Nitrogen - KN	1 2 3 4 5 6 7 8 9 10
GA	Total Phosphorus - TP	1 2 3 4 5 6 7 8 9 10

* (FF)-Field Filtered

Chain of Custody

Relinquished by	Received By	Date / Time
Print Name & Org.: Kammie Niswander AKT	AKT Storage	9/20/23 7:00pm
Signature:		9/21/23 4:00pm
Print Name & Org.: AKT Storage	Melissa Smith	9/26/23 1322
Signature:		
Print Name & Org.:		
Signature:		

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

**MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

13 October 2023

Work Order: 2309324

Price: $750.00

Janet Michaluk
EGLE-RRD-LANSING
525 W. Allegan Street
Lansing, MI 48909

RE: IMLAY CITY DPW

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

MICHIGAN DEPARTMENT OF
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EGLE-RRD-LANSING	Project: IMLAY CITY DPW	
525 W. Allegan Street	Site Code: 44000116	**Reported:**
Lansing MI, 48909	Project Manager: Janet Michaluk	10/13/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
AKT-1/MW	2309324-01	Water	09/20/2023	09/26/2023	
Equipment Blank	2309324-02	Water	09/20/2023	09/26/2023	
Trip Blank	2309324-03	Water	09/20/2023	09/26/2023	

Notes and Definitions

ND	
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **9/26/2023 1:40:00PM** for client **EGLE-RRD-LANSING** as a part of project **IMLAY CITY DPW**.

Samples were logged and designated as Work Order # **2309324** on **9/27/2023 9:35:00AM**.

This Report was created **10/13/2023 1:10:32PM**.

Additional Notes/Narrative (if applicable):

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TEL: (517) 335-9800
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Client ID: AKT-1/MW

Lab ID: 2309324-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-22-4	**PFBA**	**4.4**	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-73-5	**PFBS**	**3.4**	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-85-9	**PFHpA**	**2.7**	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
307-24-4	**PFHxA**	**3.7**	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-67-1	**PFOA**	**14**	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2706-90-3	**PFPeA**	**3.4**	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*92.6 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*98.8 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*104 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*83.8 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*59.1 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	

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FAX: (517) 335-9600

Client ID: AKT-1/MW

Lab ID: 2309324-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*91.7 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*106 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*100 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*104 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*100 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*100 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*109 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	

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Client ID: Equipment Blank

Lab ID: 2309324-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*94.9 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*109 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*106 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*88.8 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*68.2 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*106 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*106 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	

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Client ID: Equipment Blank

Lab ID: 2309324-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*99.7 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*105 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*104 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*105 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*107 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*100 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*111 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	

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Client ID: Trip Blank

Lab ID: 2309324-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	10/04/23	B3J0344	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	10/04/23	B3J0344	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*113 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*96.0 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*96.5 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*82.8 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*66.0 %*	*25-250*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	

