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· GEOTECHNICAL
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· PETROGRAPHY/CHEMISTRY

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Laundromat Property

1021 South Broadway Street
Menomonie, Wisconsin 54751

AET Report No. P-0002702

Date:

June 16, 2021

Prepared for:

Quarters Unlimited
N7487 State Highway 25
Menomonie, WI 54751

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June 16, 2021

Quarters Unlimited
N7487 State Highway 25
Menomonie, WI 54751

Attn: Wayne Moser, Owner
Submitted via Email: wmwasherman@gmail.com

RE: Phase II Environmental Site Assessment
Laundromat Property Site
1021 South Broadway Street
Menomonie, Wisconsin 54751
AET Project No. P-0002702.

Dear Mr. Moser:

American Engineering Testing, Inc. has completed Phase II Environmental Site Assessment services at the above referenced property located at 1021 South Broadway Street, Menomonie, Wisconsin. This Limited Phase II Environmental Site Assessment was done in accordance with our proposal no. P-0002702.

We appreciate the opportunity to serve you on this project. If you have any questions regarding the information presented in this Phase II Environmental Site Assessment report, or if we may be of additional assistance, please contact me.

Sincerely,
American Engineering Testing, Inc.

Dennis McComas, PG
Senior Geologist/ Due Diligence Manager

Phone: (651) 647-2759
E-mail: dmccomas@amengtest.com

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EXECUTIVE SUMMARY

American Engineering Testing, Inc. (AET) was authorized by Quarters Unlimited (the User) to conduct a Limited Phase II Environmental Site Assessment (ESA) for the Laundromat Property located at 1021 South Broadway Street in the City of Menomonie, Dunn County, Wisconsin (the Site).

This Limited Phase II ESA has revealed the following information regarding the potential environmental conditions assessed in connection with the Site:

- Soils encountered at the Site are primarily silty sands with gravel from the surface to approximately 13 feet below ground surface (bgs), silty clay from 13 to 16 feet bgs, and lean clay from 16 to 25 feet bgs. Field observations of the soil boring (GP-1) did not identify the presence of odors or solid waste within the existing soils. Field screening of the soils in the borings did not detect elevated levels of organic vapors.
- AET advanced the soil boring on the west side of the Site building. Laboratory analysis of the soil sample collected from the boring identified tetrachloroethylene (PCE) at concentrations exceeding the Wisconsin Department of Natural Resources (WDNR) soil to groundwater residual contaminant level (RCL) as outlined in NR 720 of the Wisconsin Administrative Code (WAC).
- Laboratory analyses detected various VOCs in each of the three soil gas samples analyzed. The measured results did not exceed the WDNR's calculated Vapor Risk Screening Levels (VRSLs) for small commercial buildings.

Low concentrations of PCE were detected in the soil sample collected from boring GP-1. The measured PCE concentration in this soil sample exceeded the WDNR soil to groundwater RCL. Field screening of additional deeper soils suggests that the PCE impacts may be isolated and do not extend significantly in a vertical direction beneath the pavement (25 feet bgs).

According to the "Wisconsin Spill Law", Chapter 292.11, Wisconsin Statutes, the discovery of petroleum and non-petroleum contamination constitutes a release to the environment. In accordance with the Spill Law, the owner of the Site and/or responsible party(s) associated with the release may have an obligation to notify the WDNR of the results from this limited site investigation. Reporting can be done by completing the WDNR form "Notification for Hazardous Substance Discharge (Non-Emergency Only)". Following notification, the WDNR may require further sampling and analysis to determine the degree and extent of contamination. Alternatively, they may determine that no further action is required based on the limited extent of the contamination, current site use, and general risk to the public.

1.0 INTRODUCTION

1.1 Site and User Identification

American Engineering Testing, Inc. (AET) was authorized by Quarters Unlimited to conduct a Limited Phase II Environmental Site Assessment (ESA) for the Laundromat Property located at 1021 South Broadway Street in the City of Menomonie, Wisconsin. Hereafter, Quarters Unlimited will be referred to as the "User" of this report, and the assessed property will be referred to as the "Site."

Figure 1 shows the Site location. **Appendix A** contains a list of the acronyms and abbreviations used in this report.

1.2 Purpose

AET understands the Site was residential prior to commercial development as a laundry facility in the 1960s. The User is considering selling the property for continued commercial use. Soil borings, soil vapor sampling, and a sub-slab vapor sample was used to evaluate potential soil, groundwater, and soil vapor contamination at the Site.

We have performed this Limited Phase II ESA for the following objective:

- To evaluate whether hazardous materials or petroleum products have impacted the soil or groundwater on the Site from past operations at the Site.

These objectives are based on AET's understanding of the User's needs and on the User's authorization of the Scope of Services. Any other objectives not described above are not considered to be within the Purpose of this Limited Phase II ESA.

2.0 BACKGROUND

2.1 Site Description and Features

The Site consists of one commercial parcel of land less than one acre located at 1021 South Broadway Street, Menomonie, Wisconsin. The Site is located in Section 26, Township 28 North, Range 13 West, Dunn County, and is identified as parcel identification number 1725122813263300014. The Site is located in a commercially developed area in the City of Menomonie, Wisconsin.

Figure 2 shows the soil boring and sub-slab vapor locations. At present, neighboring property uses include:

- North: University of Wisconsin Stout paved parking lot;

- East: South Broadway Street followed by University of Wisconsin Stout tennis courts;
- South: State Highway 29 followed by a commercial business with paved parking lot; and
- West: University of Wisconsin Stout paved parking lot.

2.2 Physical Setting

The Site is located in the Central Plain Physiographic Province of northwestern Wisconsin. Topography at the Site is fairly level. Fluvial and glacial processes have been an important geologic agent in determining the surface geology and physiography of the Site, and it is generally situated on alluvial deposits composed of silty sand and gravel underlain by clay. Regionally, bedrock consists of Cambrian age sandstone at depths ranging from 20 to 50 feet.

Soils encountered at the Site are primarily non-waste fill (sand with varying amounts of silt and gravel) from the surface to approximately five feet below ground surface (bgs). Below the fill is coarse alluvium consisting of silty sand with varying amounts of silt and gravel to about 13 feet bgs. Below the coarse alluvium is fine alluvium consisting of silty and lean clay. Bedrock was not encountered in the soil borings.

Groundwater was not encountered in the soil boring which reached a maximum depth of 25 feet bgs. The regional surficial groundwater gradient in the vicinity of the Site is likely southwest toward the Red Cedar River.

2.3 History of Site and Vicinity

The Site and surrounding properties have been residential and commercially developed since at least the late 1930s. The Site was residential prior to commercial development as a laundry facility in the 1960s. The current building dates to the early 1960s.

2.4 Previous Environmental Reports

AET concluded in their Phase I ESA report, dated May 3, 2021, that the past use of the Site as a dry cleaner and generation of hazardous solvent wastes are considered recognized environmental conditions (RECs) in connection with the Site.

AET reviewed the Wisconsin Department of Natural Resources (WDNR) Wisconsin Remediation and Redevelopment Database (WRRD) for active/closed remedial action sites for the Site and adjoining properties. One remedial action was identified on the adjacent south property on the WRRD database.

- Cenex C Store/Vista U Pump #12 at 1103 South Broadway Street located south of the Site is identified as a LUST (BRRTS No. 03-17-183724). In March 1998, petroleum contamination was reported from the unleaded gasoline UST system. The site investigation

included seven soil borings and six groundwater monitoring wells. Soil contamination was minimal and three years of groundwater monitoring determined groundwater contamination did not extend off-site and petroleum contaminant concentrations were decreasing. Based on the limited amount of soil and groundwater contamination and lack of off-site contamination, the WDCOM closed the site on November 26, 2001 with a groundwater use restriction due to the presence of residual soil and groundwater contamination.

3.0 LIMITED PHASE II ESA ACTIVITIES

3.1 Scope of Services

The scope of this Limited Phase II ESA was defined in AET's Proposal Agreement No. P-0002702, authorized by the User on May 18, 2021, and included the following tasks:

- Contacted the appropriate authorities and coordinated the locating and marking of underground utilities and conduits.
- Field screened soil samples recovered from soil borings with a photoionization detector (PID) for the presence of organic vapors and observed the soil samples for obvious indicators of contamination (unusual odors, stains, discoloration, presence of debris, etc.).
- Collected one soil sample from one soil boring (GP-1) for laboratory analysis of the following: volatile organic compounds (VOCs).
- Observed and documented the completion of two push probe soil borings for soil gas sampling (VP-1 and VP-2). The soil vapor borings were advanced through a layer of asphalt to a depth of three to five feet bgs. Collected one soil gas sample from each boring to evaluate whether soil gas conditions have the potential to intrude into the building via vapor migration. Each sample was analyzed for VOCs using EPA Method TO-15.
- Observed and documented the installation of one sub-slab vapor probe (SSV-1) in the northwest portion of the existing building. Collected one sub-slab soil gas sample to evaluate whether the presence of VOCs under the on-site building has the potential to intrude into the building via vapor migration. The sample was analyzed for VOCs using EPA Method TO-15.
- Prepared this report that summarizes the results of field sampling activities and includes a figure showing sampling locations, sheets describing methodologies used, tables summarizing the laboratory analytical and field screening results, a discussion of the results, and our conclusions and recommendations.

3.2 Environmental Sampling Methods

The Limited Phase II ESA environmental sample locations were selected to achieve a distribution of sampling locations encompassing potential contamination and to determine the presence of potential soil gas contamination. **Appendix B** contains information sheets which detail AET's standard environmental sampling methods.

The soil sample was collected from a truck-mounted Geoprobe® direct push sampler and screened in the field using a PID equipped with a 10.6 electron volt (eV) lamp to measure organic vapors in ppm. Results were recorded on the boring log in **Appendix C**. No evidence of obvious odors or visual evidence of contamination was observed.

Temporary vapor probes and soil gas samples were conducted and sampled in accordance with WDNR guidance Publication RR-800, "Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin."

The sub-slab vapor sample was collected utilizing the Vapor Pin™ sampling system. Using this system, AET placed the sampling port in the floor at the selected location and drilled each sampling point through the floor into the sub-slab fill using a ½" diameter drill bit to a depth of approximately 2-3" below the bottom of the slab. The lower end of the Vapor Pin™ Soil Gas Sampling Port assembly was placed into the drilled hole and hammered into place. The silicone sleeve in the assembly sealed the hole and formed a slight bulge between the slab and the Vapor Pin™ shoulder. The vapor port was tested for leakage by using the water dam method prior to sampling.

At each of the vapor sample locations, a soil gas sample was extracted using disposable tubing. Prior to sample collection, the tubing and subsurface cavity created for the sample collection was purged of excess soil gas. The soil gas sample was withdrawn over a period of 35-50 minutes and placed into a stainless-steel Summa canister equipped with a flow regulator. The Summa canisters were shipped to the laboratory with the chain-of-custody record.

After all necessary soil and soil gas samples were collected, the boreholes were completely backfilled with bentonite and abandoned according to procedures outlined in Chapter NR 141.25 of the Wisconsin Administrative Code (WAC). A WDNR borehole abandonment form (Form 3300-5W) was completed for each soil boring. Abandonment forms are included in **Appendix C**.

AET submitted soil and soil gas samples to Eurofins Test America laboratory for chemical analysis. The soil sample was collected from a depth of 14-16 feet bgs and analyzed for VOCs by EPA Method 8260B. Soil vapor samples were analyzed for VOCs by EPA Method TO-15. Samples were collected in accordance with AET's Quality Assurance/Quality Control (QA/QC) guidelines. The laboratory analytical reports and chain-of-custody records are provided in **Appendix D**.

3.3 Reference Standards

In this Limited Phase II ESA, we compare the analytical results to the baseline environmental regulatory standards in use by the WDNR. The reference standards are included in the results tables for comparison with assessment results. The media-specific standards are described below.

Soil Standards

The following reference standards apply to potential contaminant exposures in soils:

- PID Screening Criterion - The practical detection limit of a PID is considered to be 1 ppm, although ambient environmental conditions during sampling may result in higher background measurements.
- WDNR NR 720 soil industrial direct contact residual contaminant levels (RCLs): Compound-specific values for the protection of human health from direct contact.
- WDNR NR 720 soil non-industrial direct contact RCLs: Compound-specific values for the protection of human health from direct contact.
- WDNR NR 720 soil to groundwater RCLs: Compound-specific values for protection of groundwater.

Soil Gas Standards

Vapor Action Levels (VALs) and sub-slab Vapor Risk Screening Levels (VRSLs) were established in WDNR's guidance Publication RR-800, "Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin." If a contaminant concentration exceeds the VAL or VRSL, the WDNR may require additional monitoring or vapor mitigation. The soil gas results are reported in parts per billion by volume (ppbV) and micrograms-per-cubic-meter ($\mu g/m^3$). Because the future use of the Site will be a commercial office space, AET compared the soil gas and sub-slab vapor analytical results to WDNR's small commercial VRSL regulatory criteria. VRSLs are calculated by dividing the VAL with an attenuation factor of 0.03. The reference standards are included in the results tables for comparison with assessment results.

4.0 PROJECT RESULTS

4.1 Field Observations

AET performed the field exploration and sampling for this Limited Phase II ESA on May 20, 2021. The observational data collected during field exploration activities at the Site are included on the soil boring logs in **Appendix C**.

4.1.1 Soil Boring Observations

Soils encountered at the Site are primarily non-waste fill (sand with varying amounts of silt and gravel) from the surface to approximately five feet below ground surface (bgs). Below the fill is

coarse alluvium consisting of silty sand with varying amounts of silt and gravel to about 13 feet bgs. Below the coarse alluvium is fine alluvium consisting of silty and lean clay to the terminal depths of the boring.

Groundwater was not encountered in the soil boring which reached a maximum depth of 25 feet bgs.

4.2 Field Screening Results

The screening data collected during field exploration activities at the Site are included on the logs. The PID screening results ranged from zero to 4.5 ppm. No unusual odors were observed.

4.3 Laboratory Analysis

Appendix D includes the laboratory analytical reports and chains-of-custody for this Limited Phase II ESA. The sections below summarize the laboratory results.

4.3.1 Soil Analytical Results

Table 1 summarizes the results of laboratory analyses performed on soil samples. The soil results are reported in ppm, which is equivalent to milligrams/kilogram. The reference standards are included on the table for comparison and evaluation of impacts. Based on proposed land use and site zoning, the non-industrial direct contact RCLs apply to this investigation.

VOCs
One soil sample was analyzed for VOCs for this investigation. Laboratory analyses detected two VOCs in the soil sample analyzed. The measured results did not exceed regulatory criteria, except for the following:

- Tetrachloroethene (PCE) concentrations exceeding its soil to groundwater RCL of 0.0045 ppm was detected in the soil sample GP-1 (0.4 ppm).

4.3.2 Soil Gas Analytical Results

Table 2 summarizes the results of laboratory analyses performed on soil gas samples. The soil gas results are reported in ppbV and µg/m^3. Because the use of the Site is a commercial space, AET compared the soil gas and sub-slab vapor analytical results to WDNR's small commercial VRSL regulatory criteria.

VOCs
Laboratory analyses detected various VOCs in each of the three soil gas samples analyzed. The measured results did not exceed the WDNR's calculated VRSLs for small commercial buildings.

Because these soil gas samples were taken below a layer of asphalt, it's appropriate to compare these results to the sub-slab VRSLs. The results of the three soil gas samples did not exceed the sub-slab VRSLs or the calculated VRSLs.

Concentrations of VOCs were not detected exceeding sub-slab VRSLs in SSV-1 (the sub-slab vapor sample). **Appendix B** includes the laboratory analytical reports and chains-of-custody for this investigation.

5.0 DISCUSSION AND OPINIONS

5.1 Soil Conditions

Subsurface sampling indicates soils at the Site are primarily non-waste fill (sand with varying amounts of silt and gravel) from the surface to approximately two feet bgs. Below the fill is coarse alluvium consisting of silty sand with varying amounts of silt and gravel to about 13 feet bgs. Below the coarse alluvium is fine alluvium consisting of silty and lean clay to the terminal depths of the boring. No staining or unusual odors were noted from the soil boring and field evidence of contamination was not observed in the soils recovered at the Site. Field screening of the soils in the borings did not detect significant concentrations of organic vapors.

Low concentrations of PCE was detected in the soil sample collected from boring GP-1. The measured PCE concentration in this soil sample exceeded the WDNR soil to groundwater RCL. Field screening of additional deeper soils suggests that the PCE impacts may be isolated and do not extend a significant vertical extent beneath the pavement (25 feet bgs).

5.2 Soil Gas Conditions

Vapor testing at the Site did not detect VOCs at concentrations exceeding the calculated VRSL.

WDNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. If test results are less than a VRSL for sub-slab soil gas, then the air in the building should not present a health concern. It is expected that the sub-slab vapor attenuation factor will be the default for most sampling scenarios.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on visual observations, laboratory results, and the results of the PID screening, there is no indication that soils and soil gas on the Site have been significantly impacted.

Isolated low concentrations of PCE was detected in the soil sample from boring GP-1. The measured PCE concentration in this soil sample exceeded the WDNR soil to groundwater RCL.

According to the "Wisconsin Spill Law", Chapter 292.11, Wisconsin Statutes, the discovery of petroleum and non-petroleum contamination constitutes a release to the environment. In accordance with the Spill Law, the owner of the Site and/or responsible party(s) associated with the release may have an obligation to notify the WDNR of the results from this limited site investigation. Reporting can be done by completing the WDNR form "Notification for Hazardous Substance Discharge (Non-Emergency Only)". Following notification, the WDNR may require further sampling and analysis to determine the degree and extent of contamination. Alternatively, they may determine that no further action is required based on the limited extent of the contamination, current site use, and general risk to the public.

7.0 REPORT CLOSURE

7.1 Reliance

AET has prepared this Limited Phase II ESA for the exclusive use of the User for specific application to the Site. Written authorization by AET is necessary for other parties to rely on this report.

Because Site uses and environmental conditions can change over time, this report must be considered time-sensitive. AET should be consulted if 180 days have elapsed since the report date or the passage of time results in uncertainty about the continuing applicability of this report.

7.2 Limitations and Exceptions of Investigation

No environmental investigation can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. The methodologies of this investigation are not intended to detect all possible contamination at all locations and depths throughout the Site; while AET may extrapolate between sampling locations based on actual observations, sample data, and professional experience, those extrapolations are considered less reliable than actual data at any given location or depth on the Site.

7.3 Standard of Care

AET has endeavored to perform services for this project in a manner consistent with the level of skill and care ordinarily exercised by other members of the profession currently practicing in this area, under similar budgetary and time constraints. No further warranty, express or implied, is made.

This report is based on our current understanding of the project and conditions at the Site. If conditions differing from our original understanding or findings are identified, AET should be consulted to determine if there are material impacts on our conclusions or recommendations.

8.0 QUALIFICATIONS AND SIGNATURES

"I, Michael K. Neal, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Report Authored By:

Michael K. Neal
Professional Hydrologist, Geomorphologist

Report Reviewed By:

Eric Hesse, PE
Principal Engineer

Tables

TABLE 1

ANALYTICAL RESULTS - SOIL

LAUNDROMAT PROPERTY SITE, MENOMONIE, WISCONSIN

AET PROJECT NO. P-0002702

	Soil RCLs (ppm) Calculated: NA				Samples	
					GP-1	**MEOH Blank**
Date	*Non-Industrial Direct Contact*	*Industrial Direct Contact*	*Soil to GW*	*Surficial Background Threshold Value*	5/20/21	
Depth (feet)					14-16	---
Location					GP-1	---
PID (Instrument units)					4.5	---
Saturated (S) / Unsaturated (U)					U	---
Depth to Water Table (ft bgs)					> 25	---
Soil Type					silty clay	---
VOCs (ppm)						
Benzene	*1.6*	*7.07*	*0.0051*	---	< 0.011	< 0.0073
Ethylbenzene	*8.02*	*35.4*	*1.57*	---	< 0.014	< 0.0092
MTBE	*63.8*	*282*	*0.027*	---	< 0.031	< 0.02
Naphthalene	*5.52*	*24.1*	*0.6582*	---	< 0.026	< 0.017
PCE	*33*	*145*	*0.0045*	---	*0.4*	< 0.0019
Toluene	*818*	*818*	*1.107*	---	0.03	< 0.0074
1,2,4-TMB	*219*	*219*	---	---	< 0.028	< 0.018
1,3,5-TMB	*182*	*182*	---	---	< 0.029	< 0.019
Total TMB	---	---	*1.3787*	---	---	---
Total Xylenes	*260*	*260*	*3.96*	---	< 0.017	< 0.011
No. of Individual Exceedances (DC)					NA	---
Cumulative Hazard Index (DC)					NA	---
Cumulative Cancer Risk (DC)					NA	---

--- = not analyzed or no standard NA = not applicable PCE = tetrachloroethene/tetrachloroethylene

RCL = residual contaminant level TMB = trimethylbenzene

VOC = volatile organic compound

Bold areas indicate soil contaminant concentrations exceed Non-Industrial Direct Contact RCLs.

<u>Underline</u> areas indicate soil contaminant concentrations exceed Industrial Direct Contact RCLs.

Italic areas indicate soil contaminant concentrations exceed Groundwater RCL.

TABLE 2
ANALYTICAL RESULTS - SOIL GAS
LAUNDROMAT PROPERTY, MENOMONIE, WISCONSIN
AET PROJECT NO. P-0002702

	VP-1	**VP-2**	**SSV-1**	*Small Commercial Vapor Risk Screening Levels*	
Date	5/20/21				
Depth (feet)	3-5		---	VRSL	*SSVRSL*
ANALYTE				---	---
TO-15 VOCs (µg/m3)					
Acetone	120	< 120	2400*	*4,500,000*	*4,500,000*
Benzene	22	13	< 51	*530*	*530*
1,3-Butadiene	49	20	< 35	---	---
Chloroform	< 9.8	22	< 78	*180*	*180*
Ethanol	< 94	< 94	600	---	---
Methyl ethyl ketone (MEK)	27	< 15	< 120	---	---
Propylene	370	110	< 690	---	---
Tetrachloroethylene (PCE)	2,300	1,300	< 14	*6,000*	*6,000*
Toluene	23	16	< 60	*730,000*	*730,000*

--- = no standard

IAVAL = indoor air vapor action level

PCE = tetrachloroethene/tetrachloroethylene

SSVRSL = sub-slab vapor risk screening level

VAL = vapor action level

VRSL = vapor risk screening level

VOC = volatile organic compound

VALs were determined using an attenuation factor of 0.03 in accordance with WDNR guidance Publication RR-800, “Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin.”

Bold numbers indicate concentrations above the IAVAL.

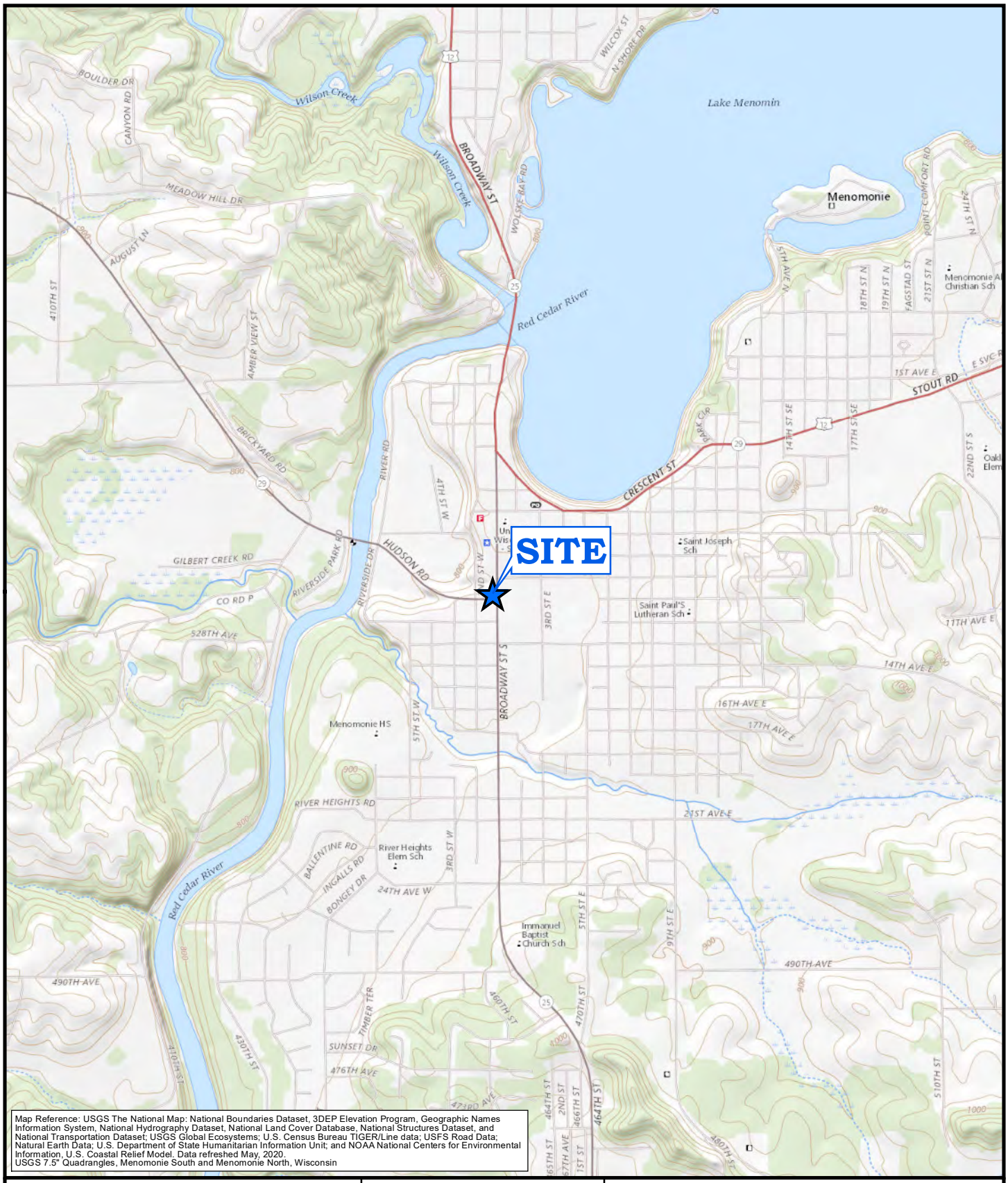
Red numbers indicate concentrations above the SSVRSL.

Note that only compounds detected above reporting limits are included in the table, see lab report for complete results.

Samples were collected using summa canisters and the water dam method was used for leak testing on the SSV

***** = Result exceed calibration range.

Figures



AMERICAN ENGINEERING TESTING, INC.

N

0 1,000 2,000

Feet

Figure 1
Site Location Map

Phase II Environmental Site Assessment

Commercial Property site
1021 South Broadway Street
Menomonie, Wisconsin

Date: 06/03/2021 AET Project No. P-0002702

File: 1021_SBdway_P2_F1_SLM.mxd PO 17938-1351

AMERICAN ENGINEERING TESTING, INC.