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Client ID: Trip Blank

Lab ID: 2309324-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*105 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*104 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*104 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*107 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*99.3 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*103 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*104 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*101 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*102 %*	*50-200*		*10/04/23*	B3J0344	*8327*	*BM*	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
Blank (B3J0344-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							10/04/2023	
3:3FTCA	ND	4.0	ng/L							10/04/2023	
4:2FTS	ND	2.0	ng/L							10/04/2023	
5:3FTCA	ND	2.0	ng/L							10/04/2023	
6:2FTS	ND	2.0	ng/L							10/04/2023	
7:3FTCA	ND	2.0	ng/L							10/04/2023	
8:2FTS	ND	2.0	ng/L							10/04/2023	
9Cl-PF3ONS	ND	2.0	ng/L							10/04/2023	
ADONA	ND	2.0	ng/L							10/04/2023	
HFPO-DA	ND	4.0	ng/L							10/04/2023	
NEtFOSAA	ND	2.0	ng/L							10/04/2023	
NMeFOSAA	ND	2.0	ng/L							10/04/2023	
PFBA	ND	4.0	ng/L							10/04/2023	
PFBS	ND	2.0	ng/L							10/04/2023	
PFBSA	ND	2.0	ng/L							10/04/2023	
PFDA	ND	2.0	ng/L							10/04/2023	
PFDoDA	ND	2.0	ng/L							10/04/2023	
PFDS	ND	2.0	ng/L							10/04/2023	
PFECHS	ND	2.0	ng/L							10/04/2023	
PFHpA	ND	2.0	ng/L							10/04/2023	
PFHpS	ND	2.0	ng/L							10/04/2023	
PFHxA	ND	2.0	ng/L							10/04/2023	
PFHxS	ND	2.0	ng/L							10/04/2023	
PFHxSA	ND	2.0	ng/L							10/04/2023	
PFNA	ND	2.0	ng/L							10/04/2023	
PFNS	ND	2.0	ng/L							10/04/2023	
PFOA	ND	2.0	ng/L							10/04/2023	
PFOS	ND	2.0	ng/L							10/04/2023	
PFOSA	ND	2.0	ng/L							10/04/2023	
PFPeA	ND	2.0	ng/L							10/04/2023	
PFPeS	ND	2.0	ng/L							10/04/2023	
PFTeDA	ND	4.0	ng/L							10/04/2023	
PFTrDA	ND	4.0	ng/L							10/04/2023	
PFUnDA	ND	2.0	ng/L							10/04/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*147*		ng/L	*149.9*		*98.2*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*156*		ng/L	*152.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*166*		ng/L	*153.5*		*108*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*174*		ng/L	*160.0*		*109*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*163*		ng/L	*160.0*		*102*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*148*		ng/L	*160.0*		*92.8*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C3-HFPODA	*362*		ng/L	*320.0*		*113*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFBS	*155*		ng/L	*149.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFHxS	*157*		ng/L	*151.6*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFBA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFHpA	*167*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFHxA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFPeA	*169*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C6-PFDA	*164*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*170*		ng/L	*160.0*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOA	*163*		ng/L	*160.0*		*102*	*50-200*			10/04/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