Map Reference: Wisconsin DNR 2015 Digital Orthophotography

N

0 25 50

Feet

Figure 2
Sample Location Map

Phase II Environmental Site Assessment

Commercial Property site
1021 South Broadway Street
Menomonie, Wisconsin

Date: 06/03/2021 AET Project No. P-0002702

File: 1021_SBdway_P2_F2_Samples.mxd PO 17938-1351

Appendix A

Acronyms and Abbreviations

ACRONYMS AND ABBREVIATIONS

AET Standard List

ºC	degrees Celsius
ºF	degrees Fahrenheit
%	percent
AAI	EPA All Appropriate Inquiry (§312.10 of 40 CFR 312)
ACM	asbestos containing material
ACBM	asbestos containing building material
AET	American Engineering Testing, Inc.
AHERA	Asbestos Hazard Emergency Response Act
AST	aboveground storage tank
ASTM	American Society for Testing and Materials (now known only by acronym)
AUL	activity and use limitation
BETX	benzene, ethylbenzene, toluene, xylene
bgs	below ground surface
BRRTS	Bureau of Remediation and Redevelopment Tracking System
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation, Liability Act (Superfund)
CERCLIS	Comprehensive Environmental Response, Compensation, Liability Information System
CESQG	RCRA Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CLEAN	Contaminated Lands Environmental Action Network
CoC	contaminant of concern
c.o.c.	chain of custody
CORRACTS	RCRA Corrective Actions Information System
cPAH	carcinogenic polynuclear aromatic hydrocarbon
CVOC	chlorinated volatile organic compound
cy or CY	cubic yards
DCA	dichloroethane
DRO	diesel range organics
EC	engineering control
EIS	Environmental Impact Statement
EP	Environmental Professional (§312.10 of 40 CFR 312)
EPA	Environmental Protection Agency (also USEPA)
ES	enforcement standard
ERIS	Environmental Risk Information Services
ERNS	Emergency Response Notification System (federal)
ESA	Environmental Site Assessment
FDM	Facilities Development Manual
f/cc	fibers per cubic centimeter
ft	feet
GC	gas chromatography

ACRONYMS AND ABBREVIATIONS

AET Standard List

GC/MS	gas chromatography/mass spectroscopy
GEN	RCRA Generator
GIS	geographic information system
GPS	global positioning system
GRO	gasoline range organics
HASP	Health and Safety Plan
HIG	Historical Information Gatherers, Inc.
HMA	Hazardous Materials Assessment
HREC	historical recognized environmental condition
IAVAL	indoor air vapor action level
IC	institutional control
LLP	landowner liability protection
LQG	RCRA Large Quantity Generator
LOQ	limit of quantitation
LSI	Limited Site Investigation
LUST	leaking underground storage tank
MCL	EPA Maximum Contaminant Level
MDL	method detection limit.
mg/kg	milligrams per kilogram (ppm)
mg/L	milligrams per liter (ppm)
MTBE	methyl tert-butyl ether
NA	not assigned or not applicable
ND	no detection
NEPA	National Environmental Protection Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NLR	RCRA No Longer Regulated Information System
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List (federal Superfund)
NR	not recorded
ODI	EPA Open Dump Inventory
OSHA	Occupational Safety and Health Administration
PECFA	Petroleum Environmental Clean-Up Fund Act
PAH	polynuclear aromatic hydrocarbon
PAL	preventive action limit
PEL	OSHA Permissible Exposure Limit
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
pcm	point count method

ACRONYMS AND ABBREVIATIONS

AET Standard List

PE	Professional Engineer
PG	Professional Geologist
PID	photoionization detector
PLM	polarized light microscopy
PLP	Permanent List of Priorities (state Superfund)
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PVOC	petroleum volatile organic compound
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RACM	regulated asbestos containing material
RAP	Response Action Plan
RCRA	Resource Conservation Recovery Act
RCL	residual contaminant level
REC	recognized environmental condition
RI	Remedial Investigation
RL	laboratory reporting limit
ROD	EPA Record of Decision
RP	responsible party
SDS	safety data sheet
SOP	standard operating procedure
SPILLS	WDNR Spills inventory
SQG	RCRA Small Quantity Generator
SREC	suspect recognized environmental condition
SSP	Site Safety Plan
SSVP	sub-slab vapor probe
SSVRSL	sub-slab vapor risk screening level
STH	State Highway
SVE	soil vapor extraction
SVOC	semi-volatile organic compound
SVP	soil vapor probe
SWF/LF	WDNR Solid Waste Facilities/Landfill Sites
TCE	trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TMB	trimethylbenzene
TPH	total petroleum hydrocarbons
TRIS	EPA Toxic Release Inventory System
TSCA	Toxic Substances Control Act

ACRONYMS AND ABBREVIATIONS

AET Standard List

TSD	RCRA Transportation Storage and Disposal inventory
µg/kg	micrograms per kilogram (ppb)
µg/l or µg/L	micrograms per liter (ppb)
$\mu g/m^3$	micrograms per cubic meter
USEPA	United States Environmental Protection Agency (also EPA)
USGS	United States Geological Survey
UST	underground storage tank
VAL	vapor action level
VIC	Voluntary Investigation and Cleanup Program
VOC	volatile organic compound
VRSL	vapor risk screening level
WAC	Wisconsin Adminstrative Code
WCA	Wetland Conservation Act
WDATCP	Wisconsin Department of Agriculture, Trade, and Consumer Protection
WDHS	Wisconsin Department of Health Services
WDNR	Wisconsin Department of Natural Resources
WGNHS	Wisconsin Geological and Natural History Survey
WisDOT	Wisconsin Department of Transportation
WPDES	Wisconsin Pollution Discharge Elimination System
WRRD	Wisconsin Remediation and Redevelopment Database
XRF	x-ray fluorescence

DEFINITIONS

Controlled recognized environmental condition (CREC): a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

De minimus condition: a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies. Conditions determined to be de minimus conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

ACRONYMS AND ABBREVIATIONS

AET Standard List

Historical recognized environmental condition (HREC): a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Recognized environmental condition (REC): the presence or likely presence of hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment.

Appendix B

Environmental Sampling Methods

ENVIRONMENTAL SAMPLING METHODS – GENERAL: EXCAVATIONS/TEST PITS, HAND AUGERS, SURFICIAL SOILS, STOCKPILES

Site Safety Issues

Safety is of paramount importance on construction, demolition, or other high-traffic sites with potentially unstable ground. Frequent visual and verbal contact is maintained with operators of heavy equipment in the sampling vicinity. Care is taken not to enter depressions or scale mounds that would constitute confined spaces, where engulfment, immersion, or falls are possible, or where harmful vapors may collect. Most observations and soil collection are performed from a stable and level ground surface with the help of heavy equipment operated by an excavation contractor.

Contamination Reduction

Sampling devices (except heavy equipment in most cases) are cleaned between sampling points to minimize cross contamination. The cleaning procedure may consist of an alconox detergent-water wash using a brush, followed by a tap water rinse. Certain types of projects may entail more or less stringent decontamination procedures.

Soil Collection

Most soil samples from excavations or test pits are collected directly from heavy equipment (e.g., excavation bucket, loader, or bulldozer), giving preference to soils that have not touched the equipment. A hand auger is used to complete shallow soil borings in locations of limited vehicle access. Hand auger borings are advanced manually, typically in 6" to 12" depth intervals. Soils are collected directly from the hollow auger barrel. A spade shovel is used to collect surficial soils (i.e., up to 6" depth). In many cases, soil samples can be collected by hand without added equipment.

Impacted soils or buried debris may be present in the ground that are not observed due to the spacing and depths of sampling points. Best judgment determinations, based on known site conditions and past experience in similar situations, do not guarantee identification or removal of all impacts.

Soil Classification

As the samples are obtained in the field, they are visually and manually classified by the field staff. Representative portions of the samples may be returned to the laboratory for further examination and for verification of the field classification. Soil classifications, visual/odor observations, and information on any groundwater encountered are reported on the Soil Screening Data Sheet or other field notes.

Soil Sample Vapor Screening

Soil samples collected directly or from equipment are screened with a photoionization detector (PID) for the presence of organic vapors with ionization potentials less than the lamp voltage. The PID is calibrated for direct reading in parts-per-million-volume (PPMv) of a benzene equivalent. Soil samples are collected and screened according to the bag-headspace field screening procedure, which consists of placing freshly collected soil into a polyethylene Whirl-Pak or freezer "baggie" (i.e., bag), sealing the bag to contain an air pocket (i.e., headspace), and allowing 10 to 20 minutes for vapors to disperse from the soil to the headspace. The highest reading upon inserting the PID probe into the bag headspace – typically attained within two to five seconds of probe insertion – is recorded on the Soil Screening Data Sheet or other field notes. Excessive moisture, temperature extremes, ambient vapors, or other unusual field circumstances can affect screening results.

Other Field Screening

For certain sites, field screening may be conducted for additional parameters in accordance with AET's Field Screening Methods Supplemental information sheet.

Soil Sampling for Chemical Analysis

Soil samples obtained for chemical analysis are collected directly or from the sampling device into laboratory-prepared containers with appropriate preservatives, according to laboratory protocols. The samples are delivered to the analytical laboratory within prescribed holding times, accompanied by proper chain-of-custody forms.

Not all methods summarized on this information sheet are conducted at all sites. Special conditions may also occur which require modifications to these methods. Any descriptions of field methods within the report text take precedence.

ENVIRONMENTAL SAMPLING METHODS – HSA/PUSH PROBE SOIL BORINGS

Contamination Reduction

The hollow-stem auger (HSA) drill rig and down hole tooling are steam cleaned prior to mobilization. The split-spoon sampler is cleaned between samples to minimize cross contamination. The push-probe down hole tooling is steam cleaned prior to mobilization. New clear plastic liners are used for each drive, and the tooling is cleaned between borings to minimize cross contamination. The cleaning procedure consists of an alconox detergent-water wash using a brush, followed by a tapwater rinse. The alconox wash and rinse water are changed regularly – typically between borings. Certain types of projects may entail more stringent decontamination procedures.

Soil Boring Advancement and Limitations

Split-spoon soil sampling in the standard-penetration soil borings is performed using hollow-stem auger techniques in general accordance with ASTM:D1586, with a modified hammer weight calibrated by pile driving analyzer (PDA). Using this procedure, a 2" outer-diameter (OD) split-spoon soil sampler is driven into the soil by a hammer weight with 60%-65% energy of a 140-lb. weight falling 30". After an initial set of 6", the number of blows required to drive the sampler an additional 12" is known as the penetration resistance or N value, an index of the relative density of cohesionless soils and the consistency of cohesive soils. Samples are typically collected in distinct 18" or 24" depth intervals separated by 12" or 6" depth intervals, using drive rods to extend the boring deeper beneath the ground surface. The split-spoon sampler is opened to expose distinct 18" or 24" sections of soil for classification and sampling.

Soil sampling in the soil borings is performed using a Geoprobe® system. Soil borings are advanced using a vehicle-mounted, hydraulically-powered, soil probing machine, which uses static force (vehicle weight) and percussion to advance small-diameter sampling tools into the subsurface for collecting soil core, soil gas, or groundwater samples. Using this system, a 2" outer-diameter (OD) MacroCore® soil sampler containing a 1.75" OD clear plastic liner is driven into the soil in distinct 48" depth intervals, except where subsurface conditions limit the equipment to shorter drive lengths. In cases where soil recovery is poor, typically due to grain-size or moisture, a smaller “discrete” soil sampler (1.5" OD containing a 1.0" OD clear plastic liner) with a retractable piston tip may be used to collect soil in distinct 24" depth intervals. Probe rods are added to extend borings deeper beneath the surface. The plastic liner is removed from the sampler and cut lengthwise to expose discrete sections of soil for classification and sampling.

Unless actually observed, contacts between soil layers are estimated based on the spacing of samples and the action of the drilling tools. Cobbles, boulders, and other large objects generally cannot be recovered from soil borings, and may be present in the ground even if they are not noted on the boring logs. Impacted soils or buried debris may be present that are not observed due to the spacing and depths of sampling points. Best judgment determinations, based on known site conditions and past experience in similar situations, do not guarantee identification of all impacts.

Soil Classification

As the samples are obtained in the field, they are visually and manually classified by the field staff following the Unified Soil Classification (USC) system in general accordance with ASTM:D2488. Representative portions of the samples may be returned to the laboratory for further observation and for verification of the field identification. Logs of the borings are prepared indicating the depth and identification of the various strata, water level information, and other pertinent information regarding the method of maintaining and advancing the borings.

Boring logs include judgments of the geologic depositional origin. This judgment is primarily based on observations of the soil samples, which can be limited. Observations of the surrounding topography, vegetation, and development can sometimes aid this judgment. Visual/odor observations may aid in assessing impacts but are not relied on exclusively.

Soil Sample Vapor Screening

Soil samples collected directly from the soil samplers are screened with a photoionization detector (PID) for the presence of organic vapors with ionization potentials less than the lamp voltage. The PID is calibrated for direct reading in parts-per-million-volume (PPMv) of a benzene equivalent. Soil samples are collected and screened according to the bag-headspace field screening procedure, which consists of placing freshly collected soil into a polyethylene Whirl-Pak or freezer “baggie” (i.e., bag), sealing the bag to contain an air pocket (i.e., headspace), and allowing 10 to 20 minutes for vapors to disperse from the soil to the headspace. The highest reading upon inserting the PID probe into the bag

Not all methods summarized on this information sheet are conducted at all sites. Special conditions may also occur which require modifications to these methods. Any descriptions of field methods within the report text take precedence.

ENVIRONMENTAL SAMPLING METHODS – HSA/PUSH PROBE SOIL BORINGS

headspace – typically attained within two to five seconds of probe insertion – is recorded on the boring log. Excessive moisture, temperature extremes, ambient vapors, or other unusual field circumstances can affect screening results.

Other Field Screening
For certain sites, field screening may be conducted for additional parameters in accordance with AET's Field Screening Methods Supplemental information sheet.

Soil Sampling for Chemical Analysis
Soil samples obtained for chemical analysis are collected directly from the soil samplers and placed into laboratory-prepared containers with appropriate preservatives, according to laboratory protocols. The samples are delivered to the analytical laboratory within prescribed holding times, accompanied by proper chain-of-custody forms.

Water Level Measurements
The groundwater level measurements are shown at the bottom of the boring logs. The following information appears under Water Level Measurements on the logs:

- Date and time of measurement
- Sampled Depth: greatest depth of soil sampling at the time of measurement
- Casing Depth: depth to bottom of casing or hollow-stem auger at time of measurement
- Cave-in Depth: tape-measured depth of borehole
- Water Level: tape-measured depth of free water in the borehole

The true depth of the water table at the boring locations may be different from the water levels measured in the boreholes. This is possible because several factors can affect the water-level measurements in the borehole such as permeability of each soil layer in profile, presence of perched water, amount of time between water level readings, and weather conditions.

Groundwater Sampling for Chemical Analysis
Groundwater samples obtained for chemical analysis are collected directly from each borehole/temporary monitoring well by one of two techniques: (1) A new dedicated teflon bailer is lowered down the borehole/temporary monitoring well with new nylon rope or decontaminated downrigger cable; (2) Using a peristaltic pump or check-valve assembly, samples are pumped directly from the borehole/temporary monitoring well through new polyethylene tubing extended to depth through the casing. Samples are collected in laboratory-prepared containers with appropriate preservatives, according to laboratory protocols. For analyses in which field-filtering is required, samples are vacuum-filtered through a new dedicated plastic filter with 0.45-μm pores. The samples are delivered to the analytical laboratory within prescribed holding times, accompanied by proper chain-of-custody forms.

Because boreholes/temporary monitoring wells are not typically in equilibrium with groundwater, results provide qualitative groundwater data. Purging additional water prior to sampling may improve the data representativeness somewhat. Monitoring wells are necessary to obtain more accurate quantitative groundwater data.

Surveying and Abandonment
Following sampling, ground surface elevations at boring locations are typically measured to the nearest 0.1 foot. If a permanent benchmark of known elevation is unavailable, the measurement is referenced to a nearby temporary benchmark given the arbitrary reference elevation of 100.0 feet. Horizontal location control is typically based on tape measurements from fixed site features. Certain types of projects may entail more stringent measures such as global positioning systems (GPS) or contracting registered surveyors.

Boreholes/temporary monitoring wells are completely backfilled with bentonite and abandoned according to procedures outlined in Chapter NR 141.25 of the Wisconsin Administrative Code A WDNR Borehole Abandonment (3300-5W) form is completed for each soil boring not completed as a monitoring well.

Not all methods summarized on this information sheet are conducted at all sites. Special conditions may also occur which require modifications to these methods. Any descriptions of field methods within the report text take precedence.

ENVIRONMENTAL SAMPLING METHODS – MONITORING WELLS

Contamination Reduction

The sampling downrigger and electronic water-level indicator are cleaned prior to sampling and between sampling from different monitoring wells. The cleaning procedure consists of an alconox detergent-water wash and distilled water rinse from spray dispensers. New disposable bailers are used for each well.

Monitoring Well Installation and Development

Groundwater monitoring wells and piezometers are constructed and developed in accordance with Wisconsin Administrative Code – Chapter NR 141 requirements. Monitoring Well Construction (4400-113A) and Monitoring Well Development (4400-113B) forms are completed for each well. Typically, monitoring wells are installed in hollow-stem auger (HSA) soil boreholes that have been sampled for environmental parameters.

Monitoring wells are developed by removing a minimum of three to five borehole volumes, until water appears clear.

Groundwater Elevation Measurements

Following monitoring well installation, the top-of-riser elevations are surveyed to the nearest 0.01 feet. If a permanent benchmark of known elevation is unavailable, the survey is referenced to a nearby temporary benchmark given the arbitrary reference elevation of 100.00 feet.

Groundwater elevations are determined by using an electronic water-level indicator. Measurements are obtained by lowering the probe into each well until the groundwater surface is encountered. Measurements, referenced to the top-of-riser elevations, are reported to the nearest 0.01 feet.

Groundwater Sampling for Chemical Analysis

Groundwater samples obtained for chemical analysis are collected directly from each monitoring well using a new disposable bailer lowered down the well with new nylon rope or decontaminated downrigger cable. Samples are decanted directly from the bailer into laboratory-prepared containers with appropriate preservatives. Alternatively, samples may be drawn directly from the submersible pump discharge tubing. For analyses in which field-filtering is required, samples are vacuum-filtered through a new dedicated plastic filter with 0.45-μm pores. The samples are delivered to the analytical laboratory within prescribed holding times, accompanied by proper chain-of-custody forms.

Free Product Removal Procedures

We conducted free product removal procedure as follows:

- Remove well cover and scrape away excess dirt.
- Carefully remove test well plug, bailer, & sock from well casing. Remember that bailer and absorbent socks are tied to the plug.
- Set bailer aside and squeeze product from sock into bucket. After squeezing out sock set aside to dry.
- Measure depth to water/product with a product/groundwater interface probe. Record depth to product, groundwater, and thickness of product in feet.
- Secure bailer to rope or string and insert into well casing. Lower the bailer until contact with water table is made. Allow bailer to drop into the water for no more than one foot. Remove bailer and estimate product thickness. Empty contents of bailer into bucket and record product thickness.
- Continue to lower bailer into well and drop to the water table. Allow bailer to fill with no more than one foot of water/product. Remove bailer and empty contents into bucket. Continue fill bucket. Transfer filled buckets to drum.
- Repeat this process until thickness of free product is less than one inch. Record amount of water/product removed.
- If a groundwater sample will be collected use a new disposable bailer to obtain a water sample. Insert the bailers bottom empting device and use to fill the appropriate sample bottle.
- Reattach string/rope to well plug, replace bailer and sock into well and cap with well plug. Replace well cover. Replace socks as needed.
- Secure cover on 55-gasllon drum.

Not all methods summarized on this information sheet are conducted at all sites. Special conditions may also occur which require modifications to these methods. Any descriptions of field methods within the report text take precedence.

Standard Operating Procedure Installation and Extraction of the Vapor Pin™

Updated April 3, 2015

Scope:

This standard operating procedure describes the installation and extraction of the Vapor Pin™ for use in sub-slab soil-gas sampling.

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the Vapor Pin™ for the collection of sub-slab soil-gas samples or pressure readings.

Equipment Needed:

- Assembled Vapor Pin™ [Vapor Pin™ and silicone sleeve(Figure 1)]; Because of sharp edges, gloves are recommended for sleeve installation;
- Hammer drill;
- 5/8-inch (16mm) diameter hammer bit (hole **must** be 5/8-inch (16mm) diameter to ensure seal. It is recommended that you use the drill guide). (Hilti™ TE-YX 5/8" x 22" (400 mm) #00206514 or equivalent);
- 1½-inch (38mm) diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch (19mm) diameter bottle brush;
- Wet/Dry vacuum with HEPA filter (optional);
- Vapor Pin™ installation/extraction tool;
- Dead blow hammer;
- Vapor Pin™ flush mount cover, if desired;
- Vapor Pin™ drilling guide, if desired;
- Vapor Pin™ protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel for repairing the hole following the extraction of the Vapor Pin™.

Figure 1. Assembled Vapor Pin™

Installation Procedure:

1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.

2) Set up wet/dry vacuum to collect drill cuttings.

3) If a flush mount installation is required, drill a 1½-inch (38mm) diameter hole at least 1¾-inches (45mm) into the slab. Use of a Vapor Pin™ drilling guide is recommended.

4) Drill a 5/8-inch (16mm) diameter hole through the slab and approximately 1-inch (25mm) into the underlying soil to form a void. Hole **must** be 5/8-inch (16mm) in diameter to ensure seal. It is recommended that you use the drill guide.

5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.

6) Place the lower end of Vapor Pin™ assembly into the drilled hole. Place the small hole located in the handle of the installation/extraction tool over the Vapor Pin™ to protect the barb fitting, and tap the Vapor Pin™ into place using a dead blow hammer (Figure 2). Make sure the installation/extraction tool is aligned parallel to the Vapor Pin™ to avoid damaging the barb fitting.

Figure 2. Installing the Vapor Pin™.

During installation, the silicone sleeve will form a slight bulge between the slab and the Vapor Pin™ shoulder. Place the protective cap on Vapor Pin™ to prevent vapor loss prior to sampling (Figure 3).

Figure 3. Installed Vapor Pin™

7) For flush mount installations, cover the Vapor Pin™ with a flush mount cover, using either the plastic cover or the optional stainless-steel Secure Cover (Figure 4).

Figure 4. Secure Cover Installed

8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to re-equilibrate prior to sampling.

9) Remove protective cap and connect sample tubing to the barb fitting of the Vapor Pin™. This connection can be made using a short piece of Tygon™ tubing to join the Vapor Pin™ with the Nylaflow

tubing (Figure 5). Put the Nylaflow tubing as close to the Vapor Pin as possible to minimize contact between soil gas and Tygon™ tubing.

Figure 5. Vapor Pin™ sample connection.

10) Conduct leak tests in accordance with applicable guidance. If the method of leak testing is not specified, an alternative can be the use of a water dam and vacuum pump, as described in SOP Leak Testing the Vapor Pin™ via Mechanical Means (Figure 6). For flush-mount installations, distilled water can be poured directly into the 1 1/2 inch (38mm) hole.

Figure 6. Water dam used for leak detection

11) Collect sub-slab soil gas sample or pressure reading. When finished, replace the protective cap and flush mount cover until the next event. If the sampling is complete, extract the Vapor Pin™.

Extraction Procedure:

1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the Vapor Pin™ (Figure 7). Continue turning the tool clockwise to pull the Vapor Pin™ from the hole into the installation/extraction tool.

2) Fill the void with hydraulic cement and smooth with a trowel or putty knife.

Figure 7. Removing the Vapor Pin™.

3) Prior to reuse, remove the silicone sleeve and protective cap and discard. Decontaminate the Vapor Pin™ in a hot water and Alconox® wash, then heat in an oven to a temperature of 265° F (130° C) for 15 to 30 minutes.

The Vapor Pin™ to designed be used repeatedly, however, replacement parts and supplies will be required periodically. These parts are available on-line at VaporPin.CoxColvin.com.

Appendix C

WDNR Soil Boring Logs and Boring Abandonment Forms

AMERICAN ENGINEERING TESTING, INC.

GEOPROBE SUBSURFACE BORING LOG

AET JOB NO: **P-0002702** LOG OF BORING NO. **GP-1 (p. 1 of 1)**

PROJECT: **Phase II ESA - Laundromat, Menomonee, WI**

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	XRF	PID (ppm)
1	BITUMINOUS	FILL									0.5
2	FILL, mostly sand with gravel, fine to medium grained, light brown										
3	FILL, mostly silty sand, dark brown, slight organic odor, some large rocks at 5'			D	MC	36					0.5
4											0.1
5	SAND WITH GRAVEL, reddish brown	COARSE ALLUVIUM									
6											0.0
7				M	MC	48					
8											
9											0.1
10											
11											0.2
12				M	MC	48					
13	CLAYEY SILT, light brown	FINE ALLUVIUM									
14											0.1
15											
16	LEAN CLAY, greenish gray, very firm										4.5
17				M	MC	54					
18											1.7
19											1.2
20											
21											
22				M	MC	48					0.1
23											0.1
24											0.1
25	**END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-25' Geoprobe			**None**	**Taken**	**Refer To**	**"MC"**	**Column**	
BORING COMPLETED: **5/20/21**								
DR: **BT** LG: **RJ** Rig: **64**								

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

Route to DNR Bureau: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dunn		

Latitude / Longitude (see instructions): ____ N ____ W — Format Code: ☐ DD ☐ DDM — Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
SW	SW	26	28 N	13 ☐ E ☒ W

or Gov't Lot #

Well Street Address: 1021 South Broadway Street

Well City, Village or Town	Well ZIP Code
Menomonie	54751

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
test boring	

2. Facility / Owner Information

Facility Name: Laundromat Property

Facility ID (FID or PWS):

License/Permit/Monitoring #: GP-1

Original Well Owner:

Present Well Owner: Wayne Moser

Mailing Address of Present Owner: 1021 South Broadway Street

City of Present Owner	State	ZIP Code
Menomonie	WI	54751

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-20-21

If a Well Construction Report is available, please attach.

Construction Type: ☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
25	

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	> 25

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☒ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☒ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☒ No	☐ N/A

Required Method of Placing Sealing Material: ☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped ☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials: ☐ Neat Cement Grout ☐ Concrete ☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only: ☐ Bentonite Chips ☐ Bentonite - Cement Grout ☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips			
Surface	25		

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
AET		5-20-21

Street or Route	Telephone Number
1837 CTH OO	(715) 861 5945

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Chippewa Falls	WI	54729	AET	6-1-21

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) Page 1 of 2

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☒ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dunn		

Latitude / Longitude (see instructions): ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
SW	SW	26	28 N	13 ☐ E ☒ W

or Gov't Lot #

Well Street Address: 1021 South Broadway Street
Well City, Village or Town: Menomonie
Well ZIP Code: 54751
Subdivision Name:
Lot #:

Reason for Removal from Service: test boring
WI Unique Well # of Replacement Well:

2. Facility / Owner Information

Facility Name: Laundromat Property
Facility ID (FID or PWS):
License/Permit/Monitoring #: VP-1
Original Well Owner:
Present Well Owner: Wayne Moser
Mailing Address of Present Owner: 1021 South Broadway Street
City of Present Owner: Menomonie
State: WI
ZIP Code: 54751

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-20-21
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
5	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	7.25

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☒ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☒ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☒ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips			
Surface	5		

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
AET		5-20-21

Street or Route	Telephone Number
1837 CTH OO	(715) 861 5945

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Chippewa Falls	WI	54729	AET	6-1-21

DNR Use Only

Date Received	Noted By
Comments	

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

Route to DNR Bureau: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dunn		

Latitude / Longitude (see instructions) ____ N ____ W | Format Code ☐ DD ☐ DDM | Method Code ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
SW	SW	26	28 N	13 ☐ E ☒ W

or Gov't Lot #

Well Street Address: 1021 South Broadway Street

Well City, Village or Town: Menomonie | Well ZIP Code: 54751

Subdivision Name | Lot #

Reason for Removal from Service: test boring | WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: Laundromat Property

Facility ID (FID or PWS)

License/Permit/Monitoring #: VP-2

Original Well Owner

Present Well Owner: Wayne Moser

Mailing Address of Present Owner: 1021 South Broadway Street

City of Present Owner: Menomonie | State: WI | ZIP Code: 54751

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-20-21

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug ☒ Other (specify): Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
5	
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
	> 25

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☒ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☒ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☒ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips	Surface	5		

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
AET		5-20-21

Street or Route: 1837 CTH OO | Telephone Number: (715) 861 5945

City: Chippewa Falls | State: WI | ZIP Code: 54729

Signature of Person Doing Work: [signature] AET | Date Signed: 6-1-21

DNR Use Only

Date Received	Noted By

Comments

Appendix D

Laboratory Analytical Reports and Chains-of-Custody

eurofins | Environment Testing America

REVIEWED
By mneal at 10:43 am, Jun 01, 2021

ANALYTICAL REPORT

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-207193-1
Laboratory Sample Delivery Group: P-0002702
Client Project/Site: Phase II ESA Laundromat/Menominee WI

For:
American Engineering Testing Inc.
550 Cleveland Ave. North
St. Paul, Minnesota 55114

Attn: Dennis McComas

Authorized for release by:
6/1/2021 8:53:15 AM
Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

Designee for

Zach Bindert, Project Manager I
(319)277-2401
Zach.Bindert@Eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Laboratory Job ID: 310-207193-1
SDG: P-0002702

Table of Contents

Case Narrative

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Job ID: 310-207193-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative
310-207193-1

Comments
No additional comments.

Receipt
The samples were received on 5/22/2021 7:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-207193-1	GP-1 (14-16')	Soil	05/20/21 12:24	05/22/21 07:45	
310-207193-2	Trip Blank	Solid	05/20/21 00:00	05/22/21 07:45	

Detection Summary

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Client Sample ID: GP-1 (14-16') Lab Sample ID: 310-207193-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	400		78	29	ug/Kg	50	☼	8260B	Total/NA
Toluene	30		19	11	ug/Kg	50	☼	8260B	Total/NA

Client Sample ID: Trip Blank Lab Sample ID: 310-207193-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Client Sample ID: GP-1 (14-16')
Date Collected: 05/20/21 12:24
Date Received: 05/22/21 07:45

Lab Sample ID: 310-207193-1
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<11		19	11	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Bromobenzene	<28		78	28	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Bromochloromethane	<33		78	33	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Bromodichloromethane	<29		78	29	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Bromoform	<38		78	38	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Bromomethane	<62		230	62	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
n-Butylbenzene	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
sec-Butylbenzene	<31		78	31	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
tert-Butylbenzene	<31		78	31	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Carbon tetrachloride	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Chlorobenzene	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Dibromochloromethane	<38		78	38	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Chloroethane	<39		78	39	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Chloroform	<29		160	29	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Chloromethane	<25		78	25	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
2-Chlorotoluene	<24		78	24	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
4-Chlorotoluene	<27		78	27	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2-Dibromo-3-Chloropropane	<150		390	150	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2-Dibromoethane	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Dibromomethane	<21		78	21	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2-Dichlorobenzene	<26		78	26	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,3-Dichlorobenzene	<31		78	31	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,4-Dichlorobenzene	<28		78	28	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Dichlorodifluoromethane	<52		230	52	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1-Dichloroethane	<32		78	32	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2-Dichloroethane	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1-Dichloroethene	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
cis-1,2-Dichloroethene	<32		78	32	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
trans-1,2-Dichloroethene	<27		78	27	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2-Dichloropropane	<33		78	33	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,3-Dichloropropane	<28		78	28	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
2,2-Dichloropropane	<34		78	34	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1-Dichloropropene	<23		78	23	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
cis-1,3-Dichloropropene	<32		78	32	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
trans-1,3-Dichloropropene	<28		78	28	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Isopropyl ether	<21		78	21	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Ethylbenzene	<14		19	14	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Hexachlorobutadiene	<35		78	35	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Isopropylbenzene	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
p-Isopropyltoluene	<28		78	28	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Methylene Chloride	<130		390	130	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Methyl tert-butyl ether	<31		78	31	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Naphthalene	<26		78	26	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
N-Propylbenzene	<32		78	32	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Styrene	<30		78	30	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1,1,2-Tetrachloroethane	<36		78	36	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1,2,2-Tetrachloroethane	<31		78	31	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Tetrachloroethene	**400**		78	29	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Toluene	**30**		19	11	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Client Sample ID: GP-1 (14-16')
Date Collected: 05/20/21 12:24
Date Received: 05/22/21 07:45

Lab Sample ID: 310-207193-1
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<36		78	36	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2,4-Trichlorobenzene	<27		78	27	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1,1-Trichloroethane	<29		78	29	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,1,2-Trichloroethane	<27		78	27	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Trichloroethene	<13		39	13	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Trichlorofluoromethane	<33		78	33	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2,3-Trichloropropane	<32		160	32	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,2,4-Trimethylbenzene	<28		78	28	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
1,3,5-Trimethylbenzene	<29		78	29	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Vinyl chloride	<20		78	20	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50
Xylenes, Total	<17		39	17	ug/Kg	☼	05/20/21 12:24	05/31/21 14:46	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 126*	*05/20/21 12:24*	*05/31/21 14:46*	*50*
Toluene-d8 (Surr)	*97*		*75 - 120*	*05/20/21 12:24*	*05/31/21 14:46*	*50*
4-Bromofluorobenzene (Surr)	*93*		*72 - 124*	*05/20/21 12:24*	*05/31/21 14:46*	*50*
Dibromofluoromethane	*92*		*75 - 120*	*05/20/21 12:24*	*05/31/21 14:46*	*50*

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.1**		0.1	0.1	%			05/26/21 10:05	1
Percent Solids	**75.9**		0.1	0.1	%			05/26/21 10:05	1

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Client Sample ID: Trip Blank
Date Collected: 05/20/21 00:00
Date Received: 05/22/21 07:45

Lab Sample ID: 310-207193-2
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<7.3		13	7.3	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Bromobenzene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Bromochloromethane	<21		50	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Bromodichloromethane	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Bromoform	<24		50	24	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Bromomethane	<40		150	40	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
n-Butylbenzene	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
sec-Butylbenzene	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
tert-Butylbenzene	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Carbon tetrachloride	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Chlorobenzene	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Dibromochloromethane	<24		50	24	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Chloroethane	<25		50	25	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Chloroform	<19		100	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Chloromethane	<16		50	16	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
2-Chlorotoluene	<16		50	16	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
4-Chlorotoluene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2-Dibromo-3-Chloropropane	<100		250	100	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2-Dibromoethane	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Dibromomethane	<14		50	14	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2-Dichlorobenzene	<17		50	17	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,3-Dichlorobenzene	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,4-Dichlorobenzene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Dichlorodifluoromethane	<34		150	34	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1-Dichloroethane	<21		50	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2-Dichloroethane	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1-Dichloroethene	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
cis-1,2-Dichloroethene	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
trans-1,2-Dichloroethene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2-Dichloropropane	<21		50	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,3-Dichloropropane	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
2,2-Dichloropropane	<22		50	22	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1-Dichloropropene	<15		50	15	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
cis-1,3-Dichloropropene	<21		50	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
trans-1,3-Dichloropropene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Isopropyl ether	<14		50	14	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Ethylbenzene	<9.2		13	9.2	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Hexachlorobutadiene	<22		50	22	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Isopropylbenzene	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
p-Isopropyltoluene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Methylene Chloride	<82		250	82	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Methyl tert-butyl ether	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Naphthalene	<17		50	17	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
N-Propylbenzene	<21		50	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Styrene	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1,1,2-Tetrachloroethane	<23		50	23	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1,2,2-Tetrachloroethane	<20		50	20	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Tetrachloroethene	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Toluene	<7.4		13	7.4	ug/Kg		05/20/21 00:00	05/31/21 15:11	50

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Client Sample ID: Trip Blank
Lab Sample ID: 310-207193-2
Date Collected: 05/20/21 00:00 **Matrix: Solid**
Date Received: 05/22/21 07:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<23		50	23	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2,4-Trichlorobenzene	<17		50	17	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1,1-Trichloroethane	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,1,2-Trichloroethane	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Trichloroethene	<8.2		25	8.2	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Trichlorofluoromethane	<21		50	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2,3-Trichloropropane	<21		100	21	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,2,4-Trimethylbenzene	<18		50	18	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
1,3,5-Trimethylbenzene	<19		50	19	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Vinyl chloride	<13		50	13	ug/Kg		05/20/21 00:00	05/31/21 15:11	50
Xylenes, Total	<11		25	11	ug/Kg		05/20/21 00:00	05/31/21 15:11	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 126*	*05/20/21 00:00*	*05/31/21 15:11*	*50*
Toluene-d8 (Surr)	*97*		*75 - 120*	*05/20/21 00:00*	*05/31/21 15:11*	*50*
4-Bromofluorobenzene (Surr)	*93*		*72 - 124*	*05/20/21 00:00*	*05/31/21 15:11*	*50*
Dibromofluoromethane	*91*		*75 - 120*	*05/20/21 00:00*	*05/31/21 15:11*	*50*

Definitions/Glossary

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Soil **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(75-126)	(75-120)	(72-124)	(75-120)
310-207193-1	GP-1 (14-16')	99	97	93	92

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(75-126)	(75-120)	(72-124)	(75-120)
310-207193-2	Trip Blank	100	97	93	91
LB3 500-600828/21-A	Method Blank	97	97	96	92
LCS 500-600828/22-A	Lab Control Sample	99	98	98	96
LCS 500-601576/5	Lab Control Sample	98	99	96	95
MB 500-601576/7	Method Blank	101	98	99	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LB3 500-600828/21-A
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600828

Analyte	LB3 Result	LB3 Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<7.3		13	7.3	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Bromobenzene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Bromochloromethane	<21		50	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Bromodichloromethane	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Bromoform	<24		50	24	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Bromomethane	<40		150	40	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
n-Butylbenzene	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
sec-Butylbenzene	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
tert-Butylbenzene	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Carbon tetrachloride	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Chlorobenzene	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Dibromochloromethane	<24		50	24	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Chloroethane	<25		50	25	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Chloroform	<19		100	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Chloromethane	<16		50	16	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
2-Chlorotoluene	<16		50	16	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
4-Chlorotoluene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2-Dibromo-3-Chloropropane	<100		250	100	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2-Dibromoethane	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Dibromomethane	<14		50	14	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2-Dichlorobenzene	<17		50	17	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,3-Dichlorobenzene	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,4-Dichlorobenzene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Dichlorodifluoromethane	<34		150	34	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1-Dichloroethane	<21		50	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2-Dichloroethane	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1-Dichloroethene	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
cis-1,2-Dichloroethene	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
trans-1,2-Dichloroethene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2-Dichloropropane	<21		50	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,3-Dichloropropane	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
2,2-Dichloropropane	<22		50	22	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1-Dichloropropene	<15		50	15	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
cis-1,3-Dichloropropene	<21		50	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
trans-1,3-Dichloropropene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Isopropyl ether	<14		50	14	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Ethylbenzene	<9.2		13	9.2	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Hexachlorobutadiene	<22		50	22	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Isopropylbenzene	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
p-Isopropyltoluene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Methylene Chloride	<82		250	82	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Methyl tert-butyl ether	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Naphthalene	<17		50	17	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
N-Propylbenzene	<21		50	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Styrene	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1,1,2-Tetrachloroethane	<23		50	23	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1,2,2-Tetrachloroethane	<20		50	20	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Tetrachloroethene	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB3 500-600828/21-A
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600828

Analyte	LB3 Result	LB3 Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<7.4		13	7.4	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2,3-Trichlorobenzene	<23		50	23	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2,4-Trichlorobenzene	<17		50	17	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1,1-Trichloroethane	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,1,2-Trichloroethane	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Trichloroethene	<8.2		25	8.2	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Trichlorofluoromethane	<21		50	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2,3-Trichloropropane	<21		100	21	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,2,4-Trimethylbenzene	<18		50	18	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
1,3,5-Trimethylbenzene	<19		50	19	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Vinyl chloride	<13		50	13	ug/Kg		05/25/21 20:55	05/31/21 12:13	50
Xylenes, Total	<11		25	11	ug/Kg		05/25/21 20:55	05/31/21 12:13	50

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 126*	*05/25/21 20:55*	*05/31/21 12:13*	*50*
Toluene-d8 (Surr)	*97*		*75 - 120*	*05/25/21 20:55*	*05/31/21 12:13*	*50*
4-Bromofluorobenzene (Surr)	*96*		*72 - 124*	*05/25/21 20:55*	*05/31/21 12:13*	*50*
Dibromofluoromethane	*92*		*75 - 120*	*05/25/21 20:55*	*05/31/21 12:13*	*50*

Lab Sample ID: LCS 500-600828/22-A
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600828

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2500	2570		ug/Kg		103	70 - 120
Bromobenzene	2500	2580		ug/Kg		103	70 - 122
Bromochloromethane	2500	2440		ug/Kg		98	65 - 122
Bromodichloromethane	2500	2360		ug/Kg		94	69 - 120
Bromoform	2500	2070		ug/Kg		83	56 - 132
Bromomethane	2500	2340		ug/Kg		93	40 - 152
n-Butylbenzene	2500	2540		ug/Kg		102	68 - 125
sec-Butylbenzene	2500	2620		ug/Kg		105	70 - 123
tert-Butylbenzene	2500	2630		ug/Kg		105	70 - 121
Carbon tetrachloride	2500	2430		ug/Kg		97	59 - 133
Chlorobenzene	2500	2560		ug/Kg		102	70 - 120
Dibromochloromethane	2500	2170		ug/Kg		87	68 - 125
Chloroethane	2500	2490		ug/Kg		99	48 - 136
Chloroform	2500	2380		ug/Kg		95	70 - 120
Chloromethane	2500	3160		ug/Kg		126	56 - 152
2-Chlorotoluene	2500	2610		ug/Kg		105	70 - 125
4-Chlorotoluene	2500	2590		ug/Kg		104	68 - 124
1,2-Dibromo-3-Chloropropane	2500	1520		ug/Kg		61	56 - 123
1,2-Dibromoethane	2500	2390		ug/Kg		96	70 - 125
Dibromomethane	2500	2450		ug/Kg		98	70 - 120
1,2-Dichlorobenzene	2500	2400		ug/Kg		96	70 - 125
1,3-Dichlorobenzene	2500	2530		ug/Kg		101	70 - 125
1,4-Dichlorobenzene	2500	2460		ug/Kg		98	70 - 120
Dichlorodifluoromethane	2500	1580		ug/Kg		63	40 - 159

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-600828/22-A
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600828

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2500	2830		ug/Kg		113	70 - 125
1,2-Dichloroethane	2500	2650		ug/Kg		106	68 - 127
1,1-Dichloroethene	2500	2380		ug/Kg		95	67 - 122
cis-1,2-Dichloroethene	2500	2530		ug/Kg		101	70 - 125
trans-1,2-Dichloroethene	2500	2470		ug/Kg		99	70 - 125
1,2-Dichloropropane	2500	2940		ug/Kg		118	67 - 130
1,3-Dichloropropane	2500	2430		ug/Kg		97	62 - 136
2,2-Dichloropropane	2500	2570		ug/Kg		103	58 - 139
1,1-Dichloropropene	2500	2510		ug/Kg		100	70 - 121
cis-1,3-Dichloropropene	2500	2400		ug/Kg		96	64 - 127
trans-1,3-Dichloropropene	2500	2250		ug/Kg		90	62 - 128
Ethylbenzene	2500	2540		ug/Kg		101	70 - 123
Hexachlorobutadiene	2500	2360		ug/Kg		94	51 - 150
Isopropylbenzene	2500	2680		ug/Kg		107	70 - 126
p-Isopropyltoluene	2500	2600		ug/Kg		104	70 - 125
Methylene Chloride	2500	2470		ug/Kg		99	69 - 125
Methyl tert-butyl ether	2500	2110		ug/Kg		85	55 - 123
Naphthalene	2500	2880		ug/Kg		115	53 - 144
N-Propylbenzene	2500	2660		ug/Kg		106	69 - 127
Styrene	2500	2530		ug/Kg		101	70 - 120
1,1,1,2-Tetrachloroethane	2500	2490		ug/Kg		100	70 - 125
1,1,2,2-Tetrachloroethane	2500	2430		ug/Kg		97	62 - 140
Tetrachloroethene	2500	2520		ug/Kg		101	70 - 128
Toluene	2500	2610		ug/Kg		104	70 - 125
1,2,3-Trichlorobenzene	2500	1730		ug/Kg		69	51 - 145
1,2,4-Trichlorobenzene	2500	1930		ug/Kg		77	57 - 137
1,1,1-Trichloroethane	2500	2500		ug/Kg		100	70 - 125
1,1,2-Trichloroethane	2500	2450		ug/Kg		98	71 - 130
Trichloroethene	2500	2570		ug/Kg		103	70 - 125
Trichlorofluoromethane	2500	2520		ug/Kg		101	55 - 128
1,2,3-Trichloropropane	2500	2500		ug/Kg		100	50 - 133
1,2,4-Trimethylbenzene	2500	2560		ug/Kg		103	70 - 123
1,3,5-Trimethylbenzene	2500	2600		ug/Kg		104	70 - 123
Vinyl chloride	2500	2650		ug/Kg		106	64 - 126
Xylenes, Total	5000	5040		ug/Kg		101	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 126*
Toluene-d8 (Surr)	*98*		*75 - 120*
4-Bromofluorobenzene (Surr)	*98*		*72 - 124*
Dibromofluoromethane	*96*		*75 - 120*

Lab Sample ID: MB 500-601576/7
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.25	0.15	ug/Kg			05/31/21 11:48	1

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-601576/7
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	<0.36		1.0	0.36	ug/Kg			05/31/21 11:48	1
Bromochloromethane	<0.43		1.0	0.43	ug/Kg			05/31/21 11:48	1
Bromodichloromethane	<0.37		1.0	0.37	ug/Kg			05/31/21 11:48	1
Bromoform	<0.48		1.0	0.48	ug/Kg			05/31/21 11:48	1
Bromomethane	<0.80		3.0	0.80	ug/Kg			05/31/21 11:48	1
n-Butylbenzene	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/Kg			05/31/21 11:48	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/Kg			05/31/21 11:48	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/Kg			05/31/21 11:48	1
Chlorobenzene	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
Dibromochloromethane	<0.49		1.0	0.49	ug/Kg			05/31/21 11:48	1
Chloroethane	<0.50		1.0	0.50	ug/Kg			05/31/21 11:48	1
Chloroform	<0.37		2.0	0.37	ug/Kg			05/31/21 11:48	1
Chloromethane	<0.32		1.0	0.32	ug/Kg			05/31/21 11:48	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/Kg			05/31/21 11:48	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/Kg			05/31/21 11:48	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/Kg			05/31/21 11:48	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
Dibromomethane	<0.27		1.0	0.27	ug/Kg			05/31/21 11:48	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/Kg			05/31/21 11:48	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/Kg			05/31/21 11:48	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/Kg			05/31/21 11:48	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/Kg			05/31/21 11:48	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/Kg			05/31/21 11:48	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/Kg			05/31/21 11:48	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/Kg			05/31/21 11:48	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/Kg			05/31/21 11:48	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/Kg			05/31/21 11:48	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/Kg			05/31/21 11:48	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/Kg			05/31/21 11:48	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/Kg			05/31/21 11:48	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/Kg			05/31/21 11:48	1
Isopropyl ether	<0.28		1.0	0.28	ug/Kg			05/31/21 11:48	1
Ethylbenzene	<0.18		0.25	0.18	ug/Kg			05/31/21 11:48	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/Kg			05/31/21 11:48	1
Isopropylbenzene	<0.38		1.0	0.38	ug/Kg			05/31/21 11:48	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/Kg			05/31/21 11:48	1
Methylene Chloride	<1.6		5.0	1.6	ug/Kg			05/31/21 11:48	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
Naphthalene	<0.33		1.0	0.33	ug/Kg			05/31/21 11:48	1
N-Propylbenzene	<0.41		1.0	0.41	ug/Kg			05/31/21 11:48	1
Styrene	<0.39		1.0	0.39	ug/Kg			05/31/21 11:48	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/Kg			05/31/21 11:48	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/Kg			05/31/21 11:48	1
Tetrachloroethene	<0.37		1.0	0.37	ug/Kg			05/31/21 11:48	1
Toluene	<0.15		0.25	0.15	ug/Kg			05/31/21 11:48	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/Kg			05/31/21 11:48	1

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-601576/7
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/Kg			05/31/21 11:48	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/Kg			05/31/21 11:48	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/Kg			05/31/21 11:48	1
Trichloroethene	<0.16		0.50	0.16	ug/Kg			05/31/21 11:48	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/Kg			05/31/21 11:48	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/Kg			05/31/21 11:48	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/Kg			05/31/21 11:48	1
1,3,5-Trimethylbenzene	<0.38		1.0	0.38	ug/Kg			05/31/21 11:48	1
Vinyl chloride	<0.26		1.0	0.26	ug/Kg			05/31/21 11:48	1
Xylenes, Total	<0.22		0.50	0.22	ug/Kg			05/31/21 11:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 126*		*05/31/21 11:48*	*1*
Toluene-d8 (Surr)	*98*		*75 - 120*		*05/31/21 11:48*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*		*05/31/21 11:48*	*1*
Dibromofluoromethane	*97*		*75 - 120*		*05/31/21 11:48*	*1*

Lab Sample ID: LCS 500-601576/5
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.5		ug/Kg		95	70 - 120
Bromobenzene	50.0	47.3		ug/Kg		95	70 - 122
Bromochloromethane	50.0	46.1		ug/Kg		92	65 - 122
Bromodichloromethane	50.0	44.4		ug/Kg		89	69 - 120
Bromoform	50.0	41.1		ug/Kg		82	56 - 132
Bromomethane	50.0	53.8		ug/Kg		108	40 - 152
n-Butylbenzene	50.0	47.6		ug/Kg		95	68 - 125
sec-Butylbenzene	50.0	47.5		ug/Kg		95	70 - 123
tert-Butylbenzene	50.0	48.1		ug/Kg		96	70 - 121
Carbon tetrachloride	50.0	47.3		ug/Kg		95	59 - 133
Chlorobenzene	50.0	47.5		ug/Kg		95	70 - 120
Dibromochloromethane	50.0	42.1		ug/Kg		84	68 - 125
Chloroethane	50.0	55.2		ug/Kg		110	48 - 136
Chloroform	50.0	44.1		ug/Kg		88	70 - 120
Chloromethane	50.0	61.8		ug/Kg		124	56 - 152
2-Chlorotoluene	50.0	48.0		ug/Kg		96	70 - 125
4-Chlorotoluene	50.0	48.2		ug/Kg		96	68 - 124
1,2-Dibromo-3-Chloropropane	50.0	31.5		ug/Kg		63	56 - 123
1,2-Dibromoethane	50.0	45.4		ug/Kg		91	70 - 125
Dibromomethane	50.0	46.5		ug/Kg		93	70 - 120
1,2-Dichlorobenzene	50.0	43.7		ug/Kg		87	70 - 125
1,3-Dichlorobenzene	50.0	46.2		ug/Kg		92	70 - 125
1,4-Dichlorobenzene	50.0	45.3		ug/Kg		91	70 - 120
Dichlorodifluoromethane	50.0	38.2		ug/Kg		76	40 - 159
1,1-Dichloroethane	50.0	52.9		ug/Kg		106	70 - 125
1,2-Dichloroethane	50.0	49.4		ug/Kg		99	68 - 127

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-601576/5
Matrix: Solid
Analysis Batch: 601576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	50.0	47.8		ug/Kg		96	67 - 122
cis-1,2-Dichloroethene	50.0	47.0		ug/Kg		94	70 - 125
trans-1,2-Dichloroethene	50.0	47.4		ug/Kg		95	70 - 125
1,2-Dichloropropane	50.0	53.5		ug/Kg		107	67 - 130
1,3-Dichloropropane	50.0	46.1		ug/Kg		92	62 - 136
2,2-Dichloropropane	50.0	51.5		ug/Kg		103	58 - 139
1,1-Dichloropropene	50.0	48.4		ug/Kg		97	70 - 121
cis-1,3-Dichloropropene	50.0	45.3		ug/Kg		91	64 - 127
trans-1,3-Dichloropropene	50.0	42.8		ug/Kg		86	62 - 128
Ethylbenzene	50.0	47.7		ug/Kg		95	70 - 123
Hexachlorobutadiene	50.0	41.6		ug/Kg		83	51 - 150
Isopropylbenzene	50.0	49.9		ug/Kg		100	70 - 126
p-Isopropyltoluene	50.0	47.7		ug/Kg		95	70 - 125
Methylene Chloride	50.0	45.5		ug/Kg		91	69 - 125
Methyl tert-butyl ether	50.0	39.2		ug/Kg		78	55 - 123
Naphthalene	50.0	33.8		ug/Kg		68	53 - 144
N-Propylbenzene	50.0	50.0		ug/Kg		100	69 - 127
Styrene	50.0	46.9		ug/Kg		94	70 - 120
1,1,1,2-Tetrachloroethane	50.0	46.2		ug/Kg		92	70 - 125
1,1,2,2-Tetrachloroethane	50.0	46.7		ug/Kg		93	62 - 140
Tetrachloroethene	50.0	48.0		ug/Kg		96	70 - 128
Toluene	50.0	49.3		ug/Kg		99	70 - 125
1,2,3-Trichlorobenzene	50.0	36.5		ug/Kg		73	51 - 145
1,2,4-Trichlorobenzene	50.0	38.2		ug/Kg		76	57 - 137
1,1,1-Trichloroethane	50.0	48.5		ug/Kg		97	70 - 125
1,1,2-Trichloroethane	50.0	47.0		ug/Kg		94	71 - 130
Trichloroethene	50.0	48.8		ug/Kg		98	70 - 125
Trichlorofluoromethane	50.0	48.5		ug/Kg		97	55 - 128
1,2,3-Trichloropropane	50.0	46.8		ug/Kg		94	50 - 133
1,2,4-Trimethylbenzene	50.0	46.9		ug/Kg		94	70 - 123
1,3,5-Trimethylbenzene	50.0	47.7		ug/Kg		95	70 - 123
Vinyl chloride	50.0	51.7		ug/Kg		103	64 - 126
Xylenes, Total	100	94.5		ug/Kg		95	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 126*
Toluene-d8 (Surr)	*99*		*75 - 120*
4-Bromofluorobenzene (Surr)	*96*		*72 - 124*
Dibromofluoromethane	*95*		*75 - 120*

QC Association Summary

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

GC/MS VOA

Prep Batch: 600828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-207193-1	GP-1 (14-16')	Total/NA	Soil	5035	
310-207193-2	Trip Blank	Total/NA	Solid	5035	
LB3 500-600828/21-A	Method Blank	Total/NA	Solid	5035	
LCS 500-600828/22-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 601576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-207193-1	GP-1 (14-16')	Total/NA	Soil	8260B	600828
310-207193-2	Trip Blank	Total/NA	Solid	8260B	600828
LB3 500-600828/21-A	Method Blank	Total/NA	Solid	8260B	600828
MB 500-601576/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-600828/22-A	Lab Control Sample	Total/NA	Solid	8260B	600828
LCS 500-601576/5	Lab Control Sample	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 600927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-207193-1	GP-1 (14-16')	Total/NA	Soil	Moisture	

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Phase II ESA Laundromat/Menominee WI

Job ID: 310-207193-1
SDG: P-0002702

Client Sample ID: GP-1 (14-16')

Lab Sample ID: 310-207193-1
Matrix: Soil
Date Collected: 05/20/21 12:24
Date Received: 05/22/21 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			600828	05/20/21 12:24	WRE	TAL CHI
Total/NA	Analysis	8260B		50	601576	05/31/21 14:46	PMF	TAL CHI
Total/NA	Analysis	Moisture		1	600927	05/26/21 10:05	LWN	TAL CHI

Client Sample ID: Trip Blank

Lab Sample ID: 310-207193-2
Matrix: Solid
Date Collected: 05/20/21 00:00
Date Received: 05/22/21 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			600828	05/20/21 00:00	WRE	TAL CHI
Total/NA	Analysis	8260B		50	601576	05/31/21 15:11	PMF	TAL CHI

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Laboratory: Eurofins TestAmerica, Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Soil	Percent Moisture
Moisture		Soil	Percent Solids

Method Summary

Client: American Engineering Testing Inc. Job ID: 310-207193-1
Project/Site: Phase II ESA Laundromat/Menominee WI SDG: P-0002702

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI
5035	Closed System Purge and Trap	SW846	TAL CHI

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

eurofins | Environment Testing TestAmerica

310-207193 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form 23

Client Information

Client: AET

City/State: CITY St. Paul STATE MN Project:

Receipt Information

Date/Time Received: DATE 5/22/21 TIME 745 Received By: CD

Delivery Type: ☒ UPS Sat ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID:
Multiple Coolers?	☐ Yes	☒ No	*If yes:* Cooler # _____ of _____
Cooler Custody Seals Present?	☒ Yes	☐ No	*If yes:* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☒ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☒ Yes	☐ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: 0 Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 0.8 Corrected Temp (°C): 0.8

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

AMERICAN ENGINEERING TESTING, INC.

☒ St. Paul Office
550 Cleveland Ave. N
St. Paul, MN 55114
651-659-9001
651-659-1379 (fax)

☐ OTHER _____

TestAmerica Minneapolis SC
213

ADDRESS: _____

PHONE: _____

№ 25851

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AET PROJECT NUMBER P-C002702

PROJECT NAME/LOCATION Ph II ESA Laundromat / Menomonee WI

AET PROJECT MANAGER Dennis McComas

AET PURCHASE ORDER NO _____

SEND REPORT TO Dennis McComas
Rachel Jackson

SAMPLED BY (PRINT) R. Jackson

SAMPLER SIGNATURE

REQUESTED TURNAROUND TIME: ☒ NORMAL ☐ RUSH

DATE NEEDED BY: _____

ITEM #	SAMPLE DESCRIPTION	DATE	TIME	SAMPLE TYPE	NO OF CONTAINERS	PRESERVATIVES: UNPRESERVED	PRESERVATIVES: MeOH	PRESERVATIVES: HCL	PRESERVATIVES: H_2SO_4	PRESERVATIVES: HNO_3	FIELD FILTERED Y/N	ANALYSIS: VOC	ANALYSIS: Moisture	REMARKS
1	GP-1 (14-16')	5/20/21	12:24	soil	2	1	1					X	X	
2	Trip Blank	—	—	—	1	1	1					X		

NOTE: 5 day TAT

ITEM NUMBER	RELINQUISHED BY/AFFILIATION	ACCEPTED BY/AFFILIATION	DATE	TIME
1-2	R. Jackson / AET		5/21/21	0909
1-2			5/22/21	745

8/2019

AET Project No. P-0002702

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6/1/2021

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone 319 277 2401 Fax 319 277 2425

Chain of Custody Record

Client Information (Sub Contract Lab)	Sampler	Lab PM	Carrier Tracking No(s)	COC No
		Bindert Zach T		310-37761 1
Client Contact	Phone	E Mail	State of Origin	Page
Shipping/Receiving		Zach Bindert@Eurofinset com	Wisconsin	Page 1 of 1
Company		Accreditations Required (See note)		Job #
TestAmerica Laboratories Inc		State Program - Wisconsin		310-207193-1
Address	Due Date Requested			
2417 Bond Street	6/2/2021			
City	TAT Requested (days)			
University Park				
State Zip				
IL 60484				
Phone	PO #			
708-534-5200(Tel) 708-534-5211(Fax)				
Email	WO #			
Project Name	Project #			
Phase II ESA Laundromat/Menominee WI	31005472			
Site	SSOW#			

310-207193 COC

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B/5035A_FM VOCs - Wisconsin	Moisture	Total Number of containers	Special Instructions/Note
			Preservation Code							
GP-1 (14-16') (310-207193-1)	5/20/21	12 24 Central		Solid			X	X	2	
Trip Blank (310-207193-2)	5/20/21	Central		Solid			X		1	

Note Since laboratory accreditations are subject to change Eurofins TestAmerica places the ownership of method analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	5/21/21 1635		[signature]	5/25/21 0930	EAT OKC
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact:	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		5.8

Login Sample Receipt Checklist

Client: American Engineering Testing Inc.

Job Number: 310-207193-1
SDG Number: P-0002702

Login Number: 207193
List Number: 1
Creator: Barros, Chelsea E

List Source: Eurofins TestAmerica, Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: American Engineering Testing Inc.