Blank (B3J0344-BLK1)											
Isotope Dilution Analog: 13C8-PFOS	*154*		ng/L	*153.3*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOSA	*166*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C9-PFNA	*162*		ng/L	*160.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*169*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*174*		ng/L	*160.0*		*109*	*50-200*			10/04/2023	
LCS (B3J0344-BS1)											
11Cl-PF3OUdS	41.3	2.0	ng/L	37.72		110	70-130			10/04/2023	
3:3FTCA	43.7	4.0	ng/L	40.00		109	70-130			10/04/2023	
4:2FTS	43.3	2.0	ng/L	37.48		115	70-130			10/04/2023	
5:3FTCA	44.1	2.0	ng/L	40.00		110	70-130			10/04/2023	
6:2FTS	43.1	2.0	ng/L	38.04		113	70-130			10/04/2023	
7:3FTCA	45.0	2.0	ng/L	40.00		113	70-130			10/04/2023	
8:2FTS	42.9	2.0	ng/L	38.40		112	70-130			10/04/2023	
9Cl-PF3ONS	42.8	2.0	ng/L	37.32		115	70-130			10/04/2023	
ADONA	43.1	2.0	ng/L	37.80		114	70-130			10/04/2023	
HFPO-DA	41.7	4.0	ng/L	40.00		104	70-130			10/04/2023	
NEtFOSAA	44.3	2.0	ng/L	40.00		111	70-130			10/04/2023	
NMeFOSAA	45.4	2.0	ng/L	40.00		114	70-130			10/04/2023	
PFBA	46.3	4.0	ng/L	40.00		116	70-130			10/04/2023	
PFBS	41.4	2.0	ng/L	35.48		117	70-130			10/04/2023	
PFBSA	45.6	2.0	ng/L	40.00		114	70-130			10/04/2023	
PFDA	48.6	2.0	ng/L	40.00		121	70-130			10/04/2023	
PFDoDA	47.7	2.0	ng/L	40.00		119	70-130			10/04/2023	
PFDS	42.6	2.0	ng/L	38.60		110	70-130			10/04/2023	
PFECHS	41.4	2.0	ng/L	36.96		112	70-130			10/04/2023	
PFHpA	45.7	2.0	ng/L	40.00		114	70-130			10/04/2023	
PFHpS	44.9	2.0	ng/L	38.12		118	70-130			10/04/2023	
PFHxA	45.6	2.0	ng/L	40.00		114	70-130			10/04/2023	
PFHxS	43.8	2.0	ng/L	36.56		120	70-130			10/04/2023	
PFHxSA	45.6	2.0	ng/L	40.00		114	70-130			10/04/2023	
PFNA	44.6	2.0	ng/L	40.00		112	70-130			10/04/2023	
PFNS	44.6	2.0	ng/L	38.48		116	70-130			10/04/2023	
PFOA	47.3	2.0	ng/L	40.00		118	70-130			10/04/2023	
PFOS	41.7	2.0	ng/L	37.12		112	70-130			10/04/2023	
PFOSA	44.8	2.0	ng/L	40.00		112	70-130			10/04/2023	
PFPeA	46.8	2.0	ng/L	40.00		117	70-130			10/04/2023	
PFPeS	44.7	2.0	ng/L	37.64		119	70-130			10/04/2023	
PFTeDA	48.1	4.0	ng/L	40.00		120	70-130			10/04/2023	
PFTrDA	42.3	4.0	ng/L	40.00		106	70-130			10/04/2023	
PFUnDA	47.6	2.0	ng/L	40.00		119	70-130			10/04/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*149*		ng/L	*149.9*		*99.2*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*156*		ng/L	*152.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*157*		ng/L	*153.5*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*168*		ng/L	*160.0*		*105*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*156*		ng/L	*160.0*		*97.6*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*141*		ng/L	*160.0*		*88.3*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C3-HFPODA	*350*		ng/L	*320.0*		*109*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFBS	*152*		ng/L	*149.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFHxS	*156*		ng/L	*151.6*		*103*	*50-200*			10/04/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