Job Number: 310-207193-1
SDG Number: P-0002702

Login Number: 207193
List Number: 2
Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago
List Creation: 05/25/21 11:59 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

eurofins | Environment Testing America

REVIEWED
By mneal at 8:15 am, May 27, 2021

ANALYTICAL REPORT

Eurofins TestAmerica, Burlington
530 Community Drive
Suite 11
South Burlington, VT 05403
Tel: (802)660-1990

Laboratory Job ID: 200-58590-1
Laboratory Sample Delivery Group: 200-58590-1
Client Project/Site: Ph II ESA Laundromat/ Menomonie WI

For:
American Engineering Testing Inc.
550 Cleveland Ave. North
St. Paul, Minnesota 55114

Attn: Dennis McComas

Kathryn Kelly

Authorized for release by:
5/26/2021 2:54:49 PM

Kathryn Kelly, Project Manager II
(802)923-1021
Kathryn.Kelly@Eurofinset.com

Client: American Engineering Testing Inc.
Project/Site: Ph II ESA Laundromat/ Menomonie WI

Laboratory Job ID: 200-58590-1
SDG: 200-58590-1

Table of Contents

Definitions/Glossary

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

Air - GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Job ID: 200-58590-1

Laboratory: Eurofins TestAmerica, Burlington

Narrative

CASE NARRATIVE

Client: American Engineering Testing Inc.

Project: Ph II ESA Laundromat/ Menomonie WI

Report Number: 200-58590-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 05/22/2021; the samples arrived in good condition.

VOLATILE ORGANIC COMPOUNDS
Samples VP-1 (3-5'), VP-2 (3-5') and SSV-1 were analyzed for Volatile Organic Compounds in accordance with EPA Method TO-15. The samples were analyzed on 05/26/2021.

Samples VP-1 (3-5')[10X], VP-2 (3-5')[10X], SSV-1[10.1X] and SSV-1[79.8X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: VP-1 (3-5') Lab Sample ID: 200-58590-1

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Propylene	370		86	86	ug/m3	10		TO-15	Total/NA
1,3-Butadiene	49		4.4	4.4	ug/m3	10		TO-15	Total/NA
Acetone	120		120	120	ug/m3	10		TO-15	Total/NA
Methyl Ethyl Ketone	27		15	15	ug/m3	10		TO-15	Total/NA
Benzene	22		6.4	6.4	ug/m3	10		TO-15	Total/NA
Toluene	23		7.5	7.5	ug/m3	10		TO-15	Total/NA
Tetrachloroethene	2300		14	14	ug/m3	10		TO-15	Total/NA

Client Sample ID: VP-2 (3-5') Lab Sample ID: 200-58590-2

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Propylene	110		86	86	ug/m3	10		TO-15	Total/NA
1,3-Butadiene	20		4.4	4.4	ug/m3	10		TO-15	Total/NA
Chloroform	22		9.8	9.8	ug/m3	10		TO-15	Total/NA
Benzene	13		6.4	6.4	ug/m3	10		TO-15	Total/NA
Toluene	16		7.5	7.5	ug/m3	10		TO-15	Total/NA
Tetrachloroethene	1300		14	14	ug/m3	10		TO-15	Total/NA

Client Sample ID: SSV-1 Lab Sample ID: 200-58590-3

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Ethanol	600		95	95	ug/m3	10.1		TO-15	Total/NA
Acetone	2400	E	120	120	ug/m3	10.1		TO-15	Total/NA
Acetone - DL	2200	D	950	950	ug/m3	79.8		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: VP-1 (3-5')

Lab Sample ID: 200-58590-1
Date Collected: 05/20/21 13:35
Matrix: Air
Date Received: 05/22/21 09:30
Sample Container: No Container

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Propylene	**370**		86	86	ug/m3			05/26/21 00:26	10
Dichlorodifluoromethane	25	U	25	25	ug/m3			05/26/21 00:26	10
1,2-Dichlorotetrafluoroethane	14	U	14	14	ug/m3			05/26/21 00:26	10
Chloromethane	10	U	10	10	ug/m3			05/26/21 00:26	10
Vinyl chloride	5.1	U	5.1	5.1	ug/m3			05/26/21 00:26	10
1,3-Butadiene	**49**		4.4	4.4	ug/m3			05/26/21 00:26	10
Bromomethane	7.8	U	7.8	7.8	ug/m3			05/26/21 00:26	10
Chloroethane	13	U	13	13	ug/m3			05/26/21 00:26	10
Trichlorofluoromethane	11	U	11	11	ug/m3			05/26/21 00:26	10
Ethanol	94	U	94	94	ug/m3			05/26/21 00:26	10
Freon TF	15	U	15	15	ug/m3			05/26/21 00:26	10
1,1-Dichloroethene	7.9	U	7.9	7.9	ug/m3			05/26/21 00:26	10
Acetone	**120**		120	120	ug/m3			05/26/21 00:26	10
Isopropyl alcohol	120	U	120	120	ug/m3			05/26/21 00:26	10
Carbon disulfide	16	U	16	16	ug/m3			05/26/21 00:26	10
Methylene Chloride	17	U	17	17	ug/m3			05/26/21 00:26	10
Methyl tert-butyl ether	7.2	U	7.2	7.2	ug/m3			05/26/21 00:26	10
trans-1,2-Dichloroethene	7.9	U	7.9	7.9	ug/m3			05/26/21 00:26	10
n-Hexane	18	U	18	18	ug/m3			05/26/21 00:26	10
1,1-Dichloroethane	8.1	U	8.1	8.1	ug/m3			05/26/21 00:26	10
Vinyl acetate	180	U	180	180	ug/m3			05/26/21 00:26	10
Ethyl acetate	180	U	180	180	ug/m3			05/26/21 00:26	10
Methyl Ethyl Ketone	**27**		15	15	ug/m3			05/26/21 00:26	10
cis-1,2-Dichloroethene	7.9	U	7.9	7.9	ug/m3			05/26/21 00:26	10
Chloroform	9.8	U	9.8	9.8	ug/m3			05/26/21 00:26	10
Tetrahydrofuran	150	U	150	150	ug/m3			05/26/21 00:26	10
1,1,1-Trichloroethane	11	U	11	11	ug/m3			05/26/21 00:26	10
Cyclohexane	6.9	U	6.9	6.9	ug/m3			05/26/21 00:26	10
Carbon tetrachloride	13	U	13	13	ug/m3			05/26/21 00:26	10
Benzene	**22**		6.4	6.4	ug/m3			05/26/21 00:26	10
1,2-Dichloroethane	8.1	U	8.1	8.1	ug/m3			05/26/21 00:26	10
n-Heptane	8.2	U	8.2	8.2	ug/m3			05/26/21 00:26	10
Trichloroethene	11	U	11	11	ug/m3			05/26/21 00:26	10
1,2-Dichloropropane	9.2	U	9.2	9.2	ug/m3			05/26/21 00:26	10
Bromodichloromethane	13	U	13	13	ug/m3			05/26/21 00:26	10
cis-1,3-Dichloropropene	9.1	U	9.1	9.1	ug/m3			05/26/21 00:26	10
Methyl isobutyl ketone	20	U	20	20	ug/m3			05/26/21 00:26	10
Toluene	**23**		7.5	7.5	ug/m3			05/26/21 00:26	10
trans-1,3-Dichloropropene	9.1	U	9.1	9.1	ug/m3			05/26/21 00:26	10
1,1,2-Trichloroethane	11	U	11	11	ug/m3			05/26/21 00:26	10
Tetrachloroethene	**2300**		14	14	ug/m3			05/26/21 00:26	10
Methyl Butyl Ketone (2-Hexanone)	20	U	20	20	ug/m3			05/26/21 00:26	10
1,2-Dibromoethane	15	U	15	15	ug/m3			05/26/21 00:26	10
Chlorobenzene	9.2	U	9.2	9.2	ug/m3			05/26/21 00:26	10
Ethylbenzene	8.7	U	8.7	8.7	ug/m3			05/26/21 00:26	10
m,p-Xylene	22	U	22	22	ug/m3			05/26/21 00:26	10
Xylene, o-	8.7	U	8.7	8.7	ug/m3			05/26/21 00:26	10
Styrene	8.5	U	8.5	8.5	ug/m3			05/26/21 00:26	10

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: VP-1 (3-5') Lab Sample ID: 200-58590-1

Date Collected: 05/20/21 13:35 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: No Container

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	21	U	21	21	ug/m3			05/26/21 00:26	10
1,1,2,2-Tetrachloroethane	14	U	14	14	ug/m3			05/26/21 00:26	10
4-Ethyltoluene	9.8	U	9.8	9.8	ug/m3			05/26/21 00:26	10
1,3,5-Trimethylbenzene	9.8	U	9.8	9.8	ug/m3			05/26/21 00:26	10
1,2,4-Trimethylbenzene	9.8	U	9.8	9.8	ug/m3			05/26/21 00:26	10
1,3-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 00:26	10
1,4-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 00:26	10
Benzyl chloride	10	U	10	10	ug/m3			05/26/21 00:26	10
1,2-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 00:26	10
1,2,4-Trichlorobenzene	37	U	37	37	ug/m3			05/26/21 00:26	10
Hexachlorobutadiene	21	U	21	21	ug/m3			05/26/21 00:26	10
Naphthalene	26	U	26	26	ug/m3			05/26/21 00:26	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Propyne	*35*	*J N*	*ppb v/v*		*4.48*	*74-99-7*		*05/26/21 00:26*	*10*
1-Propene, 2-methyl-	*70*	*J N*	*ppb v/v*		*5.00*	*115-11-7*		*05/26/21 00:26*	*10*
Unknown	*20*	*J*	*ppb v/v*		*5.05*			*05/26/21 00:26*	*10*
Unknown	*20*	*J*	*ppb v/v*		*5.41*			*05/26/21 00:26*	*10*
Unknown	*14*	*J*	*ppb v/v*		*5.51*			*05/26/21 00:26*	*10*
2-Butene, 2-methyl-	*27*	*J N*	*ppb v/v*		*6.98*	*513-35-9*		*05/26/21 00:26*	*10*
1,2-Pentadiene	*15*	*J N*	*ppb v/v*		*7.43*	*591-95-7*		*05/26/21 00:26*	*10*
1,3-Cyclopentadiene	*29*	*J N*	*ppb v/v*		*8.35*	*542-92-7*		*05/26/21 00:26*	*10*
Unknown	*14*	*J*	*ppb v/v*		*9.59*			*05/26/21 00:26*	*10*
Cyclotrisiloxane, hexamethyl-	*18*	*J N*	*ppb v/v*		*16.72*	*541-05-9*		*05/26/21 00:26*	*10*

Client Sample ID: VP-2 (3-5') Lab Sample ID: 200-58590-2

Date Collected: 05/20/21 13:56 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Propylene	**110**		86	86	ug/m3			05/26/21 03:11	10
Dichlorodifluoromethane	25	U	25	25	ug/m3			05/26/21 03:11	10
1,2-Dichlorotetrafluoroethane	14	U	14	14	ug/m3			05/26/21 03:11	10
Chloromethane	10	U	10	10	ug/m3			05/26/21 03:11	10
Vinyl chloride	5.1	U	5.1	5.1	ug/m3			05/26/21 03:11	10
1,3-Butadiene	**20**		4.4	4.4	ug/m3			05/26/21 03:11	10
Bromomethane	7.8	U	7.8	7.8	ug/m3			05/26/21 03:11	10
Chloroethane	13	U	13	13	ug/m3			05/26/21 03:11	10
Trichlorofluoromethane	11	U	11	11	ug/m3			05/26/21 03:11	10
Ethanol	94	U	94	94	ug/m3			05/26/21 03:11	10
Freon TF	15	U	15	15	ug/m3			05/26/21 03:11	10
1,1-Dichloroethene	7.9	U	7.9	7.9	ug/m3			05/26/21 03:11	10
Acetone	120	U	120	120	ug/m3			05/26/21 03:11	10
Isopropyl alcohol	120	U	120	120	ug/m3			05/26/21 03:11	10
Carbon disulfide	16	U	16	16	ug/m3			05/26/21 03:11	10
Methylene Chloride	17	U	17	17	ug/m3			05/26/21 03:11	10
Methyl tert-butyl ether	7.2	U	7.2	7.2	ug/m3			05/26/21 03:11	10

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: VP-2 (3-5') Lab Sample ID: 200-58590-2

Date Collected: 05/20/21 13:56 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	7.9	U	7.9	7.9	ug/m3			05/26/21 03:11	10
n-Hexane	18	U	18	18	ug/m3			05/26/21 03:11	10
1,1-Dichloroethane	8.1	U	8.1	8.1	ug/m3			05/26/21 03:11	10
Vinyl acetate	180	U	180	180	ug/m3			05/26/21 03:11	10
Ethyl acetate	180	U	180	180	ug/m3			05/26/21 03:11	10
Methyl Ethyl Ketone	15	U	15	15	ug/m3			05/26/21 03:11	10
cis-1,2-Dichloroethene	7.9	U	7.9	7.9	ug/m3			05/26/21 03:11	10
Chloroform	**22**		9.8	9.8	ug/m3			05/26/21 03:11	10
Tetrahydrofuran	150	U	150	150	ug/m3			05/26/21 03:11	10
1,1,1-Trichloroethane	11	U	11	11	ug/m3			05/26/21 03:11	10
Cyclohexane	6.9	U	6.9	6.9	ug/m3			05/26/21 03:11	10
Carbon tetrachloride	13	U	13	13	ug/m3			05/26/21 03:11	10
Benzene	**13**		6.4	6.4	ug/m3			05/26/21 03:11	10
1,2-Dichloroethane	8.1	U	8.1	8.1	ug/m3			05/26/21 03:11	10
n-Heptane	8.2	U	8.2	8.2	ug/m3			05/26/21 03:11	10
Trichloroethene	11	U	11	11	ug/m3			05/26/21 03:11	10
1,2-Dichloropropane	9.2	U	9.2	9.2	ug/m3			05/26/21 03:11	10
Bromodichloromethane	13	U	13	13	ug/m3			05/26/21 03:11	10
cis-1,3-Dichloropropene	9.1	U	9.1	9.1	ug/m3			05/26/21 03:11	10
Methyl isobutyl ketone	20	U	20	20	ug/m3			05/26/21 03:11	10
Toluene	**16**		7.5	7.5	ug/m3			05/26/21 03:11	10
trans-1,3-Dichloropropene	9.1	U	9.1	9.1	ug/m3			05/26/21 03:11	10
1,1,2-Trichloroethane	11	U	11	11	ug/m3			05/26/21 03:11	10
Tetrachloroethene	**1300**		14	14	ug/m3			05/26/21 03:11	10
Methyl Butyl Ketone (2-Hexanone)	20	U	20	20	ug/m3			05/26/21 03:11	10
1,2-Dibromoethane	15	U	15	15	ug/m3			05/26/21 03:11	10
Chlorobenzene	9.2	U	9.2	9.2	ug/m3			05/26/21 03:11	10
Ethylbenzene	8.7	U	8.7	8.7	ug/m3			05/26/21 03:11	10
m,p-Xylene	22	U	22	22	ug/m3			05/26/21 03:11	10
Xylene, o-	8.7	U	8.7	8.7	ug/m3			05/26/21 03:11	10
Styrene	8.5	U	8.5	8.5	ug/m3			05/26/21 03:11	10
Bromoform	21	U	21	21	ug/m3			05/26/21 03:11	10
1,1,2,2-Tetrachloroethane	14	U	14	14	ug/m3			05/26/21 03:11	10
4-Ethyltoluene	9.8	U	9.8	9.8	ug/m3			05/26/21 03:11	10
1,3,5-Trimethylbenzene	9.8	U	9.8	9.8	ug/m3			05/26/21 03:11	10
1,2,4-Trimethylbenzene	9.8	U	9.8	9.8	ug/m3			05/26/21 03:11	10
1,3-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 03:11	10
1,4-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 03:11	10
Benzyl chloride	10	U	10	10	ug/m3			05/26/21 03:11	10
1,2-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 03:11	10
1,2,4-Trichlorobenzene	37	U	37	37	ug/m3			05/26/21 03:11	10
Hexachlorobutadiene	21	U	21	21	ug/m3			05/26/21 03:11	10
Naphthalene	26	U	26	26	ug/m3			05/26/21 03:11	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Propyne	*15*	*J N*	*ppb v/v*		*4.49*	*74-99-7*		*05/26/21 03:11*	*10*
Unknown	*18*	*J*	*ppb v/v*		*5.01*			*05/26/21 03:11*	*10*
Unknown	*18*	*J*	*ppb v/v*		*5.06*			*05/26/21 03:11*	*10*
Unknown	*18*	*J*	*ppb v/v*		*5.42*			*05/26/21 03:11*	*10*

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: VP-2 (3-5')
Lab Sample ID: 200-58590-2
Date Collected: 05/20/21 13:56 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*10*	*J*	*ppb v/v*		*6.96*			*05/26/21 03:11*	*10*
1,3-Cyclopentadiene	*10*	*J N*	*ppb v/v*		*8.35*	*542-92-7*		*05/26/21 03:11*	*10*

Client Sample ID: SSV-1
Lab Sample ID: 200-58590-3
Date Collected: 05/20/21 11:47 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Propylene	87	U	87	87	ug/m3			05/26/21 04:06	10.1
Dichlorodifluoromethane	25	U	25	25	ug/m3			05/26/21 04:06	10.1
1,2-Dichlorotetrafluoroethane	14	U	14	14	ug/m3			05/26/21 04:06	10.1
Chloromethane	10	U	10	10	ug/m3			05/26/21 04:06	10.1
Vinyl chloride	5.2	U	5.2	5.2	ug/m3			05/26/21 04:06	10.1
1,3-Butadiene	4.5	U	4.5	4.5	ug/m3			05/26/21 04:06	10.1
Bromomethane	7.8	U	7.8	7.8	ug/m3			05/26/21 04:06	10.1
Chloroethane	13	U	13	13	ug/m3			05/26/21 04:06	10.1
Trichlorofluoromethane	11	U	11	11	ug/m3			05/26/21 04:06	10.1
Ethanol	**600**		95	95	ug/m3			05/26/21 04:06	10.1
Freon TF	15	U	15	15	ug/m3			05/26/21 04:06	10.1
1,1-Dichloroethene	8.0	U	8.0	8.0	ug/m3			05/26/21 04:06	10.1
Acetone	**2400**	**E**	120	120	ug/m3			05/26/21 04:06	10.1
Isopropyl alcohol	120	U	120	120	ug/m3			05/26/21 04:06	10.1
Carbon disulfide	16	U	16	16	ug/m3			05/26/21 04:06	10.1
Methylene Chloride	18	U	18	18	ug/m3			05/26/21 04:06	10.1
Methyl tert-butyl ether	7.3	U	7.3	7.3	ug/m3			05/26/21 04:06	10.1
trans-1,2-Dichloroethene	8.0	U	8.0	8.0	ug/m3			05/26/21 04:06	10.1
n-Hexane	18	U	18	18	ug/m3			05/26/21 04:06	10.1
1,1-Dichloroethane	8.2	U	8.2	8.2	ug/m3			05/26/21 04:06	10.1
Vinyl acetate	180	U	180	180	ug/m3			05/26/21 04:06	10.1
Ethyl acetate	180	U	180	180	ug/m3			05/26/21 04:06	10.1
Methyl Ethyl Ketone	15	U	15	15	ug/m3			05/26/21 04:06	10.1
cis-1,2-Dichloroethene	8.0	U	8.0	8.0	ug/m3			05/26/21 04:06	10.1
Chloroform	9.9	U	9.9	9.9	ug/m3			05/26/21 04:06	10.1
Tetrahydrofuran	150	U	150	150	ug/m3			05/26/21 04:06	10.1
1,1,1-Trichloroethane	11	U	11	11	ug/m3			05/26/21 04:06	10.1
Cyclohexane	7.0	U	7.0	7.0	ug/m3			05/26/21 04:06	10.1
Carbon tetrachloride	13	U	13	13	ug/m3			05/26/21 04:06	10.1
Benzene	6.5	U	6.5	6.5	ug/m3			05/26/21 04:06	10.1
1,2-Dichloroethane	8.2	U	8.2	8.2	ug/m3			05/26/21 04:06	10.1
n-Heptane	8.3	U	8.3	8.3	ug/m3			05/26/21 04:06	10.1
Trichloroethene	11	U	11	11	ug/m3			05/26/21 04:06	10.1
1,2-Dichloropropane	9.3	U	9.3	9.3	ug/m3			05/26/21 04:06	10.1
Bromodichloromethane	14	U	14	14	ug/m3			05/26/21 04:06	10.1
cis-1,3-Dichloropropene	9.2	U	9.2	9.2	ug/m3			05/26/21 04:06	10.1
Methyl isobutyl ketone	21	U	21	21	ug/m3			05/26/21 04:06	10.1
Toluene	7.6	U	7.6	7.6	ug/m3			05/26/21 04:06	10.1

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: SSV-1 Lab Sample ID: 200-58590-3

Date Collected: 05/20/21 11:47 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	9.2	U	9.2	9.2	ug/m3			05/26/21 04:06	10.1
1,1,2-Trichloroethane	11	U	11	11	ug/m3			05/26/21 04:06	10.1
Tetrachloroethene	14	U	14	14	ug/m3			05/26/21 04:06	10.1
Methyl Butyl Ketone (2-Hexanone)	21	U	21	21	ug/m3			05/26/21 04:06	10.1
1,2-Dibromoethane	16	U	16	16	ug/m3			05/26/21 04:06	10.1
Chlorobenzene	9.3	U	9.3	9.3	ug/m3			05/26/21 04:06	10.1
Ethylbenzene	8.8	U	8.8	8.8	ug/m3			05/26/21 04:06	10.1
m,p-Xylene	22	U	22	22	ug/m3			05/26/21 04:06	10.1
Xylene, o-	8.8	U	8.8	8.8	ug/m3			05/26/21 04:06	10.1
Styrene	8.6	U	8.6	8.6	ug/m3			05/26/21 04:06	10.1
Bromoform	21	U	21	21	ug/m3			05/26/21 04:06	10.1
1,1,2,2-Tetrachloroethane	14	U	14	14	ug/m3			05/26/21 04:06	10.1
4-Ethyltoluene	9.9	U	9.9	9.9	ug/m3			05/26/21 04:06	10.1
1,3,5-Trimethylbenzene	9.9	U	9.9	9.9	ug/m3			05/26/21 04:06	10.1
1,2,4-Trimethylbenzene	9.9	U	9.9	9.9	ug/m3			05/26/21 04:06	10.1
1,3-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 04:06	10.1
1,4-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 04:06	10.1
Benzyl chloride	10	U	10	10	ug/m3			05/26/21 04:06	10.1
1,2-Dichlorobenzene	12	U	12	12	ug/m3			05/26/21 04:06	10.1
1,2,4-Trichlorobenzene	37	U	37	37	ug/m3			05/26/21 04:06	10.1
Hexachlorobutadiene	22	U	22	22	ug/m3			05/26/21 04:06	10.1
Naphthalene	26	U	26	26	ug/m3			05/26/21 04:06	10.1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*J*	*ppb v/v*		*5.41*			*05/26/21 04:06*	*10.1*
1-Propanol	*13*	*J N*	*ppb v/v*		*10.17*	*71-23-8*		*05/26/21 04:06*	*10.1*

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Propylene	690	U	690	690	ug/m3			05/26/21 05:01	79.8
Dichlorodifluoromethane	200	U	200	200	ug/m3			05/26/21 05:01	79.8
1,2-Dichlorotetrafluoroethane	110	U	110	110	ug/m3			05/26/21 05:01	79.8
Chloromethane	82	U	82	82	ug/m3			05/26/21 05:01	79.8
Vinyl chloride	41	U	41	41	ug/m3			05/26/21 05:01	79.8
1,3-Butadiene	35	U	35	35	ug/m3			05/26/21 05:01	79.8
Bromomethane	62	U	62	62	ug/m3			05/26/21 05:01	79.8
Chloroethane	110	U	110	110	ug/m3			05/26/21 05:01	79.8
Trichlorofluoromethane	90	U	90	90	ug/m3			05/26/21 05:01	79.8
Ethanol	750	U	750	750	ug/m3			05/26/21 05:01	79.8
Freon TF	120	U	120	120	ug/m3			05/26/21 05:01	79.8
1,1-Dichloroethene	63	U	63	63	ug/m3			05/26/21 05:01	79.8
Acetone	**2200**	**D**	950	950	ug/m3			05/26/21 05:01	79.8
Isopropyl alcohol	980	U	980	980	ug/m3			05/26/21 05:01	79.8
Carbon disulfide	120	U	120	120	ug/m3			05/26/21 05:01	79.8
Methylene Chloride	140	U	140	140	ug/m3			05/26/21 05:01	79.8
Methyl tert-butyl ether	58	U	58	58	ug/m3			05/26/21 05:01	79.8
trans-1,2-Dichloroethene	63	U	63	63	ug/m3			05/26/21 05:01	79.8
n-Hexane	140	U	140	140	ug/m3			05/26/21 05:01	79.8
1,1-Dichloroethane	65	U	65	65	ug/m3			05/26/21 05:01	79.8

Client Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: SSV-1 **Lab Sample ID: 200-58590-3**
Date Collected: 05/20/21 11:47 **Matrix: Air**
Date Received: 05/22/21 09:30
Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air - DL (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	1400	U	1400	1400	ug/m3			05/26/21 05:01	79.8
Ethyl acetate	1400	U	1400	1400	ug/m3			05/26/21 05:01	79.8
Methyl Ethyl Ketone	120	U	120	120	ug/m3			05/26/21 05:01	79.8
cis-1,2-Dichloroethene	63	U	63	63	ug/m3			05/26/21 05:01	79.8
Chloroform	78	U	78	78	ug/m3			05/26/21 05:01	79.8
Tetrahydrofuran	1200	U	1200	1200	ug/m3			05/26/21 05:01	79.8
1,1,1-Trichloroethane	87	U	87	87	ug/m3			05/26/21 05:01	79.8
Cyclohexane	55	U	55	55	ug/m3			05/26/21 05:01	79.8
Carbon tetrachloride	100	U	100	100	ug/m3			05/26/21 05:01	79.8
Benzene	51	U	51	51	ug/m3			05/26/21 05:01	79.8
1,2-Dichloroethane	65	U	65	65	ug/m3			05/26/21 05:01	79.8
n-Heptane	65	U	65	65	ug/m3			05/26/21 05:01	79.8
Trichloroethene	86	U	86	86	ug/m3			05/26/21 05:01	79.8
1,2-Dichloropropane	74	U	74	74	ug/m3			05/26/21 05:01	79.8
Bromodichloromethane	110	U	110	110	ug/m3			05/26/21 05:01	79.8
cis-1,3-Dichloropropene	72	U	72	72	ug/m3			05/26/21 05:01	79.8
Methyl isobutyl ketone	160	U	160	160	ug/m3			05/26/21 05:01	79.8
Toluene	60	U	60	60	ug/m3			05/26/21 05:01	79.8
trans-1,3-Dichloropropene	72	U	72	72	ug/m3			05/26/21 05:01	79.8
1,1,2-Trichloroethane	87	U	87	87	ug/m3			05/26/21 05:01	79.8
Tetrachloroethene	110	U	110	110	ug/m3			05/26/21 05:01	79.8
Methyl Butyl Ketone (2-Hexanone)	160	U	160	160	ug/m3			05/26/21 05:01	79.8
1,2-Dibromoethane	120	U	120	120	ug/m3			05/26/21 05:01	79.8
Chlorobenzene	73	U	73	73	ug/m3			05/26/21 05:01	79.8
Ethylbenzene	69	U	69	69	ug/m3			05/26/21 05:01	79.8
m,p-Xylene	170	U	170	170	ug/m3			05/26/21 05:01	79.8
Xylene, o-	69	U	69	69	ug/m3			05/26/21 05:01	79.8
Styrene	68	U	68	68	ug/m3			05/26/21 05:01	79.8
Bromoform	160	U	160	160	ug/m3			05/26/21 05:01	79.8
1,1,2,2-Tetrachloroethane	110	U	110	110	ug/m3			05/26/21 05:01	79.8
4-Ethyltoluene	78	U	78	78	ug/m3			05/26/21 05:01	79.8
1,3,5-Trimethylbenzene	78	U	78	78	ug/m3			05/26/21 05:01	79.8
1,2,4-Trimethylbenzene	78	U	78	78	ug/m3			05/26/21 05:01	79.8
1,3-Dichlorobenzene	96	U	96	96	ug/m3			05/26/21 05:01	79.8
1,4-Dichlorobenzene	96	U	96	96	ug/m3			05/26/21 05:01	79.8
Benzyl chloride	83	U	83	83	ug/m3			05/26/21 05:01	79.8
1,2-Dichlorobenzene	96	U	96	96	ug/m3			05/26/21 05:01	79.8
1,2,4-Trichlorobenzene	300	U	300	300	ug/m3			05/26/21 05:01	79.8
Hexachlorobutadiene	170	U	170	170	ug/m3			05/26/21 05:01	79.8
Naphthalene	210	U	210	210	ug/m3			05/26/21 05:01	79.8

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ppb v/v*					*05/26/21 05:01*	*79.8*

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Ph II ESA Laundromat/ Menomonie WI

Job ID: 200-58590-1
SDG: 200-58590-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 200-167228/4
Matrix: Air
Analysis Batch: 167228

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Propylene	8.6	U	8.6	8.6	ug/m3			05/25/21 10:23	1
Dichlorodifluoromethane	2.5	U	2.5	2.5	ug/m3			05/25/21 10:23	1
1,2-Dichlorotetrafluoroethane	1.4	U	1.4	1.4	ug/m3			05/25/21 10:23	1
Chloromethane	1.0	U	1.0	1.0	ug/m3			05/25/21 10:23	1
Vinyl chloride	0.51	U	0.51	0.51	ug/m3			05/25/21 10:23	1
1,3-Butadiene	0.44	U	0.44	0.44	ug/m3			05/25/21 10:23	1
Bromomethane	0.78	U	0.78	0.78	ug/m3			05/25/21 10:23	1
Chloroethane	1.3	U	1.3	1.3	ug/m3			05/25/21 10:23	1
Trichlorofluoromethane	1.1	U	1.1	1.1	ug/m3			05/25/21 10:23	1
Ethanol	9.4	U	9.4	9.4	ug/m3			05/25/21 10:23	1
Freon TF	1.5	U	1.5	1.5	ug/m3			05/25/21 10:23	1
1,1-Dichloroethene	0.79	U	0.79	0.79	ug/m3			05/25/21 10:23	1
Acetone	12	U	12	12	ug/m3			05/25/21 10:23	1
Isopropyl alcohol	12	U	12	12	ug/m3			05/25/21 10:23	1
Carbon disulfide	1.6	U	1.6	1.6	ug/m3			05/25/21 10:23	1
Methylene Chloride	1.7	U	1.7	1.7	ug/m3			05/25/21 10:23	1
Methyl tert-butyl ether	0.72	U	0.72	0.72	ug/m3			05/25/21 10:23	1
trans-1,2-Dichloroethene	0.79	U	0.79	0.79	ug/m3			05/25/21 10:23	1
n-Hexane	1.8	U	1.8	1.8	ug/m3			05/25/21 10:23	1
1,1-Dichloroethane	0.81	U	0.81	0.81	ug/m3			05/25/21 10:23	1
Vinyl acetate	18	U	18	18	ug/m3			05/25/21 10:23	1
Ethyl acetate	18	U	18	18	ug/m3			05/25/21 10:23	1
Methyl Ethyl Ketone	1.5	U	1.5	1.5	ug/m3			05/25/21 10:23	1
cis-1,2-Dichloroethene	0.79	U	0.79	0.79	ug/m3			05/25/21 10:23	1
Chloroform	0.98	U	0.98	0.98	ug/m3			05/25/21 10:23	1
Tetrahydrofuran	15	U	15	15	ug/m3			05/25/21 10:23	1
1,1,1-Trichloroethane	1.1	U	1.1	1.1	ug/m3			05/25/21 10:23	1
Cyclohexane	0.69	U	0.69	0.69	ug/m3			05/25/21 10:23	1
Carbon tetrachloride	1.3	U	1.3	1.3	ug/m3			05/25/21 10:23	1
Benzene	0.64	U	0.64	0.64	ug/m3			05/25/21 10:23	1
1,2-Dichloroethane	0.81	U	0.81	0.81	ug/m3			05/25/21 10:23	1
n-Heptane	0.82	U	0.82	0.82	ug/m3			05/25/21 10:23	1
Trichloroethene	1.1	U	1.1	1.1	ug/m3			05/25/21 10:23	1
1,2-Dichloropropane	0.92	U	0.92	0.92	ug/m3			05/25/21 10:23	1
Bromodichloromethane	1.3	U	1.3	1.3	ug/m3			05/25/21 10:23	1
cis-1,3-Dichloropropene	0.91	U	0.91	0.91	ug/m3			05/25/21 10:23	1
Methyl isobutyl ketone	2.0	U	2.0	2.0	ug/m3			05/25/21 10:23	1
Toluene	0.75	U	0.75	0.75	ug/m3			05/25/21 10:23	1
trans-1,3-Dichloropropene	0.91	U	0.91	0.91	ug/m3			05/25/21 10:23	1
1,1,2-Trichloroethane	1.1	U	1.1	1.1	ug/m3			05/25/21 10:23	1
Tetrachloroethene	1.4	U	1.4	1.4	ug/m3			05/25/21 10:23	1
Methyl Butyl Ketone (2-Hexanone)	2.0	U	2.0	2.0	ug/m3			05/25/21 10:23	1
1,2-Dibromoethane	1.5	U	1.5	1.5	ug/m3			05/25/21 10:23	1
Chlorobenzene	0.92	U	0.92	0.92	ug/m3			05/25/21 10:23	1
Ethylbenzene	0.87	U	0.87	0.87	ug/m3			05/25/21 10:23	1
m,p-Xylene	2.2	U	2.2	2.2	ug/m3			05/25/21 10:23	1
Xylene, o-	0.87	U	0.87	0.87	ug/m3			05/25/21 10:23	1
Styrene	0.85	U	0.85	0.85	ug/m3			05/25/21 10:23	1

QC Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-167228/4 **Client Sample ID: Method Blank**
Matrix: Air **Prep Type: Total/NA**
Analysis Batch: 167228

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	2.1	U	2.1	2.1	ug/m3			05/25/21 10:23	1
1,1,2,2-Tetrachloroethane	1.4	U	1.4	1.4	ug/m3			05/25/21 10:23	1
4-Ethyltoluene	0.98	U	0.98	0.98	ug/m3			05/25/21 10:23	1
1,3,5-Trimethylbenzene	0.98	U	0.98	0.98	ug/m3			05/25/21 10:23	1
1,2,4-Trimethylbenzene	0.98	U	0.98	0.98	ug/m3			05/25/21 10:23	1
1,3-Dichlorobenzene	1.2	U	1.2	1.2	ug/m3			05/25/21 10:23	1
1,4-Dichlorobenzene	1.2	U	1.2	1.2	ug/m3			05/25/21 10:23	1
Benzyl chloride	1.0	U	1.0	1.0	ug/m3			05/25/21 10:23	1
1,2-Dichlorobenzene	1.2	U	1.2	1.2	ug/m3			05/25/21 10:23	1
1,2,4-Trichlorobenzene	3.7	U	3.7	3.7	ug/m3			05/25/21 10:23	1
Hexachlorobutadiene	2.1	U	2.1	2.1	ug/m3			05/25/21 10:23	1
Naphthalene	2.6	U	2.6	2.6	ug/m3			05/25/21 10:23	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ppb v/v*					*05/25/21 10:23*	*1*

Lab Sample ID: LCS 200-167228/3 **Client Sample ID: Lab Control Sample**
Matrix: Air **Prep Type: Total/NA**
Analysis Batch: 167228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Propylene	17.4	17.5		ug/m3		100	50 - 158
Dichlorodifluoromethane	52.3	49.4		ug/m3		94	61 - 142
1,2-Dichlorotetrafluoroethane	74.0	70.1		ug/m3		95	71 - 141
Chloromethane	20.5	22.1		ug/m3		108	56 - 141
Vinyl chloride	25.5	25.8		ug/m3		101	61 - 135
1,3-Butadiene	21.5	20.2		ug/m3		94	58 - 139
Bromomethane	40.4	36.9		ug/m3		91	72 - 124
Chloroethane	27.9	26.4		ug/m3		95	68 - 130
Trichlorofluoromethane	58.5	53.9		ug/m3		92	70 - 129
Ethanol	27.7	28.1		ug/m3		101	50 - 150
Freon TF	81.8	75.7		ug/m3		93	70 - 121
1,1-Dichloroethene	40.4	34.6		ug/m3		86	68 - 120
Acetone	24.8	22.8		ug/m3		92	54 - 154
Isopropyl alcohol	25.0	23.3		ug/m3		93	53 - 142
Carbon disulfide	32.3	29.8		ug/m3		92	71 - 138
Methylene Chloride	35.6	33.4		ug/m3		94	59 - 137
Methyl tert-butyl ether	38.1	34.7		ug/m3		91	70 - 127
trans-1,2-Dichloroethene	40.9	38.2		ug/m3		93	69 - 137
n-Hexane	36.9	33.3		ug/m3		90	63 - 138
1,1-Dichloroethane	41.6	37.5		ug/m3		90	66 - 130
Vinyl acetate	35.5	38.0		ug/m3		107	59 - 149
Ethyl acetate	36.8	34.6		ug/m3		94	70 - 131
Methyl Ethyl Ketone	30.5	28.4		ug/m3		93	72 - 124
cis-1,2-Dichloroethene	41.1	34.4		ug/m3		84	72 - 121
Chloroform	50.4	45.8		ug/m3		91	73 - 124
Tetrahydrofuran	28.9	28.0		ug/m3		97	60 - 149
1,1,1-Trichloroethane	56.3	51.9		ug/m3		92	72 - 127

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Ph II ESA Laundromat/ Menomonie WI

Job ID: 200-58590-1
SDG: 200-58590-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-167228/3
Matrix: Air
Analysis Batch: 167228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	35.2	32.0		ug/m3		91	76 - 124
Carbon tetrachloride	63.2	64.5		ug/m3		102	71 - 133
Benzene	33.2	30.6		ug/m3		92	73 - 119
1,2-Dichloroethane	42.3	39.2		ug/m3		93	68 - 135
n-Heptane	42.2	39.1		ug/m3		93	60 - 142
Trichloroethene	55.3	49.7		ug/m3		90	73 - 122
1,2-Dichloropropane	47.8	45.9		ug/m3		96	69 - 128
Bromodichloromethane	68.9	67.4		ug/m3		98	75 - 127
cis-1,3-Dichloropropene	45.1	44.4		ug/m3		98	74 - 125
Methyl isobutyl ketone	41.7	39.5		ug/m3		95	58 - 144
Toluene	38.4	35.4		ug/m3		92	75 - 122
trans-1,3-Dichloropropene	44.7	43.3		ug/m3		97	74 - 128
1,1,2-Trichloroethane	57.2	53.9		ug/m3		94	75 - 126
Tetrachloroethene	71.0	67.1		ug/m3		95	70 - 125
Methyl Butyl Ketone (2-Hexanone)	41.4	38.8		ug/m3		94	57 - 143
1,2-Dibromoethane	81.9	79.0		ug/m3		96	78 - 122
Chlorobenzene	48.3	46.4		ug/m3		96	76 - 119
Ethylbenzene	44.4	41.9		ug/m3		94	74 - 122
m,p-Xylene	86.8	86.6		ug/m3		100	76 - 121
Xylene, o-	45.0	42.9		ug/m3		95	73 - 123
Styrene	43.8	44.0		ug/m3		101	74 - 125
Bromoform	106	116		ug/m3		109	53 - 149
1,1,2,2-Tetrachloroethane	71.0	72.0		ug/m3		101	74 - 126
4-Ethyltoluene	50.4	51.5		ug/m3		102	75 - 129
1,3,5-Trimethylbenzene	51.6	49.6		ug/m3		96	72 - 126
1,2,4-Trimethylbenzene	51.3	50.3		ug/m3		98	71 - 129
1,3-Dichlorobenzene	61.1	69.7		ug/m3		114	69 - 131
1,4-Dichlorobenzene	62.5	70.7		ug/m3		113	67 - 132
Benzyl chloride	52.6	63.7		ug/m3		121	60 - 136
1,2-Dichlorobenzene	64.7	67.0		ug/m3		104	68 - 129
1,2,4-Trichlorobenzene	81.5	87.4		ug/m3		107	50 - 150
Hexachlorobutadiene	116	103		ug/m3		89	58 - 130
Naphthalene	55.0	56.1		ug/m3		102	50 - 150

Lab Sample ID: 200-58590-1 DU
Matrix: Air
Analysis Batch: 167228

Client Sample ID: VP-1 (3-5')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Propylene	370		353		ug/m3		4	25
Dichlorodifluoromethane	25	U	25	U	ug/m3		NC	25
1,2-Dichlorotetrafluoroethane	14	U	14	U	ug/m3		NC	25
Chloromethane	10	U	10	U	ug/m3		NC	25
Vinyl chloride	5.1	U	5.1	U	ug/m3		NC	25
1,3-Butadiene	49		47.7		ug/m3		4	25
Bromomethane	7.8	U	7.8	U	ug/m3		NC	25
Chloroethane	13	U	13	U	ug/m3		NC	25
Trichlorofluoromethane	11	U	11	U	ug/m3		NC	25

QC Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: 200-58590-1 DU **Client Sample ID: VP-1 (3-5')**
Matrix: Air **Prep Type: Total/NA**
Analysis Batch: 167228

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ethanol	94	U		94	U	ug/m3				NC	25
Freon TF	15	U		15	U	ug/m3				NC	25
1,1-Dichloroethene	7.9	U		7.9	U	ug/m3				NC	25
Acetone	120			120	U	ug/m3				NC	25
Isopropyl alcohol	120	U		120	U	ug/m3				NC	25
Carbon disulfide	16	U		16	U	ug/m3				NC	25
Methylene Chloride	17	U		17	U	ug/m3				NC	25
Methyl tert-butyl ether	7.2	U		7.2	U	ug/m3				NC	25
trans-1,2-Dichloroethene	7.9	U		7.9	U	ug/m3				NC	25
n-Hexane	18	U		18	U	ug/m3				NC	25
1,1-Dichloroethane	8.1	U		8.1	U	ug/m3				NC	25
Vinyl acetate	180	U		180	U	ug/m3				NC	25
Ethyl acetate	180	U		180	U	ug/m3				NC	25
Methyl Ethyl Ketone	27			26.5		ug/m3				2	25
cis-1,2-Dichloroethene	7.9	U		7.9	U	ug/m3				NC	25
Chloroform	9.8	U		9.8	U	ug/m3				NC	25
Tetrahydrofuran	150	U		150	U	ug/m3				NC	25
1,1,1-Trichloroethane	11	U		11	U	ug/m3				NC	25
Cyclohexane	6.9	U		6.9	U	ug/m3				NC	25
Carbon tetrachloride	13	U		13	U	ug/m3				NC	25
Benzene	22			21.3		ug/m3				3	25
1,2-Dichloroethane	8.1	U		8.1	U	ug/m3				NC	25
n-Heptane	8.2	U		8.2	U	ug/m3				NC	25
Trichloroethene	11	U		11	U	ug/m3				NC	25
1,2-Dichloropropane	9.2	U		9.2	U	ug/m3				NC	25
Bromodichloromethane	13	U		13	U	ug/m3				NC	25
cis-1,3-Dichloropropene	9.1	U		9.1	U	ug/m3				NC	25
Methyl isobutyl ketone	20	U		20	U	ug/m3				NC	25
Toluene	23			22.0		ug/m3				4	25
trans-1,3-Dichloropropene	9.1	U		9.1	U	ug/m3				NC	25
1,1,2-Trichloroethane	11	U		11	U	ug/m3				NC	25
Tetrachloroethene	2300			2210		ug/m3				6	25
Methyl Butyl Ketone (2-Hexanone)	20	U		20	U	ug/m3				NC	25
1,2-Dibromoethane	15	U		15	U	ug/m3				NC	25
Chlorobenzene	9.2	U		9.2	U	ug/m3				NC	25
Ethylbenzene	8.7	U		8.7	U	ug/m3				NC	25
m,p-Xylene	22	U		22	U	ug/m3				NC	25
Xylene, o-	8.7	U		8.7	U	ug/m3				NC	25
Styrene	8.5	U		8.5	U	ug/m3				NC	25
Bromoform	21	U		21	U	ug/m3				NC	25
1,1,2,2-Tetrachloroethane	14	U		14	U	ug/m3				NC	25
4-Ethyltoluene	9.8	U		9.8	U	ug/m3				NC	25
1,3,5-Trimethylbenzene	9.8	U		9.8	U	ug/m3				NC	25
1,2,4-Trimethylbenzene	9.8	U		9.8	U	ug/m3				NC	25
1,3-Dichlorobenzene	12	U		12	U	ug/m3				NC	25
1,4-Dichlorobenzene	12	U		12	U	ug/m3				NC	25
Benzyl chloride	10	U		10	U	ug/m3				NC	25
1,2-Dichlorobenzene	12	U		12	U	ug/m3				NC	25

QC Sample Results

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: 200-58590-1 DU **Client Sample ID: VP-1 (3-5')**
Matrix: Air **Prep Type: Total/NA**
Analysis Batch: 167228

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,2,4-Trichlorobenzene	37	U		37	U	ug/m3				NC	25
Hexachlorobutadiene	21	U		21	U	ug/m3				NC	25
Naphthalene	26	U		26	U	ug/m3				NC	25

QC Association Summary

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Air - GC/MS VOA

Analysis Batch: 167228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-58590-1	VP-1 (3-5')	Total/NA	Air	TO-15	
200-58590-2	VP-2 (3-5')	Total/NA	Air	TO-15	
200-58590-3	SSV-1	Total/NA	Air	TO-15	
200-58590-3 - DL	SSV-1	Total/NA	Air	TO-15	
MB 200-167228/4	Method Blank	Total/NA	Air	TO-15	
LCS 200-167228/3	Lab Control Sample	Total/NA	Air	TO-15	
200-58590-1 DU	VP-1 (3-5')	Total/NA	Air	TO-15	

Lab Chronicle

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Client Sample ID: VP-1 (3-5') Lab Sample ID: 200-58590-1

Date Collected: 05/20/21 13:35 **Matrix: Air**
Date Received: 05/22/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		10	167228	05/26/21 00:26	A1B	TAL BUR

Client Sample ID: VP-2 (3-5') Lab Sample ID: 200-58590-2

Date Collected: 05/20/21 13:56 **Matrix: Air**
Date Received: 05/22/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		10	167228	05/26/21 03:11	A1B	TAL BUR

Client Sample ID: SSV-1 Lab Sample ID: 200-58590-3

Date Collected: 05/20/21 11:47 **Matrix: Air**
Date Received: 05/22/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		10.1	167228	05/26/21 04:06	A1B	TAL BUR
Total/NA	Analysis	TO-15	DL	79.8	167228	05/26/21 05:01	A1B	TAL BUR

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Laboratory: Eurofins TestAmerica, Burlington

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	050-999-436	12-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
TO-15		Air	Vinyl acetate

Method Summary

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL BUR

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: American Engineering Testing Inc. Job ID: 200-58590-1
Project/Site: Ph II ESA Laundromat/ Menomonie WI SDG: 200-58590-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
200-58590-1	VP-1 (3-5')	Air	05/20/21 13:35	05/22/21 09:30	Air Canister (1-Liter) #34002441
200-58590-2	VP-2 (3-5')	Air	05/20/21 13:56	05/22/21 09:30	Air Canister (1-Liter) #4482
200-58590-3	SSV-1	Air	05/20/21 11:47	05/22/21 09:30	Air Canister (1-Liter) #8287

AMERICAN ENGINEERING TESTING, INC.

☒ St Paul Office
550 Cleveland Ave N
St Paul, MN 55114
651-659-9001
651-659-1379 (fax)

☐ OTHER _____

ADDRESS _____

Minneapolis SC
3

PHONE _____

№ 25841

PAGE 1 OF 1

AET PROJECT NUMBER P-0002702

PROJECT NAME/LOCATION Ph II ESA Laundromat/Menomonee WI

AET PROJECT MANAGER Dennis McComas

AET PURCHASE ORDER NO _____

SEND REPORT TO Dennis McComas

SAMPLED BY (PRINT) Rachel Jackson

SAMPLER SIGNATURE R. Jackson

REQUESTED TURNAROUND TIME ☒ NORMAL ☐ RUSH

DATE NEEDED BY _____

ITEM #	SAMPLE DESCRIPTION	DATE	TIME	SAMPLE TYPE	NO OF CONTAINERS	PRESERVATIVES: UNPRESERVED	MeOH	HCL	H_2SO_4	HNO_3	FIELD FILTERED Y/N	ANALYSIS: TO-15	start time	END TIME	start VAC	end VAC	can #	reg #	CTO (ppm)	REMARKS
1	VP-1 (3-5')	5/20/21	13:29	air								X	13:29	1335	-30	-2	3491	7669	0.8	
2	VP-2 (3-5')	"	1349	"								X	1349	1356	-30	-5	4482	7365	0.4	
3	SSV-1	"	11:42	"								X	11:42	11:47	-28	-3	8997	4617	2.5	

200-58590 Chain of Custody

NOTE

5 day TAT

ITEM NUMBER	RELINQUISHED BY/AFFILIATION	ACCEPTED BY/AFFILIATION	DATE	TIME
1-3	R. Jackson /AET	[signature]	5/21/21	0909
1-3	[signature] 5-21-21, 1700			
		[signature] FASI	5/22/21	0930

8/2019

AET Project No. P-0002702

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5/26/2021

Page D 48 of 80


ORIGIN ID:GPZA (111) 111-1111
SAMPLE RECEIVING
TESTAMERICA
7600 WEST 27TH STREET
SUITE 209
MINNEAPOLIS, MN 55426
UNITED STATES US
SHIP DATE: 21MAY21
ACTWGT: 10.00 LB
CAD: 399920/CAFE3409
BILL RECIPIENT
TO SAMPLE RECEIVING
TESTAMERICA BURLINGTON
530 COMMUNITY DRIVE
BURLINGTON VT 05403
(802) 660-1990
REF:
DEPT:
INV:
PO:
FedEx Express
J2011201218011W
SATURDAY 12:00P
PRIORITY OVERNIGHT
TRK# 4114 9911 2090
0201
XO BTVA
05403
VT-US BTV
56DC3/71DC/0582

Login Sample Receipt Checklist

Client: American Engineering Testing Inc.

Job Number: 200-58590-1
SDG Number: 200-58590-1

Login Number: 58590
List Number: 1
Creator: Lavigne, Scott M

List Source: Eurofins TestAmerica, Burlington

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1356904
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Summa Canister Dilution Worksheet

Client: American Engineering Testing Inc.
Project/Site: Ph II ESA Laundromat/ Menomonie WI

Job No.: 200-58590-1
SDG No.: 200-58590-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Pressure Gauge ID	Date	Analyst Initals
200-58590-3	1	-1.9	0.94	0.94	56.7	4.86	4.86		5.19	5.19	G21	05/25/21 11:20	TPB

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg
Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig
Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)
14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

Pre-Shipment Clean Canister Certification Report

Canister Cleaning & Pre-Shipment Leak Test

System ID	Max DF#	# Cycles	Cleaning Start Date/Time		System Start Temp(s):		Technician	Can Size	Certification Type:
Oven 1/2	1000	300	4/30/2021	1142	22	22	SML	1 liter	batch

Port	Can ID	Initial[1] (psia)	Final (psia)	Diff.[3]	Final ("Hg)	Initial Reading Gauge:	Date:	Time:	Tech:	Temp:	Final Reading Gauge:	Date:	Time:	Tech:	Temp:
1	6437	106	106	0	29.6	G26	5/3/21	1025	S	22.0	G26	5/11/21	1358		
2	5856		106	0		G26					G26				
3	8287		106	0		G26					G26				
4	6456		106	0		G26					G26				
5	34001090		106	0		G26					G26				
6	34000331		106	0		G26					G26				
7	4851		106	0		G26					G26				
8	5891		106	0		G26					G26				
9	34002441		106	0		G26					G26				
10	4643		106	0		G26					G26				
11	4961	106	106	0		G26	5/10/21	1214	S	22.0	G26				
12	4657	106	106	0		G26	5/3/21	1025	S	22.0	G26				

[1] Batch Certification: The reading is taken on the "batch" canister and this value is used as the initial pressure for all canisters in the batch.

[3] Difference = Final Pressure - Initial Pressure . Acceptance Criteria: (1) The difference must be less than or equal to + 0.25psi. (2) Pressure readings must be at least 24 hours apart.

If time frame was not met, the PM must authorize shipment of canister **PM Authorization** **Date:**

Clean Canister Certification Analysis & Authorization of Release to Inventory

Test Method: ☒ TO15 Routine ☐ TO15 LL

Can ID	Date	Sequence	Analyst	Inventory Level 1	2	3	4	Secondary Review Limited	Review Date	Reviewer
4961	5/14/21	45801	KPI			XXXXXXX			5/14/21	DPB

Inventory Level 1: Individual Canister Certification (TO15LL 0.01).

Inventory Level 2: Individual or Batch Certification (TO15 0.04 ppbv).

Inventory Level 3: Individual or Batch Certification (TO15 0.2 ppbv).

Inventory Level Limited: Canisters may only be used for certain projects.

Dup Tees/Vac gauges (enter IDs if included):

Comments:

Form ID: FAI023:12
Revision Date: 12/18/2018

TestAmerica Burlington

AET Project No. P-0002702

200-58277-A-11
4961
Location: Air-Storage
Bottle: Summa Canister 1L
Sampled: 4/30/2021 12:00 AM 200-1489887

Loc: 200
58277
#11 A
Air-Storag

Page D 52 of 80

Page 26 of 54

5/26/2021

Pre-Shipment Clean Canister Certification Report

Canister Cleaning & Pre-Shipment Leak Test

System ID	Max DF#	# Cycles	Cleaning Start Date/Time		System Start Temp(s):		Technician	Can Size	Certification Type:
Oven 1/2	30	100	5/4/2021	1610	22	22	SML	1 liter	batch

Port	Can ID	Initial[1] (psia)	Final (psia)	Diff.[3]	Final ("Hg)	Initial Reading Gauge:	Date:	Time:	Tech:	Temp:	Final Reading Gauge:	Date:	Time:	Tech:	Temp:
1	6298	.06	.06	0	29.6	G26	5/10/21	1214	S—	22.0	G26	5/11/21	1416	S—	22.0
2	34002425	.06	.06	0		G26	5/5/21	1000	S—	22.0	G26				
3	4486		.06	0		G26					G26				
4	34002005		.06	0		G26					G26				
5	34002416		.06	0		G26					G26				
6	4482		.06	0		G26					G26				
7	6272		.06	0		G26					G26				
8	6425		.06	0		G26					G26				
9	6422		.06	0		G26					G26				
10	5915		.06	0		G26					G26				
11	6434		.06	0		G26					G26				
12	6451		.06	0		G26					G26				

[1] Batch Certification: The reading is taken on the "batch" canister and this value is used as the initial pressure for all canisters in the batch.

[3] Difference = Final Pressure - Initial Pressure . Acceptance Criteria: (1) The difference must be less than or equal to + 0.25psi. (2) Pressure readings must be at least 24 hours apart.

If time frame was not met, the PM must authorize shipment of canister **PM Authorization** **Date:**

Clean Canister Certification Analysis & Authorization of Release to Inventory

Test Method: ☐TO15 Routine ☐ TO15 LL

Can ID	Date	Sequence	Analyst	Inventory Level 1	2	3	4	Secondary Review Limited	Review Date	Review
6298	5/7/21	45860	ICP1			XXXXXX			5/7/21	UP

Inventory Level 1: Individual Canister Certification (TO15LL 0.01).

Inventory Level 2: Individual or Batch Certification (TO15 0.04 ppbv).

Inventory Level 3: Individual or Batch Certification (TO15 0.2 ppbv).

Inventory Level Limited: Canisters may only be used for certain projects.