LCS (B3J0344-BS1)											
Isotope Dilution Analog: 13C4-PFBA	*169*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFHpA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFHxA	*167*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFPeA	*167*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C6-PFDA	*161*		ng/L	*160.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*167*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOA	*163*		ng/L	*160.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOS	*162*		ng/L	*153.3*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOSA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C9-PFNA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*166*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*169*		ng/L	*160.0*		*106*	*50-200*			10/04/2023	
LCS Dup (B3J0344-BSD1)											
11Cl-PF3OUdS	42.4	2.0	ng/L	37.72		112	70-130	2.48	200	10/04/2023	
3:3FTCA	47.0	4.0	ng/L	40.00		118	70-130	7.36	200	10/04/2023	
4:2FTS	44.1	2.0	ng/L	37.48		118	70-130	1.83	200	10/04/2023	
5:3FTCA	45.4	2.0	ng/L	40.00		113	70-130	2.77	200	10/04/2023	
6:2FTS	43.9	2.0	ng/L	38.04		115	70-130	1.93	200	10/04/2023	
7:3FTCA	44.1	2.0	ng/L	40.00		110	70-130	2.16	200	10/04/2023	
8:2FTS	45.6	2.0	ng/L	38.40		119	70-130	6.11	200	10/04/2023	
9Cl-PF3ONS	43.8	2.0	ng/L	37.32		117	70-130	2.35	200	10/04/2023	
ADONA	44.0	2.0	ng/L	37.80		116	70-130	2.02	200	10/04/2023	
HFPO-DA	48.9	4.0	ng/L	40.00		122	70-130	15.9	200	10/04/2023	
NEtFOSAA	46.1	2.0	ng/L	40.00		115	70-130	4.03	200	10/04/2023	
NMeFOSAA	48.1	2.0	ng/L	40.00		120	70-130	5.73	200	10/04/2023	
PFBA	47.5	4.0	ng/L	40.00		119	70-130	2.65	200	10/04/2023	
PFBS	40.9	2.0	ng/L	35.48		115	70-130	1.17	200	10/04/2023	
PFBSA	43.2	2.0	ng/L	40.00		108	70-130	5.59	200	10/04/2023	
PFDA	46.4	2.0	ng/L	40.00		116	70-130	4.46	200	10/04/2023	
PFDoDA	47.5	2.0	ng/L	40.00		119	70-130	0.378	200	10/04/2023	
PFDS	43.9	2.0	ng/L	38.60		114	70-130	2.82	200	10/04/2023	
PFECHS	42.6	2.0	ng/L	36.96		115	70-130	2.86	200	10/04/2023	
PFHpA	45.3	2.0	ng/L	40.00		113	70-130	0.967	200	10/04/2023	
PFHpS	44.4	2.0	ng/L	38.12		116	70-130	1.03	200	10/04/2023	
PFHxA	46.2	2.0	ng/L	40.00		116	70-130	1.31	200	10/04/2023	
PFHxS	43.7	2.0	ng/L	36.56		119	70-130	0.274	200	10/04/2023	
PFHxSA	43.4	2.0	ng/L	40.00		108	70-130	5.08	200	10/04/2023	
PFNA	45.3	2.0	ng/L	40.00		113	70-130	1.42	200	10/04/2023	
PFNS	43.9	2.0	ng/L	38.48		114	70-130	1.58	200	10/04/2023	
PFOA	47.7	2.0	ng/L	40.00		119	70-130	0.758	200	10/04/2023	
PFOS	43.8	2.0	ng/L	37.12		118	70-130	5.00	200	10/04/2023	
PFOSA	45.7	2.0	ng/L	40.00		114	70-130	1.86	200	10/04/2023	
PFPeA	46.5	2.0	ng/L	40.00		116	70-130	0.729	200	10/04/2023	
PFPeS	43.3	2.0	ng/L	37.64		115	70-130	3.32	200	10/04/2023	
PFTeDA	48.5	4.0	ng/L	40.00		121	70-130	0.994	200	10/04/2023	
PFTrDA	40.1	4.0	ng/L	40.00		100	70-130	5.44	200	10/04/2023	
PFUnDA	45.8	2.0	ng/L	40.00		114	70-130	3.77	200	10/04/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*149*		ng/L	*149.9*		*99.1*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*157*		ng/L	*152.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*186*		ng/L	*153.5*		*121*	*50-200*			10/04/2023	

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Lansing, MI 48909
TEL: (517) 335-9800
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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
LCS Dup (B3J0344-BSD1)											
Isotope Dilution Analog: 13C2-PFDoDA	*198*		ng/L	*160.0*		*124*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*183*		ng/L	*160.0*		*115*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*165*		ng/L	*160.0*		*103*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C3-HFPODA	*334*		ng/L	*320.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFBS	*153*		ng/L	*149.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFHxS	*162*		ng/L	*151.6*		*107*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFBA	*171*		ng/L	*160.0*		*107*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFHpA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFHxA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFPeA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C6-PFDA	*175*		ng/L	*160.0*		*110*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*188*		ng/L	*160.0*		*117*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOS	*161*		ng/L	*153.3*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOSA	*176*		ng/L	*160.0*		*110*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C9-PFNA	*166*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*167*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*204*		ng/L	*160.0*		*128*	*50-200*			10/04/2023	
MRL Check (B3J0344-MRL1)											
11Cl-PF3OUdS	4.06	2.0	ng/L	3.772		108	50-150			10/04/2023	
3:3FTCA	4.80	4.0	ng/L	4.000		120	50-150			10/04/2023	
4:2FTS	3.74	2.0	ng/L	3.748		99.8	50-150			10/04/2023	
5:3FTCA	4.50	2.0	ng/L	4.000		112	50-150			10/04/2023	
6:2FTS	4.08	2.0	ng/L	3.804		107	50-150			10/04/2023	
7:3FTCA	4.68	2.0	ng/L	4.000		117	50-150			10/04/2023	
8:2FTS	5.04	2.0	ng/L	3.840		131	50-150			10/04/2023	
9Cl-PF3ONS	4.00	2.0	ng/L	3.732		107	50-150			10/04/2023	
ADONA	4.02	2.0	ng/L	3.780		106	50-150			10/04/2023	
HFPO-DA	4.30	4.0	ng/L	4.000		108	50-150			10/04/2023	
NEtFOSAA	4.02	2.0	ng/L	4.000		100	50-150			10/04/2023	
NMeFOSAA	4.20	2.0	ng/L	4.000		105	50-150			10/04/2023	
PFBA	4.10	4.0	ng/L	4.000		102	50-150			10/04/2023	
PFBS	3.86	2.0	ng/L	3.548		109	50-150			10/04/2023	
PFBSA	4.24	2.0	ng/L	4.000		106	50-150			10/04/2023	
PFDA	3.84	2.0	ng/L	4.000		96.0	50-150			10/04/2023	
PFDoDA	4.40	2.0	ng/L	4.000		110	50-150			10/04/2023	
PFDS	4.00	2.0	ng/L	3.860		104	50-150			10/04/2023	
PFECHS	4.24	2.0	ng/L	3.696		115	50-150			10/04/2023	
PFHpA	4.08	2.0	ng/L	4.000		102	50-150			10/04/2023	
PFHpS	4.20	2.0	ng/L	3.812		110	50-150			10/04/2023	
PFHxA	4.02	2.0	ng/L	4.000		100	50-150			10/04/2023	
PFHxS	3.96	2.0	ng/L	3.656		108	50-150			10/04/2023	
PFHxSA	4.18	2.0	ng/L	4.000		104	50-150			10/04/2023	
PFNA	4.10	2.0	ng/L	4.000		102	50-150			10/04/2023	
PFNS	3.86	2.0	ng/L	3.848		100	50-150			10/04/2023	
PFOA	4.30	2.0	ng/L	4.000		108	50-150			10/04/2023	
PFOS	4.08	2.0	ng/L	3.712		110	50-150			10/04/2023	
PFOSA	4.30	2.0	ng/L	4.000		108	50-150			10/04/2023	
PFPeA	4.18	2.0	ng/L	4.000		104	50-150			10/04/2023	
PFPeS	4.04	2.0	ng/L	3.764		107	50-150			10/04/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
MRL Check (B3J0344-MRL1)											
PFTeDA	4.44	4.0	ng/L	4.000		111	50-150			10/04/2023	
PFTrDA	3.72	4.0	ng/L	4.000		93.0	50-150			10/04/2023	
PFUnDA	4.18	2.0	ng/L	4.000		104	50-150			10/04/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*149*		ng/L	*149.9*		*99.2*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*146*		ng/L	*152.0*		*95.7*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*154*		ng/L	*153.5*		*100*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*170*		ng/L	*160.0*		*106*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*159*		ng/L	*160.0*		*99.4*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*145*		ng/L	*160.0*		*90.8*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C3-HFPODA	*331*		ng/L	*320.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFBS	*154*		ng/L	*149.