Dup Tees/Vac gauges (enter IDs if included):

Comments:

Form ID: FAI023:12
Revision Date: 12/18/2018

TestAmerica Burlington

AET Project No. P-0002702

200-58316-A-1
6298
Location: Air-Storage
Bottle: Summa Canister 1L
Sampled: 5/4/2021 12:00 AM 200-1490598

58316 A
#1
Air-Storag
Loc: 200

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 200-58277-1

SDG No.:

Client Sample ID: 4961 Lab Sample ID: 200-58277-11

Matrix: Air Lab File ID: 45801-06.D

Analysis Method: TO-15 Date Collected: 04/30/2021 00:00

Sample wt/vol: 200(mL) Date Analyzed: 05/03/2021 12:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-624 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 166412 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	RL
115-07-1	Propylene	5.0	U	5.0	5.0
75-71-8	Dichlorodifluoromethane	0.50	U	0.50	0.50
75-45-6	Freon 22	0.50	U	0.50	0.50
76-14-2	1,2-Dichlorotetrafluoroethane	0.20	U	0.20	0.20
74-87-3	Chloromethane	0.50	U	0.50	0.50
106-97-8	n-Butane	0.50	U	0.50	0.50
75-01-4	Vinyl chloride	0.20	U	0.20	0.20
106-99-0	1,3-Butadiene	0.20	U	0.20	0.20
74-83-9	Bromomethane	0.20	U	0.20	0.20
75-00-3	Chloroethane	0.50	U	0.50	0.50
593-60-2	Bromoethene(Vinyl Bromide)	0.20	U	0.20	0.20
75-69-4	Trichlorofluoromethane	0.20	U	0.20	0.20
64-17-5	Ethanol	5.0	U	5.0	5.0
76-13-1	Freon TF	0.20	U	0.20	0.20
75-35-4	1,1-Dichloroethene	0.20	U	0.20	0.20
67-64-1	Acetone	5.0	U	5.0	5.0
67-63-0	Isopropyl alcohol	5.0	U	5.0	5.0
75-15-0	Carbon disulfide	0.50	U	0.50	0.50
107-05-1	3-Chloropropene	0.50	U	0.50	0.50
75-09-2	Methylene Chloride	0.50	U	0.50	0.50
75-65-0	tert-Butyl alcohol	5.0	U	5.0	5.0
1634-04-4	Methyl tert-butyl ether	0.20	U	0.20	0.20
156-60-5	trans-1,2-Dichloroethene	0.20	U	0.20	0.20
110-54-3	n-Hexane	0.50	U	0.50	0.50
75-34-3	1,1-Dichloroethane	0.20	U	0.20	0.20
108-05-4	Vinyl acetate	5.0	U	5.0	5.0
141-78-6	Ethyl acetate	5.0	U	5.0	5.0
78-93-3	Methyl Ethyl Ketone	0.50	U	0.50	0.50
156-59-2	cis-1,2-Dichloroethene	0.20	U	0.20	0.20
540-59-0	1,2-Dichloroethene, Total	0.40	U	0.40	0.40
67-66-3	Chloroform	0.20	U	0.20	0.20
109-99-9	Tetrahydrofuran	5.0	U	5.0	5.0
71-55-6	1,1,1-Trichloroethane	0.20	U	0.20	0.20
110-82-7	Cyclohexane	0.20	U	0.20	0.20
56-23-5	Carbon tetrachloride	0.20	U	0.20	0.20
540-84-1	2,2,4-Trimethylpentane	0.20	U	0.20	0.20

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 200-58277-1

SDG No.:

Client Sample ID: 4961 Lab Sample ID: 200-58277-11

Matrix: Air Lab File ID: 45801-06.D

Analysis Method: TO-15 Date Collected: 04/30/2021 00:00

Sample wt/vol: 200(mL) Date Analyzed: 05/03/2021 12:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-624 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 166412 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	RL
71-43-2	Benzene	0.20	U	0.20	0.20
107-06-2	1,2-Dichloroethane	0.20	U	0.20	0.20
142-82-5	n-Heptane	0.20	U	0.20	0.20
79-01-6	Trichloroethene	0.20	U	0.20	0.20
80-62-6	Methyl methacrylate	0.50	U	0.50	0.50
78-87-5	1,2-Dichloropropane	0.20	U	0.20	0.20
123-91-1	1,4-Dioxane	5.0	U	5.0	5.0
75-27-4	Bromodichloromethane	0.20	U	0.20	0.20
10061-01-5	cis-1,3-Dichloropropene	0.20	U	0.20	0.20
108-10-1	methyl isobutyl ketone	0.50	U	0.50	0.50
108-88-3	Toluene	0.20	U	0.20	0.20
10061-02-6	trans-1,3-Dichloropropene	0.20	U	0.20	0.20
79-00-5	1,1,2-Trichloroethane	0.20	U	0.20	0.20
127-18-4	Tetrachloroethene	0.20	U	0.20	0.20
591-78-6	Methyl Butyl Ketone (2-Hexanone)	0.50	U	0.50	0.50
124-48-1	Dibromochloromethane	0.20	U	0.20	0.20
106-93-4	1,2-Dibromoethane	0.20	U	0.20	0.20
108-90-7	Chlorobenzene	0.20	U	0.20	0.20
100-41-4	Ethylbenzene	0.20	U	0.20	0.20
179601-23-1	m,p-Xylene	0.50	U	0.50	0.50
95-47-6	Xylene, o-	0.20	U	0.20	0.20
1330-20-7	Xylene (total)	0.70	U	0.70	0.70
100-42-5	Styrene	0.20	U	0.20	0.20
75-25-2	Bromoform	0.20	U	0.20	0.20
98-82-8	Cumene	0.20	U	0.20	0.20
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U	0.20	0.20
103-65-1	n-Propylbenzene	0.20	U	0.20	0.20
622-96-8	4-Ethyltoluene	0.20	U	0.20	0.20
108-67-8	1,3,5-Trimethylbenzene	0.20	U	0.20	0.20
95-49-8	2-Chlorotoluene	0.20	U	0.20	0.20
98-06-6	tert-Butylbenzene	0.20	U	0.20	0.20
95-63-6	1,2,4-Trimethylbenzene	0.20	U	0.20	0.20
135-98-8	sec-Butylbenzene	0.20	U	0.20	0.20
99-87-6	4-Isopropyltoluene	0.20	U	0.20	0.20
541-73-1	1,3-Dichlorobenzene	0.20	U	0.20	0.20
106-46-7	1,4-Dichlorobenzene	0.20	U	0.20	0.20

FORM I TO-15

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 200-58277-1

SDG No.:

Client Sample ID: 4961 Lab Sample ID: 200-58277-11

Matrix: Air Lab File ID: 45801-06.D

Analysis Method: TO-15 Date Collected: 04/30/2021 00:00

Sample wt/vol: 200(mL) Date Analyzed: 05/03/2021 12:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-624 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 166412 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	RL
100-44-7	Benzyl chloride	0.20	U	0.20	0.20
104-51-8	n-Butylbenzene	0.20	U	0.20	0.20
95-50-1	1,2-Dichlorobenzene	0.20	U	0.20	0.20
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.50	0.50
87-68-3	Hexachlorobutadiene	0.20	U	0.20	0.20
91-20-3	Naphthalene	0.50	U	0.50	0.50

Report Date: 04-May-2021 09:38:35 Chrom Revision: 2.3 08-Apr-2021 17:17:48

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\chromfs\Burlington\ChromData\CHX.i\20210503-45801.b\45801-06.D
Lims ID: 200-58277-A-11
Client ID: 4961
Sample Type: Client
Inject. Date: 03-May-2021 12:01:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 200.000 mL Dil. Factor: 1.0000
Sample Info: 200-0045801-006
Operator ID: ggg Instrument ID: CHX.i

Method: \\chromfs\Burlington\ChromData\CHX.i\20210503-45801.b\TO15_MasterMethod_X.m.m
Limit Group: AI_TO15_ICAL
Last Update: 04-May-2021 09:38:34 Calib Date: 09-Apr-2021 11:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Burlington\ChromData\CHX.i\20210408-45522.b\45522-23.D

Column 1 : RTX-624 (0.32 mm) Det: MS SCAN
Process Host: CTX1631

First Level Reviewer: puangmaleek Date: 04-May-2021 09:38:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
1 Propene	41		4.343				ND	
2 Dichlorodifluoromethane	85		4.439				ND	
3 Chlorodifluoromethane	51		4.488				ND	
4 1,2-Dichloro-1,1,2,2-tetrafluoro	85		4.798				ND	
5 Chloromethane	50		4.926				ND	
6 Butane	43		5.236				ND	
7 Vinyl chloride	62		5.236				ND	
8 Butadiene	54		5.349				ND	
10 Bromomethane	94		6.066				ND	
11 Chloroethane	64		6.333				ND	
13 Vinyl bromide	106		6.750				ND	
14 Trichlorofluoromethane	101		6.906				ND	
17 Ethanol	45	7.275	7.259	0.032	51	1094	0.1943	
21 1,1-Dichloroethene	96		7.965				ND	
20 112TCTFE	101		7.997				ND	
22 Acetone	43		8.024				ND	
24 Isopropyl alcohol	45		8.291				ND	
23 Carbon disulfide	76		8.382				ND	
25 3-Chloro-1-propene	41		8.660				ND	
27 Methylene Chloride	49		8.896				ND	
28 2-Methyl-2-propanol	59		9.056				ND	
29 Methyl tert-butyl ether	73		9.372				ND	
31 trans-1,2-Dichloroethene	61		9.393				ND	
S 30 1,2-Dichloroethene, Total	61		9.665				ND	7
33 Hexane	57		9.885				ND	
35 Vinyl acetate	43		10.153				ND	
34 1,1-Dichloroethane	63		10.158				ND	
38 2-Butanone (MEK)	72		11.105				ND	
37 cis-1,2-Dichloroethene	96		11.148				ND	
39 Ethyl acetate	88		11.185				ND	
* 40 Chlorobromomethane	128	11.565	11.565	0.000	83	78788	10.0	
41 Tetrahydrofuran	42		11.587				ND	

Report Date: 04-May-2021 09:38:35 Chrom Revision: 2.3 08-Apr-2021 17:17:48
Data File: \\chromfs\Burlington\ChromData\CHX.i\20210503-45801.b\45801-06.D

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
	42 Chloroform	83		11.736				ND	
	44 1,1,1-Trichloroethane	97		12.041				ND	
	43 Cyclohexane	84		12.180				ND	
	45 Carbon tetrachloride	117		12.320				ND	
	47 Benzene	78		12.667				ND	
	48 1,2-Dichloroethane	62		12.753				ND	
	46 Isooctane	57		12.865				ND	
	49 n-Heptane	43		13.175				ND	
*	50 1,4-Difluorobenzene	114	13.400	13.405	-0.005	93	397546	10.0	
	53 Trichloroethene	95		13.833				ND	
	54 1,2-Dichloropropane	63		14.299				ND	
	55 Methyl methacrylate	69		14.358				ND	
	56 1,4-Dioxane	88		14.401				ND	
	57 Dibromomethane	174		14.459				ND	
	58 Dichlorobromomethane	83		14.764				ND	
	60 cis-1,3-Dichloropropene	75		15.561				ND	
	61 4-Methyl-2-pentanone (MIBK)	43		15.797				ND	
	65 Toluene	92		16.198				ND	
	66 trans-1,3-Dichloropropene	75		16.615				ND	
	67 1,1,2-Trichloroethane	83		16.995				ND	
	68 Tetrachloroethene	166		17.182				ND	
	69 2-Hexanone	43		17.370				ND	
	71 Chlorodibromomethane	129		17.739				ND	
	72 Ethylene Dibromide	107		17.979				ND	
*	74 Chlorobenzene-d5	117	18.873	18.878	-0.005	85	289891	10.0	
	75 Chlorobenzene	112		18.937				ND	
	76 Ethylbenzene	91		19.119				ND	7
	78 m-Xylene & p-Xylene	106		19.381				ND	
S	73 Xylenes, Total	106		19.600				ND	7
	79 o-Xylene	106		20.157				ND	
	80 Styrene	104		20.194				ND	
	81 Bromoform	173		20.553				ND	
	82 Isopropylbenzene	105		20.836				ND	
	84 1,1,2,2-Tetrachloroethane	83		21.355				ND	
	85 N-Propylbenzene	91		21.548				ND	
	89 2-Chlorotoluene	91		21.698				ND	
	88 4-Ethyltoluene	105		21.746				ND	
	90 1,3,5-Trimethylbenzene	105		21.837				ND	
	92 tert-Butylbenzene	119		22.313				ND	
	93 1,2,4-Trimethylbenzene	105		22.398				ND	
	94 sec-Butylbenzene	105		22.634				ND	
	96 1,3-Dichlorobenzene	146		22.816				ND	7
	95 4-Isopropyltoluene	119		22.848				ND	
	97 1,4-Dichlorobenzene	146		22.955				ND	U
	98 Benzyl chloride	91		23.099				ND	
	100 n-Butylbenzene	91		23.404				ND	7
	101 1,2-Dichlorobenzene	146		23.447				ND	
	103 1,2,4-Trichlorobenzene	180		25.897				ND	
	104 Hexachlorobutadiene	225		26.132				ND	
	105 Naphthalene	128	26.389	26.377	0.005	1	243	0.0173	

Report Date: 04-May-2021 09:38:35 Chrom Revision: 2.3 08-Apr-2021 17:17:48

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

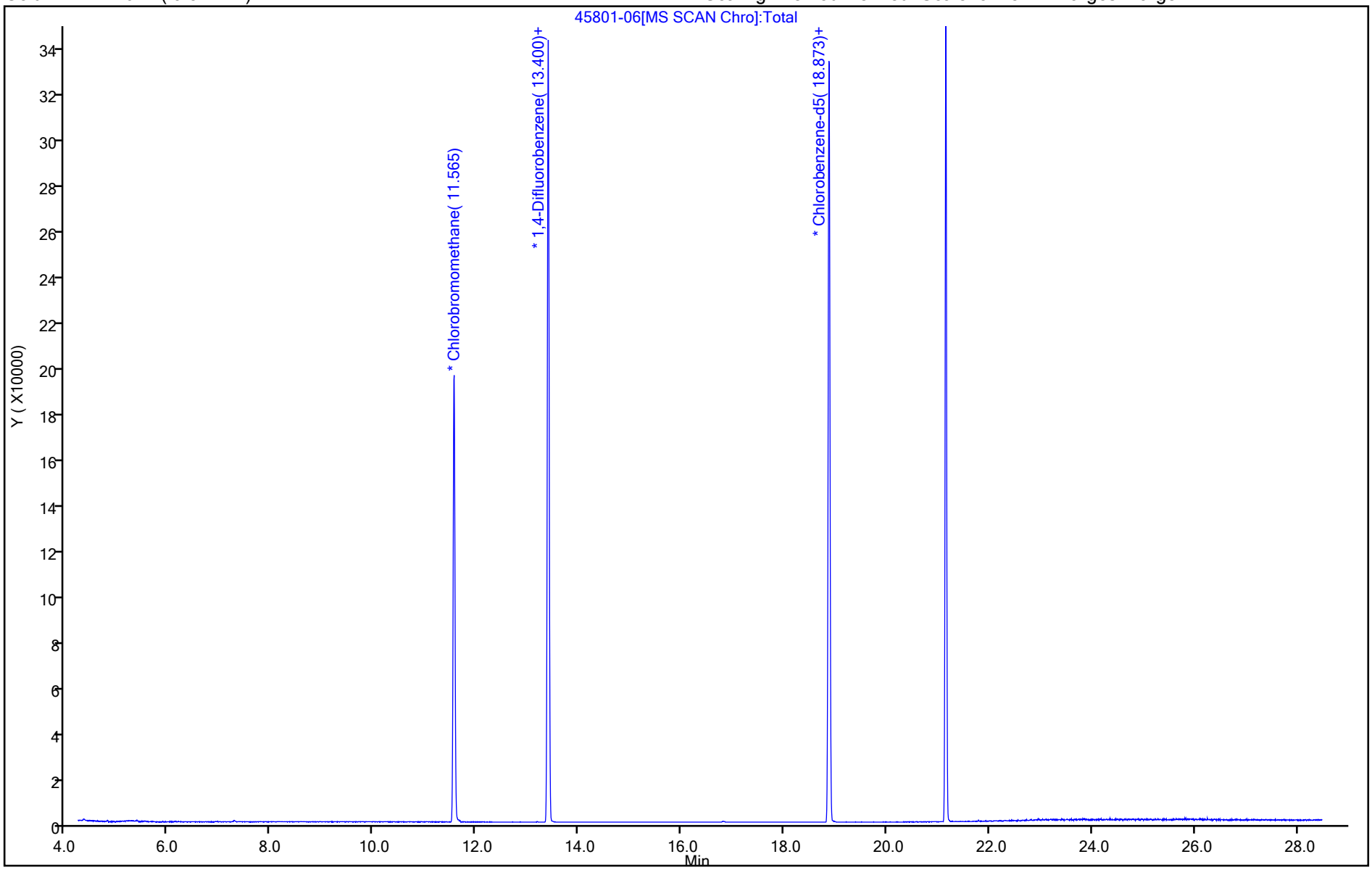
ATTO15XISs_00002	Amount Added: 20.00	Units: mL	Run Reagent

Report Date: 04-May-2021 09:38:35 Chrom Revision: 2.3 08-Apr-2021 17:17:48

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHX.i\20210503-45801.b\45801-06.D				
Injection Date:	03-May-2021 12:01:30	Instrument ID:	CHX.i	Operator ID:	ggg
Lims ID:	200-58277-A-11	Lab Sample ID:	200-58277-11	Worklist Smp#:	6
Client ID:	4961				
Purge Vol:	200.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	TO15_MasterMethod_X.m	Limit Group:	AI_TO15_ICAL		

Column: RTX-624 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Report Date: 04-May-2021 09:38:35 Chrom Revision: 2.3 08-Apr-2021 17:17:48

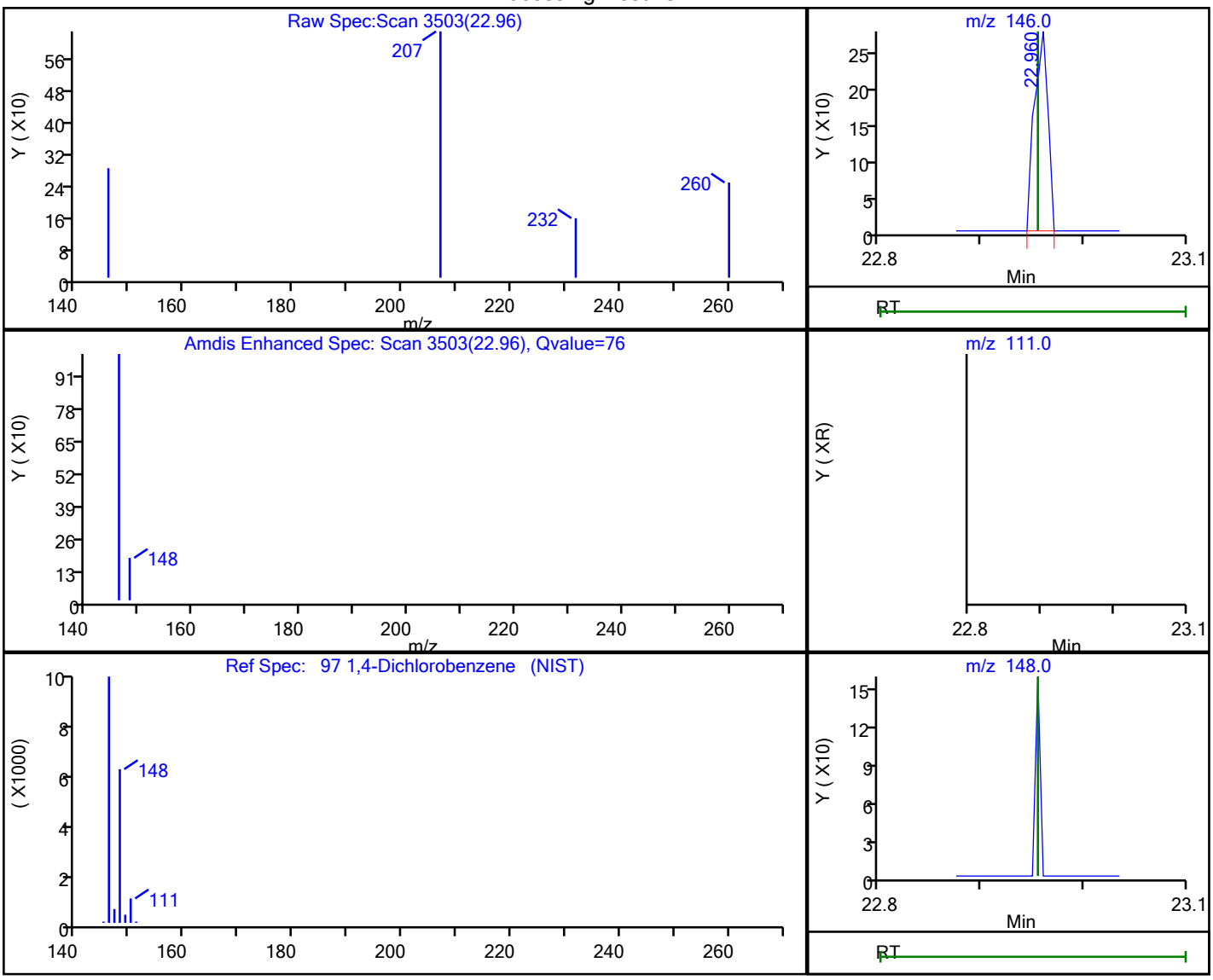
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHX.i\20210503-45801.b\45801-06.D				
Injection Date:	03-May-2021 12:01:30	Instrument ID:	CHX.i		
Lims ID:	200-58277-A-11	Lab Sample ID:	200-58277-11		
Client ID:	4961				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_X.m	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

97 1,4-Dichlorobenzene, CAS: 106-46-7

Processing Results



RT	Mass	Response	Amount
22.96	146.00	255	0.016271
22.95	111.00	0	
22.95	148.00	0	

Reviewer: puangmaleek, 04-May-2021 09:38:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 200-58316-1

SDG No.:

Client Sample ID: 6298 Lab Sample ID: 200-58316-1

Matrix: Air Lab File ID: 200-45860-006.D

Analysis Method: TO-15 Date Collected: 05/04/2021 00:00

Sample wt/vol: 200(mL) Date Analyzed: 05/06/2021 12:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-624 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 166587 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	RL
115-07-1	Propylene	5.0	U	5.0	5.0
75-71-8	Dichlorodifluoromethane	0.50	U	0.50	0.50
75-45-6	Freon 22	0.50	U	0.50	0.50
76-14-2	1,2-Dichlorotetrafluoroethane	0.20	U	0.20	0.20
74-87-3	Chloromethane	0.50	U	0.50	0.50
106-97-8	n-Butane	0.50	U	0.50	0.50
75-01-4	Vinyl chloride	0.20	U	0.20	0.20
106-99-0	1,3-Butadiene	0.20	U	0.20	0.20
74-83-9	Bromomethane	0.20	U	0.20	0.20
75-00-3	Chloroethane	0.50	U	0.50	0.50
593-60-2	Bromoethene(Vinyl Bromide)	0.20	U	0.20	0.20
75-69-4	Trichlorofluoromethane	0.20	U	0.20	0.20
64-17-5	Ethanol	5.0	U	5.0	5.0
76-13-1	Freon TF	0.20	U	0.20	0.20
75-35-4	1,1-Dichloroethene	0.20	U	0.20	0.20
67-64-1	Acetone	5.0	U	5.0	5.0
67-63-0	Isopropyl alcohol	5.0	U	5.0	5.0
75-15-0	Carbon disulfide	0.50	U	0.50	0.50
107-05-1	3-Chloropropene	0.50	U	0.50	0.50
75-09-2	Methylene Chloride	0.50	U	0.50	0.50
75-65-0	tert-Butyl alcohol	5.0	U	5.0	5.0
1634-04-4	Methyl tert-butyl ether	0.20	U	0.20	0.20
156-60-5	trans-1,2-Dichloroethene	0.20	U	0.20	0.20
110-54-3	n-Hexane	0.50	U	0.50	0.50
75-34-3	1,1-Dichloroethane	0.20	U	0.20	0.20
108-05-4	Vinyl acetate	5.0	U	5.0	5.0
141-78-6	Ethyl acetate	5.0	U	5.0	5.0
78-93-3	Methyl Ethyl Ketone	0.50	U	0.50	0.50
156-59-2	cis-1,2-Dichloroethene	0.20	U	0.20	0.20
540-59-0	1,2-Dichloroethene, Total	0.40	U	0.40	0.40
67-66-3	Chloroform	0.20	U	0.20	0.20
109-99-9	Tetrahydrofuran	5.0	U	5.0	5.0
71-55-6	1,1,1-Trichloroethane	0.20	U	0.20	0.20
110-82-7	Cyclohexane	0.20	U	0.20	0.20
56-23-5	Carbon tetrachloride	0.20	U	0.20	0.20
540-84-1	2,2,4-Trimethylpentane	0.20	U	0.20	0.20

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 200-58316-1

SDG No.:

Client Sample ID: 6298 Lab Sample ID: 200-58316-1

Matrix: Air Lab File ID: 200-45860-006.D

Analysis Method: TO-15 Date Collected: 05/04/2021 00:00

Sample wt/vol: 200(mL) Date Analyzed: 05/06/2021 12:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-624 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 166587 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	RL
71-43-2	Benzene	0.20	U	0.20	0.20
107-06-2	1,2-Dichloroethane	0.20	U	0.20	0.20
142-82-5	n-Heptane	0.20	U	0.20	0.20
79-01-6	Trichloroethene	0.20	U	0.20	0.20
80-62-6	Methyl methacrylate	0.50	U	0.50	0.50
78-87-5	1,2-Dichloropropane	0.20	U	0.20	0.20
123-91-1	1,4-Dioxane	5.0	U	5.0	5.0
75-27-4	Bromodichloromethane	0.20	U	0.20	0.20
10061-01-5	cis-1,3-Dichloropropene	0.20	U	0.20	0.20
108-10-1	methyl isobutyl ketone	0.50	U	0.50	0.50
108-88-3	Toluene	0.20	U	0.20	0.20
10061-02-6	trans-1,3-Dichloropropene	0.20	U	0.20	0.20
79-00-5	1,1,2-Trichloroethane	0.20	U	0.20	0.20
127-18-4	Tetrachloroethene	0.20	U	0.20	0.20
591-78-6	Methyl Butyl Ketone (2-Hexanone)	0.50	U	0.50	0.50
124-48-1	Dibromochloromethane	0.20	U	0.20	0.20
106-93-4	1,2-Dibromoethane	0.20	U	0.20	0.20
108-90-7	Chlorobenzene	0.20	U	0.20	0.20
100-41-4	Ethylbenzene	0.20	U	0.20	0.20
179601-23-1	m,p-Xylene	0.50	U	0.50	0.50
95-47-6	Xylene, o-	0.20	U	0.20	0.20
1330-20-7	Xylene (total)	0.70	U	0.70	0.70
100-42-5	Styrene	0.20	U	0.20	0.20
75-25-2	Bromoform	0.20	U	0.20	0.20
98-82-8	Cumene	0.20	U	0.20	0.20
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U	0.20	0.20
103-65-1	n-Propylbenzene	0.20	U	0.20	0.20
622-96-8	4-Ethyltoluene	0.20	U	0.20	0.20
108-67-8	1,3,5-Trimethylbenzene	0.20	U	0.20	0.20
95-49-8	2-Chlorotoluene	0.20	U	0.20	0.20
98-06-6	tert-Butylbenzene	0.20	U	0.20	0.20
95-63-6	1,2,4-Trimethylbenzene	0.20	U	0.20	0.20
135-98-8	sec-Butylbenzene	0.20	U	0.20	0.20
99-87-6	4-Isopropyltoluene	0.20	U	0.20	0.20
541-73-1	1,3-Dichlorobenzene	0.20	U	0.20	0.20
106-46-7	1,4-Dichlorobenzene	0.20	U	0.20	0.20

FORM I TO-15

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 200-58316-1

SDG No.:

Client Sample ID: 6298 Lab Sample ID: 200-58316-1

Matrix: Air Lab File ID: 200-45860-006.D

Analysis Method: TO-15 Date Collected: 05/04/2021 00:00

Sample wt/vol: 200(mL) Date Analyzed: 05/06/2021 12:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-624 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 166587 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	RL
100-44-7	Benzyl chloride	0.20	U *+	0.20	0.20
104-51-8	n-Butylbenzene	0.20	U	0.20	0.20
95-50-1	1,2-Dichlorobenzene	0.20	U	0.20	0.20
120-82-1	1,2,4-Trichlorobenzene	0.50	U	0.50	0.50
87-68-3	Hexachlorobutadiene	0.20	U	0.20	0.20
91-20-3	Naphthalene	0.50	U	0.50	0.50

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D
Lims ID: 200-58316-A-1
Client ID: 6298
Sample Type: Client
Inject. Date: 06-May-2021 12:03:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 200.000 mL Dil. Factor: 1.0000
Sample Info: 200-0045860-006
Operator ID: ggg Instrument ID: CHG.i

Method: \\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\TO15_MasterMethod_(v1)_G.m
Limit Group: AI_TO15_ICAL
Last Update: 06-May-2021 16:14:51 Calib Date: 30-Apr-2021 01:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Burlington\ChromData\CHG.i\20210429-45776.b\200-45776-013.D

Column 1 : RTX-624 (0.32 mm) Det: MS SCAN
Process Host: CTX1680

First Level Reviewer: phamvu Date: 06-May-2021 16:14:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
1 Propene	41		3.038				ND	7
2 Dichlorodifluoromethane	85		3.091				ND	
3 Chlorodifluoromethane	51		3.107				ND	7
4 1,2-Dichloro-1,1,2,2-tetrafluoro	85		3.300				ND	
5 Chloromethane	50		3.369				ND	7
7 Vinyl chloride	62		3.557				ND	
6 Butane	43		3.567				ND	7
8 Butadiene	54		3.632				ND	
10 Bromomethane	94		4.086				ND	
11 Chloroethane	64		4.274				ND	
13 Vinyl bromide	106		4.579				ND	
14 Trichlorofluoromethane	101		4.712				ND	
17 Ethanol	45		4.921				ND	7
21 1,1-Dichloroethene	96		5.563				ND	
22 Acetone	43		5.579				ND	7
20 1,1,2-Trichloro-1,2,2-trifluoroe	101		5.606				ND	
24 Isopropyl alcohol	45		5.809				ND	
23 Carbon disulfide	76		5.937				ND	
25 3-Chloro-1-propene	41		6.157				ND	7
27 Methylene Chloride	49		6.355				ND	7
28 2-Methyl-2-propanol	59		6.520				ND	
31 trans-1,2-Dichloroethene	61		6.852				ND	
29 Methyl tert-butyl ether	73		6.874				ND	7
33 Hexane	57		7.382				ND	
34 1,1-Dichloroethane	63		7.564				ND	
35 Vinyl acetate	43		7.574				ND	
38 2-Butanone (MEK)	72		8.489				ND	
37 cis-1,2-Dichloroethene	96		8.527				ND	
39 Ethyl acetate	88		8.607				ND	
* 40 Chlorobromomethane	128	8.928	8.922	0.006	82	117828	10.0	
41 Tetrahydrofuran	42		9.003				ND	
42 Chloroform	83		9.110				ND	