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFHxS	*158*		ng/L	*151.6*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFBA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFHpA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFHxA	*167*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFPeA	*169*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C6-PFDA	*166*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*170*		ng/L	*160.0*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOS	*159*		ng/L	*153.3*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOSA	*166*		ng/L	*160.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C9-PFNA	*162*		ng/L	*160.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*171*		ng/L	*160.0*		*107*	*50-200*			10/04/2023	
Matrix Spike (B3J0344-MS1)	**Source: 2309324-01**										
11Cl-PF3OUdS	40.1	2.0	ng/L	37.72	ND	106	70-130			10/04/2023	
3:3FTCA	45.8	4.0	ng/L	40.00	ND	115	70-130			10/04/2023	
4:2FTS	43.2	2.0	ng/L	37.48	ND	115	70-130			10/04/2023	
5:3FTCA	46.8	2.0	ng/L	40.00	ND	117	70-130			10/04/2023	
6:2FTS	45.1	2.0	ng/L	38.04	ND	119	70-130			10/04/2023	
7:3FTCA	48.6	2.0	ng/L	40.00	ND	122	70-130			10/04/2023	
8:2FTS	44.7	2.0	ng/L	38.40	ND	116	70-130			10/04/2023	
9Cl-PF3ONS	44.1	2.0	ng/L	37.32	ND	118	70-130			10/04/2023	
ADONA	43.7	2.0	ng/L	37.80	ND	116	70-130			10/04/2023	
HFPO-DA	47.7	4.0	ng/L	40.00	ND	119	70-130			10/04/2023	
NEtFOSAA	44.4	2.0	ng/L	40.00	ND	111	70-130			10/04/2023	
NMeFOSAA	49.6	2.0	ng/L	40.00	ND	124	70-130			10/04/2023	
PFBA	51.6	4.0	ng/L	40.00	4.38	118	70-130			10/04/2023	
PFBS	43.6	2.0	ng/L	35.48	3.40	113	70-130			10/04/2023	
PFBSA	45.8	2.0	ng/L	40.00	0.580	113	70-130			10/04/2023	
PFDA	46.6	2.0	ng/L	40.00	ND	116	70-130			10/04/2023	
PFDoDA	48.0	2.0	ng/L	40.00	ND	120	70-130			10/04/2023	
PFDS	43.5	2.0	ng/L	38.60	ND	113	70-130			10/04/2023	
PFECHS	45.1	2.0	ng/L	36.96	ND	122	70-130			10/04/2023	
PFHpA	48.8	2.0	ng/L	40.00	2.74	115	70-130			10/04/2023	
PFHpS	45.7	2.0	ng/L	38.12	ND	120	70-130			10/04/2023	
PFHxA	51.6	2.0	ng/L	40.00	3.74	120	70-130			10/04/2023	
PFHxS	43.1	2.0	ng/L	36.56	1.28	114	70-130			10/04/2023	
PFHxSA	45.5	2.0	ng/L	40.00	ND	114	70-130			10/04/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
Matrix Spike (B3J0344-MS1)	**Source: 2309324-01**										
PFNA	49.1	2.0	ng/L	40.00	1.78	118	70-130			10/04/2023	
PFNS	44.6	2.0	ng/L	38.48	ND	116	70-130			10/04/2023	
PFOA	63.1	2.0	ng/L	40.00	14.0	123	70-130			10/04/2023	
PFOS	43.8	2.0	ng/L	37.12	1.54	114	70-130			10/04/2023	
PFOSA	45.9	2.0	ng/L	40.00	ND	115	70-130			10/04/2023	
PFPeA	52.3	2.0	ng/L	40.00	3.42	122	70-130			10/04/2023	
PFPeS	42.9	2.0	ng/L	37.64	ND	114	70-130			10/04/2023	
PFTeDA	51.5	4.0	ng/L	40.00	ND	129	70-130			10/04/2023	
PFTrDA	42.9	4.0	ng/L	40.00	ND	107	70-130			10/04/2023	
PFUnDA	47.5	2.0	ng/L	40.00	ND	119	70-130			10/04/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*150*		ng/L	*149.9*		*100*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*153*		ng/L	*152.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*158*		ng/L	*153.5*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*163*		ng/L	*160.0*		*102*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*129*		ng/L	*160.0*		*80.8*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*88.4*		ng/L	*160.0*		*55.2*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C3-HFPODA	*342*		ng/L	*320.0*		*107*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFBS	*158*		ng/L	*149.0*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFHxS	*163*		ng/L	*151.6*		*108*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFBA	*151*		ng/L	*160.0*		*94.6*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFHpA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFHxA	*169*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFPeA	*168*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C6-PFDA	*170*		ng/L	*160.0*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*170*		ng/L	*160.0*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOA	*164*		ng/L	*160.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOS	*162*		ng/L	*153.3*		*106*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOSA	*170*		ng/L	*160.0*		*107*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C9-PFNA	*162*		ng/L	*160.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*163*		ng/L	*160.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*173*		ng/L	*160.0*		*108*	*50-200*			10/04/2023	
Matrix Spike Dup (B3J0344-MSD1)	**Source: 2309324-01**										
11Cl-PF3OUdS	40.6	2.0	ng/L	37.72	ND	108	70-130	1.34	30	10/04/2023	
3:3FTCA	48.5	4.0	ng/L	40.00	ND	121	70-130	5.60	30	10/04/2023	
4:2FTS	45.7	2.0	ng/L	37.48	ND	122	70-130	5.62	30	10/04/2023	
5:3FTCA	48.5	2.0	ng/L	40.00	ND	121	70-130	3.49	30	10/04/2023	
6:2FTS	43.9	2.0	ng/L	38.04	ND	115	70-130	2.83	30	10/04/2023	
7:3FTCA	48.4	2.0	ng/L	40.00	ND	121	70-130	0.536	30	10/04/2023	
8:2FTS	44.4	2.0	ng/L	38.40	ND	116	70-130	0.674	30	10/04/2023	
9Cl-PF3ONS	45.3	2.0	ng/L	37.32	ND	121	70-130	2.59	30	10/04/2023	
ADONA	45.4	2.0	ng/L	37.80	ND	120	70-130	3.86	30	10/04/2023	
HFPO-DA	48.1	4.0	ng/L	40.00	ND	120	70-130	1.00	30	10/04/2023	
NEtFOSAA	47.6	2.0	ng/L	40.00	ND	119	70-130	6.87	30	10/04/2023	
NMeFOSAA	49.3	2.0	ng/L	40.00	ND	123	70-130	0.445	30	10/04/2023	
PFBA	51.8	4.0	ng/L	40.00	4.38	119	70-130	0.425	30	10/04/2023	
PFBS	45.1	2.0	ng/L	35.48	3.40	118	70-130	3.38	30	10/04/2023	
PFBSA	46.5	2.0	ng/L	40.00	0.580	115	70-130	1.52	30	10/04/2023	
PFDA	47.8	2.0	ng/L	40.00	ND	119	70-130	2.50	30	10/04/2023	
PFDoDA	47.6	2.0	ng/L	40.00	ND	119	70-130	0.836	30	10/04/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3J0344 - Method: 3512				**Prepared: 10/03/2023**							
Matrix Spike Dup (B3J0344-MSD1)	**Source: 2309324-01**										
PFDS	43.6	2.0	ng/L	38.60	ND	113	70-130	0.275	30	10/04/2023	
PFECHS	44.2	2.0	ng/L	36.96	ND	119	70-130	2.11	30	10/04/2023	
PFHpA	50.2	2.0	ng/L	40.00	2.74	119	70-130	2.87	30	10/04/2023	
PFHpS	44.2	2.0	ng/L	38.12	ND	116	70-130	3.20	30	10/04/2023	
PFHxA	52.0	2.0	ng/L	40.00	3.74	121	70-130	0.811	30	10/04/2023	
PFHxS	44.0	2.0	ng/L	36.56	1.28	117	70-130	2.07	30	10/04/2023	
PFHxSA	46.2	2.0	ng/L	40.00	ND	116	70-130	1.61	30	10/04/2023	
PFNA	49.8	2.0	ng/L	40.00	1.78	120	70-130	1.41	30	10/04/2023	
PFNS	46.7	2.0	ng/L	38.48	ND	121	70-130	4.51	30	10/04/2023	
PFOA	62.1	2.0	ng/L	40.00	14.0	120	70-130	1.53	30	10/04/2023	
PFOS	45.7	2.0	ng/L	37.12	1.54	119	70-130	4.24	30	10/04/2023	
PFOSA	46.1	2.0	ng/L	40.00	ND	115	70-130	0.391	30	10/04/2023	
PFPeA	52.1	2.0	ng/L	40.00	3.42	122	70-130	0.460	30	10/04/2023	
PFPeS	44.4	2.0	ng/L	37.64	ND	118	70-130	3.44	30	10/04/2023	
PFTeDA	50.3	4.0	ng/L	40.00	ND	126	70-130	2.51	30	10/04/2023	
PFTrDA	44.3	4.0	ng/L	40.00	ND	111	70-130	3.35	30	10/04/2023	
PFUnDA	49.7	2.0	ng/L	40.00	ND	124	70-130	4.61	30	10/04/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*150*		ng/L	*149.9*		*99.8*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*153*		ng/L	*152.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*148*		ng/L	*153.5*		*96.4*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*150*		ng/L	*160.0*		*93.6*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*116*		ng/L	*160.0*		*72.3*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*73.9*		ng/L	*160.0*		*46.2*	*25-250*			10/04/2023	
Isotope Dilution Analog: 13C3-HFPODA	*332*		ng/L	*320.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFBS	*155*		ng/L	*149.0*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C3-PFHxS	*157*		ng/L	*151.6*		*104*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFBA	*150*		ng/L	*160.0*		*93.7*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C4-PFHpA	*163*		ng/L	*160.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFHxA	*163*		ng/L	*160.0*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C5-PFPeA	*165*		ng/L	*160.0*		*103*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C6-PFDA	*162*		ng/L	*160.0*		*101*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*156*		ng/L	*160.0*		*97.6*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOA	*159*		ng/L	*160.0*		*99.3*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOS	*156*		ng/L	*153.3*		*102*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C8-PFOSA	*167*		ng/L	*160.0*		*105*	*50-200*			10/04/2023	
Isotope Dilution Analog: 13C9-PFNA	*160*		ng/L	*160.0*		*100*	*50-200*			10/04/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*159*		ng/L	*160.0*		*99.6*	*50-200*			10/04/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*162*		ng/L	*160.0*		*101*	*50-200*			10/04/2023	

EGLE

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
2309324	Imlay City DPW / 406 East 3rd Street, Imlay City, MI	ENV WATER

Location ID	Program: 201	Report CC Email 1: carri@aktpeerless.com	Project TAT Days*	Sample Collector: Kammie Niswander
Dept-Division-District: RRD - Lansing Central	Activity	Report CC Email 2: niswanderk@aktpeerless.com	Report Batch QC Yes ☐ No ☐	Sample Collector Phone: 989-844-6442
State Project Manager: Janet Michaluk	Funding Source	Report CC Email 3	**Lab Use Only** Sample Receipt Temperature: 3.5 °C	Contract Firm: AKT Peerless
State Project Manager Email: MichalukJ@michigan.gov	Location Code: C033	Overflow Lab Choice 1	Received On Ice Yes ☑ No ☐	Contract Firm Primary Contact: Jeff Carr
State Project Manager Phone: 517-643-0314	SUD Location Code	Overflow Lab Choice 2		Primary Contact Phone: 989-754-9896

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01	AKT-1/TMW	9/20/2023	11:41am	3	
2	02	Equipment Blank	9/20/2023	11:41am	3	
3	03	Trip Blank	9/20/2023		1	
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

PFAS - Semi-Volatile Organic Compounds
PFAS - EPA 8327

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	Kammie Niswander AKT	AKT Storage	9/20/23 7:00pm
Signature:			
Print Name & Org.	AKT Storage	Melissa Smith	9/21/23 13:40
Signature:			
Print Name & Org.			/ / :
Signature:			