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48
Data File: \\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
44 1,1,1-Trichloroethane	97		9.452				ND	
43 Cyclohexane	84		9.629				ND	
S 30 1,2-Dichloroethene, Total	61		9.665				ND	7
45 Carbon tetrachloride	117		9.757				ND	
47 Benzene	78		10.094				ND	U
48 1,2-Dichloroethane	62		10.148				ND	
46 Isooctane	57		10.399				ND	
49 n-Heptane	43		10.741				ND	7
* 50 1,4-Difluorobenzene	114	10.897	10.891	0.006	94	642827	10.0	
53 Trichloroethene	95		11.383				ND	
54 1,2-Dichloropropane	63		11.859				ND	
55 Methyl methacrylate	69		12.004				ND	
57 Dibromomethane	174		12.020				ND	7
56 1,4-Dioxane	88		12.025				ND	
58 Dichlorobromomethane	83		12.378				ND	
60 cis-1,3-Dichloropropene	75		13.282				ND	
61 4-Methyl-2-pentanone (MIBK)	43		13.571				ND	
65 Toluene	92		13.999				ND	U
66 trans-1,3-Dichloropropene	75		14.422				ND	7
67 1,1,2-Trichloroethane	83		14.818				ND	
68 Tetrachloroethene	166		15.091				ND	
69 2-Hexanone	43		15.289				ND	
71 Chlorodibromomethane	129		15.610				ND	
72 Ethylene Dibromide	107		15.856				ND	U
* 74 Chlorobenzene-d5	117	16.851	16.856	-0.005	88	591412	10.0	
75 Chlorobenzene	112		16.915				ND	U
76 Ethylbenzene	91		17.145				ND	U
78 m-Xylene & p-Xylene	106		17.429				ND	
79 o-Xylene	106		18.231				ND	U
80 Styrene	104		18.263				ND	7
81 Bromoform	173		18.605				ND	7
82 Isopropylbenzene	105		19.033				ND	7
84 1,1,2,2-Tetrachloroethane	83		19.568				ND	7
S 73 Xylenes, Total	106		19.600				ND	7
85 N-Propylbenzene	91		19.836				ND	7
89 2-Chlorotoluene	91		19.975				ND	7
88 4-Ethyltoluene	105		20.055				ND	7
90 1,3,5-Trimethylbenzene	105		20.162				ND	7
92 tert-Butylbenzene	119		20.681				ND	7
93 1,2,4-Trimethylbenzene	105		20.777				ND	7
94 sec-Butylbenzene	105		21.034				ND	7
96 1,3-Dichlorobenzene	146		21.195				ND	U
95 4-Isopropyltoluene	119		21.270				ND	7
97 1,4-Dichlorobenzene	146		21.344				ND	U
98 Benzyl chloride	91		21.489				ND	U
101 1,2-Dichlorobenzene	146		21.842				ND	U
100 n-Butylbenzene	91		21.847				ND	7
103 1,2,4-Trichlorobenzene	180	24.233	24.233	0.000	1	3552	0.1072	
104 Hexachlorobutadiene	225		24.506				ND	U
105 Naphthalene	128		24.677				ND	U

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

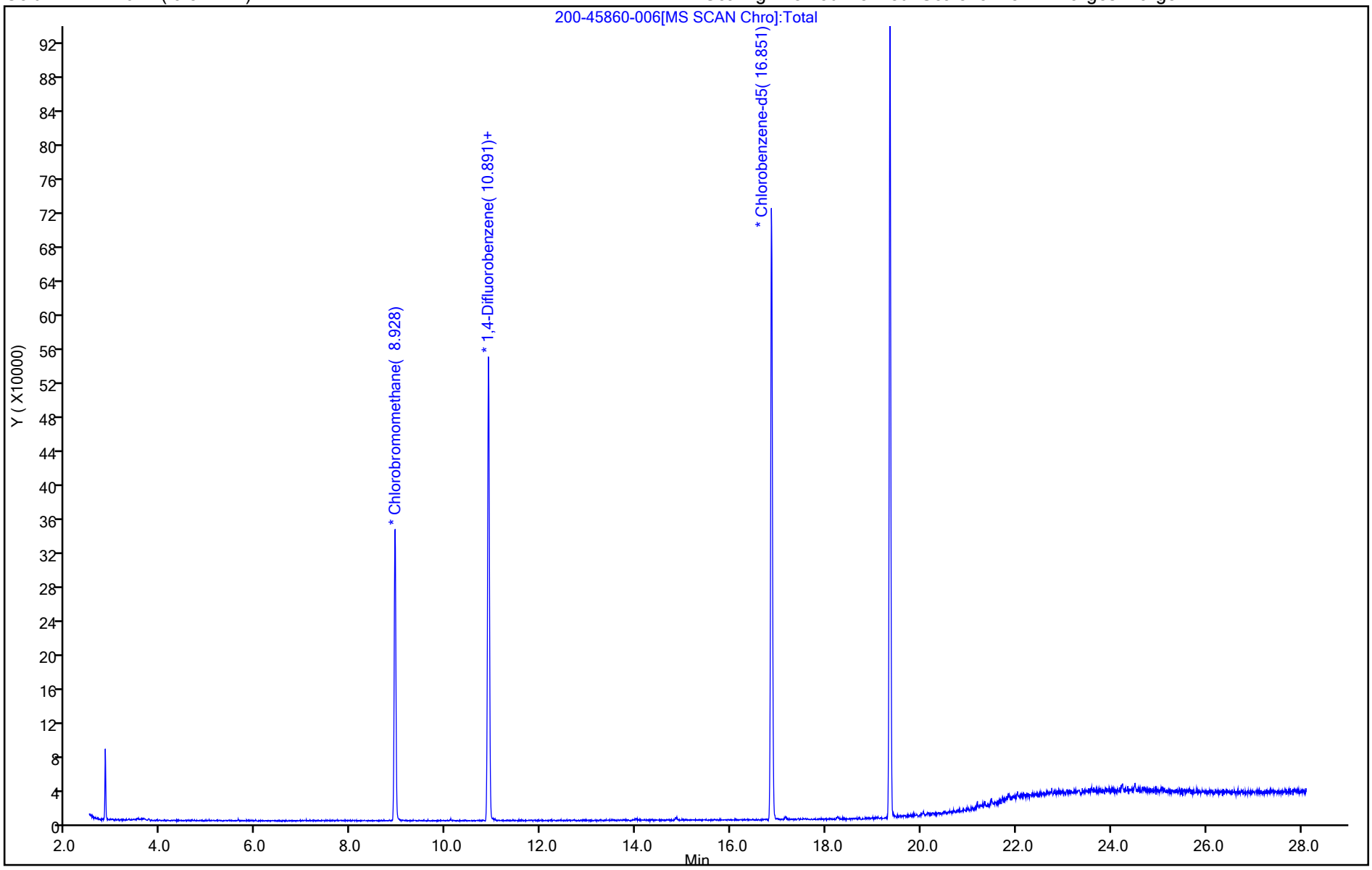
ATTO15GIS_00017	Amount Added: 20.00	Units: mL	Run Reagent

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i	Operator ID:	ggg
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1	Worklist Smp#:	6
Client ID:	6298				
Purge Vol:	200.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		

Column: RTX-624 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

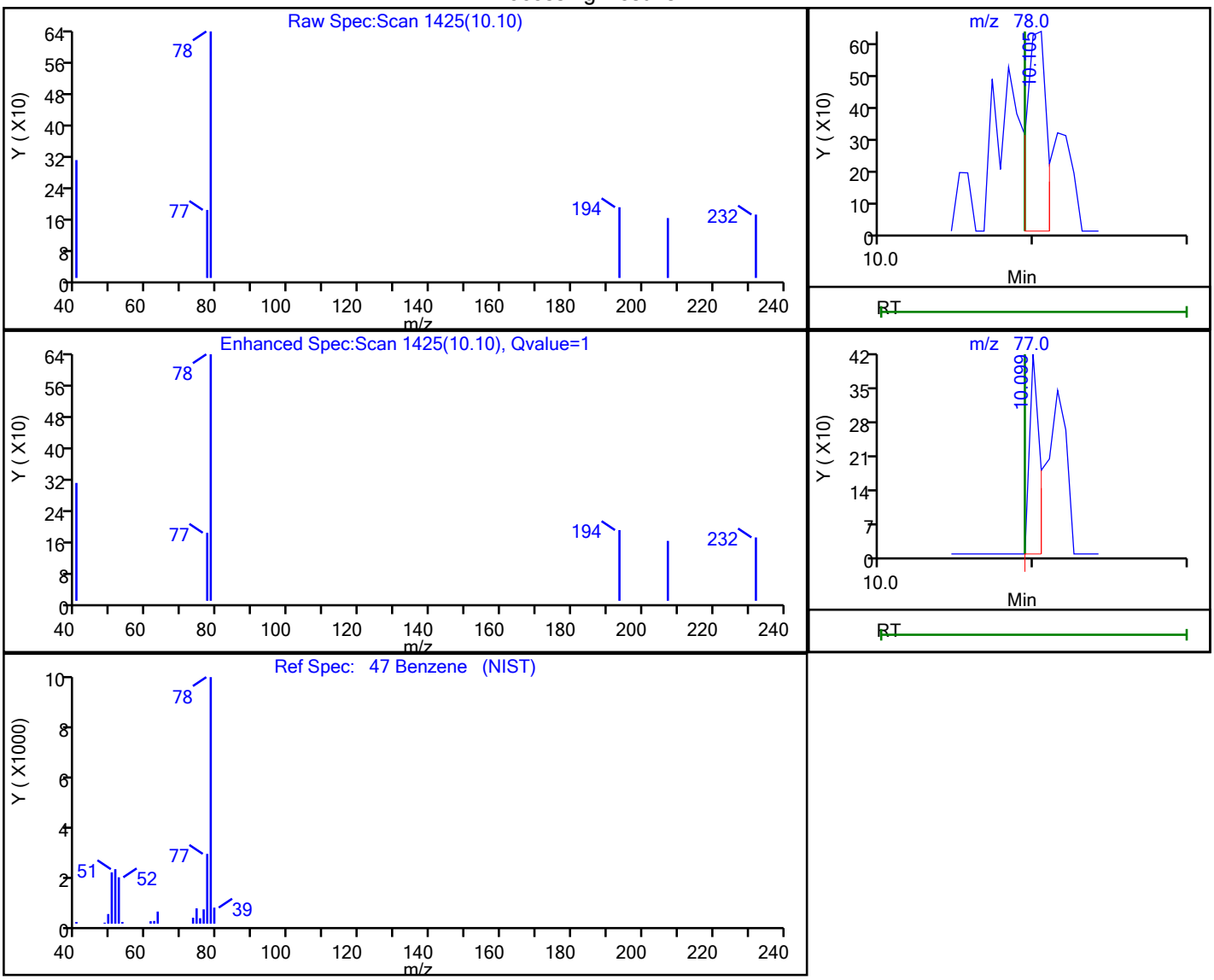
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

47 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
10.10	78.00	573	0.018124
10.10	77.00	191	

Reviewer: phamvu, 06-May-2021 16:14:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

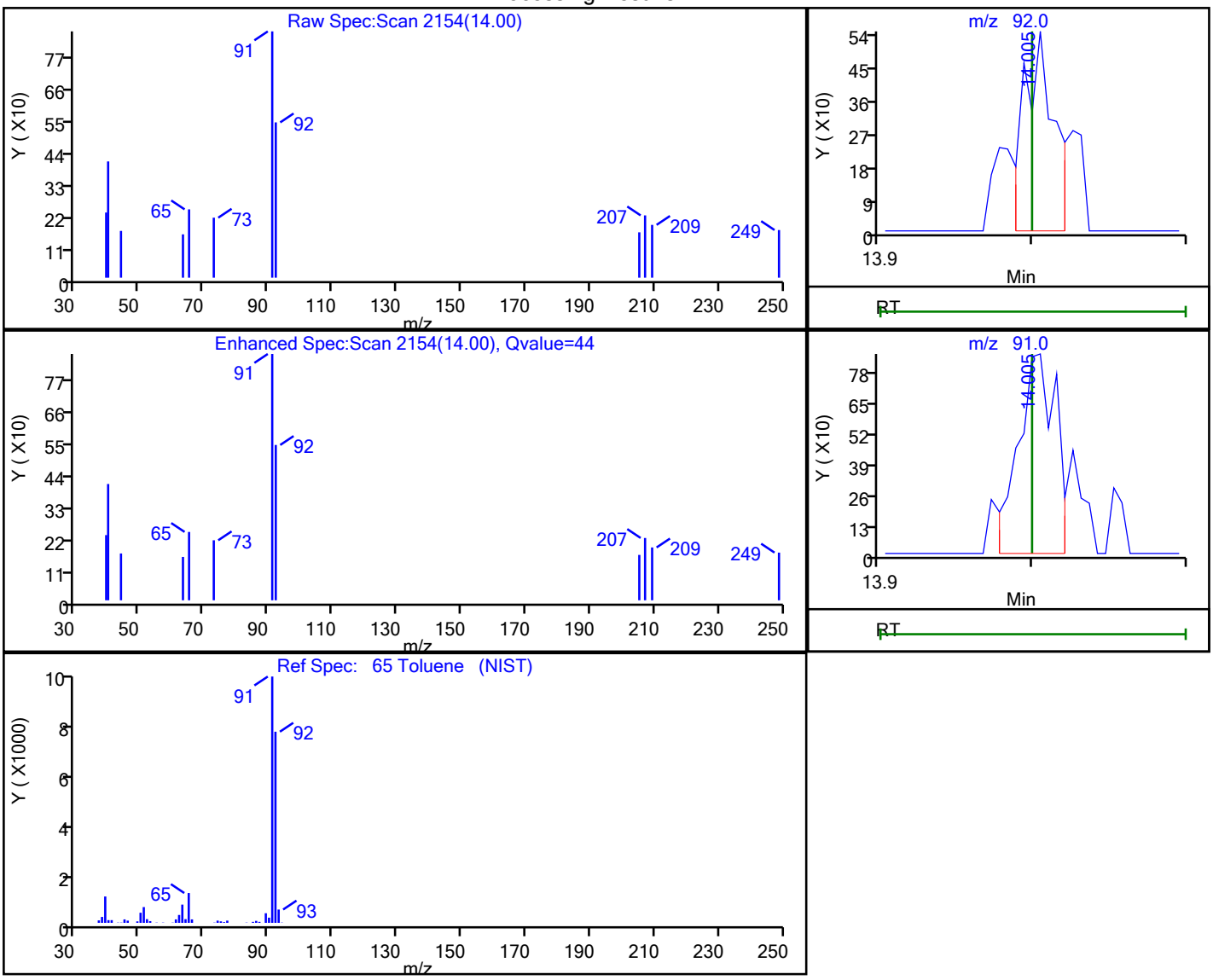
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

65 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
14.00	92.00	748	0.029565
14.00	91.00	1491	

Reviewer: phamvu, 06-May-2021 16:14:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

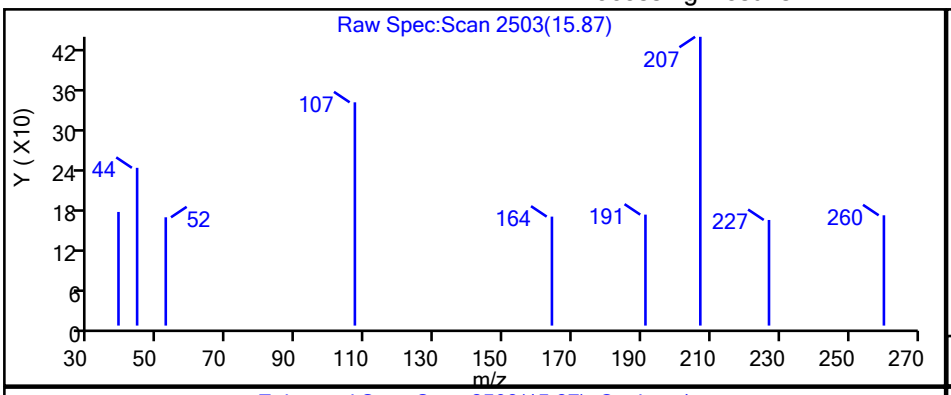
User Disabled Compound Report

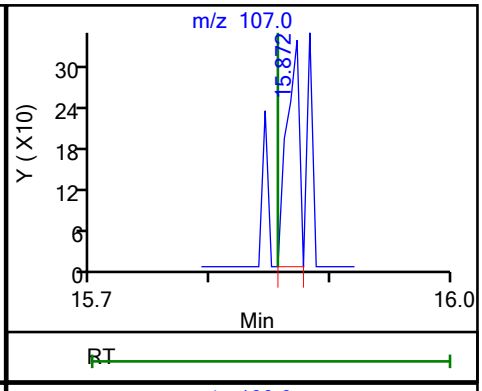
Eurofins TestAmerica, Burlington

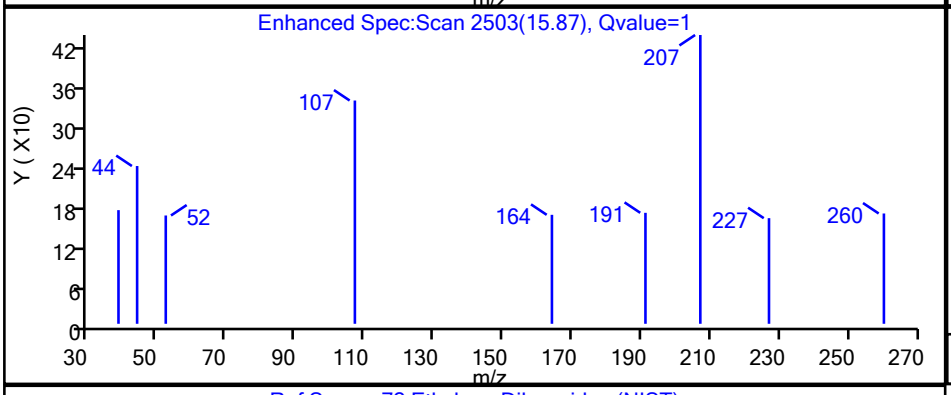
Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

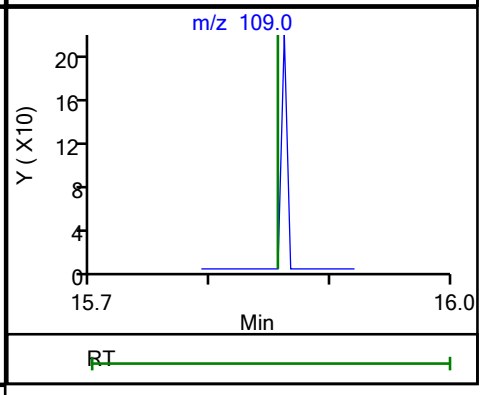
72 Ethylene Dibromide, CAS: 106-93-4

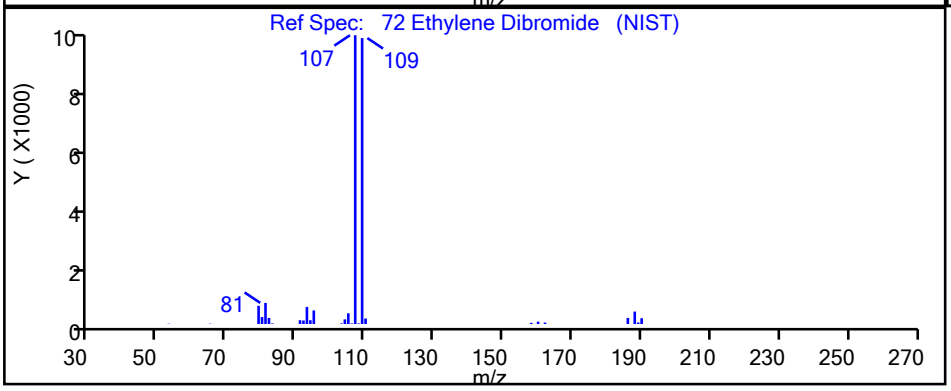
Processing Results











RT	Mass	Response	Amount
15.87	107.00	246	0.010223
15.86	109.00	0	

Reviewer: phamvu, 06-May-2021 16:14:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

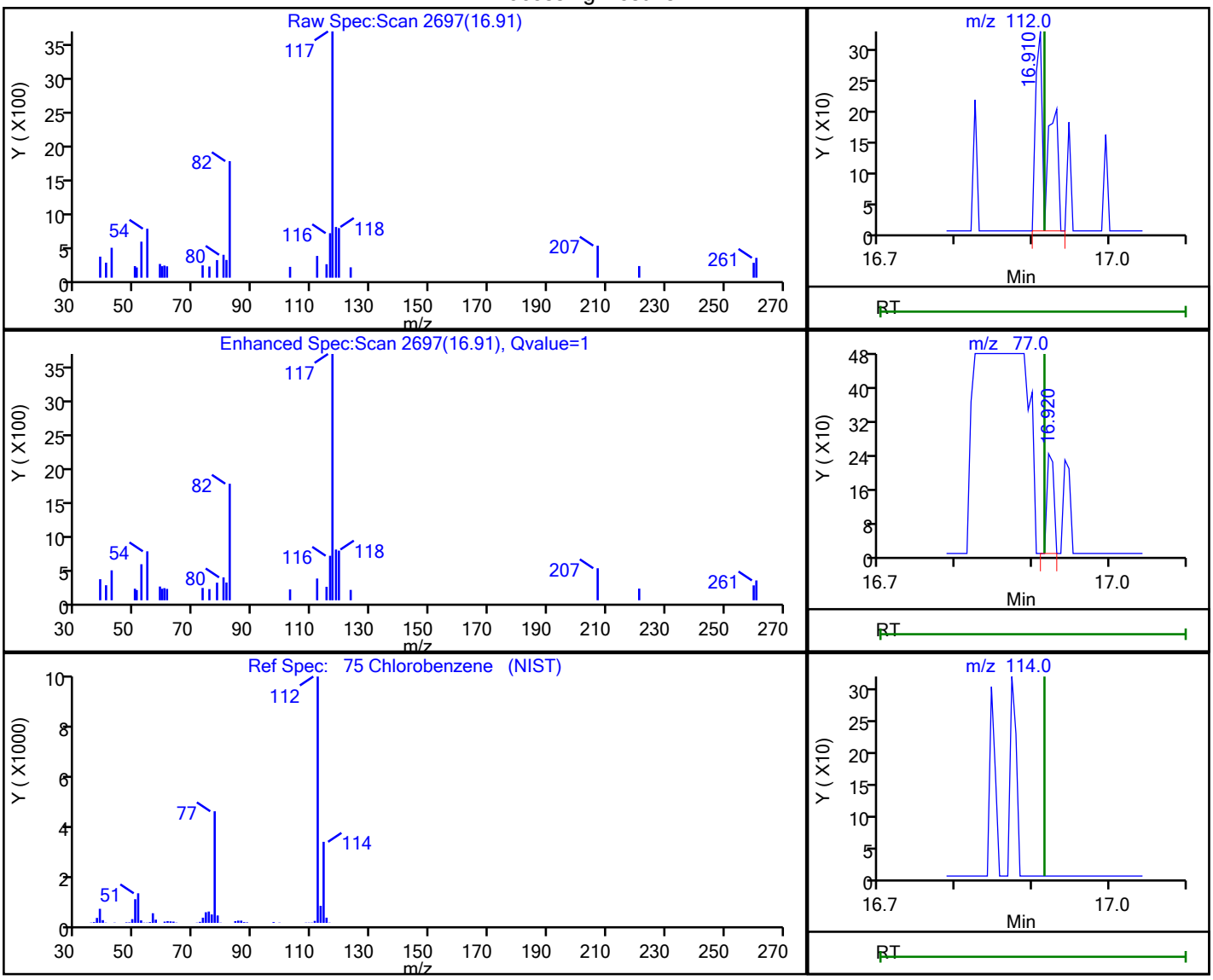
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

75 Chlorobenzene, CAS: 108-90-7

Processing Results



RT	Mass	Response	Amount
16.91	112.00	358	0.010268
16.92	77.00	148	
16.91	114.00	0	

Reviewer: phamvu, 06-May-2021 16:14:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

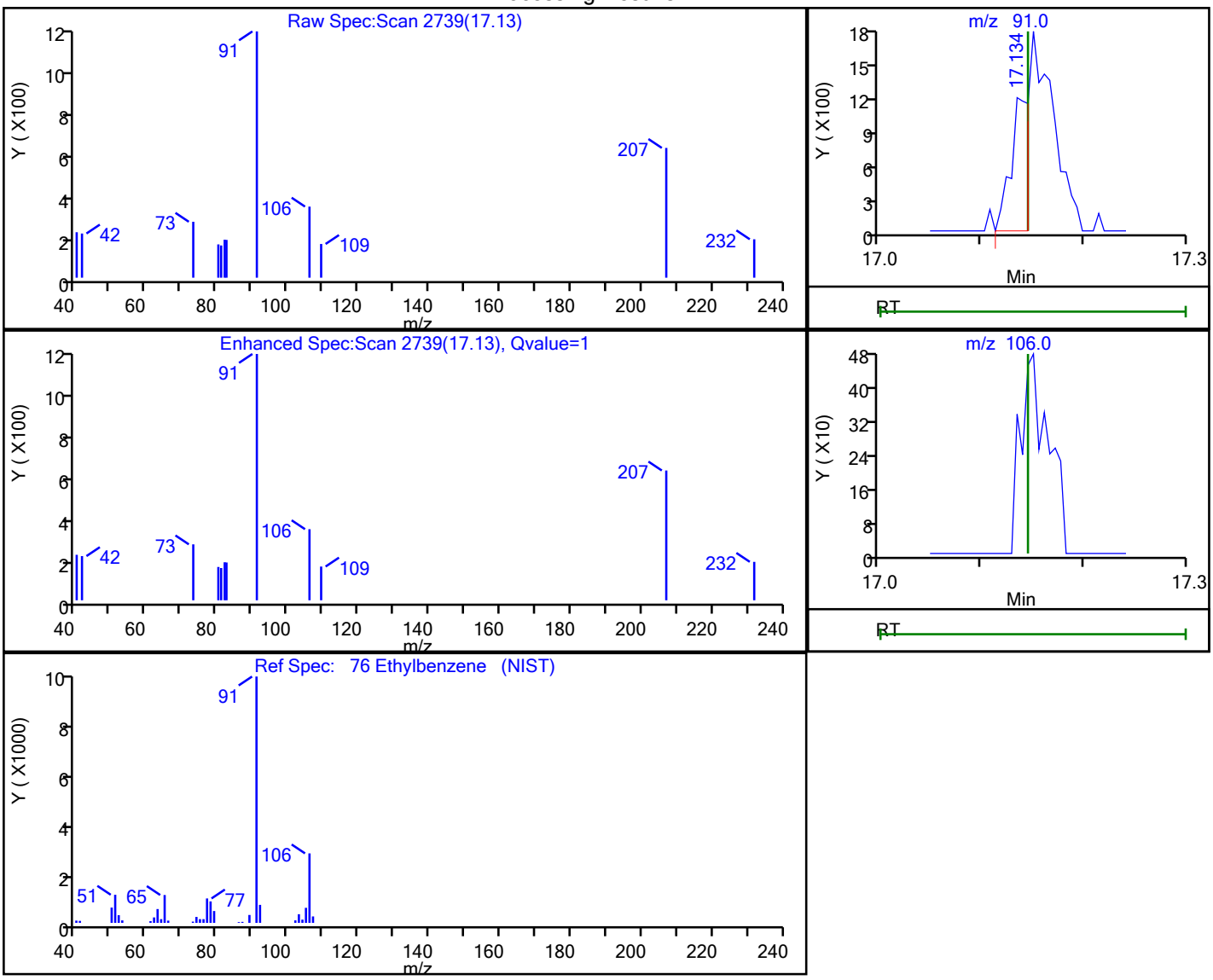
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

76 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
17.13	91.00	1442	0.024711
17.14	106.00	0	

Reviewer: phamvu, 06-May-2021 16:14:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

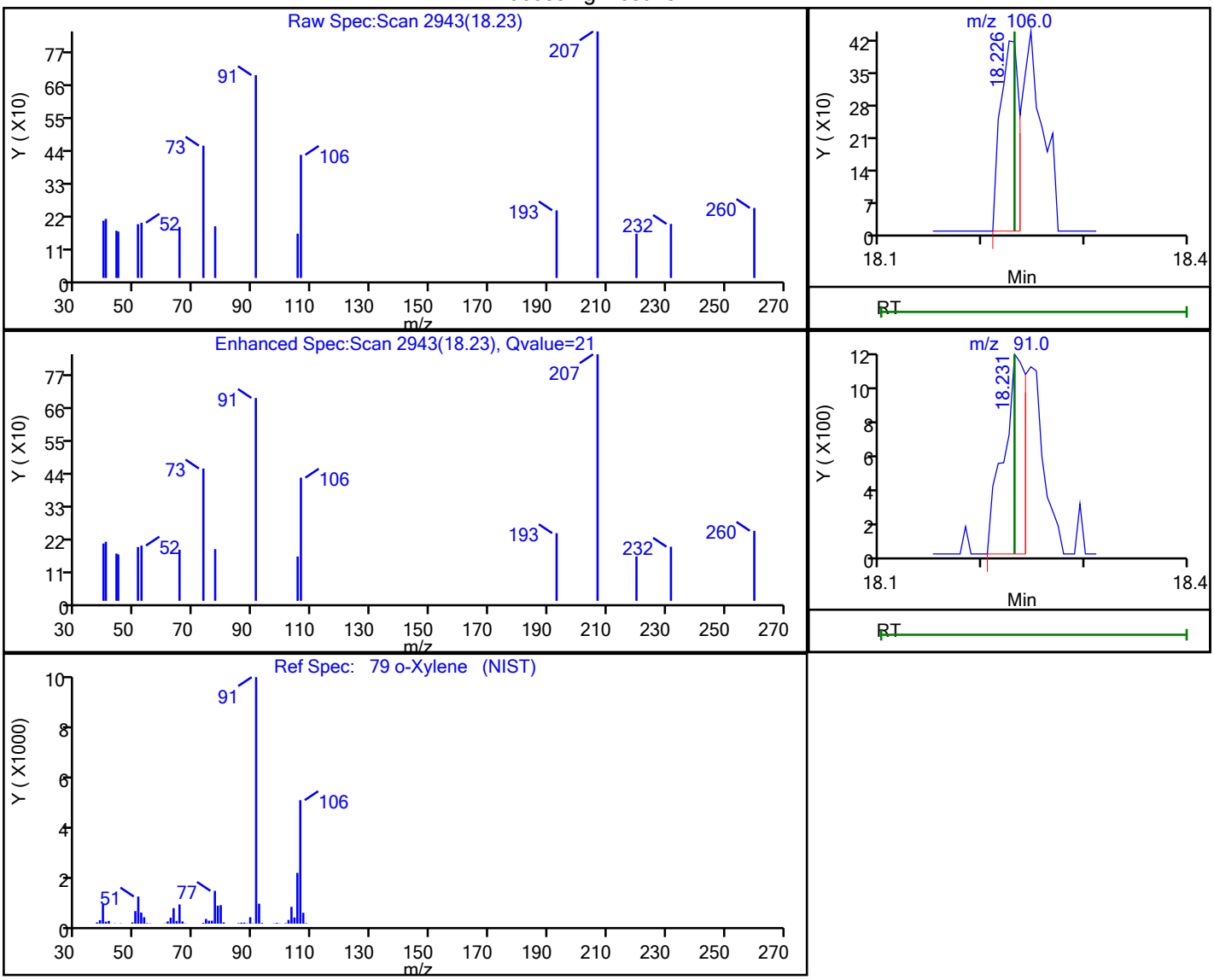
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

79 o-Xylene, CAS: 95-47-6

Processing Results



RT	Mass	Response	Amount
18.23	106.00	530	0.024450
18.23	91.00	1733	

Reviewer: phamvu, 06-May-2021 16:14:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

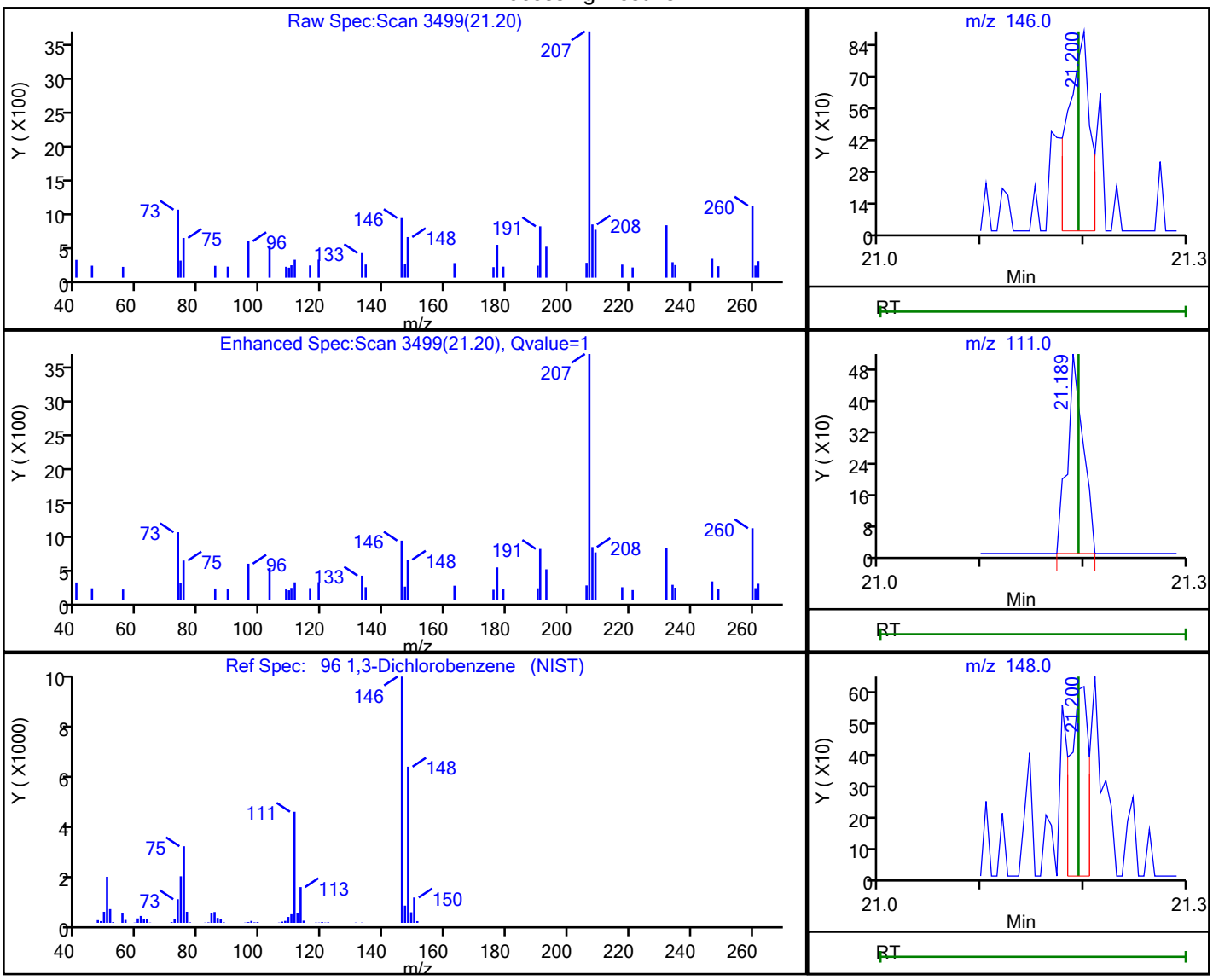
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

96 1,3-Dichlorobenzene, CAS: 541-73-1

Processing Results



RT	Mass	Response	Amount
21.20	146.00	1298	0.033542
21.19	111.00	559	
21.20	148.00	762	

Reviewer: phamvu, 06-May-2021 16:14:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

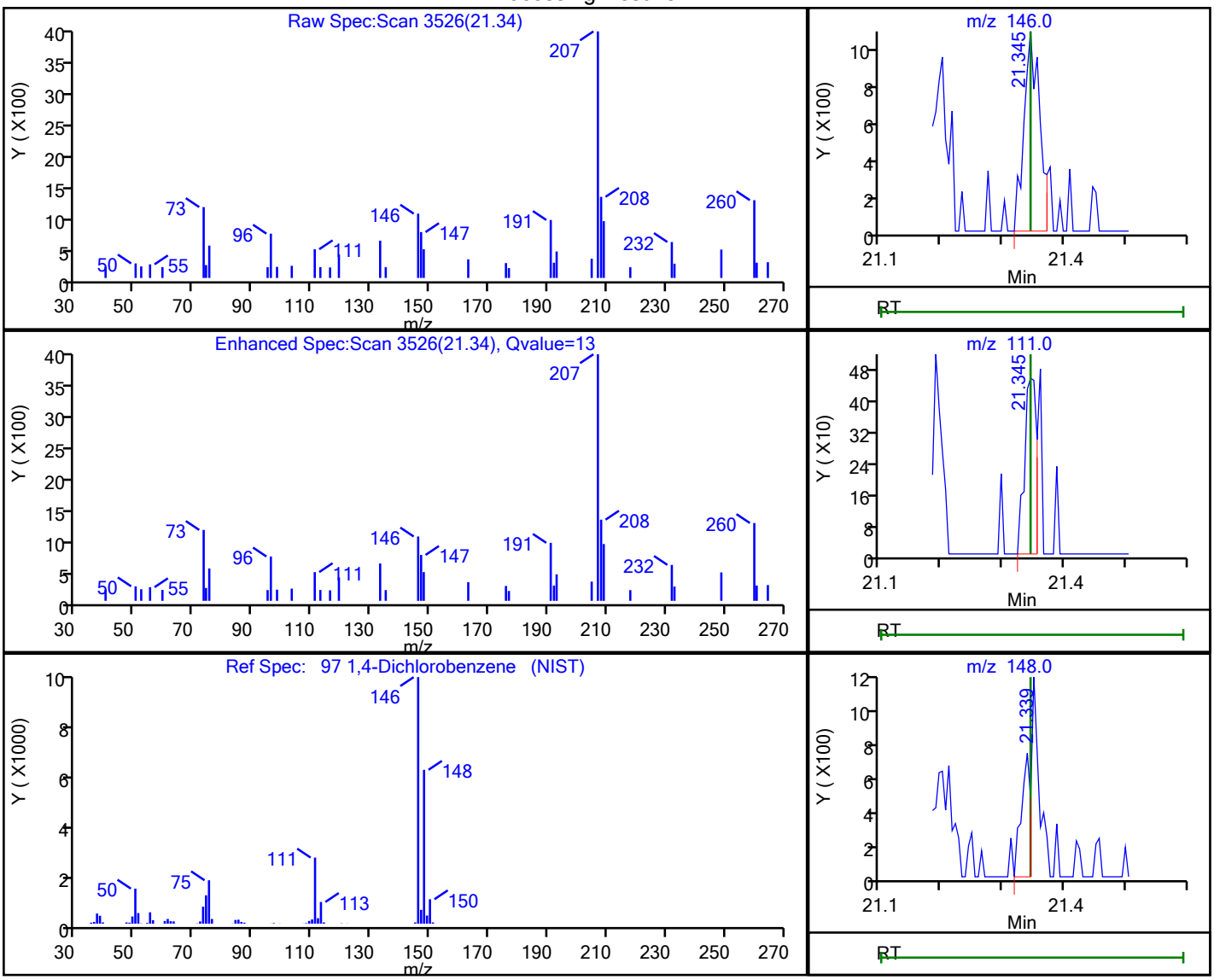
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

97 1,4-Dichlorobenzene, CAS: 106-46-7

Processing Results



RT	Mass	Response	Amount
21.34	146.00	1827	0.047924
21.34	111.00	627	
21.34	148.00	741	

Reviewer: phamvu, 06-May-2021 16:14:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

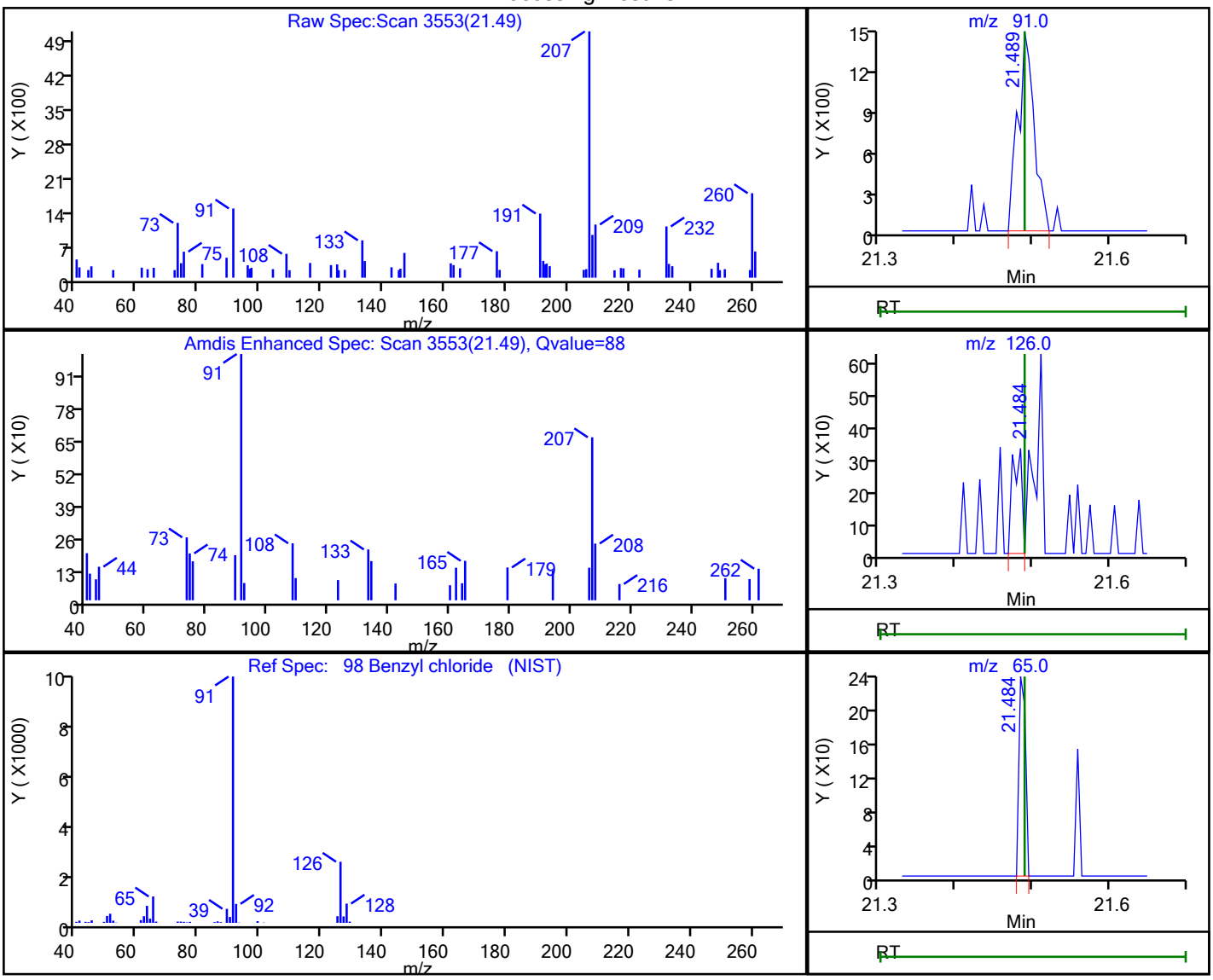
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

98 Benzyl chloride, CAS: 100-44-7

Processing Results



RT	Mass	Response	Amount
21.49	91.00	2090	0.043679
21.48	126.00	276	
21.48	65.00	141	

Reviewer: phamvu, 06-May-2021 16:14:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

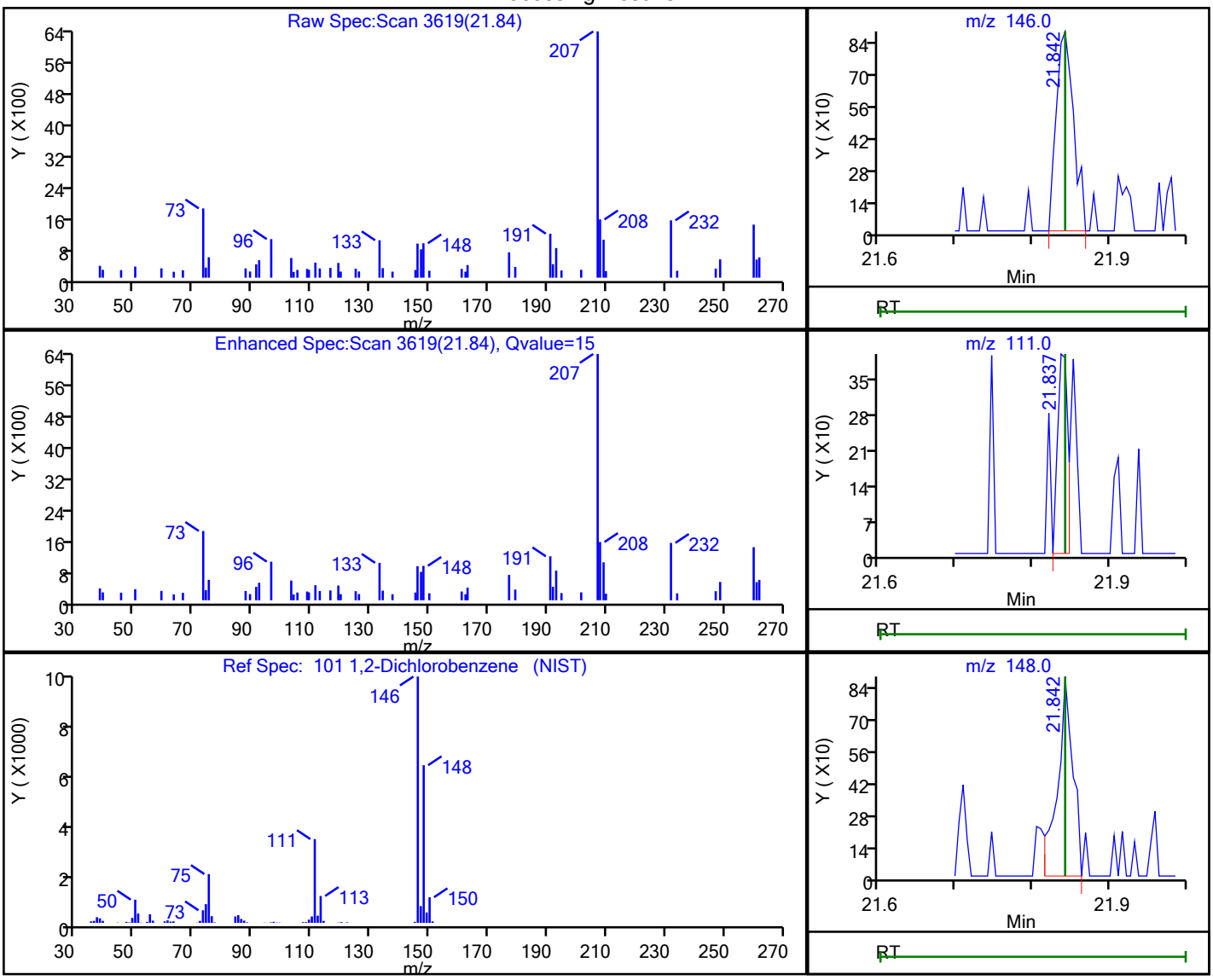
User Disabled Compound Report

Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

101 1,2-Dichlorobenzene, CAS: 95-50-1

Processing Results



RT	Mass	Response	Amount
21.84	146.00	1390	0.035537
21.84	111.00	377	
21.84	148.00	1240	

Reviewer: phamvu, 06-May-2021 16:14:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

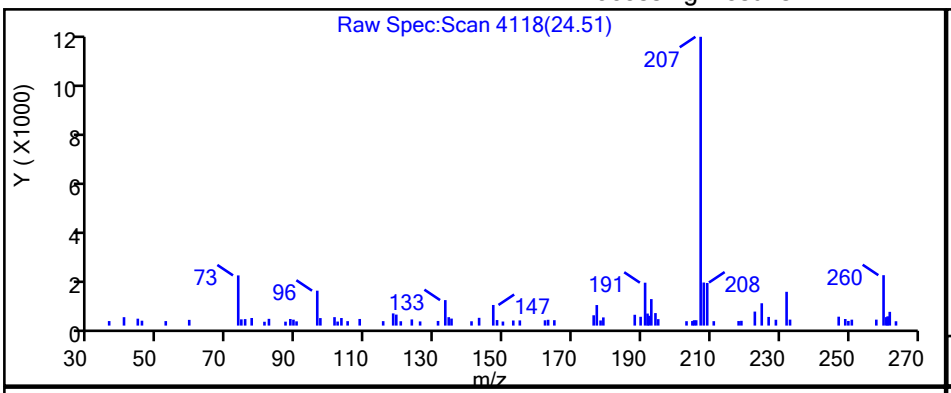
User Disabled Compound Report

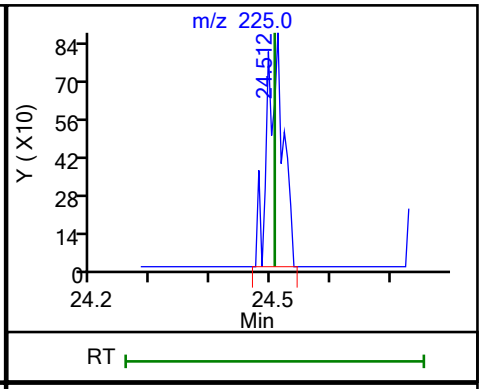
Eurofins TestAmerica, Burlington

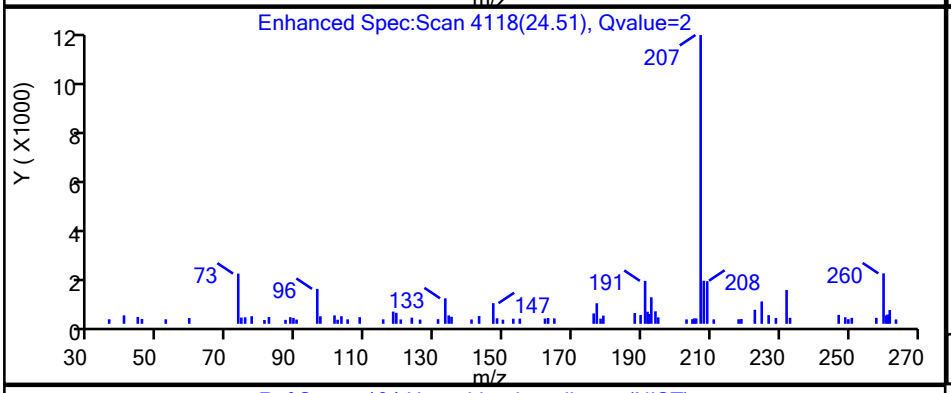
Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

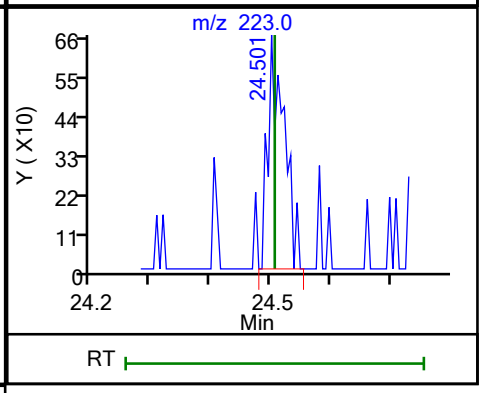
104 Hexachlorobutadiene, CAS: 87-68-3

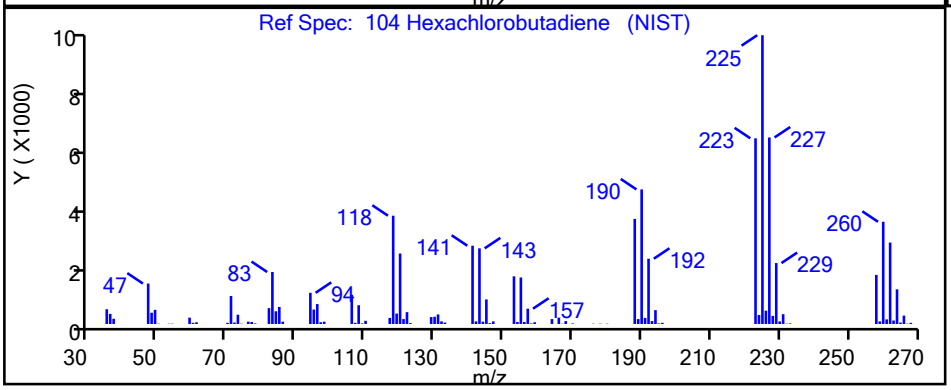
Processing Results











RT	Mass	Response	Amount
24.51	225.00	1591	0.037990
24.50	223.00	1258	

Reviewer: phamvu, 06-May-2021 16:14:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 06-May-2021 16:14:52 Chrom Revision: 2.3 08-Apr-2021 17:17:48

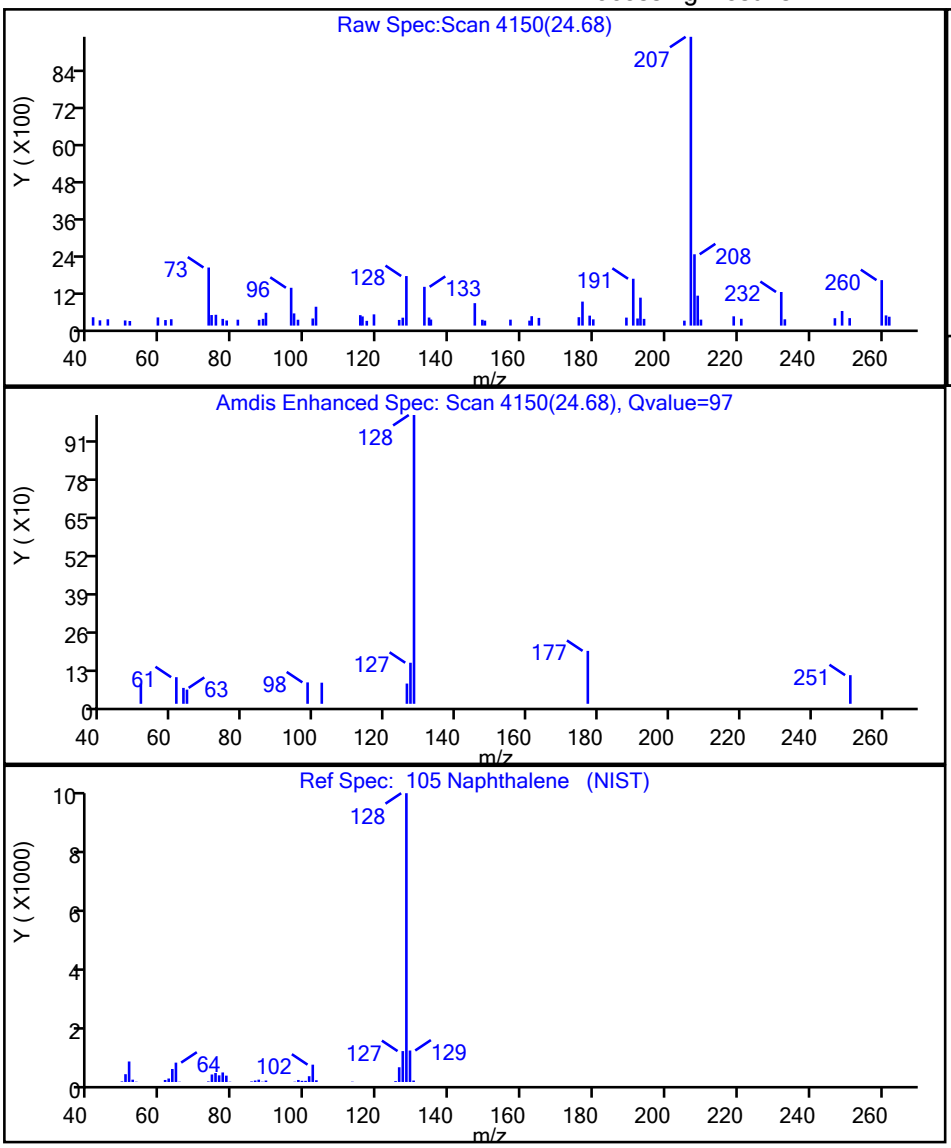
User Disabled Compound Report

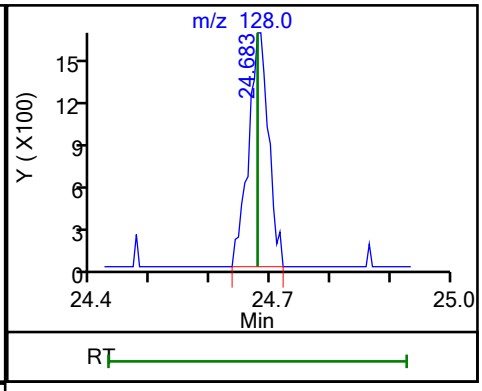
Eurofins TestAmerica, Burlington

Data File:	\\chromfs\Burlington\ChromData\CHG.i\20210506-45860.b\200-45860-006.D				
Injection Date:	06-May-2021 12:03:30	Instrument ID:	CHG.i		
Lims ID:	200-58316-A-1	Lab Sample ID:	200-58316-1		
Client ID:	6298				
Operator ID:	ggg	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	200.000 mL	Dil. Factor:	1.0000		
Method:	TO15_MasterMethod_(v1)_G	Limit Group:	AI_TO15_ICAL		
Column:	RTX-624 (0.32 mm)	Detector	MS SCAN		

105 Naphthalene, CAS: 91-20-3

Processing Results





RT	Mass	Response	Amount
24.68	128.00	3762	0.052992

Reviewer: phamvu, 06-May-2021 16:14:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID