AMERICAN ENGINEERING TESTING, INC.

CONSULTANTS
• ENVIRONMENTAL
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• MATERIALS
• FORENSICS

November 18, 2016

Diana Schira
3440 Stony Road
Mosinee, Wisconsin 54494

Re: Notification of Soil Contamination,
Proposed Marathon City Center Site,
400 Main Street, Marathon, Marathon County, Wisconsin
AET Project No. 03-06391

Dear Ms. Schira:

American Engineering Testing, Inc. (AET) has been retained by the Village of Marathon to complete geotechnical and environmental services at the proposed Marathon City Center development property located at the above-referenced site. On September 9, 2016 soils impacted by volatile and semi-volatile organic compounds were encountered during the completion of a subsurface geotechnical engineering review of the site. On October 6, 2016 additional soil borings were completed to evaluate the degree and extent of previously identified soil contamination and evaluate the potential for groundwater contamination at the site.

Results of this investigation have demonstrated that soil contamination encountered during the geotechnical investigation was not an isolated release and more extensive soil contamination is present on the site. Soil contaminated with volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs), at concentrations exceeding the Wisconsin Department of Natural Resources (WDNR) soil to groundwater and direct contact residual contaminant levels, were encountered from depths of two to four feet below ground surface. Although contaminants were not detected in soil samples collected from near the groundwater table, the potential exists for groundwater impact. I have enclosed a copy of our Limited Site Investigation Report that we completed for the Village of Marathon.

In accordance with the "Wisconsin Spill Law", Chapter 292.11, Wisconsin Statutes, as the property owner you are responsible to immediately report the contamination to the WDNR. Non-emergency hazardous substance discharges may be reported by calling the WDNR. Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 292.11 (3) Wisconsin Statutes, states:

- RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

1837 County Highway OO • Chippewa Falls, WI 54729
Phone 715-861-5045 • Fax 715-861-5048 • www.amengtest.com

I am aware that you are currently involved in cleanup from an underground storage tank (UST) release at the former Ginseng Wisconsin site (WDNR BRRTS #03-37-526881). The WDNR project manager for that site, Ms. Dee Lance, can be contacted to report this additional soil contamination. She can be reached at 715-421-7862 and will determine the need for additional investigation.

If you have any questions or need addition information, please contact me.

Sincerely,
American Engineering Testing, Inc.

Michael K. Neal, Professional Hydrologist
Geomorphologist

Phone: (715) 861-5045
Cell Phone: (715) 894-6455
Email: mneal@amengtest.com

cc: Andy Kurtz, Village of Marathon, P.O. Box 487, Marathon, WI 54448

AMERICAN ENGINEERING TESTING, INC.

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LIMITED SITE INVESTIGATION REPORT

Marathon City Center Site

Southwest Corner of Third & Market Streets,
Marathon, Marathon County, Wisconsin

AET Project No. 03-06391

Date:

October 18, 2016

Prepared for:

Village of Marathon
P.O. Box 487
Marathon, WI 54448

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October 18, 2016

Village of Marathon
P.O. Box 487
Marathon, WI 54448

Attn: Andy Kurtz
akurtz@marathoncity.org

RE: Limited Site Investigation Report
Marathon City Center Site, Southwest Corner of Third & Market Streets,
Marathon, Marathon County, Wisconsin. AET Project No. 03-06391.

Dear Mr. Kurtz:

American Engineering Testing, Inc. has completed Limited Site Investigation services at the above-referenced property in Marathon, Wisconsin. These services were performed in accordance with our approved proposal dated September 28, 2016.

We appreciate the opportunity to serve you on this project. If you have any questions regarding the information presented in this report, or if we can be of additional service, please contact me.

Sincerely,
American Engineering Testing, Inc.

Michael K. Neal, Professional Hydrologist
Geomorphologist

Phone: (715) 861-5045, Cellular Phone (715) 894-6455
E-mail: mneal@amengtest.com

cc: Dee Lance, WDNR, 473 Griffith Avenue, Wisconsin Rapids, WI 54494

WDNR, West Central Region, R&R Program Associate, DNRRWCR@wisconsin.gov

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LIMITED SITE INVESTIGATION REPORT
MARATHON CITY CENTER SITE
MARATHON, WISCONSIN

AET PROJECT NO. 03-06391

EXECUTIVE SUMMARY

American Engineering Testing, Inc. (AET) was authorized by the Village of Marathon to conduct Limited Site Investigation (LSI) activities at the proposed Marathon City Center development property located at the southwest corner of Third and Market Streets, Marathon, Marathon County, Wisconsin (the Site). Soils impacted by volatile and semi-volatile organic compounds were encountered in a soil boring during the completion of a subsurface exploration program and geotechnical engineering review at the Site. The purpose of this LSI was to evaluate the degree and extent of previously identified soil contamination and evaluate the potential for groundwater contamination at the Site.

Results of this LSI have demonstrated that soil contamination encountered during the geotechnical investigation was not an isolated release and more extensive soil contamination is present on the Site. Soil contaminated with volatile organic compounds and polynuclear aromatic hydrocarbons, at concentrations exceeding the Wisconsin Department of Natural Resources (WDNR) soil to groundwater and direct contact residual contaminant levels, were encountered from depths of two to four feet below ground surface. Although contaminants were not detected in soil samples collected from near the water table, the potential exists for groundwater impact. The scope of this LSI was not sufficient to delineate the extent and magnitude of soil and groundwater contamination at the Site. Additional investigation would be necessary to determine the complete extent of soil and groundwater contamination.

In accordance with the "Wisconsin Spill Law", Chapter 292.11, Wisconsin Statutes, AET recommends the WDNR be notified of the results from this LSI. The WDNR will determine the need for additional investigation.

1.0 INTRODUCTION

The Village of Marathon authorized American Engineering Testing, Inc. (AET) to conduct limited site investigation (LSI) activities at the proposed Marathon City Center development site located at the southwest corner of Third and Market Streets, Marathon, Marathon County, Wisconsin (the Site). **Figure 1** shows the Site location, and **Figure 2** shows the current Site layout.

Appendix A contains a list of the acronyms and abbreviations used in this report.

1.1 Purpose

We have completed the scope of services for this project to evaluate the degree and extent of previously identified soil contamination and evaluate the potential for groundwater contamination at the Site. AET's services have been performed in accordance with generally accepted practices of the profession undertaken in similar studies at the same time and in the same geographical area, and for the following objectives:

- To attempt to define the extent and degree of previously identified soil contamination;
- To evaluate the potential for groundwater contamination at the Site; and
- To evaluate the need for further Site investigation.

2.0 BACKGROUND

2.1 Site Description and Features

The Site is located in the southwest quarter of the southeast quarter of Section 6, Township 28 North, Range 6 East, in the Village of Marathon, Marathon Wisconsin. The Site is an approximately 90-foot by 60-foot portion of a lot located on the west side of Market Street south of Third Street. Currently the Site is a part of a gravel parking lot for the unoccupied commercial property at 400 Main Street (Ginseng Wisconsin). The area is served by a municipal water supply and sewer system.

At present, neighboring property uses include Third Street and commercial properties to the north, Market Street and the Marathon Fire Department building to the east, vacant lot and commercial property to the south, and commercial property to the west (Ginseng Wisconsin).

2.2 Physical Setting

The Site is located in the Northern Highland Physiographic Province of north central Wisconsin. Fluvial and glacial processes have been an important geologic agent in determining the surface geology and physiography of the Site, and it is situated on alluvial and glacial deposits.

Soils encountered at the Site are primarily fill sand and gravel from the surface to approximately three feet below ground surface (bgs). Deeper than three feet bgs is medium to coarse silty sand. Regionally, bedrock consists of Precambrian age granite. Bedrock was not encountered in the geotechnical borings to their maximum depth of 26.5 feet bgs.

Groundwater was encountered at depths ranging from seven to eight feet bgs in the soil borings. Topography at the Site slopes slightly north. The regional surficial groundwater gradient in the vicinity of the Site is likely north toward the Big Rib River.

2.3 Previous Environmental Reports

Currently the Site is a part of a gravel parking lot for the unoccupied commercial property at 400 Main Street (Ginseng Wisconsin). The Ginseng Wisconsin site (Wisconsin Department of Natural Resources (WDNR) Bureau for Remediation and Redevelopment Tracking System (BRRTS) #03-37-526881) is currently undergoing remedial assessment for the release of waste oil. The release was reported on June 2, 2004, following removal of a waste oil underground storage tank (UST) located on the east side of the Ginseng Wisconsin building. REI Environmental is the consultant conducting remedial activities on behalf of Ginseng Wisconsin. According to REI, soil excavation was completed to address contaminated soils associated with the UST in early 2014. Soil contamination did not extend to the groundwater table and was confined to a small area adjacent to the building. REI will be applying to the WDNR for site closure.

Soil contamination was encountered on the Site on September 9, 2016, during the installation of soil borings completed as part of a geotechnical engineering review for redevelopment of the Site. The results of the geotechnical exploration and review were included in AET report of Project No. 12-02424 dated September 30, 2016. Refer to that report for background and supplemental information. Two soil samples collected from geotechnical soil boring B-2 were analyzed for volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs).

Analysis of the soil samples collected from B-2 revealed the following:

- VOC- and PAH-contaminated soil is present on the Site at concentrations exceeding soil to groundwater and direct contact residual contaminant levels (RCLs) at a depth of two feet bgs.
- Soil contamination was not detected at the groundwater table (7-8 feet bgs).

3.0 LIMITED SITE INVESTIGATION ACTIVITIES

3.1 Scope of Services

The scope of this LSI was initially defined in an AET proposal agreement with the Village of Marathon approved on September 28, 2016. The implemented scope of services included the following:

- Contact appropriate authorities to obtain proper permits and to coordinate the locating and marking of underground utilities and conduits.
- Prepare and administer a site-specific safety plan.
- Install four soil borings to depths of up to 11.5 feet bgs in an effort to define the extent of soil contamination. Due to the proximity of overhead electrical lines, two soil borings were advanced with hand auger to depths of 3.5 and 2.5 feet bgs.
- Sample soils continuously, describe recovered soils according to the Unified Soil Classification System, and field screen soil samples for organic vapors with a photoionization detector (PID) equipped with a 10.6 eV lamp.
- Collect up to two soil samples from each boring (only one sample from the hand auger borings) and analyze for VOCs and PAHs using EPA Method 8260B and 8270D.
- Prepare and submit an LSI report summarizing the results of the field effort and laboratory analysis.

The soil borings were performed to determine the horizontal and vertical extent and degree of soil contamination and to evaluate potential for groundwater contamination. Groundwater was encountered at depths of seven to eight feet bgs. Soil boring locations are shown on **Figure 2**.

3.2 Environmental Sampling Methods

AET conducted soil sampling using the methods described on the Environmental Sampling Methods pages in **Appendix B**.

Soil samples were collected from either a split spoon sampler or a hand auger and screened in the field using a PID equipped with a 10.6 electron volt eV lamp to measure organic vapors in parts per million (ppm). Results were recorded on the boring logs in **Appendix C**; obvious odors and visual evidence of contamination were noted. Soil samples for laboratory analysis were placed into laboratory-supplied containers, preserved as required, and placed in a cooler on ice prior to transport to the laboratory. After all necessary soil 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 samples to Test America laboratory for chemical analysis. Soil samples were analyzed for VOCs and PAHs by EPA GC methods. Samples were collected in accordance with AET's Quality Assurance/Quality Control (QA/QC) guidelines.

3.3 Reference Standards

For this report, 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.

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

- 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 non-industrial direct contact RCLs spreadsheet: Compound-specific values for the protection of human health from direct contact.
- WDNR NR 720 soil to groundwater RCLs spreadsheet: Compound-specific values for protection of groundwater.

4.0 PROJECT RESULTS

4.1 Field Observations

AET performed the field exploration and sampling for this LSI on October 6, 2016. The observational data collected during field exploration activities at the Site are included on the logs in **Appendix C**.

Soils encountered at the Site are primarily dark brown sands and gravels with silty sand to depths of 11.5 feet bgs. Soil samples were generally moist and groundwater was encountered at depths of seven to eight feet bgs. Obvious indications of potential environmental impacts such as staining or odor were noted in the soils from borings EB-1 and EB-4. Soil boring locations are depicted on **Figure 2**.

4.2 Field Screening Results

We observed PID readings ranging from 3.7 to 260 ppm in the four borings completed. Results of less than 1 ppm are considered background levels. Soil sample screening results appear on **Table 1** as well as on the boring logs in **Appendix C**.

4.3 Laboratory Analysis

Appendix D includes the laboratory analytical reports and chains-of-custody for this remedial action. Soil sample analytical results are summarized in **Table 1**.

4.3.1 Soil Analytical Results

The WDNR developed a non-industrial direct contact and soil to groundwater RCLs spreadsheet for several compounds, as listed in WAC NR 720. AET submitted six soil samples from four borings to Test America for laboratory analysis of VOCs and PAHs. VOCs and PAHs were detected at concentrations exceeding soil to groundwater and direct contact RCL values in four of the six samples analyzed. Soil analytical results are summarized in **Table 1**.

When the concentrations of VOCs and PAHs were detected in soil samples within four feet bgs, WDNR direct contact RCL worksheets were used to calculate the cumulative health risks. Soil contaminant concentrations in borings B-2, EB-2, and EB-4 exceed cumulative health risks for non-industrial sites and will need either further cleanup to lower contaminant levels or the construction of a cap/cover to address the direct contact pathway. Direct contact worksheets are included in **Appendix E**.

5.0 DISCUSSION AND OPINIONS

5.1 Soil Contamination Conditions

Based on visual observations, laboratory results, and the results of the PID screening, there is an indication that soils on the Site have been significantly impacted. Soil contaminated with VOCs and PAHs at concentrations exceeding the WDNR soil to groundwater and direct contact RCLs were encountered from depths of two to four feet bgs.

5.2 Groundwater Contamination Conditions

Groundwater samples were not collected during this LSI; however, soil contamination encountered at concentrations exceeding soil to groundwater RCLs would suggest the potential exists for groundwater contamination at the Site.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Results of this LSI have demonstrated that soil contamination encountered during the geotechnical investigation was not an isolated release and more extensive soil contamination is present on the Site. Soil contaminated with VOCs and PAHs at concentrations exceeding the WDNR soil to groundwater and direct contact RCLs were encountered from depths of two to four feet bgs. Although contaminants were not detected in the two soil samples collected from near the water table, the potential exists for groundwater impact. The scope of this limited investigation was not sufficient to delineate the extent and magnitude of soil and groundwater contamination at the Site. Additional investigation would be necessary to determine the complete extent of soil and groundwater contamination.

In accordance with the "Wisconsin Spill Law", Chapter 292.11, Wisconsin Statutes, AET recommends the WDNR be notified of the results from this LSI. The WDNR will determine the need for additional investigation.

7.0 REPORT CLOSURE

7.1 Standard of Care

This remediation has been conducted under the supervision of an Environmental Professional and for the objectives described in the Purpose section of this report. AET's findings, opinions, conclusions, and recommendations are based on the Scope of Services defined in this report.

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 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.

Report Prepared By:

Michael K. Neal
Professional Hydrologist/Geomorphologist

WISCONSIN
MICHAEL K.
NEAL
101-111
EAU CLAIRE
WI
PROFESSIONAL HYDROLOGIST

Report Reviewed By:

Michael Hultgren, P.G.
Sr. Geologist/Supervisor

Tables

TABLE 1

ANALYTICAL RESULTS - SOIL

MARATHON CITY CENTER SITE, MARATHON CITY, WISCONSIN

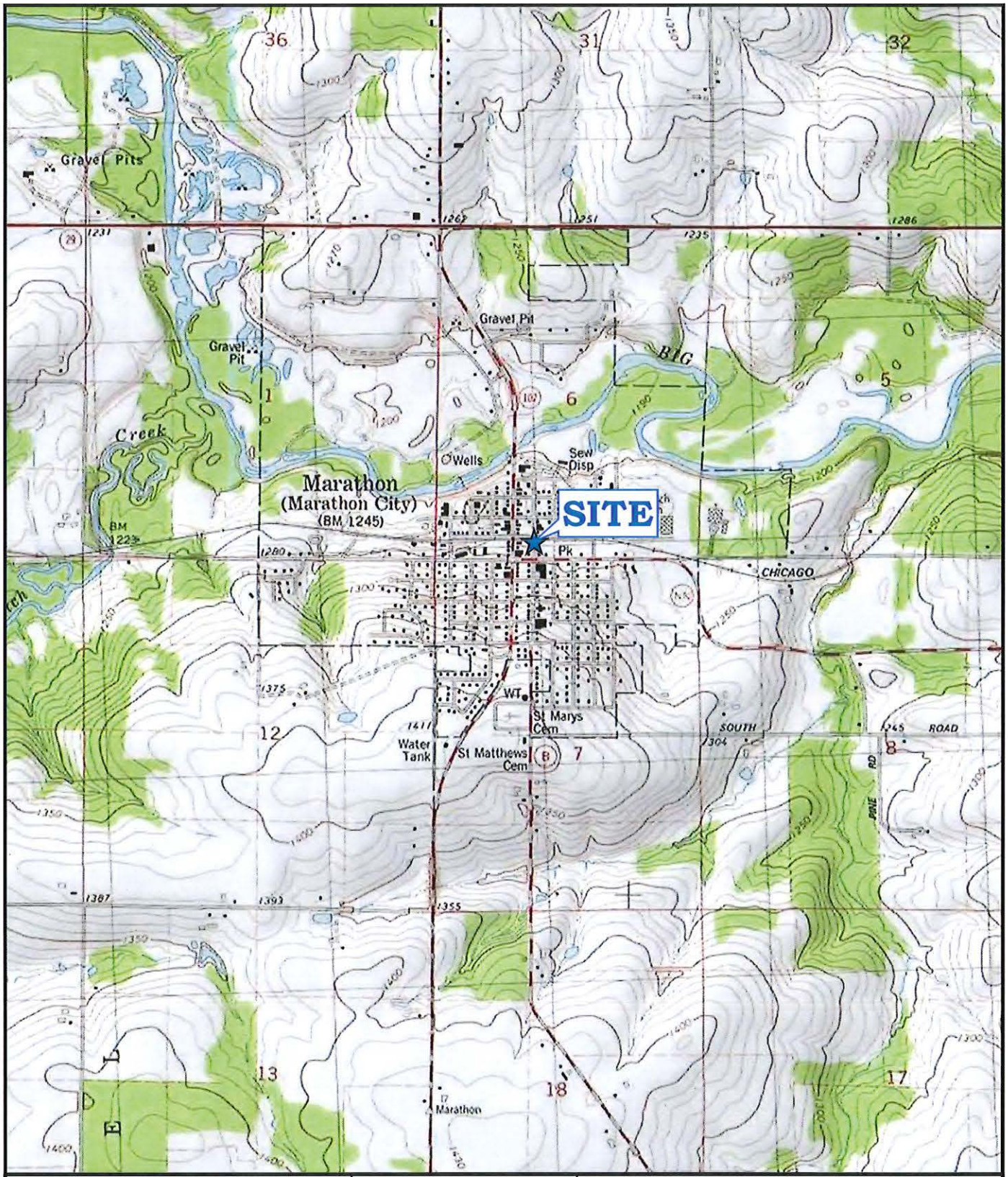
	Soil RCLs (ppm) Calculated: 10-13-2016			Samples								
				B-2A	**B-2B**	**BS-1A**	**BS-1B**	**BS-2A**	**BS-2B**	**BS-3A**	**BS-4A**	**MEOH Blank**
Date	*Non-Industrial Direct Contact*	*Soil to GW*	*Surficial Background Threshold Value*	9/20/16		10/6/16						
Depth (feet)				2-4	7-9	2-4	7-9	2-4	7-9	3.5	2.5	---
Soil Boring				B-2		EB-1		EB-2		EB-3	EB-4	---
PID (ppm)				120	< 1	260	99.5	5.9	3.7	177.5	10.7	---
Depth to Water Table (ft bgs)				8		7						---
Soil Type				silty sand	sand	silty sand						---
VOCs (ppm)												
Benzene	*1.49*	*0.0051*	---	**0.087**	< 0.01	< 0.018	< 0.0094	< 0.0099	< 0.011	< 0.0092	< 0.01	< 0.0073
n-Butylbenzene	*108*	---	---	5	< 0.027	1.6	< 0.025	< 0.025	< 0.029	< 0.024	< 0.027	< 0.019
sec-Butylbenzene	*145*	---	---	1.3	< 0.028	0.73	< 0.026	< 0.026	< 0.03	< 0.025	< 0.028	< 0.02
tert-Butylbenzene	*183*	---	---	< 0.058	< 0.028	1	< 0.026	< 0.026	< 0.03	< 0.025	< 0.028	< 0.02
Ethylbenzene	*7.47*	*1.57*	---	**3.3**	< 0.013	0.33	< 0.012	< 0.012	< 0.014	< 0.011	< 0.013	< 0.0092
Isopropylbenzene	---	---	---	1.7	< 0.027	0.63	< 0.025	< 0.025	< 0.029	< 0.024	< 0.027	< 0.019
p-Isopropyltoluene	*162*	---	---	2.8	< 0.025	< 0.045	< 0.023	< 0.023	< 0.027	< 0.023	< 0.025	< 0.018
Naphthalene	*5.15*	*0.6582*	---	**26**	< 0.023	**0.68**	< 0.021	< 0.021	< 0.025	0.46	< 0.023	< 0.017
PCE	*30.7*	*0.0023*	---	< 0.054	< 0.026	**2.9**	< 0.024	< 0.024	< 0.028	< 0.023	< 0.026	< 0.019
n-Propylbenzene	---	---	---	3	< 0.029	1.6	< 0.027	< 0.027	< 0.031	< 0.026	< 0.029	< 0.021
Toluene	*818*	*1.107*	---	0.52	< 0.01	0.071	< 0.0094	< 0.0099	< 0.011	0.028	< 0.01	< 0.0074
1,2,4-TMB	*89.8*	---	---	22	< 0.025	10	0.095	0.036	< 0.027	0.16	< 0.025	< 0.018
1,3,5-TMB	*182*	---	---	7.9	< 0.026	3.4	< 0.024	< 0.026	< 0.029	0.07	< 0.026	< 0.019
Total TMB	---	*1.39*	---	**29.9**	---	**13.4**	0.095	0.036	---	0.23	---	---
Total Xylenes	*258*	*3.94*	---	**17**	< 0.015	**4.3**	< 0.014	0.029	< 0.017	0.068	< 0.015	< 0.011
PAHs (ppm)												
Acenaphthylene	---	---	---	1.8	< 0.0066	< 0.0046	< 0.0048	< 0.0048	< 0.0054	0.11	0.027	---
Anthracene	*17,200*	*196.95*	---	< 0.068	< 0.0062	< 0.0059	< 0.0061	< 0.0061	< 0.0069	< 0.12	0.029	---
Benzo(a)anthracene	*0.147*	---	---	3.7	< 0.005	< 0.0047	< 0.0049	0.014	< 0.0055	< 0.1	0.14	---
Benzo(a)pyrene	*0.015*	*0.47*	---	< 0.79	< 0.0071	< 0.0068	< 0.0068	0.02	< 0.008	< 0.14	0.15	---
Benzo(b)fluoranthene	*0.148*	*0.4793*	---	< 0.88	< 0.0079	< 0.0076	< 0.0076	0.042	< 0.0089	< 0.16	0.22	---
Benzo(g,h,i)perylene	---	---	---	< 1.3	< 0.011	< 0.11	< 0.11	< 0.012	< 0.013	< 0.24	0.057	---
Benzo(k)fluoranthene	*1.48*	---	---	< 1.2	< 0.01	< 0.01	< 0.01	0.013	< 0.012	< 0.22	0.082	---
Chrysene	*14.8*	*0.1446*	---	**2.2**	< 0.01	0.099	< 0.0099	0.028	< 0.011	**0.74**	**0.18**	---
Dibenz(a,h)anthracene	*0.015*	---	---	< 0.79	< 0.0071	< 0.0068	< 0.0068	< 0.007	< 0.008	< 0.14	0.02	---
Fluoranthene	*2,290*	*88.878*	---	3.7	< 0.0068	0.04	< 0.0067	0.038	< 0.0076	0.41	0.26	---
Fluorene	*2,290*	*14.8299*	---	1.1	< 0.0052	0.014	< 0.0051	< 0.0051	< 0.0058	0.11	0.014	---
Indeno(1,2,3-cd)pyrene	*0.148*	---	---	< 1.1	< 0.0095	< 0.0091	< 0.0091	0.015	< 0.011	< 0.19	0.064	---
1-Methylnaphthalene	*15.6*	---	---	24	< 0.009	0.33	< 0.0089	0.016	< 0.01	1	0.014	---
2-Methylnaphthalene	*229*	---	---	37	< 0.0068	0.58	< 0.0067	0.02	< 0.0076	0.5	0.014	---
Naphthalene	*5.15*	*0.6582*	---	**26**	< 0.0057	**0.75**	< 0.0056	0.022	< 0.0063	0.59	0.014	---
Phenanthrene	---	---	---	4.5	< 0.0051	< 0.0049	< 0.0051	0.028	< 0.0057	0.3	0.19	---
Pyrene	*1,720*	*54.5455*	---	3.4	< 0.0073	0.15	< 0.0072	0.039	< 0.0082	1.3	0.33	---
No. of Individual Exceedances (DC)				3	NA	0	NA	1	NA	0	3	NA
Cumulative Hazard Index (DC)				0.5875	NA	0.1533	NA	0.0007	NA	0.0085	0.0005	NA
Cumulative Cancer Risk (DC)				3.2E-05	NA	3.1E-07	NA	1.7E-06	NA	2.3E-07	1.4E-05	NA

--- = not analyzed or no standard MTBE = methyl-tert-butyl ether TMB = trimethylbenzene PCE = tetrachloroethene

Bold areas indicate soil contaminant concentrations exceed Groundwater RCL.

Red areas indicate soil contaminant concentrations exceed Direct Contact RCLs.

Figures



AMERICAN ENGINEERING TESTING, INC

Map Reference: Copyright © 2013 National Geographic Society, i-cubed
USGS 7.5' Quadrangle: Marathon, Wisconsin

N

0 1,000 2,000

Feet

Figure 1
Site Location Map

Limited Site Investigation

Marathon City Center Site
Southwest Corner Third & Market Streets
Marathon, Wisconsin

Date: 10/11/2016 AET Project No. 03-06391

File: MCC-Fig1-SLM.mxd Date: 10/11/2016

THIRD STREET

MAIN STREET

MARKET STREET

STORM DRAIN

MAN HOLE

STORM DRAIN

GRASS

GRASS

GRASS

GRAVEL

GRAVEL

GRASS

GINSING
WISCONSIN
BUILDING

FORMER UST BASIN

NATURAL GAS METER

AREA OF EXCAVATION

B-1

B-2

B-3

B-4

B-10

B-11

EB-1

EB-2

EB-3

EB-4

Legend

B-1	Geotech Soil Boring Location
EB-1	Environmental Soil Boring Location
	Approximate Parcel Boundary
OE OE OE	Overhead Electric Line
	Underground Electric Line
SAN SAN	Sanitary Sewer Line
W W W	Water Line
TEL TEL	Telephone Line
G G	Natural Gas Line
∅	Utility Pole
	Former UST Basin
	Area of Excavation

AMERICAN ENGINEERING TESTING, INC.

N

0 10 20
FEET

Figure 2
Site Features
Limited Site Investigation
Marathon City Center Site
Southwest Corner of Third & Market Streets
Marathon, Wisconsin
Date: 10/11/2016 AET Project No. 03-06391

File: MCC_Fig2_Site_Features.DWG

Appendix A

Acronyms/Abbreviations and Definitions

ACRONYMS AND ABBREVIATIONS

AET Report No. 03-06391

^{0}C	degrees Celsius
^{0}F	degrees Fahrenheit
%	percent
AAI	EPA All Appropriate Inquiry (§312.10 of 40 CFR 312)
ACM	asbestos containing material
ACWM	asbestos containing waste 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)
bgs	below ground surface
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
EC	engineering control
EIS	Environmental Impact Statement
EP	Environmental Professional (§312.10 of 40 CFR 312)
EPA	Environmental Protection Agency (also USEPA)
ERNS	Emergency Response Notification System (federal)
ESA	Environmental Site Assessment
f/cc	fibers-per-cubic-centimeter
ft	feet
GEN	RCRA Generator
GIS	geographic information system
GPS	global positioning system
HASP	Health and Safety Plan
HIG	Historical Information Gatherers, Inc.
HREC	historical recognized environmental condition
IC	institutional control
LLP	landowner liability protection

ACRONYMS AND ABBREVIATIONS

AET Report No. 03-06391

LQG	RCRA Large Quantity Generator
LSI	Limited Site Investigation
LUST	leaking underground storage tank
MCL	EPA Maximum Contaminant Level
MDL	method detection limit.
mg/kg	milligrams-per-kilogram
mg/L	milligrams-per-liter
MMP	Materials Management Plan
MSDS	material safety data sheet
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
PAH	polynuclear aromatic hydrocarbon
PEL	OSHA Permissible Exposure Limit
PCB	polychlorinated biphenyl
PE	Professional Engineer
PG	Professional Geologist
PID	photoionization detector
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

ACRONYMS AND ABBREVIATIONS

AET Report No. 03-06391

RCL	residual contaminant level
REC	recognized environmental condition
RI	Remedial Investigation
RL	laboratory reporting limit
ROD	EPA Record of Decision
SOP	standard operating procedure
SPILLS	WDNR Spills inventory
SQG	RCRA Small Quantity Generator
SREC	suspect recognized environmental condition
SSP	Site Safety Plan
SVOC	semi-volatile organic compound
SWF/LF	WDNR Solid Waste Facilities/Landfill Sites
TCLP	Toxicity Characteristic Leaching Procedure
TPH	total petroleum hydrocarbons
TRIS	EPA Toxic Release Inventory System
TSCA	Toxic Substances Control Act
TSD	RCRA Transportation Storage and Disposal inventory
µg/kg	micrograms-per-kilogram
µg/l or µg/L	micrograms-per-liter
$\mu g/m^3$	micrograms-per-cubic-meter
USEPA	United States Environmental Protection Agency (also EPA)
USGS	United States Geological Survey
UST	underground storage tank
VIC	Voluntary Investigation and Cleanup Program
VOC	volatile organic compound
WDATCP	Wisconsin Department of Agriculture, Trade, and Consumer Protection
WDNR	Wisconsin Department of Natural Resources
WDOT	Wisconsin Department of Transportation
WGNHS	Wisconsin Geological and Natural History Survey
WCA	Wetland Conservation Act

Appendix B

Environmental Sampling Methods

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.

Appendix C

Subsurface Boring Logs

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET No: 12-02424 Log of Boring No. B-02 (p. 1 of 1)

Project: Proposed Marathon City Center; 420 Main Street; Marathon City, Wisconsin

DEPTH IN FEET	ELEV. FEET	Surface Elevation 1238.1 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	1237.9	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	FILL	13	M	SS	18					
2	1235.6	FILL, gravelly silty sand, fine to coarse grained, brown, moist (SM)										
3				6	M	SS	16					
4	1233.6	FILL, sandy silt, trace organics, black, moist (ML)										
5		LEAN CLAY, mottled brown and gray, firm (CL)	FINE ALLUVIUM	7	M	SS	24					
6												
7	1231.1											
8		SAND, fine to medium grained, brown, moist to waterbearing, medium dense (SP)	COARSE ALLUVIUM	26	MW	SS	18					
9												
10				13	W	SS	19					
11												
12												
13	1224.8			36	W	SS	24					
14		SILTY SAND with gravel, fine to coarse grained, brown, waterbearing, medium dense to dense (SM)	TILL									
15				38	W	SS	10					
16												
17												
18												
19												
20												
21				14	W	SS	10					
22												
23	1215.1											
24		LEAN CLAY, gray, stiff (CL)										
25												
26	1211.6			9	W	SS	16		1.0			
		End of boring at 26.5 feet										

Soil Samples
B-2A 2-4 ft
B-2B 7-9 ft

DEPTH:	DRILLING METHOD
0-24.5'	3.25" HSA

BORING COMPLETED: 9/9/16

DR: MD LG: LL Rig: 57

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
9/9/16	1439	14.0'	12.0'	11.2'	None	9.0'
9/9/16	1442	14.0'	12.0'	11.2'	None	8.3'
9/9/16	1446	14.0'	12.0'	10.0'	None	8.2'

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV 12-02424.GPJ AET+CPT+WELL.GDT 9/30/16

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

EB-1

AET No: 03-06391 Log of Boring No. E-1 (p. 1 of 1)

Project: Proposed Marathon City Center; 420 Main Street; Marathon City, Wisconsin

DEPTH IN FEET	Surface Elevation ~1238 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	PID	PL	%-#200
1	FILL, silty sand with gravel, fine to coarse grained, brown, moist (SM)	FILL	27	M	SS	14			25.8		
2											
3	FILL, silty sand, fine to medium grained, gray, moist (SM)		8	M	SS	13			26.0		
4											
5	SAND, fine to medium grained, brown, moist to waterbearing, loose to medium dense (SP)	COARSE ALLUVIUM							99.5		
6			26	M	SS	14					
7				▼							
8			23	M/W	SS	17			64.3		
9											
10									53.5		
11			14	W	SS	10					
	End of boring at 11.5 feet										

Soil Samples

BS-1A 2-4 ft

BS-1B 7-9 ft

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA	10/6/16	1023	11.5'	9.5'	8.8'	None	7.5'
	10/6/16	1029	11.5'	9.5'	8.6'	None	7.4'
BORING COMPLETED: 10/6/16							
DR: MD LG: LL Rig: 57							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP 03-06391.GPJ AET+CPT+WELL.GDT 10/17/16

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08) 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 ch. NR 141, 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: ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Marathon		

Latitude / Longitude (Degrees and Minutes) ___ ___ ° ___ ___ . ___ ___ ___ 'N / ___ ___ ° ___ ___ . ___ ___ ___ 'W — Method Code (see instructions)

¼ / ¼	¼	Section	Township	Range	
SE	SW	6	28 N	6	☑ E ☐ W

or Gov't Lot #

Well Street Address: Market Street at 3rd Street

Well City, Village or Town: Marathon City — Well ZIP Code: 54448

Subdivision Name — Lot #

Reason For Removal From Service: Geotech. Borehole Terming — WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS)

License/Permit/Monitoring #: EK-1

Original Well Owner: Village of Marathon City

Present Well Owner: Village of Marathon City

Mailing Address of Present Owner: P.O. Box 487

City of Present Owner	State	ZIP Code
Marathon	WI	54448

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 10/06/2016

If a Well Construction Report is available, please attach.

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

Formation Type: ☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
11.5	6
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	9.5

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

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

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

Pump and piping removed?	☐ Yes	☐ No	☑ N/A
Liner(s) removed?	☐ 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): Loose Dumped

Sealing Materials

☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☑ 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
Backfill (Native Soil)	Surface	1.0	Native Soil	
3/8" Bentonite Chips	1.0	11.5	2.5 bags	

6. Comments

E-1

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
American Engineering Testing		10/06/2016

Street or Route	Telephone Number
4203 Schofield Avenue	(715) 359-3534

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Schofield	WI	54476		10-17-2016

DNR Use Only

Date Received	Noted By

Comments

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

EB-2

AET No: 03-06391 Log of Boring No. E-2 (p. 1 of 1)

Project: Proposed Marathon City Center; 420 Main Street; Marathon City, Wisconsin

DEPTH IN FEET	Surface Elevation ~1238 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	PID	PL	%-#200
1	FILL, silty sand with gravel, fine to coarse grained, brown, moist (SM)	FILL	36	M	SS	17			13		
2											
3			6	M	SS	16			5.9		
4											
5	SAND, fine to medium grained, brown, moist to waterbearing, loose to medium dense (SP)	COARSE ALLUVIUM	8	M/W	SS	15			6.7		
6				▼							
7									3.7		
8			20	W	SS	18					
9	**End of boring at 9.0 feet**										

Soil Samples:

BS-2A 2-4 ft

BS-2B 7-9 ft

DEPTH:	DRILLING METHOD
0-9.0'	3.25" HSA
BORING COMPLETED:	10/6/16
DR: MD	LG: LL Rig: 57

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
10/6/16	1115	9.0'	7.0'	7.6'	None	7.3'
10/6/16	1123	9.0'	7.0'	7.2'	None	6.4'

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP 03-06391.GPJ AET+CPT+WELL.GDT 10/17/16

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08) 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 ch. NR 141, 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: ☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment ☐ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Marathon		

Latitude / Longitude (Degrees and Minutes) — Method Code (see Instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range	
SE	SW	6	28 N	6	☑ E ☐ W

or Gov't Lot #

Well Street Address: Market Street at 3rd Street

Well City, Village or Town: Marathon City — Well ZIP Code: 54448

Subdivision Name — Lot #

Reason For Removal From Service: Geotech. Borehole Terming — WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS)

License/Permit/Monitoring #: EB-2

Original Well Owner: Village of Marathon City

Present Well Owner: Village of Marathon City

Mailing Address of Present Owner: P.O. Box 487

City of Present Owner: Marathon — State: WI — ZIP Code: 54448

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 10/06/2016

If a Well Construction Report is available, please attach.

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

Formation Type:
☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
9.0	6
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
2	7.0

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

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

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

Pump and piping removed?	☐ Yes	☐ No	☑ N/A
Liner(s) removed?	☐ 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): Loose Dumped

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☑ 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
Backfill (Native Soil)	Surface	1.0	Native Soil	
3/8" Bentonite Chips	1.0	9.0	2 bags	

6. Comments

E-2

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
American Engineering Testing		10/06/2016

Street or Route: 4203 Schofield Avenue — Telephone Number: (715) 359-3534

City: Schofield — State: WI — ZIP Code: 54476

Signature of Person Doing Work

Date Signed: 10-17-2016

DNR Use Only

Date Received	Noted By

Comments

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

EB-3

AET No: 03-06391 Log of Boring No. E-3 (p. 1 of 1)

Project: Proposed Marathon City Center; 420 Main Street; Marathon City, Wisconsin

DEPTH IN FEET	Surface Elevation ~1238 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	PID	PL	%-#200
1	FILL, silty sand with gravel, fine to coarse grained, brown, moist (SM)	FILL		M	DS				130		
2											
3	SILTY SAND, fine to medium grained, trace organics, gray, moist (SM)	COARSE ALLUVIUM		M	DS				177.5		
	End of boring at 3.5 feet										

Soil Sample:

BS-3A 3.5 ft

DEPTH:	DRILLING METHOD	WATER LEVEL MEASUREMENTS						
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-3.5'	Hand Auger	10/6/16	1145	3.5'	None	3.5'	None	None
BORING COMPLETED:	10/6/16							
DR: MD	LG: LL Rig:							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP 03-06391.GPJ AET+CPT+WELL.GDT 10/17/16

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

EB-4

AET No: 03-06391 Log of Boring No. E-4 (p. 1 of 1)

Project: Proposed Marathon City Center; 420 Main Street; Marathon City, Wisconsin

DEPTH IN FEET	Surface Elevation ~1238 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	pfb	PL	%-#200
1	FILL, silty sand with gravel, fine to coarse grained, brown, moist (SM)	FILL		M	DS				5.6		
2	SILTY SAND, fine to medium grained, trace organics, gray, moist (SM)	COARSE ALLUVIUM		M	DS				10.7		
	End of boring at 2.5 feet										

Soil Sample:

BS-4A 2.5 ft

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-2.5' Hand Auger	10/6/16	1200	2.5'	None	2.5'	None	None
BORING COMPLETED: 10/6/16							
DR: MD LG: LL Rig:							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP 03-06391.GPJ AET+CPT+WELL.GDT 10/17/16

Appendix D

Analytical Results and Chain of Custody Documentation

AET Project No. 03-06391

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-117394-1
Client Project/Site: Marathon City Center - 12-02424

For:
American Engineering Testing Inc.
1837 Cty Hwy OO
Chippewa Falls, Wisconsin 54729

Attn: Mr. Michael Neal

Sandie Fredrick

Authorized for release by:
9/26/2016 4:29:56 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

REVIEWED
By mneal at 7:14 am, Sep 27, 2016

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Table of Contents

Case Narrative

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Job ID: 500-117394-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-117394-1

Comments
No additional comments.

Receipt
The samples were received on 9/21/2016 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 7.2° C.

Receipt Exceptions
A trip blank was listed on the Chain of Custody (COC); however, no sample was received.

GC/MS VOA
Method(s) 8260B: The extraction LCS associated with preparation batch 352813 had several analyte recoveries above control limits. The data have been reported and qualified. B-2A (500-117394-1) and B-2B (500-117394-2)

Method(s) 8260B: The laboratory control sample (LCS) for 353085 recovered outside control limits for the following analytes: 1,2-Dibromo3-Chloropropane and 2,2-Dichloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following sample was diluted due to the abundance of non-target analytes: B-2A (500-117394-1). Elevated reporting limits (RLs) are provided.

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

GC/MS Semi VOA
Method(s) 8270D: The following sample required a dilution due to the nature of the sample matrix: B-2A (500-117394-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270D: The following sample was diluted due to the nature of the sample matrix (heavy hydrocarbon background): B-2A (500-117394-1). Elevated reporting limits (RLs) are provided.

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

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

Organic Prep
Method(s) 3541: Due to the matrix, the following sample(s) could not be concentrated to the final method required volume: Sample 500-117394-1 has a final volume of 5.0 ml. The reporting limits (RLs) are elevated proportionately.

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

Detection Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Client Sample ID: B-2A — Lab Sample ID: 500-117394-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	22		0.15	0.052	mg/Kg	100	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	7.9		0.15	0.055	mg/Kg	100	☼	8260B	Total/NA
Benzene	0.087		0.036	0.021	mg/Kg	100	☼	8260B	Total/NA
Ethylbenzene	3.3		0.036	0.027	mg/Kg	100	☼	8260B	Total/NA
Isopropylbenzene	1.7		0.15	0.056	mg/Kg	100	☼	8260B	Total/NA
Naphthalene	26		0.15	0.049	mg/Kg	100	☼	8260B	Total/NA
n-Butylbenzene	5.0		0.15	0.057	mg/Kg	100	☼	8260B	Total/NA
N-Propylbenzene	3.0		0.15	0.060	mg/Kg	100	☼	8260B	Total/NA
p-Isopropyltoluene	2.8		0.15	0.053	mg/Kg	100	☼	8260B	Total/NA
sec-Butylbenzene	1.3		0.15	0.058	mg/Kg	100	☼	8260B	Total/NA
Toluene	0.52		0.036	0.021	mg/Kg	100	☼	8260B	Total/NA
Xylenes, Total	17		0.073	0.032	mg/Kg	100	☼	8260B	Total/NA
1-Methylnaphthalene	24		8.2	0.99	mg/Kg	50	☼	8270D	Total/NA
2-Methylnaphthalene	37		8.2	0.75	mg/Kg	50	☼	8270D	Total/NA
Acenaphthylene	1.8	J	4.0	0.54	mg/Kg	50	☼	8270D	Total/NA
Benzo[a]anthracene	3.7	J	4.0	0.55	mg/Kg	50	☼	8270D	Total/NA
Chrysene	2.2	J	4.0	1.1	mg/Kg	50	☼	8270D	Total/NA
Fluoranthene	3.7	J	4.0	0.76	mg/Kg	50	☼	8270D	Total/NA
Fluorene	1.1	J	4.0	0.57	mg/Kg	50	☼	8270D	Total/NA
Naphthalene	26		4.0	0.63	mg/Kg	50	☼	8270D	Total/NA
Phenanthrene	4.5		4.0	0.57	mg/Kg	50	☼	8270D	Total/NA
Pyrene	3.4	J	4.0	0.81	mg/Kg	50	☼	8270D	Total/NA

Client Sample ID: B-2B — Lab Sample ID: 500-117394-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI

5

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

Sample Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-117394-1	B-2A	Solid	09/20/16 12:00	09/21/16 10:30
500-117394-2	B-2B	Solid	09/20/16 12:00	09/21/16 10:30

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Client Sample ID: B-2A
Date Collected: 09/20/16 12:00
Date Received: 09/21/16 10:30

Lab Sample ID: 500-117394-1
Matrix: Solid
Percent Solids: 81.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.067		0.15	0.067	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,1,1-Trichloroethane	<0.055	*	0.15	0.055	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,1,2,2-Tetrachloroethane	<0.058		0.15	0.058	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,1,2-Trichloroethane	<0.051		0.15	0.051	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,1-Dichloroethane	<0.060		0.15	0.060	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,1-Dichloroethene	<0.057		0.15	0.057	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,1-Dichloropropene	<0.043	*	0.15	0.043	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2,3-Trichlorobenzene	<0.067		0.15	0.067	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2,3-Trichloropropane	<0.060	*	0.15	0.060	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2,4-Trichlorobenzene	<0.050		0.15	0.050	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2,4-Trimethylbenzene	**22**		0.15	0.052	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2-Dibromo-3-Chloropropane	<0.29	*	0.73	0.29	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2-Dibromoethane	<0.056		0.15	0.056	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2-Dichlorobenzene	<0.049		0.15	0.049	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2-Dichloroethane	<0.057	*	0.15	0.057	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,2-Dichloropropane	<0.062		0.15	0.062	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,3,5-Trimethylbenzene	**7.9**		0.15	0.055	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,3-Dichlorobenzene	<0.058		0.15	0.058	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,3-Dichloropropane	<0.053	*	0.15	0.053	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
1,4-Dichlorobenzene	<0.053		0.15	0.053	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
2,2-Dichloropropane	<0.065	*	0.15	0.065	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
2-Chlorotoluene	<0.046		0.15	0.046	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
4-Chlorotoluene	<0.051		0.15	0.051	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Benzene	**0.087**		0.036	0.021	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Bromobenzene	<0.052		0.15	0.052	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Bromochloromethane	<0.062		0.15	0.062	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Bromodichloromethane	<0.054	*	0.15	0.054	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Bromoform	<0.071		0.15	0.071	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Bromomethane	<0.12		0.29	0.12	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Carbon tetrachloride	<0.056		0.15	0.056	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Chlorobenzene	<0.056		0.15	0.056	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Chloroethane	<0.074		0.15	0.074	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Chloroform	<0.054	*	0.15	0.054	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Chloromethane	<0.047		0.15	0.047	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
cis-1,2-Dichloroethene	<0.060		0.15	0.060	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
cis-1,3-Dichloropropene	<0.061	*	0.15	0.061	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Dibromochloromethane	<0.071		0.15	0.071	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Dibromomethane	<0.039		0.15	0.039	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Dichlorodifluoromethane	<0.098		0.29	0.098	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Ethylbenzene	**3.3**		0.036	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Hexachlorobutadiene	<0.065		0.15	0.065	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Isopropyl ether	<0.040		0.15	0.040	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Isopropylbenzene	**1.7**		0.15	0.056	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Methyl tert-butyl ether	<0.057		0.15	0.057	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Methylene Chloride	<0.24		0.73	0.24	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Naphthalene	**26**		0.15	0.049	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
n-Butylbenzene	**5.0**		0.15	0.057	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
N-Propylbenzene	**3.0**		0.15	0.060	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
p-Isopropyltoluene	**2.8**		0.15	0.053	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Client Sample ID: B-2A
Date Collected: 09/20/16 12:00
Date Received: 09/21/16 10:30

Lab Sample ID: 500-117394-1
Matrix: Solid
Percent Solids: 81.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	1.3		0.15	0.058	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Styrene	<0.056		0.15	0.056	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
tert-Butylbenzene	<0.058		0.15	0.058	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Tetrachloroethene	<0.054		0.15	0.054	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Toluene	0.52		0.036	0.021	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
trans-1,2-Dichloroethene	<0.051		0.15	0.051	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
trans-1,3-Dichloropropene	<0.053	*	0.15	0.053	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Trichloroethene	<0.024		0.073	0.024	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Trichlorofluoromethane	<0.062	*	0.15	0.062	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Vinyl chloride	<0.038		0.073	0.038	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100
Xylenes, Total	17		0.073	0.032	mg/Kg	☼	09/20/16 12:00	09/23/16 18:34	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*71 - 127*	*09/20/16 12:00*	*09/23/16 18:34*	*100*
4-Bromofluorobenzene (Surr)	*119*		*71 - 120*	*09/20/16 12:00*	*09/23/16 18:34*	*100*
Dibromofluoromethane	*99*		*70 - 120*	*09/20/16 12:00*	*09/23/16 18:34*	*100*
Toluene-d8 (Surr)	*90*		*75 - 120*	*09/20/16 12:00*	*09/23/16 18:34*	*100*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	24		8.2	0.99	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
2-Methylnaphthalene	37		8.2	0.75	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Acenaphthene	<0.73		4.0	0.73	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Acenaphthylene	1.8	J	4.0	0.54	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Anthracene	<0.68		4.0	0.68	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Benzo[a]anthracene	3.7	J	4.0	0.55	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Benzo[a]pyrene	<0.79		4.0	0.79	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Benzo[b]fluoranthene	<0.88		4.0	0.88	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Benzo[g,h,i]perylene	<1.3		4.0	1.3	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Benzo[k]fluoranthene	<1.2		4.0	1.2	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Chrysene	2.2	J	4.0	1.1	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Dibenz(a,h)anthracene	<0.79		4.0	0.79	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Fluoranthene	3.7	J	4.0	0.76	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Fluorene	1.1	J	4.0	0.57	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Indeno[1,2,3-cd]pyrene	<1.1		4.0	1.1	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Naphthalene	26		4.0	0.63	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Phenanthrene	4.5		4.0	0.57	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50
Pyrene	3.4	J	4.0	0.81	mg/Kg	☼	09/21/16 18:25	09/22/16 18:03	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*0*	*D*	*42 - 115*	*09/21/16 18:25*	*09/22/16 18:03*	*50*
Nitrobenzene-d5 (Surr)	*0*	*D*	*33 - 124*	*09/21/16 18:25*	*09/22/16 18:03*	*50*
Terphenyl-d14 (Surr)	*0*	*D*	*25 - 150*	*09/21/16 18:25*	*09/22/16 18:03*	*50*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Client Sample ID: B-2B

Date Collected: 09/20/16 12:00
Date Received: 09/21/16 10:30

Lab Sample ID: 500-117394-2

Matrix: Solid
Percent Solids: 83.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.032		0.069	0.032	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,1,1-Trichloroethane	<0.026	*	0.069	0.026	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,1,2,2-Tetrachloroethane	<0.028		0.069	0.028	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,1,2-Trichloroethane	<0.024		0.069	0.024	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,1-Dichloroethane	<0.028		0.069	0.028	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,1-Dichloroethene	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,1-Dichloropropene	<0.021	*	0.069	0.021	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2,3-Trichlorobenzene	<0.032		0.069	0.032	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2,3-Trichloropropane	<0.029	*	0.069	0.029	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2,4-Trichlorobenzene	<0.024		0.069	0.024	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2,4-Trimethylbenzene	<0.025		0.069	0.025	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2-Dibromo-3-Chloropropane	<0.14	*	0.35	0.14	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2-Dibromoethane	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2-Dichlorobenzene	<0.023		0.069	0.023	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2-Dichloroethane	<0.027	*	0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,2-Dichloropropane	<0.030		0.069	0.030	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,3,5-Trimethylbenzene	<0.026		0.069	0.026	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,3-Dichlorobenzene	<0.028		0.069	0.028	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,3-Dichloropropane	<0.025	*	0.069	0.025	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
1,4-Dichlorobenzene	<0.025		0.069	0.025	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
2,2-Dichloropropane	<0.031	*	0.069	0.031	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
2-Chlorotoluene	<0.022		0.069	0.022	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
4-Chlorotoluene	<0.024		0.069	0.024	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Benzene	<0.010		0.017	0.010	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Bromobenzene	<0.025		0.069	0.025	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Bromochloromethane	<0.030		0.069	0.030	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Bromodichloromethane	<0.026	*	0.069	0.026	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Bromoform	<0.034		0.069	0.034	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Bromomethane	<0.055		0.14	0.055	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Carbon tetrachloride	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Chlorobenzene	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Chloroethane	<0.035		0.069	0.035	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Chloroform	<0.026	*	0.069	0.026	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Chloromethane	<0.022		0.069	0.022	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
cis-1,2-Dichloroethene	<0.028		0.069	0.028	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
cis-1,3-Dichloropropene	<0.029	*	0.069	0.029	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Dibromochloromethane	<0.034		0.069	0.034	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Dibromomethane	<0.019		0.069	0.019	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Dichlorodifluoromethane	<0.047		0.14	0.047	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Ethylbenzene	<0.013		0.017	0.013	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Hexachlorobutadiene	<0.031		0.069	0.031	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Isopropyl ether	<0.019		0.069	0.019	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Isopropylbenzene	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Methyl tert-butyl ether	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Methylene Chloride	<0.11		0.35	0.11	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Naphthalene	<0.023		0.069	0.023	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
n-Butylbenzene	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
N-Propylbenzene	<0.029		0.069	0.029	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
p-Isopropyltoluene	<0.025		0.069	0.025	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Client Sample ID: B-2B
Date Collected: 09/20/16 12:00
Date Received: 09/21/16 10:30

Lab Sample ID: 500-117394-2
Matrix: Solid
Percent Solids: 83.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.028		0.069	0.028	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Styrene	<0.027		0.069	0.027	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
tert-Butylbenzene	<0.028		0.069	0.028	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Tetrachloroethene	<0.026		0.069	0.026	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Toluene	<0.010		0.017	0.010	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
trans-1,2-Dichloroethene	<0.024		0.069	0.024	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
trans-1,3-Dichloropropene	<0.025	*	0.069	0.025	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Trichloroethene	<0.011		0.035	0.011	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Trichlorofluoromethane	<0.030	*	0.069	0.030	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Vinyl chloride	<0.018		0.035	0.018	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50
Xylenes, Total	<0.015		0.035	0.015	mg/Kg	☼	09/20/16 12:00	09/23/16 18:08	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*71 - 127*	*09/20/16 12:00*	*09/23/16 18:08*	*50*
4-Bromofluorobenzene (Surr)	*116*		*71 - 120*	*09/20/16 12:00*	*09/23/16 18:08*	*50*
Dibromofluoromethane	*106*		*70 - 120*	*09/20/16 12:00*	*09/23/16 18:08*	*50*
Toluene-d8 (Surr)	*87*		*75 - 120*	*09/20/16 12:00*	*09/23/16 18:08*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.0090		0.074	0.0090	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
2-Methylnaphthalene	<0.0068		0.074	0.0068	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Acenaphthene	<0.0066		0.037	0.0066	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Acenaphthylene	<0.0049		0.037	0.0049	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Anthracene	<0.0062		0.037	0.0062	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Benzo[a]anthracene	<0.0050		0.037	0.0050	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Benzo[a]pyrene	<0.0071		0.037	0.0071	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Benzo[b]fluoranthene	<0.0079		0.037	0.0079	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Benzo[g,h,i]perylene	<0.012		0.037	0.012	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Benzo[k]fluoranthene	<0.011		0.037	0.011	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Chrysene	<0.010		0.037	0.010	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Dibenz(a,h)anthracene	<0.0071		0.037	0.0071	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Fluoranthene	<0.0068		0.037	0.0068	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Fluorene	<0.0052		0.037	0.0052	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Indeno[1,2,3-cd]pyrene	<0.0095		0.037	0.0095	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Naphthalene	<0.0057		0.037	0.0057	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Phenanthrene	<0.0051		0.037	0.0051	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1
Pyrene	<0.0073		0.037	0.0073	mg/Kg	☼	09/21/16 18:25	09/23/16 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*42 - 115*	*09/21/16 18:25*	*09/23/16 14:21*	*1*
Nitrobenzene-d5 (Surr)	*72*		*33 - 124*	*09/21/16 18:25*	*09/23/16 14:21*	*1*
Terphenyl-d14 (Surr)	*75*		*25 - 150*	*09/21/16 18:25*	*09/23/16 14:21*	*1*

Definitions/Glossary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

QC Association Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

GC/MS VOA

Prep Batch: 352813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-117394-1	B-2A	Total/NA	Solid	5035	
500-117394-2	B-2B	Total/NA	Solid	5035	
LB3 500-352813/3-A	Method Blank	Total/NA	Solid	5035	
LCS 500-352813/4-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 353085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-117394-1	B-2A	Total/NA	Solid	8260B	352813
500-117394-2	B-2B	Total/NA	Solid	8260B	352813
LB3 500-352813/3-A	Method Blank	Total/NA	Solid	8260B	352813
MB 500-353085/8	Method Blank	Total/NA	Solid	8260B	
LCS 500-352813/4-A	Lab Control Sample	Total/NA	Solid	8260B	352813
LCS 500-353085/5	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 352781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-117394-1	B-2A	Total/NA	Solid	3541	
500-117394-2	B-2B	Total/NA	Solid	3541	
MB 500-352781/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-352781/2-A	Lab Control Sample	Total/NA	Solid	3541	

Analysis Batch: 352838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-117394-1	B-2A	Total/NA	Solid	8270D	352781
MB 500-352781/1-A	Method Blank	Total/NA	Solid	8270D	352781
LCS 500-352781/2-A	Lab Control Sample	Total/NA	Solid	8270D	352781

Analysis Batch: 353030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-117394-2	B-2B	Total/NA	Solid	8270D	352781

General Chemistry

Analysis Batch: 352694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-117394-1	B-2A	Total/NA	Solid	Moisture	
500-117394-2	B-2B	Total/NA	Solid	Moisture	

Surrogate Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (71-127)	BFB (71-120)	DBFM (70-120)	TOL (75-120)
500-117394-1	B-2A	122	119	99	90
500-117394-2	B-2B	125	116	106	87
LB3 500-352813/3-A	Method Blank	122	113	99	90
LCS 500-352813/4-A	Lab Control Sample	118	111	96	95
LCS 500-353085/5	Lab Control Sample	114	115	97	96
MB 500-353085/8	Method Blank	119	119	97	93

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP (42-115)	NBZ (33-124)	TPH (25-150)
500-117394-1	B-2A	0 D	0 D	0 D
500-117394-2	B-2B	65	72	75
LCS 500-352781/2-A	Lab Control Sample	71	78	85
MB 500-352781/1-A	Method Blank	69	76	85

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Lab Sample ID: LB3 500-352813/3-A
Matrix: Solid
Analysis Batch: 353085

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 352813

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.023		0.050	0.023	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,1,1-Trichloroethane	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,1,2,2-Tetrachloroethane	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,1,2-Trichloroethane	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,1-Dichloroethane	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,1-Dichloroethene	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,1-Dichloropropene	<0.015		0.050	0.015	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2,3-Trichlorobenzene	<0.023		0.050	0.023	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2,3-Trichloropropane	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2,4-Trichlorobenzene	<0.017		0.050	0.017	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2,4-Trimethylbenzene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2-Dibromo-3-Chloropropane	<0.10		0.25	0.10	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2-Dibromoethane	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2-Dichlorobenzene	<0.017		0.050	0.017	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2-Dichloroethane	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,2-Dichloropropane	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,3,5-Trimethylbenzene	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,3-Dichlorobenzene	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,3-Dichloropropane	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
1,4-Dichlorobenzene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
2,2-Dichloropropane	<0.022		0.050	0.022	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
2-Chlorotoluene	<0.016		0.050	0.016	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
4-Chlorotoluene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Benzene	<0.0073		0.013	0.0073	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Bromobenzene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Bromochloromethane	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Bromodichloromethane	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Bromoform	<0.024		0.050	0.024	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Bromomethane	<0.040		0.10	0.040	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Carbon tetrachloride	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Chlorobenzene	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Chloroethane	<0.025		0.050	0.025	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Chloroform	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Chloromethane	<0.016		0.050	0.016	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
cis-1,2-Dichloroethene	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
cis-1,3-Dichloropropene	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Dibromochloromethane	<0.024		0.050	0.024	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Dibromomethane	<0.014		0.050	0.014	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Dichlorodifluoromethane	<0.034		0.10	0.034	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Ethylbenzene	<0.0092		0.013	0.0092	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Hexachlorobutadiene	<0.022		0.050	0.022	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Isopropyl ether	<0.014		0.050	0.014	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Isopropylbenzene	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Methyl tert-butyl ether	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Methylene Chloride	<0.082		0.25	0.082	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Naphthalene	<0.017		0.050	0.017	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
n-Butylbenzene	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
N-Propylbenzene	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Lab Sample ID: LB3 500-352813/3-A
Matrix: Solid
Analysis Batch: 353085

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 352813

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
sec-Butylbenzene	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Styrene	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
tert-Butylbenzene	<0.020		0.050	0.020	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Tetrachloroethene	<0.019		0.050	0.019	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Toluene	<0.0074		0.013	0.0074	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
trans-1,2-Dichloroethene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
trans-1,3-Dichloropropene	<0.018		0.050	0.018	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Trichloroethene	<0.0082		0.025	0.0082	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Trichlorofluoromethane	<0.021		0.050	0.021	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Vinyl chloride	<0.013		0.025	0.013	mg/Kg		09/22/16 05:20	09/23/16 16:28	50
Xylenes, Total	<0.011		0.025	0.011	mg/Kg		09/22/16 05:20	09/23/16 16:28	50

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*71 - 127*	*09/22/16 05:20*	*09/23/16 16:28*	*50*
4-Bromofluorobenzene (Surr)	*113*		*71 - 120*	*09/22/16 05:20*	*09/23/16 16:28*	*50*
Dibromofluoromethane	*99*		*70 - 120*	*09/22/16 05:20*	*09/23/16 16:28*	*50*
Toluene-d8 (Surr)	*90*		*75 - 120*	*09/22/16 05:20*	*09/23/16 16:28*	*50*

Lab Sample ID: LCS 500-352813/4-A
Matrix: Solid
Analysis Batch: 353085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 352813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	2.50	2.89		mg/Kg		116	68 - 125
1,1,1-Trichloroethane	2.50	3.27	*	mg/Kg		131	70 - 125
1,1,2,2-Tetrachloroethane	2.50	2.84		mg/Kg		113	68 - 125
1,1,2-Trichloroethane	2.50	2.99		mg/Kg		120	70 - 125
1,1-Dichloroethane	2.50	2.83		mg/Kg		113	70 - 125
1,1-Dichloroethene	2.50	2.52		mg/Kg		101	70 - 125
1,1-Dichloropropene	2.50	3.16	*	mg/Kg		127	70 - 125
1,2,3-Trichlorobenzene	2.50	2.72		mg/Kg		109	58 - 135
1,2,3-Trichloropropane	2.50	3.17	*	mg/Kg		127	63 - 125
1,2,4-Trichlorobenzene	2.50	2.71		mg/Kg		108	64 - 126
1,2,4-Trimethylbenzene	2.50	2.88		mg/Kg		115	70 - 125
1,2-Dibromo-3-Chloropropane	2.50	3.32	*	mg/Kg		133	51 - 125
1,2-Dibromoethane	2.50	3.01		mg/Kg		120	70 - 125
1,2-Dichlorobenzene	2.50	2.66		mg/Kg		106	70 - 125
1,2-Dichloroethane	2.50	3.46	*	mg/Kg		139	70 - 125
1,2-Dichloropropane	2.50	2.79		mg/Kg		111	70 - 125
1,3,5-Trimethylbenzene	2.50	2.86		mg/Kg		114	70 - 125
1,3-Dichlorobenzene	2.50	2.66		mg/Kg		106	70 - 125
1,3-Dichloropropane	2.50	3.40	*	mg/Kg		136	70 - 125
1,4-Dichlorobenzene	2.50	2.63		mg/Kg		105	70 - 125
2,2-Dichloropropane	2.50	3.61	*	mg/Kg		144	62 - 125
2-Chlorotoluene	2.50	3.06		mg/Kg		122	69 - 125
4-Chlorotoluene	2.50	3.06		mg/Kg		122	70 - 125
Benzene	2.50	2.73		mg/Kg		109	70 - 125

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Lab Sample ID: LCS 500-352813/4-A
Matrix: Solid
Analysis Batch: 353085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 352813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	2.50	2.81		mg/Kg		113	70 - 125
Bromochloromethane	2.50	2.65		mg/Kg		106	70 - 125
Bromodichloromethane	2.50	3.34	*	mg/Kg		134	70 - 125
Bromoform	2.50	3.04		mg/Kg		122	54 - 128
Bromomethane	2.50	2.07		mg/Kg		83	40 - 150
Carbon tetrachloride	2.50	3.08		mg/Kg		123	70 - 125
Chlorobenzene	2.50	2.91		mg/Kg		116	70 - 125
Chloroethane	2.50	2.17		mg/Kg		87	60 - 139
Chloroform	2.50	3.22	*	mg/Kg		129	70 - 125
Chloromethane	2.50	2.67		mg/Kg		107	60 - 140
cis-1,2-Dichloroethene	2.50	2.66		mg/Kg		107	70 - 125
cis-1,3-Dichloropropene	2.50	3.25	*	mg/Kg		130	70 - 125
Dibromochloromethane	2.50	3.03		mg/Kg		121	66 - 125
Dibromomethane	2.50	2.96		mg/Kg		118	70 - 125
Dichlorodifluoromethane	2.50	1.91		mg/Kg		77	51 - 140
Ethylbenzene	2.50	2.78		mg/Kg		111	70 - 125
Hexachlorobutadiene	2.50	3.18		mg/Kg		127	57 - 140
Isopropylbenzene	2.50	2.86		mg/Kg		114	70 - 125
Methyl tert-butyl ether	2.50	2.97		mg/Kg		119	67 - 125
Methylene Chloride	2.50	2.59		mg/Kg		104	68 - 125
Naphthalene	2.50	2.64		mg/Kg		106	50 - 136
n-Butylbenzene	2.50	2.89		mg/Kg		115	70 - 125
N-Propylbenzene	2.50	2.96		mg/Kg		118	70 - 125
p-Isopropyltoluene	2.50	2.73		mg/Kg		109	70 - 125
sec-Butylbenzene	2.50	2.82		mg/Kg		113	70 - 125
Styrene	2.50	2.94		mg/Kg		118	70 - 125
tert-Butylbenzene	2.50	2.81		mg/Kg		112	70 - 125
Tetrachloroethene	2.50	2.93		mg/Kg		117	70 - 125
Toluene	2.50	2.92		mg/Kg		117	70 - 125
trans-1,2-Dichloroethene	2.50	2.60		mg/Kg		104	70 - 125
trans-1,3-Dichloropropene	2.50	3.41	*	mg/Kg		136	70 - 125
Trichloroethene	2.50	2.70		mg/Kg		108	70 - 125
Trichlorofluoromethane	2.50	3.39	*	mg/Kg		136	60 - 126
Vinyl chloride	2.50	2.03		mg/Kg		81	70 - 126
Xylenes, Total	5.00	6.11		mg/Kg		122	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*118*		*71 - 127*
4-Bromofluorobenzene (Surr)	*111*		*71 - 120*
Dibromofluoromethane	*96*		*70 - 120*
Toluene-d8 (Surr)	*95*		*75 - 120*

Lab Sample ID: MB 500-353085/8
Matrix: Solid
Analysis Batch: 353085

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.00046		0.0010	0.00046	mg/Kg			09/23/16 16:04	1

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Lab Sample ID: MB 500-353085/8
Matrix: Solid
Analysis Batch: 353085

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.00038		0.0010	0.00038	mg/Kg			09/23/16 16:04	1
1,1,2,2-Tetrachloroethane	<0.00040		0.0010	0.00040	mg/Kg			09/23/16 16:04	1
1,1,2-Trichloroethane	<0.00035		0.0010	0.00035	mg/Kg			09/23/16 16:04	1
1,1-Dichloroethane	<0.00041		0.0010	0.00041	mg/Kg			09/23/16 16:04	1
1,1-Dichloroethene	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
1,1-Dichloropropene	<0.00030		0.0010	0.00030	mg/Kg			09/23/16 16:04	1
1,2,3-Trichlorobenzene	<0.00046		0.0010	0.00046	mg/Kg			09/23/16 16:04	1
1,2,3-Trichloropropane	<0.00041		0.0010	0.00041	mg/Kg			09/23/16 16:04	1
1,2,4-Trichlorobenzene	<0.00034		0.0010	0.00034	mg/Kg			09/23/16 16:04	1
1,2,4-Trimethylbenzene	<0.00036		0.0010	0.00036	mg/Kg			09/23/16 16:04	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.0050	0.0020	mg/Kg			09/23/16 16:04	1
1,2-Dibromoethane	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
1,2-Dichlorobenzene	<0.00033		0.0010	0.00033	mg/Kg			09/23/16 16:04	1
1,2-Dichloroethane	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
1,2-Dichloropropane	<0.00043		0.0010	0.00043	mg/Kg			09/23/16 16:04	1
1,3,5-Trimethylbenzene	<0.00038		0.0010	0.00038	mg/Kg			09/23/16 16:04	1
1,3-Dichlorobenzene	<0.00040		0.0010	0.00040	mg/Kg			09/23/16 16:04	1
1,3-Dichloropropane	<0.00036		0.0010	0.00036	mg/Kg			09/23/16 16:04	1
1,4-Dichlorobenzene	<0.00036		0.0010	0.00036	mg/Kg			09/23/16 16:04	1
2,2-Dichloropropane	<0.00044		0.0010	0.00044	mg/Kg			09/23/16 16:04	1
2-Chlorotoluene	<0.00031		0.0010	0.00031	mg/Kg			09/23/16 16:04	1
4-Chlorotoluene	<0.00035		0.0010	0.00035	mg/Kg			09/23/16 16:04	1
Benzene	<0.00015		0.00025	0.00015	mg/Kg			09/23/16 16:04	1
Bromobenzene	<0.00036		0.0010	0.00036	mg/Kg			09/23/16 16:04	1
Bromochloromethane	<0.00043		0.0010	0.00043	mg/Kg			09/23/16 16:04	1
Bromodichloromethane	<0.00037		0.0010	0.00037	mg/Kg			09/23/16 16:04	1
Bromoform	<0.00048		0.0010	0.00048	mg/Kg			09/23/16 16:04	1
Bromomethane	<0.00080		0.0020	0.00080	mg/Kg			09/23/16 16:04	1
Carbon tetrachloride	<0.00038		0.0010	0.00038	mg/Kg			09/23/16 16:04	1
Chlorobenzene	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
Chloroethane	<0.00050		0.0010	0.00050	mg/Kg			09/23/16 16:04	1
Chloroform	<0.00037		0.0010	0.00037	mg/Kg			09/23/16 16:04	1
Chloromethane	<0.00032		0.0010	0.00032	mg/Kg			09/23/16 16:04	1
cis-1,2-Dichloroethene	<0.00041		0.0010	0.00041	mg/Kg			09/23/16 16:04	1
cis-1,3-Dichloropropene	<0.00042		0.0010	0.00042	mg/Kg			09/23/16 16:04	1
Dibromochloromethane	<0.00049		0.0010	0.00049	mg/Kg			09/23/16 16:04	1
Dibromomethane	<0.00027		0.0010	0.00027	mg/Kg			09/23/16 16:04	1
Dichlorodifluoromethane	<0.00067		0.0020	0.00067	mg/Kg			09/23/16 16:04	1
Ethylbenzene	<0.00018		0.00025	0.00018	mg/Kg			09/23/16 16:04	1
Hexachlorobutadiene	<0.00045		0.0010	0.00045	mg/Kg			09/23/16 16:04	1
Isopropyl ether	<0.00028		0.0010	0.00028	mg/Kg			09/23/16 16:04	1
Isopropylbenzene	<0.00038		0.0010	0.00038	mg/Kg			09/23/16 16:04	1
Methyl tert-butyl ether	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
Methylene Chloride	<0.0016		0.0050	0.0016	mg/Kg			09/23/16 16:04	1
Naphthalene	<0.00033		0.0010	0.00033	mg/Kg			09/23/16 16:04	1
n-Butylbenzene	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
N-Propylbenzene	<0.00041		0.0010	0.00041	mg/Kg			09/23/16 16:04	1
p-Isopropyltoluene	<0.00036		0.0010	0.00036	mg/Kg			09/23/16 16:04	1

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Lab Sample ID: MB 500-353085/8
Matrix: Solid
Analysis Batch: 353085

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.00040		0.0010	0.00040	mg/Kg			09/23/16 16:04	1
Styrene	<0.00039		0.0010	0.00039	mg/Kg			09/23/16 16:04	1
tert-Butylbenzene	<0.00040		0.0010	0.00040	mg/Kg			09/23/16 16:04	1
Tetrachloroethene	<0.00037		0.0010	0.00037	mg/Kg			09/23/16 16:04	1
Toluene	<0.00015		0.00025	0.00015	mg/Kg			09/23/16 16:04	1
trans-1,2-Dichloroethene	<0.00035		0.0010	0.00035	mg/Kg			09/23/16 16:04	1
trans-1,3-Dichloropropene	<0.00036		0.0010	0.00036	mg/Kg			09/23/16 16:04	1
Trichloroethene	<0.00016		0.00050	0.00016	mg/Kg			09/23/16 16:04	1
Trichlorofluoromethane	<0.00043		0.0010	0.00043	mg/Kg			09/23/16 16:04	1
Vinyl chloride	<0.00026		0.00050	0.00026	mg/Kg			09/23/16 16:04	1
Xylenes, Total	<0.00022		0.00050	0.00022	mg/Kg			09/23/16 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*71 - 127*		*09/23/16 16:04*	*1*
4-Bromofluorobenzene (Surr)	*119*		*71 - 120*		*09/23/16 16:04*	*1*
Dibromofluoromethane	*97*		*70 - 120*		*09/23/16 16:04*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*09/23/16 16:04*	*1*

Lab Sample ID: LCS 500-353085/5
Matrix: Solid
Analysis Batch: 353085

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.0500		mg/Kg		100	68 - 125
1,1,1-Trichloroethane	0.0500	0.0582		mg/Kg		116	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0522		mg/Kg		104	68 - 125
1,1,2-Trichloroethane	0.0500	0.0519		mg/Kg		104	70 - 125
1,1-Dichloroethane	0.0500	0.0504		mg/Kg		101	70 - 125
1,1-Dichloroethene	0.0500	0.0459		mg/Kg		92	70 - 125
1,1-Dichloropropene	0.0500	0.0577		mg/Kg		115	70 - 125
1,2,3-Trichlorobenzene	0.0500	0.0479		mg/Kg		96	58 - 135
1,2,3-Trichloropropane	0.0500	0.0555		mg/Kg		111	63 - 125
1,2,4-Trichlorobenzene	0.0500	0.0494		mg/Kg		99	64 - 126
1,2,4-Trimethylbenzene	0.0500	0.0522		mg/Kg		104	70 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.0643	*	mg/Kg		129	51 - 125
1,2-Dibromoethane	0.0500	0.0520		mg/Kg		104	70 - 125
1,2-Dichlorobenzene	0.0500	0.0477		mg/Kg		95	70 - 125
1,2-Dichloroethane	0.0500	0.0588		mg/Kg		118	70 - 125
1,2-Dichloropropane	0.0500	0.0500		mg/Kg		100	70 - 125
1,3,5-Trimethylbenzene	0.0500	0.0531		mg/Kg		106	70 - 125
1,3-Dichlorobenzene	0.0500	0.0481		mg/Kg		96	70 - 125
1,3-Dichloropropane	0.0500	0.0595		mg/Kg		119	70 - 125
1,4-Dichlorobenzene	0.0500	0.0479		mg/Kg		96	70 - 125
2,2-Dichloropropane	0.0500	0.0654	*	mg/Kg		131	62 - 125
2-Chlorotoluene	0.0500	0.0557		mg/Kg		111	69 - 125
4-Chlorotoluene	0.0500	0.0565		mg/Kg		113	70 - 125
Benzene	0.0500	0.0480		mg/Kg		96	70 - 125
Bromobenzene	0.0500	0.0516		mg/Kg		103	70 - 125

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

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

Lab Sample ID: LCS 500-353085/5
Matrix: Solid
Analysis Batch: 353085

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromochloromethane	0.0500	0.0447		mg/Kg		89	70 - 125
Bromodichloromethane	0.0500	0.0587		mg/Kg		117	70 - 125
Bromoform	0.0500	0.0560		mg/Kg		112	54 - 128
Bromomethane	0.0500	0.0376		mg/Kg		75	40 - 150
Carbon tetrachloride	0.0500	0.0554		mg/Kg		111	70 - 125
Chlorobenzene	0.0500	0.0525		mg/Kg		105	70 - 125
Chloroethane	0.0500	0.0437		mg/Kg		87	60 - 139
Chloroform	0.0500	0.0567		mg/Kg		113	70 - 125
Chloromethane	0.0500	0.0530		mg/Kg		106	60 - 140
cis-1,2-Dichloroethene	0.0500	0.0479		mg/Kg		96	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0587		mg/Kg		117	70 - 125
Dibromochloromethane	0.0500	0.0536		mg/Kg		107	66 - 125
Dibromomethane	0.0500	0.0503		mg/Kg		101	70 - 125
Dichlorodifluoromethane	0.0500	0.0477		mg/Kg		95	51 - 140
Ethylbenzene	0.0500	0.0508		mg/Kg		102	70 - 125
Hexachlorobutadiene	0.0500	0.0566		mg/Kg		113	57 - 140
Isopropylbenzene	0.0500	0.0523		mg/Kg		105	70 - 125
Methyl tert-butyl ether	0.0500	0.0512		mg/Kg		102	67 - 125
Methylene Chloride	0.0500	0.0472		mg/Kg		94	68 - 125
Naphthalene	0.0500	0.0469		mg/Kg		94	50 - 136
n-Butylbenzene	0.0500	0.0532		mg/Kg		106	70 - 125
N-Propylbenzene	0.0500	0.0548		mg/Kg		110	70 - 125
p-Isopropyltoluene	0.0500	0.0506		mg/Kg		101	70 - 125
sec-Butylbenzene	0.0500	0.0520		mg/Kg		104	70 - 125
Styrene	0.0500	0.0516		mg/Kg		103	70 - 125
tert-Butylbenzene	0.0500	0.0514		mg/Kg		103	70 - 125
Tetrachloroethene	0.0500	0.0519		mg/Kg		104	70 - 125
Toluene	0.0500	0.0523		mg/Kg		105	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0471		mg/Kg		94	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0607		mg/Kg		121	70 - 125
Trichloroethene	0.0500	0.0477		mg/Kg		95	70 - 125
Trichlorofluoromethane	0.0500	0.0609		mg/Kg		122	60 - 126
Vinyl chloride	0.0500	0.0403		mg/Kg		81	70 - 126
Xylenes, Total	0.100	0.109		mg/Kg		109	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*71 - 127*
4-Bromofluorobenzene (Surr)	*115*		*71 - 120*
Dibromofluoromethane	*97*		*70 - 120*
Toluene-d8 (Surr)	*96*		*75 - 120*

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-352781/1-A
Matrix: Solid
Analysis Batch: 352838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 352781

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.0081		0.067	0.0081	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
2-Methylnaphthalene	<0.0061		0.067	0.0061	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Acenaphthene	<0.0060		0.033	0.0060	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Acenaphthylene	<0.0044		0.033	0.0044	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Anthracene	<0.0056		0.033	0.0056	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Benzo[a]anthracene	<0.0045		0.033	0.0045	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Benzo[a]pyrene	<0.0064		0.033	0.0064	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Benzo[b]fluoranthene	<0.0072		0.033	0.0072	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Benzo[g,h,i]perylene	<0.011		0.033	0.011	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Benzo[k]fluoranthene	<0.0098		0.033	0.0098	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Chrysene	<0.0091		0.033	0.0091	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Dibenz(a,h)anthracene	<0.0064		0.033	0.0064	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Fluoranthene	<0.0062		0.033	0.0062	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Fluorene	<0.0047		0.033	0.0047	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Indeno[1,2,3-cd]pyrene	<0.0086		0.033	0.0086	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Naphthalene	<0.0051		0.033	0.0051	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Phenanthrene	<0.0046		0.033	0.0046	mg/Kg		09/21/16 18:25	09/22/16 10:46	1
Pyrene	<0.0066		0.033	0.0066	mg/Kg		09/21/16 18:25	09/22/16 10:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*42 - 115*	*09/21/16 18:25*	*09/22/16 10:46*	*1*
Nitrobenzene-d5 (Surr)	*76*		*33 - 124*	*09/21/16 18:25*	*09/22/16 10:46*	*1*
Terphenyl-d14 (Surr)	*85*		*25 - 150*	*09/21/16 18:25*	*09/22/16 10:46*	*1*

Lab Sample ID: LCS 500-352781/2-A
Matrix: Solid
Analysis Batch: 352838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 352781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	1.33	0.952		mg/Kg		71	54 - 123
2-Methylnaphthalene	1.33	1.28		mg/Kg		96	55 - 120
Acenaphthene	1.33	0.973		mg/Kg		73	52 - 113
Acenaphthylene	1.33	0.931		mg/Kg		70	57 - 116
Anthracene	1.33	1.03		mg/Kg		77	57 - 118
Benzo[a]anthracene	1.33	1.11		mg/Kg		83	63 - 115
Benzo[a]pyrene	1.33	1.15		mg/Kg		86	64 - 122
Benzo[b]fluoranthene	1.33	1.22		mg/Kg		92	61 - 123
Benzo[g,h,i]perylene	1.33	1.22		mg/Kg		91	55 - 134
Benzo[k]fluoranthene	1.33	1.11		mg/Kg		84	59 - 125
Chrysene	1.33	1.09		mg/Kg		82	63 - 118
Dibenz(a,h)anthracene	1.33	1.19		mg/Kg		89	61 - 134
Fluoranthene	1.33	1.10		mg/Kg		82	61 - 124
Fluorene	1.33	1.06		mg/Kg		79	56 - 115
Indeno[1,2,3-cd]pyrene	1.33	1.17		mg/Kg		88	50 - 149
Naphthalene	1.33	0.918		mg/Kg		69	58 - 116
Phenanthrene	1.33	1.05		mg/Kg		79	58 - 125
Pyrene	1.33	1.08		mg/Kg		81	60 - 115

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-352781/2-A
Matrix: Solid
Analysis Batch: 352838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 352781

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	71		42 - 115
Nitrobenzene-d5 (Surr)	78		33 - 124
Terphenyl-d14 (Surr)	85		25 - 150

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Client Sample ID: B-2A

Lab Sample ID: 500-117394-1

Date Collected: 09/20/16 12:00

Matrix: Solid

Date Received: 09/21/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	352694	09/21/16 12:42	PFK	TAL CHI

Client Sample ID: B-2A

Lab Sample ID: 500-117394-1

Date Collected: 09/20/16 12:00

Matrix: Solid

Date Received: 09/21/16 10:30

Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			352813	09/20/16 12:00	WRE	TAL CHI
Total/NA	Analysis	8260B		100	353085	09/23/16 18:34	EMA	TAL CHI
Total/NA	Prep	3541			352781	09/21/16 18:25	DEA	TAL CHI
Total/NA	Analysis	8270D		50	352838	09/22/16 18:03	PMF	TAL CHI

Client Sample ID: B-2B

Lab Sample ID: 500-117394-2

Date Collected: 09/20/16 12:00

Matrix: Solid

Date Received: 09/21/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	352694	09/21/16 12:42	PFK	TAL CHI

Client Sample ID: B-2B

Lab Sample ID: 500-117394-2

Date Collected: 09/20/16 12:00

Matrix: Solid

Date Received: 09/21/16 10:30

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			352813	09/20/16 12:00	WRE	TAL CHI
Total/NA	Analysis	8260B		50	353085	09/23/16 18:08	EMA	TAL CHI
Total/NA	Prep	3541			352781	09/21/16 18:25	DEA	TAL CHI
Total/NA	Analysis	8270D		1	353030	09/23/16 14:21	AJD	TAL CHI

Laboratory References:

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

Certification Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 12-02424

TestAmerica Job ID: 500-117394-1

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-17

Analysis Method	Prep Method	Matrix	Analyte

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax: 500-117394 COC
PO#/Reference#

Lab Job #: 500- 117394
Chain of Custody Number:
Page 1 of 1
Temperature °C of Cooler: 7.2

Client	Client Project #	Preservative	5Meth	8	8							
AET	12-02424											
Project Name: Marathon City Center		Parameter	VOCs	PAH	Dry Wt							
Project Location/State: Marathon, WI	Lab Project #											
Sampler: Michael K. Neal	Lab PM: Sandie F											

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix									Comments
1		B-2A	9-20-16	1200	2	SO	X	X	X						
2		B-2B		1200	3	SO	X	X	X						
		Trip Blank		—	1	—	X								

B 9-28-16

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days X 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	AET	9-20-16	15:30	Fed X			
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
					TA	09/21/16	1030
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater SE – Sediment
W – Water SO – Soil
S – Soil L – Leachate
SL – Sludge WI – Wipe
MS – Miscellaneous DW – Drinking Water
OL – Oil O – Other
A – Air

Client Comments: Would like to get results by 9-28-16
Not PECFA

Lab Comments:

Login Sample Receipt Checklist

Client: American Engineering Testing Inc.

Job Number: 500-117394-1

Login Number: 117394
List Number: 1
Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

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.	False	On ice.
Cooler Temperature is recorded.	True	7.2c
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.	False	COC indicates a Trip Blank, but none was received
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-118261-1
Client Project/Site: Marathon City Center - 03-06391

For:
American Engineering Testing Inc.
1837 Cty Hwy OO
Chippewa Falls, Wisconsin 54729

Attn: Mr. Michael Neal

Authorized for release by:
10/12/2016 12:42:44 PM
Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

Designee for

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Table of Contents

Case Narrative

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Job ID: 500-118261-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-118261-1

Comments
No additional comments.

Receipt
The samples were received on 10/7/2016 8:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

GC/MS VOA
Method(s) 8260B: The laboratory control sample (LCS) for the soil preparation batch 355298 recovered outside control limits for n-Butylbenzene and Tetrachloroethene. These analytes were biased high in the preparation batch LCS, but were within limits in the analytical batch LCS; therefore, the data has been reported.

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

GC/MS Semi VOA
Method(s) 8270D: The following sample was diluted due to the nature of the sample matrix: BS-3A (500-118261-5). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following samples contained one base surrogate outside acceptance limits: BS-1A (500-118261-1) and BS-3A (500-118261-5). The laboratory's SOP allows one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

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

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

Detection Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-1A — Lab Sample ID: 500-118261-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	10		0.12	0.044	mg/Kg	100	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	3.4		0.12	0.047	mg/Kg	100	☼	8260B	Total/NA
Ethylbenzene	0.33		0.031	0.023	mg/Kg	100	☼	8260B	Total/NA
Isopropylbenzene	0.63		0.12	0.047	mg/Kg	100	☼	8260B	Total/NA
Naphthalene	0.68		0.12	0.041	mg/Kg	100	☼	8260B	Total/NA
N-Propylbenzene	1.6		0.12	0.051	mg/Kg	100	☼	8260B	Total/NA
sec-Butylbenzene	0.73		0.12	0.049	mg/Kg	100	☼	8260B	Total/NA
tert-Butylbenzene	1.0		0.12	0.049	mg/Kg	100	☼	8260B	Total/NA
Tetrachloroethene	2.9	*	0.12	0.046	mg/Kg	100	☼	8260B	Total/NA
Toluene	0.071		0.031	0.018	mg/Kg	100	☼	8260B	Total/NA
Xylenes, Total	4.3		0.062	0.027	mg/Kg	100	☼	8260B	Total/NA
1-Methylnaphthalene	0.33		0.071	0.0086	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.58		0.071	0.0065	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.099		0.035	0.0096	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.040		0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.014	J	0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.75		0.035	0.0054	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA

Client Sample ID: BS-1B — Lab Sample ID: 500-118261-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.095		0.064	0.023	mg/Kg	50	☼	8260B	Total/NA

Client Sample ID: BS-2A — Lab Sample ID: 500-118261-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.036	J	0.068	0.024	mg/Kg	50	☼	8260B	Total/NA
Xylenes, Total	0.029	J	0.034	0.015	mg/Kg	50	☼	8260B	Total/NA
1-Methylnaphthalene	0.016	J	0.073	0.0089	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.020	J	0.073	0.0067	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.014	J	0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.020	J	0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.042		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.013	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.028	J	0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.038		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.015	J	0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.022	J	0.036	0.0056	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.028	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.039		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA

Client Sample ID: BS-2B — Lab Sample ID: 500-118261-4

No Detections.

Client Sample ID: BS-3A — Lab Sample ID: 500-118261-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.16		0.063	0.022	mg/Kg	50	☼	8260B	Total/NA
1,3,5-Trimethylbenzene	0.070		0.063	0.024	mg/Kg	50	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-3A (Continued) — Lab Sample ID: 500-118261-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Chlorotoluene	0.070		0.063	0.020	mg/Kg	50	☼	8260B	Total/NA
Naphthalene	0.46		0.063	0.021	mg/Kg	50	☼	8260B	Total/NA
Toluene	0.028		0.016	0.0092	mg/Kg	50	☼	8260B	Total/NA
Xylenes, Total	0.068		0.031	0.014	mg/Kg	50	☼	8260B	Total/NA
1-Methylnaphthalene	1.0	J	1.5	0.18	mg/Kg	20	☼	8270D	Total/NA
2-Methylnaphthalene	0.50	J	1.5	0.14	mg/Kg	20	☼	8270D	Total/NA
Acenaphthylene	0.11	J	0.74	0.098	mg/Kg	20	☼	8270D	Total/NA
Chrysene	0.74		0.74	0.20	mg/Kg	20	☼	8270D	Total/NA
Fluoranthene	0.41	J	0.74	0.14	mg/Kg	20	☼	8270D	Total/NA
Fluorene	0.11	J	0.74	0.10	mg/Kg	20	☼	8270D	Total/NA
Naphthalene	0.59	J	0.74	0.11	mg/Kg	20	☼	8270D	Total/NA
Phenanthrene	0.30	J	0.74	0.10	mg/Kg	20	☼	8270D	Total/NA
Pyrene	1.3		0.74	0.15	mg/Kg	20	☼	8270D	Total/NA

Client Sample ID: BS-4A — Lab Sample ID: 500-118261-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.014	J	0.077	0.0093	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.014	J	0.077	0.0070	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.027	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.029	J	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.14		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.15		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.22		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.057		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.082		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.18		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.020	J	0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.26		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.014	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.064		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.014	J	0.038	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.19		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.33		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA

Client Sample ID: MeOH Blank — Lab Sample ID: 500-118261-7

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	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 = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-118261-1	BS-1A	Solid	10/06/16 10:00	10/07/16 08:50
500-118261-2	BS-1B	Solid	10/06/16 10:15	10/07/16 08:50
500-118261-3	BS-2A	Solid	10/06/16 11:00	10/07/16 08:50
500-118261-4	BS-2B	Solid	10/06/16 11:15	10/07/16 08:50
500-118261-5	BS-3A	Solid	10/06/16 11:45	10/07/16 08:50
500-118261-6	BS-4A	Solid	10/06/16 12:00	10/07/16 08:50
500-118261-7	MeOH Blank	Solid	10/06/16 00:00	10/07/16 08:50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-1A
Date Collected: 10/06/16 10:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-1
Matrix: Solid
Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.057		0.12	0.057	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,1,1-Trichloroethane	<0.047		0.12	0.047	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,1,2,2-Tetrachloroethane	<0.049		0.12	0.049	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,1,2-Trichloroethane	<0.043		0.12	0.043	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,1-Dichloroethane	<0.051		0.12	0.051	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,1-Dichloroethene	<0.048		0.12	0.048	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,1-Dichloropropene	<0.037		0.12	0.037	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2,3-Trichlorobenzene	<0.057		0.12	0.057	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2,3-Trichloropropane	<0.051		0.12	0.051	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2,4-Trichlorobenzene	<0.042		0.12	0.042	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2,4-Trimethylbenzene	**10**		0.12	0.044	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2-Dibromo-3-Chloropropane	<0.25		0.62	0.25	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2-Dibromoethane	<0.048		0.12	0.048	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2-Dichlorobenzene	<0.041		0.12	0.041	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2-Dichloroethane	<0.048		0.12	0.048	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,2-Dichloropropane	<0.053		0.12	0.053	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,3,5-Trimethylbenzene	**3.4**		0.12	0.047	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,3-Dichlorobenzene	<0.049		0.12	0.049	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,3-Dichloropropane	<0.045		0.12	0.045	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
1,4-Dichlorobenzene	<0.045		0.12	0.045	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
2,2-Dichloropropane	<0.055		0.12	0.055	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
2-Chlorotoluene	<0.039		0.12	0.039	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
4-Chlorotoluene	<0.043		0.12	0.043	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Benzene	<0.018		0.031	0.018	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Bromobenzene	<0.044		0.12	0.044	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Bromochloromethane	<0.053		0.12	0.053	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Bromodichloromethane	<0.046		0.12	0.046	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Bromoform	<0.060		0.12	0.060	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Bromomethane	<0.098		0.25	0.098	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Carbon tetrachloride	<0.047		0.12	0.047	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Chlorobenzene	<0.048		0.12	0.048	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Chloroethane	<0.062		0.12	0.062	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Chloroform	<0.046		0.12	0.046	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Chloromethane	<0.040		0.12	0.040	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
cis-1,2-Dichloroethene	<0.050		0.12	0.050	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
cis-1,3-Dichloropropene	<0.051		0.12	0.051	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Dibromochloromethane	<0.060		0.12	0.060	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Dibromomethane	<0.033		0.12	0.033	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Dichlorodifluoromethane	<0.083		0.25	0.083	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Ethylbenzene	**0.33**		0.031	0.023	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Hexachlorobutadiene	<0.055		0.12	0.055	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Isopropyl ether	<0.034		0.12	0.034	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Isopropylbenzene	**0.63**		0.12	0.047	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Methyl tert-butyl ether	<0.049		0.12	0.049	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Methylene Chloride	<0.20		0.62	0.20	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Naphthalene	**0.68**		0.12	0.041	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
n-Butylbenzene	<0.048	*	0.12	0.048	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
N-Propylbenzene	**1.6**		0.12	0.051	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
p-Isopropyltoluene	<0.045		0.12	0.045	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-1A
Date Collected: 10/06/16 10:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-1
Matrix: Solid
Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	0.73		0.12	0.049	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Styrene	<0.048		0.12	0.048	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
tert-Butylbenzene	1.0		0.12	0.049	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Tetrachloroethene	2.9	*	0.12	0.046	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Toluene	0.071		0.031	0.018	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
trans-1,2-Dichloroethene	<0.043		0.12	0.043	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
trans-1,3-Dichloropropene	<0.045		0.12	0.045	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Trichloroethene	<0.020		0.062	0.020	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Trichlorofluoromethane	<0.053		0.12	0.053	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Vinyl chloride	<0.032		0.062	0.032	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100
Xylenes, Total	4.3		0.062	0.027	mg/Kg	☼	10/06/16 10:00	10/11/16 16:54	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*71 - 127*	*10/06/16 10:00*	*10/11/16 16:54*	*100*
4-Bromofluorobenzene (Surr)	*107*		*71 - 120*	*10/06/16 10:00*	*10/11/16 16:54*	*100*
Dibromofluoromethane	*106*		*70 - 120*	*10/06/16 10:00*	*10/11/16 16:54*	*100*
Toluene-d8 (Surr)	*75*		*75 - 120*	*10/06/16 10:00*	*10/11/16 16:54*	*100*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.33		0.071	0.0086	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
2-Methylnaphthalene	0.58		0.071	0.0065	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Acenaphthene	<0.0063		0.035	0.0063	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Acenaphthylene	<0.0046		0.035	0.0046	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Anthracene	<0.0059		0.035	0.0059	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Benzo[a]anthracene	<0.0047		0.035	0.0047	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Benzo[a]pyrene	<0.0068		0.035	0.0068	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Benzo[b]fluoranthene	<0.0076		0.035	0.0076	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Benzo[g,h,i]perylene	<0.011		0.035	0.011	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Benzo[k]fluoranthene	<0.010		0.035	0.010	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Chrysene	0.099		0.035	0.0096	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Dibenz(a,h)anthracene	<0.0068		0.035	0.0068	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Fluoranthene	0.040		0.035	0.0065	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Fluorene	0.014	J	0.035	0.0050	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Indeno[1,2,3-cd]pyrene	<0.0091		0.035	0.0091	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Naphthalene	0.75		0.035	0.0054	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Phenanthrene	<0.0049		0.035	0.0049	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1
Pyrene	0.15		0.035	0.0070	mg/Kg	☼	10/07/16 18:00	10/10/16 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*42 - 115*	*10/07/16 18:00*	*10/10/16 13:17*	*1*
Nitrobenzene-d5 (Surr)	*115*		*33 - 124*	*10/07/16 18:00*	*10/10/16 13:17*	*1*
Terphenyl-d14 (Surr)	*158*	*X*	*25 - 150*	*10/07/16 18:00*	*10/10/16 13:17*	*1*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-1B
Date Collected: 10/06/16 10:15
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-2
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.030		0.064	0.030	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,1,1-Trichloroethane	<0.024		0.064	0.024	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,1,2,2-Tetrachloroethane	<0.026		0.064	0.026	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,1,2-Trichloroethane	<0.023		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,1-Dichloroethane	<0.026		0.064	0.026	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,1-Dichloroethene	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,1-Dichloropropene	<0.019		0.064	0.019	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2,3-Trichlorobenzene	<0.029		0.064	0.029	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2,3-Trichloropropane	<0.027		0.064	0.027	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2,4-Trichlorobenzene	<0.022		0.064	0.022	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2,4-Trimethylbenzene	**0.095**		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2-Dibromo-3-Chloropropane	<0.13		0.32	0.13	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2-Dibromoethane	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2-Dichlorobenzene	<0.021		0.064	0.021	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2-Dichloroethane	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,2-Dichloropropane	<0.027		0.064	0.027	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,3,5-Trimethylbenzene	<0.024		0.064	0.024	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,3-Dichlorobenzene	<0.026		0.064	0.026	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,3-Dichloropropane	<0.023		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
1,4-Dichlorobenzene	<0.023		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
2,2-Dichloropropane	<0.029		0.064	0.029	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
2-Chlorotoluene	<0.020		0.064	0.020	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
4-Chlorotoluene	<0.022		0.064	0.022	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Benzene	<0.0094		0.016	0.0094	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Bromobenzene	<0.023		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Bromochloromethane	<0.027		0.064	0.027	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Bromodichloromethane	<0.024		0.064	0.024	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Bromoform	<0.031		0.064	0.031	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Bromomethane	<0.051		0.13	0.051	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Carbon tetrachloride	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Chlorobenzene	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Chloroethane	<0.032		0.064	0.032	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Chloroform	<0.024		0.064	0.024	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Chloromethane	<0.021		0.064	0.021	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
cis-1,2-Dichloroethene	<0.026		0.064	0.026	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
cis-1,3-Dichloropropene	<0.027		0.064	0.027	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Dibromochloromethane	<0.031		0.064	0.031	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Dibromomethane	<0.017		0.064	0.017	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Dichlorodifluoromethane	<0.043		0.13	0.043	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Ethylbenzene	<0.012		0.016	0.012	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Hexachlorobutadiene	<0.029		0.064	0.029	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Isopropyl ether	<0.018		0.064	0.018	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Isopropylbenzene	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Methyl tert-butyl ether	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Methylene Chloride	<0.10		0.32	0.10	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Naphthalene	<0.021		0.064	0.021	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
n-Butylbenzene	<0.025	*	0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
N-Propylbenzene	<0.027		0.064	0.027	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
p-Isopropyltoluene	<0.023		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-1B
Date Collected: 10/06/16 10:15
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-2
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.026		0.064	0.026	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Styrene	<0.025		0.064	0.025	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
tert-Butylbenzene	<0.026		0.064	0.026	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Tetrachloroethene	<0.024	*	0.064	0.024	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Toluene	<0.0094		0.016	0.0094	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
trans-1,2-Dichloroethene	<0.022		0.064	0.022	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
trans-1,3-Dichloropropene	<0.023		0.064	0.023	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Trichloroethene	<0.011		0.032	0.011	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Trichlorofluoromethane	<0.027		0.064	0.027	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Vinyl chloride	<0.017		0.032	0.017	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50
Xylenes, Total	<0.014		0.032	0.014	mg/Kg	☼	10/06/16 10:15	10/11/16 17:22	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*71 - 127*	*10/06/16 10:15*	*10/11/16 17:22*	*50*
4-Bromofluorobenzene (Surr)	*99*		*71 - 120*	*10/06/16 10:15*	*10/11/16 17:22*	*50*
Dibromofluoromethane	*107*		*70 - 120*	*10/06/16 10:15*	*10/11/16 17:22*	*50*
Toluene-d8 (Surr)	*88*		*75 - 120*	*10/06/16 10:15*	*10/11/16 17:22*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.0089		0.073	0.0089	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
2-Methylnaphthalene	<0.0067		0.073	0.0067	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Acenaphthene	<0.0065		0.036	0.0065	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Acenaphthylene	<0.0048		0.036	0.0048	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Anthracene	<0.0061		0.036	0.0061	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Benzo[a]anthracene	<0.0049		0.036	0.0049	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Benzo[a]pyrene	<0.0070		0.036	0.0070	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Benzo[b]fluoranthene	<0.0078		0.036	0.0078	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Benzo[g,h,i]perylene	<0.012		0.036	0.012	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Benzo[k]fluoranthene	<0.011		0.036	0.011	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Chrysene	<0.0099		0.036	0.0099	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Dibenz(a,h)anthracene	<0.0070		0.036	0.0070	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Fluoranthene	<0.0067		0.036	0.0067	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Fluorene	<0.0051		0.036	0.0051	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Indeno[1,2,3-cd]pyrene	<0.0094		0.036	0.0094	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Naphthalene	<0.0056		0.036	0.0056	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Phenanthrene	<0.0051		0.036	0.0051	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1
Pyrene	<0.0072		0.036	0.0072	mg/Kg	☼	10/07/16 18:00	10/10/16 12:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*42 - 115*	*10/07/16 18:00*	*10/10/16 12:52*	*1*
Nitrobenzene-d5 (Surr)	*69*		*33 - 124*	*10/07/16 18:00*	*10/10/16 12:52*	*1*
Terphenyl-d14 (Surr)	*134*		*25 - 150*	*10/07/16 18:00*	*10/10/16 12:52*	*1*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-2A
Date Collected: 10/06/16 11:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-3
Matrix: Solid
Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.031		0.068	0.031	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,1,1-Trichloroethane	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,1,2,2-Tetrachloroethane	<0.027		0.068	0.027	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,1,2-Trichloroethane	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,1-Dichloroethane	<0.028		0.068	0.028	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,1-Dichloroethene	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,1-Dichloropropene	<0.020		0.068	0.020	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2,3-Trichlorobenzene	<0.031		0.068	0.031	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2,3-Trichloropropane	<0.028		0.068	0.028	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2,4-Trichlorobenzene	<0.023		0.068	0.023	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2,4-Trimethylbenzene	**0.036**	**J**	0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2-Dibromo-3-Chloropropane	<0.13		0.34	0.13	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2-Dibromoethane	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2-Dichlorobenzene	<0.023		0.068	0.023	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2-Dichloroethane	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,2-Dichloropropane	<0.029		0.068	0.029	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,3,5-Trimethylbenzene	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,3-Dichlorobenzene	<0.027		0.068	0.027	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,3-Dichloropropane	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
1,4-Dichlorobenzene	<0.025		0.068	0.025	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
2,2-Dichloropropane	<0.030		0.068	0.030	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
2-Chlorotoluene	<0.021		0.068	0.021	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
4-Chlorotoluene	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Benzene	<0.0099		0.017	0.0099	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Bromobenzene	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Bromochloromethane	<0.029		0.068	0.029	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Bromodichloromethane	<0.025		0.068	0.025	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Bromoform	<0.033		0.068	0.033	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Bromomethane	<0.054		0.14	0.054	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Carbon tetrachloride	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Chlorobenzene	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Chloroethane	<0.034		0.068	0.034	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Chloroform	<0.025		0.068	0.025	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Chloromethane	<0.022		0.068	0.022	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
cis-1,2-Dichloroethene	<0.028		0.068	0.028	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
cis-1,3-Dichloropropene	<0.028		0.068	0.028	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Dibromochloromethane	<0.033		0.068	0.033	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Dibromomethane	<0.018		0.068	0.018	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Dichlorodifluoromethane	<0.046		0.14	0.046	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Ethylbenzene	<0.012		0.017	0.012	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Hexachlorobutadiene	<0.030		0.068	0.030	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Isopropyl ether	<0.019		0.068	0.019	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Isopropylbenzene	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Methyl tert-butyl ether	<0.027		0.068	0.027	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Methylene Chloride	<0.11		0.34	0.11	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Naphthalene	<0.023		0.068	0.023	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
n-Butylbenzene	<0.026	*	0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
N-Propylbenzene	<0.028		0.068	0.028	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
p-Isopropyltoluene	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-2A

Date Collected: 10/06/16 11:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-3

Matrix: Solid
Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.027		0.068	0.027	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Styrene	<0.026		0.068	0.026	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
tert-Butylbenzene	<0.027		0.068	0.027	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Tetrachloroethene	<0.025	*	0.068	0.025	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Toluene	<0.0099		0.017	0.0099	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
trans-1,2-Dichloroethene	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
trans-1,3-Dichloropropene	<0.024		0.068	0.024	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Trichloroethene	<0.011		0.034	0.011	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Trichlorofluoromethane	<0.029		0.068	0.029	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Vinyl chloride	<0.018		0.034	0.018	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50
Xylenes, Total	**0.029**	**J**	0.034	0.015	mg/Kg	☼	10/06/16 11:00	10/11/16 17:49	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*71 - 127*	*10/06/16 11:00*	*10/11/16 17:49*	*50*
4-Bromofluorobenzene (Surr)	*99*		*71 - 120*	*10/06/16 11:00*	*10/11/16 17:49*	*50*
Dibromofluoromethane	*106*		*70 - 120*	*10/06/16 11:00*	*10/11/16 17:49*	*50*
Toluene-d8 (Surr)	*92*		*75 - 120*	*10/06/16 11:00*	*10/11/16 17:49*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**0.016**	**J**	0.073	0.0089	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
2-Methylnaphthalene	**0.020**	**J**	0.073	0.0067	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Acenaphthene	<0.0065		0.036	0.0065	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Acenaphthylene	<0.0048		0.036	0.0048	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Anthracene	<0.0061		0.036	0.0061	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Benzo[a]anthracene	**0.014**	**J**	0.036	0.0049	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Benzo[a]pyrene	**0.020**	**J**	0.036	0.0070	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Benzo[b]fluoranthene	**0.042**		0.036	0.0079	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Benzo[g,h,i]perylene	<0.012		0.036	0.012	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Benzo[k]fluoranthene	**0.013**	**J**	0.036	0.011	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Chrysene	**0.028**	**J**	0.036	0.0099	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Dibenz(a,h)anthracene	<0.0070		0.036	0.0070	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Fluoranthene	**0.038**		0.036	0.0067	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Fluorene	<0.0051		0.036	0.0051	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Indeno[1,2,3-cd]pyrene	**0.015**	**J**	0.036	0.0094	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Naphthalene	**0.022**	**J**	0.036	0.0056	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Phenanthrene	**0.028**	**J**	0.036	0.0051	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1
Pyrene	**0.039**		0.036	0.0072	mg/Kg	☼	10/07/16 18:00	10/11/16 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*42 - 115*	*10/07/16 18:00*	*10/11/16 19:34*	*1*
Nitrobenzene-d5 (Surr)	*63*		*33 - 124*	*10/07/16 18:00*	*10/11/16 19:34*	*1*
Terphenyl-d14 (Surr)	*80*		*25 - 150*	*10/07/16 18:00*	*10/11/16 19:34*	*1*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-2B

Date Collected: 10/06/16 11:15
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-4

Matrix: Solid
Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.035		0.075	0.035	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,1,1-Trichloroethane	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,1,2,2-Tetrachloroethane	<0.030		0.075	0.030	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,1,2-Trichloroethane	<0.026		0.075	0.026	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,1-Dichloroethane	<0.031		0.075	0.031	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,1-Dichloroethene	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,1-Dichloropropene	<0.022		0.075	0.022	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2,3-Trichlorobenzene	<0.034		0.075	0.034	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2,3-Trichloropropane	<0.031		0.075	0.031	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2,4-Trichlorobenzene	<0.026		0.075	0.026	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2,4-Trimethylbenzene	<0.027		0.075	0.027	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2-Dibromo-3-Chloropropane	<0.15		0.38	0.15	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2-Dibromoethane	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2-Dichlorobenzene	<0.025		0.075	0.025	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2-Dichloroethane	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,2-Dichloropropane	<0.032		0.075	0.032	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,3,5-Trimethylbenzene	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,3-Dichlorobenzene	<0.030		0.075	0.030	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,3-Dichloropropane	<0.027		0.075	0.027	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
1,4-Dichlorobenzene	<0.027		0.075	0.027	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
2,2-Dichloropropane	<0.033		0.075	0.033	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
2-Chlorotoluene	<0.024		0.075	0.024	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
4-Chlorotoluene	<0.026		0.075	0.026	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Benzene	<0.011		0.019	0.011	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Bromobenzene	<0.027		0.075	0.027	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Bromochloromethane	<0.032		0.075	0.032	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Bromodichloromethane	<0.028		0.075	0.028	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Bromoform	<0.036		0.075	0.036	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Bromomethane	<0.060		0.15	0.060	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Carbon tetrachloride	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Chlorobenzene	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Chloroethane	<0.038		0.075	0.038	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Chloroform	<0.028		0.075	0.028	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Chloromethane	<0.024		0.075	0.024	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
cis-1,2-Dichloroethene	<0.031		0.075	0.031	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
cis-1,3-Dichloropropene	<0.031		0.075	0.031	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Dibromochloromethane	<0.037		0.075	0.037	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Dibromomethane	<0.020		0.075	0.020	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Dichlorodifluoromethane	<0.051		0.15	0.051	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Ethylbenzene	<0.014		0.019	0.014	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Hexachlorobutadiene	<0.034		0.075	0.034	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Isopropyl ether	<0.021		0.075	0.021	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Isopropylbenzene	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Methyl tert-butyl ether	<0.030		0.075	0.030	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Methylene Chloride	<0.12		0.38	0.12	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Naphthalene	<0.025		0.075	0.025	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
n-Butylbenzene	<0.029	*	0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
N-Propylbenzene	<0.031		0.075	0.031	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
p-Isopropyltoluene	<0.027		0.075	0.027	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-2B

Date Collected: 10/06/16 11:15
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-4

Matrix: Solid
Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.030		0.075	0.030	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Styrene	<0.029		0.075	0.029	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
tert-Butylbenzene	<0.030		0.075	0.030	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Tetrachloroethene	<0.028	*	0.075	0.028	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Toluene	<0.011		0.019	0.011	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
trans-1,2-Dichloroethene	<0.026		0.075	0.026	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
trans-1,3-Dichloropropene	<0.027		0.075	0.027	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Trichloroethene	<0.012		0.038	0.012	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Trichlorofluoromethane	<0.032		0.075	0.032	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Vinyl chloride	<0.020		0.038	0.020	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50
Xylenes, Total	<0.017		0.038	0.017	mg/Kg	☼	10/06/16 11:15	10/11/16 18:17	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*71 - 127*	*10/06/16 11:15*	*10/11/16 18:17*	*50*
4-Bromofluorobenzene (Surr)	*92*		*71 - 120*	*10/06/16 11:15*	*10/11/16 18:17*	*50*
Dibromofluoromethane	*108*		*70 - 120*	*10/06/16 11:15*	*10/11/16 18:17*	*50*
Toluene-d8 (Surr)	*87*		*75 - 120*	*10/06/16 11:15*	*10/11/16 18:17*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.010		0.083	0.010	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
2-Methylnaphthalene	<0.0076		0.083	0.0076	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Acenaphthene	<0.0074		0.041	0.0074	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Acenaphthylene	<0.0054		0.041	0.0054	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Anthracene	<0.0069		0.041	0.0069	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Benzo[a]anthracene	<0.0055		0.041	0.0055	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Benzo[a]pyrene	<0.0080		0.041	0.0080	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Benzo[b]fluoranthene	<0.0089		0.041	0.0089	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Benzo[g,h,i]perylene	<0.013		0.041	0.013	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Benzo[k]fluoranthene	<0.012		0.041	0.012	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Chrysene	<0.011		0.041	0.011	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Dibenz(a,h)anthracene	<0.0080		0.041	0.0080	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Fluoranthene	<0.0076		0.041	0.0076	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Fluorene	<0.0058		0.041	0.0058	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Indeno[1,2,3-cd]pyrene	<0.011		0.041	0.011	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Naphthalene	<0.0063		0.041	0.0063	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Phenanthrene	<0.0057		0.041	0.0057	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1
Pyrene	<0.0082		0.041	0.0082	mg/Kg	☼	10/07/16 18:00	10/10/16 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*42 - 115*	*10/07/16 18:00*	*10/10/16 14:06*	*1*
Nitrobenzene-d5 (Surr)	*56*		*33 - 124*	*10/07/16 18:00*	*10/10/16 14:06*	*1*
Terphenyl-d14 (Surr)	*135*		*25 - 150*	*10/07/16 18:00*	*10/10/16 14:06*	*1*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-3A

Date Collected: 10/06/16 11:45
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-5

Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.029		0.063	0.029	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,1,1-Trichloroethane	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,1,2,2-Tetrachloroethane	<0.025		0.063	0.025	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,1,2-Trichloroethane	<0.022		0.063	0.022	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,1-Dichloroethane	<0.026		0.063	0.026	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,1-Dichloroethene	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,1-Dichloropropene	<0.019		0.063	0.019	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2,3-Trichlorobenzene	<0.029		0.063	0.029	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2,3-Trichloropropane	<0.026		0.063	0.026	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2,4-Trichlorobenzene	<0.021		0.063	0.021	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2,4-Trimethylbenzene	**0.16**		0.063	0.022	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2-Dibromo-3-Chloropropane	<0.12		0.31	0.12	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2-Dibromoethane	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2-Dichlorobenzene	<0.021		0.063	0.021	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2-Dichloroethane	<0.025		0.063	0.025	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,2-Dichloropropane	<0.027		0.063	0.027	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,3,5-Trimethylbenzene	**0.070**		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,3-Dichlorobenzene	<0.025		0.063	0.025	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,3-Dichloropropane	<0.023		0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
1,4-Dichlorobenzene	<0.023		0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
2,2-Dichloropropane	<0.028		0.063	0.028	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
2-Chlorotoluene	**0.070**		0.063	0.020	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
4-Chlorotoluene	<0.022		0.063	0.022	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Benzene	<0.0092		0.016	0.0092	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Bromobenzene	<0.022		0.063	0.022	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Bromochloromethane	<0.027		0.063	0.027	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Bromodichloromethane	<0.023		0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Bromoform	<0.030		0.063	0.030	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Bromomethane	<0.050		0.13	0.050	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Carbon tetrachloride	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Chlorobenzene	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Chloroethane	<0.032		0.063	0.032	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Chloroform	<0.023		0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Chloromethane	<0.020		0.063	0.020	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
cis-1,2-Dichloroethene	<0.026		0.063	0.026	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
cis-1,3-Dichloropropene	<0.026		0.063	0.026	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Dibromochloromethane	<0.031		0.063	0.031	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Dibromomethane	<0.017		0.063	0.017	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Dichlorodifluoromethane	<0.042		0.13	0.042	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Ethylbenzene	<0.011		0.016	0.011	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Hexachlorobutadiene	<0.028		0.063	0.028	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Isopropyl ether	<0.017		0.063	0.017	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Isopropylbenzene	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Methyl tert-butyl ether	<0.025		0.063	0.025	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Methylene Chloride	<0.10		0.31	0.10	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Naphthalene	**0.46**		0.063	0.021	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
n-Butylbenzene	<0.024	*	0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
N-Propylbenzene	<0.026		0.063	0.026	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
p-Isopropyltoluene	<0.023		0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-3A

Date Collected: 10/06/16 11:45
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-5

Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.025		0.063	0.025	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Styrene	<0.024		0.063	0.024	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
tert-Butylbenzene	<0.025		0.063	0.025	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Tetrachloroethene	<0.023	*	0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Toluene	**0.028**		0.016	0.0092	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
trans-1,2-Dichloroethene	<0.022		0.063	0.022	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
trans-1,3-Dichloropropene	<0.023		0.063	0.023	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Trichloroethene	<0.010		0.031	0.010	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Trichlorofluoromethane	<0.027		0.063	0.027	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Vinyl chloride	<0.016		0.031	0.016	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50
Xylenes, Total	**0.068**		0.031	0.014	mg/Kg	☼	10/06/16 11:45	10/11/16 18:45	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*71 - 127*	*10/06/16 11:45*	*10/11/16 18:45*	*50*
4-Bromofluorobenzene (Surr)	*103*		*71 - 120*	*10/06/16 11:45*	*10/11/16 18:45*	*50*
Dibromofluoromethane	*110*		*70 - 120*	*10/06/16 11:45*	*10/11/16 18:45*	*50*
Toluene-d8 (Surr)	*87*		*75 - 120*	*10/06/16 11:45*	*10/11/16 18:45*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**1.0**	**J**	1.5	0.18	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
2-Methylnaphthalene	**0.50**	**J**	1.5	0.14	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Acenaphthene	<0.13		0.74	0.13	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Acenaphthylene	**0.11**	**J**	0.74	0.098	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Anthracene	<0.12		0.74	0.12	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Benzo[a]anthracene	<0.10		0.74	0.10	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Benzo[a]pyrene	<0.14		0.74	0.14	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Benzo[b]fluoranthene	<0.16		0.74	0.16	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Benzo[g,h,i]perylene	<0.24		0.74	0.24	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Benzo[k]fluoranthene	<0.22		0.74	0.22	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Chrysene	**0.74**		0.74	0.20	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Dibenz(a,h)anthracene	<0.14		0.74	0.14	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Fluoranthene	**0.41**	**J**	0.74	0.14	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Fluorene	**0.11**	**J**	0.74	0.10	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Indeno[1,2,3-cd]pyrene	<0.19		0.74	0.19	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Naphthalene	**0.59**	**J**	0.74	0.11	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Phenanthrene	**0.30**	**J**	0.74	0.10	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20
Pyrene	**1.3**		0.74	0.15	mg/Kg	☼	10/07/16 18:00	10/11/16 20:03	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*42 - 115*	*10/07/16 18:00*	*10/11/16 20:03*	*20*
Nitrobenzene-d5 (Surr)	*93*		*33 - 124*	*10/07/16 18:00*	*10/11/16 20:03*	*20*
Terphenyl-d14 (Surr)	*161*	*X*	*25 - 150*	*10/07/16 18:00*	*10/11/16 20:03*	*20*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-4A
Date Collected: 10/06/16 12:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-6
Matrix: Solid
Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.033		0.071	0.033	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,1,1-Trichloroethane	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,1,2,2-Tetrachloroethane	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,1,2-Trichloroethane	<0.025		0.071	0.025	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,1-Dichloroethane	<0.029		0.071	0.029	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,1-Dichloroethene	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,1-Dichloropropene	<0.021		0.071	0.021	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2,3-Trichlorobenzene	<0.032		0.071	0.032	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2,3-Trichloropropane	<0.029		0.071	0.029	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2,4-Trichlorobenzene	<0.024		0.071	0.024	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2,4-Trimethylbenzene	<0.025		0.071	0.025	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2-Dibromo-3-Chloropropane	<0.14		0.35	0.14	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2-Dibromoethane	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2-Dichlorobenzene	<0.024		0.071	0.024	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2-Dichloroethane	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,2-Dichloropropane	<0.030		0.071	0.030	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,3,5-Trimethylbenzene	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,3-Dichlorobenzene	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,3-Dichloropropane	<0.026		0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
1,4-Dichlorobenzene	<0.026		0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
2,2-Dichloropropane	<0.031		0.071	0.031	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
2-Chlorotoluene	<0.022		0.071	0.022	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
4-Chlorotoluene	<0.025		0.071	0.025	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Benzene	<0.010		0.018	0.010	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Bromobenzene	<0.025		0.071	0.025	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Bromochloromethane	<0.030		0.071	0.030	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Bromodichloromethane	<0.026		0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Bromoform	<0.034		0.071	0.034	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Bromomethane	<0.056		0.14	0.056	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Carbon tetrachloride	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Chlorobenzene	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Chloroethane	<0.036		0.071	0.036	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Chloroform	<0.026		0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Chloromethane	<0.023		0.071	0.023	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
cis-1,2-Dichloroethene	<0.029		0.071	0.029	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
cis-1,3-Dichloropropene	<0.029		0.071	0.029	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Dibromochloromethane	<0.035		0.071	0.035	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Dibromomethane	<0.019		0.071	0.019	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Dichlorodifluoromethane	<0.048		0.14	0.048	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Ethylbenzene	<0.013		0.018	0.013	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Hexachlorobutadiene	<0.032		0.071	0.032	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Isopropyl ether	<0.020		0.071	0.020	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Isopropylbenzene	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Methyl tert-butyl ether	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Methylene Chloride	<0.12		0.35	0.12	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Naphthalene	<0.024		0.071	0.024	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
n-Butylbenzene	<0.028	*	0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
N-Propylbenzene	<0.029		0.071	0.029	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
p-Isopropyltoluene	<0.026		0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-4A

Date Collected: 10/06/16 12:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-6

Matrix: Solid
Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Styrene	<0.027		0.071	0.027	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
tert-Butylbenzene	<0.028		0.071	0.028	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Tetrachloroethene	<0.026	*	0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Toluene	<0.010		0.018	0.010	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
trans-1,2-Dichloroethene	<0.025		0.071	0.025	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
trans-1,3-Dichloropropene	<0.026		0.071	0.026	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Trichloroethene	<0.012		0.035	0.012	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Trichlorofluoromethane	<0.030		0.071	0.030	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Vinyl chloride	<0.019		0.035	0.019	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50
Xylenes, Total	<0.016		0.035	0.016	mg/Kg	☼	10/06/16 12:00	10/11/16 19:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*71 - 127*	*10/06/16 12:00*	*10/11/16 19:12*	*50*
4-Bromofluorobenzene (Surr)	*100*		*71 - 120*	*10/06/16 12:00*	*10/11/16 19:12*	*50*
Dibromofluoromethane	*104*		*70 - 120*	*10/06/16 12:00*	*10/11/16 19:12*	*50*
Toluene-d8 (Surr)	*91*		*75 - 120*	*10/06/16 12:00*	*10/11/16 19:12*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.014	J	0.077	0.0093	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
2-Methylnaphthalene	0.014	J	0.077	0.0070	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Acenaphthene	<0.0068		0.038	0.0068	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Acenaphthylene	0.027	J	0.038	0.0050	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Anthracene	0.029	J	0.038	0.0063	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Benzo[a]anthracene	0.14		0.038	0.0051	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Benzo[a]pyrene	0.15		0.038	0.0074	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Benzo[b]fluoranthene	0.22		0.038	0.0082	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Benzo[g,h,i]perylene	0.057		0.038	0.012	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Benzo[k]fluoranthene	0.082		0.038	0.011	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Chrysene	0.18		0.038	0.010	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Dibenz(a,h)anthracene	0.020	J	0.038	0.0073	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Fluoranthene	0.26		0.038	0.0070	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Fluorene	0.014	J	0.038	0.0053	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Indeno[1,2,3-cd]pyrene	0.064		0.038	0.0098	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Naphthalene	0.014	J	0.038	0.0058	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Phenanthrene	0.19		0.038	0.0053	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1
Pyrene	0.33		0.038	0.0075	mg/Kg	☼	10/07/16 18:00	10/11/16 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*42 - 115*	*10/07/16 18:00*	*10/11/16 18:36*	*1*
Nitrobenzene-d5 (Surr)	*67*		*33 - 124*	*10/07/16 18:00*	*10/11/16 18:36*	*1*
Terphenyl-d14 (Surr)	*77*		*25 - 150*	*10/07/16 18:00*	*10/11/16 18:36*	*1*

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: MeOH Blank
Date Collected: 10/06/16 00:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-7
Matrix: Solid
Percent Solids: 100.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.023		0.050	0.023	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,1,1-Trichloroethane	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,1,2,2-Tetrachloroethane	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,1,2-Trichloroethane	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,1-Dichloroethane	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,1-Dichloroethene	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,1-Dichloropropene	<0.015		0.050	0.015	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2,3-Trichlorobenzene	<0.023		0.050	0.023	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2,3-Trichloropropane	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2,4-Trichlorobenzene	<0.017		0.050	0.017	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2,4-Trimethylbenzene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2-Dibromo-3-Chloropropane	<0.10		0.25	0.10	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2-Dibromoethane	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2-Dichlorobenzene	<0.017		0.050	0.017	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2-Dichloroethane	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,2-Dichloropropane	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,3,5-Trimethylbenzene	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,3-Dichlorobenzene	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,3-Dichloropropane	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
1,4-Dichlorobenzene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
2,2-Dichloropropane	<0.022		0.050	0.022	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
2-Chlorotoluene	<0.016		0.050	0.016	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
4-Chlorotoluene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Benzene	<0.0073		0.013	0.0073	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Bromobenzene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Bromochloromethane	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Bromodichloromethane	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Bromoform	<0.024		0.050	0.024	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Bromomethane	<0.040		0.10	0.040	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Carbon tetrachloride	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Chlorobenzene	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Chloroethane	<0.025		0.050	0.025	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Chloroform	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Chloromethane	<0.016		0.050	0.016	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
cis-1,2-Dichloroethene	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
cis-1,3-Dichloropropene	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Dibromochloromethane	<0.024		0.050	0.024	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Dibromomethane	<0.014		0.050	0.014	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Dichlorodifluoromethane	<0.034		0.10	0.034	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Ethylbenzene	<0.0092		0.013	0.0092	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Hexachlorobutadiene	<0.022		0.050	0.022	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Isopropyl ether	<0.014		0.050	0.014	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Isopropylbenzene	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Methyl tert-butyl ether	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Methylene Chloride	<0.082		0.25	0.082	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Naphthalene	<0.017		0.050	0.017	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
n-Butylbenzene	<0.019	*	0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
N-Propylbenzene	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
p-Isopropyltoluene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50

Client Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: MeOH Blank — **Lab Sample ID: 500-118261-7**
Date Collected: 10/06/16 00:00 — **Matrix: Solid**
Date Received: 10/07/16 08:50 — **Percent Solids: 100.0**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Styrene	<0.019		0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
tert-Butylbenzene	<0.020		0.050	0.020	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Tetrachloroethene	<0.019	*	0.050	0.019	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Toluene	<0.0074		0.013	0.0074	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
trans-1,2-Dichloroethene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
trans-1,3-Dichloropropene	<0.018		0.050	0.018	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Trichloroethene	<0.0082		0.025	0.0082	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Trichlorofluoromethane	<0.021		0.050	0.021	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Vinyl chloride	<0.013		0.025	0.013	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50
Xylenes, Total	<0.011		0.025	0.011	mg/Kg	☼	10/06/16 00:00	10/11/16 19:40	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*71 - 127*	*10/06/16 00:00*	*10/11/16 19:40*	*50*
4-Bromofluorobenzene (Surr)	*101*		*71 - 120*	*10/06/16 00:00*	*10/11/16 19:40*	*50*
Dibromofluoromethane	*104*		*70 - 120*	*10/06/16 00:00*	*10/11/16 19:40*	*50*
Toluene-d8 (Surr)	*93*		*75 - 120*	*10/06/16 00:00*	*10/11/16 19:40*	*50*

Definitions/Glossary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

QC Association Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

GC/MS VOA

Prep Batch: 355298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-1	BS-1A	Total/NA	Solid	5035	
500-118261-2	BS-1B	Total/NA	Solid	5035	
500-118261-3	BS-2A	Total/NA	Solid	5035	
500-118261-4	BS-2B	Total/NA	Solid	5035	
500-118261-5	BS-3A	Total/NA	Solid	5035	
500-118261-6	BS-4A	Total/NA	Solid	5035	
500-118261-7	MeOH Blank	Total/NA	Solid	5035	
LB3 500-355298/20-A	Method Blank	Total/NA	Solid	5035	
LCS 500-355298/21-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 355499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-1	BS-1A	Total/NA	Solid	8260B	355298
500-118261-2	BS-1B	Total/NA	Solid	8260B	355298
500-118261-3	BS-2A	Total/NA	Solid	8260B	355298
500-118261-4	BS-2B	Total/NA	Solid	8260B	355298
500-118261-5	BS-3A	Total/NA	Solid	8260B	355298
500-118261-6	BS-4A	Total/NA	Solid	8260B	355298
500-118261-7	MeOH Blank	Total/NA	Solid	8260B	355298
LB3 500-355298/20-A	Method Blank	Total/NA	Solid	8260B	355298
MB 500-355499/6	Method Blank	Total/NA	Solid	8260B	
LCS 500-355298/21-A	Lab Control Sample	Total/NA	Solid	8260B	355298
LCS 500-355499/4	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 355189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-1	BS-1A	Total/NA	Solid	3541	
500-118261-2	BS-1B	Total/NA	Solid	3541	
500-118261-3	BS-2A	Total/NA	Solid	3541	
500-118261-4	BS-2B	Total/NA	Solid	3541	
500-118261-5	BS-3A	Total/NA	Solid	3541	
500-118261-6	BS-4A	Total/NA	Solid	3541	
MB 500-355189/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-355189/2-A	Lab Control Sample	Total/NA	Solid	3541	

Analysis Batch: 355343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-1	BS-1A	Total/NA	Solid	8270D	355189
500-118261-2	BS-1B	Total/NA	Solid	8270D	355189
500-118261-4	BS-2B	Total/NA	Solid	8270D	355189
MB 500-355189/1-A	Method Blank	Total/NA	Solid	8270D	355189
LCS 500-355189/2-A	Lab Control Sample	Total/NA	Solid	8270D	355189

Analysis Batch: 355509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-3	BS-2A	Total/NA	Solid	8270D	355189
500-118261-5	BS-3A	Total/NA	Solid	8270D	355189
500-118261-6	BS-4A	Total/NA	Solid	8270D	355189

QC Association Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

General Chemistry

Analysis Batch: 355122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-1	BS-1A	Total/NA	Solid	Moisture	
500-118261-2	BS-1B	Total/NA	Solid	Moisture	
500-118261-3	BS-2A	Total/NA	Solid	Moisture	
500-118261-4	BS-2B	Total/NA	Solid	Moisture	
500-118261-5	BS-3A	Total/NA	Solid	Moisture	
500-118261-6	BS-4A	Total/NA	Solid	Moisture	

Analysis Batch: 355389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-118261-7	MeOH Blank	Total/NA	Solid	Moisture	

Surrogate Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (71-127)	BFB (71-120)	DBFM (70-120)	TOL (75-120)
500-118261-1	BS-1A	110	107	106	75
500-118261-2	BS-1B	108	99	107	88
500-118261-3	BS-2A	115	99	106	92
500-118261-4	BS-2B	116	92	108	87
500-118261-5	BS-3A	110	103	110	87
500-118261-6	BS-4A	114	100	104	91
500-118261-7	MeOH Blank	113	101	104	93
LB3 500-355298/20-A	Method Blank	108	91	109	104
LCS 500-355298/21-A	Lab Control Sample	101	99	96	93
LCS 500-355499/4	Lab Control Sample	102	98	96	95
MB 500-355499/6	Method Blank	104	92	102	89

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP (42-115)	NBZ (33-124)	TPH (25-150)
500-118261-1	BS-1A	78	115	158 X
500-118261-2	BS-1B	78	69	134
500-118261-3	BS-2A	60	63	80
500-118261-4	BS-2B	59	56	135
500-118261-5	BS-3A	97	93	161 X
500-118261-6	BS-4A	65	67	77
LCS 500-355189/2-A	Lab Control Sample	90	92	102
MB 500-355189/1-A	Method Blank	88	88	135

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

Lab Sample ID: LB3 500-355298/20-A
Matrix: Solid
Analysis Batch: 355499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355298

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.023		0.050	0.023	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,1,1-Trichloroethane	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,1,2,2-Tetrachloroethane	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,1,2-Trichloroethane	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,1-Dichloroethane	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,1-Dichloroethene	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,1-Dichloropropene	<0.015		0.050	0.015	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2,3-Trichlorobenzene	<0.023		0.050	0.023	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2,3-Trichloropropane	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2,4-Trichlorobenzene	<0.017		0.050	0.017	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2,4-Trimethylbenzene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2-Dibromo-3-Chloropropane	<0.10		0.25	0.10	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2-Dibromoethane	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2-Dichlorobenzene	<0.017		0.050	0.017	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2-Dichloroethane	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,2-Dichloropropane	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,3,5-Trimethylbenzene	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,3-Dichlorobenzene	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,3-Dichloropropane	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
1,4-Dichlorobenzene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
2,2-Dichloropropane	<0.022		0.050	0.022	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
2-Chlorotoluene	<0.016		0.050	0.016	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
4-Chlorotoluene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Benzene	<0.0073		0.013	0.0073	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Bromobenzene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Bromochloromethane	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Bromodichloromethane	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Bromoform	<0.024		0.050	0.024	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Bromomethane	<0.040		0.10	0.040	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Carbon tetrachloride	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Chlorobenzene	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Chloroethane	<0.025		0.050	0.025	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Chloroform	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Chloromethane	<0.016		0.050	0.016	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
cis-1,2-Dichloroethene	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
cis-1,3-Dichloropropene	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Dibromochloromethane	<0.024		0.050	0.024	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Dibromomethane	<0.014		0.050	0.014	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Dichlorodifluoromethane	<0.034		0.10	0.034	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Ethylbenzene	<0.0092		0.013	0.0092	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Hexachlorobutadiene	<0.022		0.050	0.022	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Isopropyl ether	<0.014		0.050	0.014	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Isopropylbenzene	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Methyl tert-butyl ether	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Methylene Chloride	<0.082		0.25	0.082	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Naphthalene	<0.017		0.050	0.017	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
n-Butylbenzene	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
N-Propylbenzene	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

Lab Sample ID: LB3 500-355298/20-A
Matrix: Solid
Analysis Batch: 355499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355298

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
sec-Butylbenzene	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Styrene	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
tert-Butylbenzene	<0.020		0.050	0.020	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Tetrachloroethene	<0.019		0.050	0.019	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Toluene	<0.0074		0.013	0.0074	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
trans-1,2-Dichloroethene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
trans-1,3-Dichloropropene	<0.018		0.050	0.018	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Trichloroethene	<0.0082		0.025	0.0082	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Trichlorofluoromethane	<0.021		0.050	0.021	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Vinyl chloride	<0.013		0.025	0.013	mg/Kg		10/10/16 02:30	10/11/16 15:59	50
Xylenes, Total	<0.011		0.025	0.011	mg/Kg		10/10/16 02:30	10/11/16 15:59	50

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*71 - 127*	*10/10/16 02:30*	*10/11/16 15:59*	*50*
4-Bromofluorobenzene (Surr)	*91*		*71 - 120*	*10/10/16 02:30*	*10/11/16 15:59*	*50*
Dibromofluoromethane	*109*		*70 - 120*	*10/10/16 02:30*	*10/11/16 15:59*	*50*
Toluene-d8 (Surr)	*104*		*75 - 120*	*10/10/16 02:30*	*10/11/16 15:59*	*50*

Lab Sample ID: LCS 500-355298/21-A
Matrix: Solid
Analysis Batch: 355499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355298

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	2.50	2.88		mg/Kg		115	68 - 125
1,1,1-Trichloroethane	2.50	2.74		mg/Kg		109	70 - 125
1,1,2,2-Tetrachloroethane	2.50	3.01		mg/Kg		120	68 - 125
1,1,2-Trichloroethane	2.50	2.70		mg/Kg		108	70 - 125
1,1-Dichloroethane	2.50	2.92		mg/Kg		117	70 - 125
1,1-Dichloroethene	2.50	2.85		mg/Kg		114	70 - 125
1,1-Dichloropropene	2.50	3.03		mg/Kg		121	70 - 125
1,2,3-Trichlorobenzene	2.50	2.95		mg/Kg		118	58 - 135
1,2,3-Trichloropropane	2.50	2.66		mg/Kg		106	63 - 125
1,2,4-Trichlorobenzene	2.50	2.92		mg/Kg		117	64 - 126
1,2,4-Trimethylbenzene	2.50	2.97		mg/Kg		119	70 - 125
1,2-Dibromo-3-Chloropropane	2.50	2.63		mg/Kg		105	51 - 125
1,2-Dibromoethane	2.50	2.64		mg/Kg		106	70 - 125
1,2-Dichlorobenzene	2.50	2.90		mg/Kg		116	70 - 125
1,2-Dichloroethane	2.50	3.00		mg/Kg		120	70 - 125
1,2-Dichloropropane	2.50	3.00		mg/Kg		120	70 - 125
1,3,5-Trimethylbenzene	2.50	2.97		mg/Kg		119	70 - 125
1,3-Dichlorobenzene	2.50	2.94		mg/Kg		118	70 - 125
1,3-Dichloropropane	2.50	2.89		mg/Kg		116	70 - 125
1,4-Dichlorobenzene	2.50	2.92		mg/Kg		117	70 - 125
2,2-Dichloropropane	2.50	2.70		mg/Kg		108	62 - 125
2-Chlorotoluene	2.50	2.95		mg/Kg		118	69 - 125
4-Chlorotoluene	2.50	3.00		mg/Kg		120	70 - 125
Benzene	2.50	2.73		mg/Kg		109	70 - 125

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

Lab Sample ID: LCS 500-355298/21-A
Matrix: Solid
Analysis Batch: 355499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355298

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	2.50	2.86		mg/Kg		114	70 - 125
Bromochloromethane	2.50	2.73		mg/Kg		109	70 - 125
Bromodichloromethane	2.50	2.81		mg/Kg		112	70 - 125
Bromoform	2.50	2.76		mg/Kg		110	54 - 128
Bromomethane	2.50	2.19		mg/Kg		88	40 - 150
Carbon tetrachloride	2.50	2.95		mg/Kg		118	70 - 125
Chlorobenzene	2.50	2.95		mg/Kg		118	70 - 125
Chloroethane	2.50	2.60		mg/Kg		104	60 - 139
Chloroform	2.50	2.85		mg/Kg		114	70 - 125
Chloromethane	2.50	2.77		mg/Kg		111	60 - 140
cis-1,2-Dichloroethene	2.50	2.61		mg/Kg		104	70 - 125
cis-1,3-Dichloropropene	2.50	2.75		mg/Kg		110	70 - 125
Dibromochloromethane	2.50	2.73		mg/Kg		109	66 - 125
Dibromomethane	2.50	2.70		mg/Kg		108	70 - 125
Dichlorodifluoromethane	2.50	2.09		mg/Kg		83	51 - 140
Ethylbenzene	2.50	2.74		mg/Kg		110	70 - 125
Hexachlorobutadiene	2.50	3.46		mg/Kg		138	57 - 140
Isopropylbenzene	2.50	2.83		mg/Kg		113	70 - 125
Methyl tert-butyl ether	2.50	2.49		mg/Kg		100	67 - 125
Methylene Chloride	2.50	2.82		mg/Kg		113	68 - 125
Naphthalene	2.50	2.35		mg/Kg		94	50 - 136
n-Butylbenzene	2.50	3.16	*	mg/Kg		127	70 - 125
N-Propylbenzene	2.50	3.04		mg/Kg		121	70 - 125
p-Isopropyltoluene	2.50	2.87		mg/Kg		115	70 - 125
sec-Butylbenzene	2.50	2.91		mg/Kg		116	70 - 125
Styrene	2.50	2.81		mg/Kg		112	70 - 125
tert-Butylbenzene	2.50	3.02		mg/Kg		121	70 - 125
Tetrachloroethene	2.50	3.21	*	mg/Kg		128	70 - 125
Toluene	2.50	2.87		mg/Kg		115	70 - 125
trans-1,2-Dichloroethene	2.50	2.76		mg/Kg		110	70 - 125
trans-1,3-Dichloropropene	2.50	2.69		mg/Kg		107	70 - 125
Trichloroethene	2.50	2.99		mg/Kg		120	70 - 125
Trichlorofluoromethane	2.50	2.91		mg/Kg		116	60 - 126
Vinyl chloride	2.50	2.72		mg/Kg		109	70 - 126
Xylenes, Total	5.00	5.65		mg/Kg		113	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*71 - 127*
4-Bromofluorobenzene (Surr)	*99*		*71 - 120*
Dibromofluoromethane	*96*		*70 - 120*
Toluene-d8 (Surr)	*93*		*75 - 120*

Lab Sample ID: MB 500-355499/6
Matrix: Solid
Analysis Batch: 355499

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.00046		0.0010	0.00046	mg/Kg			10/11/16 15:31	1

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

Lab Sample ID: MB 500-355499/6
Matrix: Solid
Analysis Batch: 355499

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.00038		0.0010	0.00038	mg/Kg			10/11/16 15:31	1
1,1,2,2-Tetrachloroethane	<0.00040		0.0010	0.00040	mg/Kg			10/11/16 15:31	1
1,1,2-Trichloroethane	<0.00035		0.0010	0.00035	mg/Kg			10/11/16 15:31	1
1,1-Dichloroethane	<0.00041		0.0010	0.00041	mg/Kg			10/11/16 15:31	1
1,1-Dichloroethene	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
1,1-Dichloropropene	<0.00030		0.0010	0.00030	mg/Kg			10/11/16 15:31	1
1,2,3-Trichlorobenzene	<0.00046		0.0010	0.00046	mg/Kg			10/11/16 15:31	1
1,2,3-Trichloropropane	<0.00041		0.0010	0.00041	mg/Kg			10/11/16 15:31	1
1,2,4-Trichlorobenzene	<0.00034		0.0010	0.00034	mg/Kg			10/11/16 15:31	1
1,2,4-Trimethylbenzene	<0.00036		0.0010	0.00036	mg/Kg			10/11/16 15:31	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.0050	0.0020	mg/Kg			10/11/16 15:31	1
1,2-Dibromoethane	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
1,2-Dichlorobenzene	<0.00033		0.0010	0.00033	mg/Kg			10/11/16 15:31	1
1,2-Dichloroethane	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
1,2-Dichloropropane	<0.00043		0.0010	0.00043	mg/Kg			10/11/16 15:31	1
1,3,5-Trimethylbenzene	<0.00038		0.0010	0.00038	mg/Kg			10/11/16 15:31	1
1,3-Dichlorobenzene	<0.00040		0.0010	0.00040	mg/Kg			10/11/16 15:31	1
1,3-Dichloropropane	<0.00036		0.0010	0.00036	mg/Kg			10/11/16 15:31	1
1,4-Dichlorobenzene	<0.00036		0.0010	0.00036	mg/Kg			10/11/16 15:31	1
2,2-Dichloropropane	<0.00044		0.0010	0.00044	mg/Kg			10/11/16 15:31	1
2-Chlorotoluene	<0.00031		0.0010	0.00031	mg/Kg			10/11/16 15:31	1
4-Chlorotoluene	<0.00035		0.0010	0.00035	mg/Kg			10/11/16 15:31	1
Benzene	<0.00015		0.00025	0.00015	mg/Kg			10/11/16 15:31	1
Bromobenzene	<0.00036		0.0010	0.00036	mg/Kg			10/11/16 15:31	1
Bromochloromethane	<0.00043		0.0010	0.00043	mg/Kg			10/11/16 15:31	1
Bromodichloromethane	<0.00037		0.0010	0.00037	mg/Kg			10/11/16 15:31	1
Bromoform	<0.00048		0.0010	0.00048	mg/Kg			10/11/16 15:31	1
Bromomethane	<0.00080		0.0020	0.00080	mg/Kg			10/11/16 15:31	1
Carbon tetrachloride	<0.00038		0.0010	0.00038	mg/Kg			10/11/16 15:31	1
Chlorobenzene	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
Chloroethane	<0.00050		0.0010	0.00050	mg/Kg			10/11/16 15:31	1
Chloroform	<0.00037		0.0010	0.00037	mg/Kg			10/11/16 15:31	1
Chloromethane	<0.00032		0.0010	0.00032	mg/Kg			10/11/16 15:31	1
cis-1,2-Dichloroethene	<0.00041		0.0010	0.00041	mg/Kg			10/11/16 15:31	1
cis-1,3-Dichloropropene	<0.00042		0.0010	0.00042	mg/Kg			10/11/16 15:31	1
Dibromochloromethane	<0.00049		0.0010	0.00049	mg/Kg			10/11/16 15:31	1
Dibromomethane	<0.00027		0.0010	0.00027	mg/Kg			10/11/16 15:31	1
Dichlorodifluoromethane	<0.00067		0.0020	0.00067	mg/Kg			10/11/16 15:31	1
Ethylbenzene	<0.00018		0.00025	0.00018	mg/Kg			10/11/16 15:31	1
Hexachlorobutadiene	<0.00045		0.0010	0.00045	mg/Kg			10/11/16 15:31	1
Isopropyl ether	<0.00028		0.0010	0.00028	mg/Kg			10/11/16 15:31	1
Isopropylbenzene	<0.00038		0.0010	0.00038	mg/Kg			10/11/16 15:31	1
Methyl tert-butyl ether	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
Methylene Chloride	<0.0016		0.0050	0.0016	mg/Kg			10/11/16 15:31	1
Naphthalene	<0.00033		0.0010	0.00033	mg/Kg			10/11/16 15:31	1
n-Butylbenzene	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
N-Propylbenzene	<0.00041		0.0010	0.00041	mg/Kg			10/11/16 15:31	1
p-Isopropyltoluene	<0.00036		0.0010	0.00036	mg/Kg			10/11/16 15:31	1

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

Lab Sample ID: MB 500-355499/6
Matrix: Solid
Analysis Batch: 355499

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.00040		0.0010	0.00040	mg/Kg			10/11/16 15:31	1
Styrene	<0.00039		0.0010	0.00039	mg/Kg			10/11/16 15:31	1
tert-Butylbenzene	<0.00040		0.0010	0.00040	mg/Kg			10/11/16 15:31	1
Tetrachloroethene	<0.00037		0.0010	0.00037	mg/Kg			10/11/16 15:31	1
Toluene	<0.00015		0.00025	0.00015	mg/Kg			10/11/16 15:31	1
trans-1,2-Dichloroethene	<0.00035		0.0010	0.00035	mg/Kg			10/11/16 15:31	1
trans-1,3-Dichloropropene	<0.00036		0.0010	0.00036	mg/Kg			10/11/16 15:31	1
Trichloroethene	<0.00016		0.00050	0.00016	mg/Kg			10/11/16 15:31	1
Trichlorofluoromethane	<0.00043		0.0010	0.00043	mg/Kg			10/11/16 15:31	1
Vinyl chloride	<0.00026		0.00050	0.00026	mg/Kg			10/11/16 15:31	1
Xylenes, Total	<0.00022		0.00050	0.00022	mg/Kg			10/11/16 15:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*71 - 127*		*10/11/16 15:31*	*1*
4-Bromofluorobenzene (Surr)	*92*		*71 - 120*		*10/11/16 15:31*	*1*
Dibromofluoromethane	*102*		*70 - 120*		*10/11/16 15:31*	*1*
Toluene-d8 (Surr)	*89*		*75 - 120*		*10/11/16 15:31*	*1*

Lab Sample ID: LCS 500-355499/4
Matrix: Solid
Analysis Batch: 355499

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.0500	0.0484		mg/Kg		97	68 - 125
1,1,1-Trichloroethane	0.0500	0.0454		mg/Kg		91	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0518		mg/Kg		104	68 - 125
1,1,2-Trichloroethane	0.0500	0.0468		mg/Kg		94	70 - 125
1,1-Dichloroethane	0.0500	0.0493		mg/Kg		99	70 - 125
1,1-Dichloroethene	0.0500	0.0501		mg/Kg		100	70 - 125
1,1-Dichloropropene	0.0500	0.0500		mg/Kg		100	70 - 125
1,2,3-Trichlorobenzene	0.0500	0.0490		mg/Kg		98	58 - 135
1,2,3-Trichloropropane	0.0500	0.0454		mg/Kg		91	63 - 125
1,2,4-Trichlorobenzene	0.0500	0.0471		mg/Kg		94	64 - 126
1,2,4-Trimethylbenzene	0.0500	0.0493		mg/Kg		99	70 - 125
1,2-Dibromo-3-Chloropropane	0.0500	0.0467		mg/Kg		93	51 - 125
1,2-Dibromoethane	0.0500	0.0457		mg/Kg		91	70 - 125
1,2-Dichlorobenzene	0.0500	0.0493		mg/Kg		99	70 - 125
1,2-Dichloroethane	0.0500	0.0518		mg/Kg		104	70 - 125
1,2-Dichloropropane	0.0500	0.0505		mg/Kg		101	70 - 125
1,3,5-Trimethylbenzene	0.0500	0.0490		mg/Kg		98	70 - 125
1,3-Dichlorobenzene	0.0500	0.0486		mg/Kg		97	70 - 125
1,3-Dichloropropane	0.0500	0.0504		mg/Kg		101	70 - 125
1,4-Dichlorobenzene	0.0500	0.0482		mg/Kg		96	70 - 125
2,2-Dichloropropane	0.0500	0.0433		mg/Kg		87	62 - 125
2-Chlorotoluene	0.0500	0.0498		mg/Kg		100	69 - 125
4-Chlorotoluene	0.0500	0.0501		mg/Kg		100	70 - 125
Benzene	0.0500	0.0462		mg/Kg		92	70 - 125
Bromobenzene	0.0500	0.0486		mg/Kg		97	70 - 125

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

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

Lab Sample ID: LCS 500-355499/4
Matrix: Solid
Analysis Batch: 355499

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromochloromethane	0.0500	0.0474		mg/Kg		95	70 - 125
Bromodichloromethane	0.0500	0.0474		mg/Kg		95	70 - 125
Bromoform	0.0500	0.0467		mg/Kg		93	54 - 128
Bromomethane	0.0500	0.0392		mg/Kg		78	40 - 150
Carbon tetrachloride	0.0500	0.0486		mg/Kg		97	70 - 125
Chlorobenzene	0.0500	0.0498		mg/Kg		100	70 - 125
Chloroethane	0.0500	0.0464		mg/Kg		93	60 - 139
Chloroform	0.0500	0.0480		mg/Kg		96	70 - 125
Chloromethane	0.0500	0.0537		mg/Kg		107	60 - 140
cis-1,2-Dichloroethene	0.0500	0.0438		mg/Kg		88	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0468		mg/Kg		94	70 - 125
Dibromochloromethane	0.0500	0.0474		mg/Kg		95	66 - 125
Dibromomethane	0.0500	0.0465		mg/Kg		93	70 - 125
Dichlorodifluoromethane	0.0500	0.0534		mg/Kg		107	51 - 140
Ethylbenzene	0.0500	0.0465		mg/Kg		93	70 - 125
Hexachlorobutadiene	0.0500	0.0568		mg/Kg		114	57 - 140
Isopropylbenzene	0.0500	0.0475		mg/Kg		95	70 - 125
Methyl tert-butyl ether	0.0500	0.0425		mg/Kg		85	67 - 125
Methylene Chloride	0.0500	0.0490		mg/Kg		98	68 - 125
Naphthalene	0.0500	0.0402		mg/Kg		80	50 - 136
n-Butylbenzene	0.0500	0.0507		mg/Kg		101	70 - 125
N-Propylbenzene	0.0500	0.0505		mg/Kg		101	70 - 125
p-Isopropyltoluene	0.0500	0.0480		mg/Kg		96	70 - 125
sec-Butylbenzene	0.0500	0.0490		mg/Kg		98	70 - 125
Styrene	0.0500	0.0475		mg/Kg		95	70 - 125
tert-Butylbenzene	0.0500	0.0495		mg/Kg		99	70 - 125
Tetrachloroethene	0.0500	0.0516		mg/Kg		103	70 - 125
Toluene	0.0500	0.0487		mg/Kg		97	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0464		mg/Kg		93	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0464		mg/Kg		93	70 - 125
Trichloroethene	0.0500	0.0493		mg/Kg		99	70 - 125
Trichlorofluoromethane	0.0500	0.0506		mg/Kg		101	60 - 126
Vinyl chloride	0.0500	0.0516		mg/Kg		103	70 - 126
Xylenes, Total	0.100	0.0945		mg/Kg		94	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 127*
4-Bromofluorobenzene (Surr)	*98*		*71 - 120*
Dibromofluoromethane	*96*		*70 - 120*
Toluene-d8 (Surr)	*95*		*75 - 120*

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-355189/1-A
Matrix: Solid
Analysis Batch: 355343

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.0081		0.067	0.0081	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
2-Methylnaphthalene	<0.0061		0.067	0.0061	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Acenaphthene	<0.0060		0.033	0.0060	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Acenaphthylene	<0.0044		0.033	0.0044	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Anthracene	<0.0056		0.033	0.0056	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Benzo[a]anthracene	<0.0045		0.033	0.0045	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Benzo[a]pyrene	<0.0064		0.033	0.0064	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Benzo[b]fluoranthene	<0.0072		0.033	0.0072	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Benzo[g,h,i]perylene	<0.011		0.033	0.011	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Benzo[k]fluoranthene	<0.0098		0.033	0.0098	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Chrysene	<0.0091		0.033	0.0091	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Dibenz(a,h)anthracene	<0.0064		0.033	0.0064	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Fluoranthene	<0.0062		0.033	0.0062	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Fluorene	<0.0047		0.033	0.0047	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Indeno[1,2,3-cd]pyrene	<0.0086		0.033	0.0086	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Naphthalene	<0.0051		0.033	0.0051	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Phenanthrene	<0.0046		0.033	0.0046	mg/Kg		10/07/16 18:00	10/10/16 11:13	1
Pyrene	<0.0066		0.033	0.0066	mg/Kg		10/07/16 18:00	10/10/16 11:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*42 - 115*	*10/07/16 18:00*	*10/10/16 11:13*	*1*
Nitrobenzene-d5 (Surr)	*88*		*33 - 124*	*10/07/16 18:00*	*10/10/16 11:13*	*1*
Terphenyl-d14 (Surr)	*135*		*25 - 150*	*10/07/16 18:00*	*10/10/16 11:13*	*1*

Lab Sample ID: LCS 500-355189/2-A
Matrix: Solid
Analysis Batch: 355343

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355189

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	1.33	1.11		mg/Kg		83	54 - 123
2-Methylnaphthalene	1.33	1.13		mg/Kg		84	55 - 120
Acenaphthene	1.33	1.25		mg/Kg		94	52 - 113
Acenaphthylene	1.33	1.21		mg/Kg		91	57 - 116
Anthracene	1.33	1.18		mg/Kg		88	57 - 118
Benzo[a]anthracene	1.33	1.19		mg/Kg		90	63 - 115
Benzo[a]pyrene	1.33	1.17		mg/Kg		88	64 - 122
Benzo[b]fluoranthene	1.33	1.18		mg/Kg		88	61 - 123
Benzo[g,h,i]perylene	1.33	1.04		mg/Kg		78	55 - 134
Benzo[k]fluoranthene	1.33	1.25		mg/Kg		93	59 - 125
Chrysene	1.33	1.15		mg/Kg		86	63 - 118
Dibenz(a,h)anthracene	1.33	1.06		mg/Kg		80	61 - 134
Fluoranthene	1.33	1.19		mg/Kg		89	61 - 124
Fluorene	1.33	1.25		mg/Kg		94	56 - 115
Indeno[1,2,3-cd]pyrene	1.33	1.07		mg/Kg		81	50 - 149
Naphthalene	1.33	1.15		mg/Kg		86	58 - 116
Phenanthrene	1.33	1.17		mg/Kg		87	58 - 125
Pyrene	1.33	1.16		mg/Kg		87	60 - 115

QC Sample Results

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-355189/2-A
Matrix: Solid
Analysis Batch: 355343

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355189

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	90		42 - 115
Nitrobenzene-d5 (Surr)	92		33 - 124
Terphenyl-d14 (Surr)	102		25 - 150

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-1A

Lab Sample ID: 500-118261-1
Matrix: Solid
Date Collected: 10/06/16 10:00
Date Received: 10/07/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355122	10/07/16 13:46	LWN	TAL CHI

Client Sample ID: BS-1A

Lab Sample ID: 500-118261-1
Matrix: Solid
Date Collected: 10/06/16 10:00
Date Received: 10/07/16 08:50
Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 10:00	WRE	TAL CHI
Total/NA	Analysis	8260B		100	355499	10/11/16 16:54	EMA	TAL CHI
Total/NA	Prep	3541			355189	10/07/16 18:00	DEA	TAL CHI
Total/NA	Analysis	8270D		1	355343	10/10/16 13:17	AJD	TAL CHI

Client Sample ID: BS-1B

Lab Sample ID: 500-118261-2
Matrix: Solid
Date Collected: 10/06/16 10:15
Date Received: 10/07/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355122	10/07/16 13:46	LWN	TAL CHI

Client Sample ID: BS-1B

Lab Sample ID: 500-118261-2
Matrix: Solid
Date Collected: 10/06/16 10:15
Date Received: 10/07/16 08:50
Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 10:15	WRE	TAL CHI
Total/NA	Analysis	8260B		50	355499	10/11/16 17:22	EMA	TAL CHI
Total/NA	Prep	3541			355189	10/07/16 18:00	DEA	TAL CHI
Total/NA	Analysis	8270D		1	355343	10/10/16 12:52	AJD	TAL CHI

Client Sample ID: BS-2A

Lab Sample ID: 500-118261-3
Matrix: Solid
Date Collected: 10/06/16 11:00
Date Received: 10/07/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355122	10/07/16 13:46	LWN	TAL CHI

Client Sample ID: BS-2A

Lab Sample ID: 500-118261-3
Matrix: Solid
Date Collected: 10/06/16 11:00
Date Received: 10/07/16 08:50
Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 11:00	WRE	TAL CHI

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-2A
Date Collected: 10/06/16 11:00
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-3
Matrix: Solid
Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	355499	10/11/16 17:49	EMA	TAL CHI
Total/NA	Prep	3541			355189	10/07/16 18:00	DEA	TAL CHI
Total/NA	Analysis	8270D		1	355509	10/11/16 19:34	GES	TAL CHI

Client Sample ID: BS-2B
Date Collected: 10/06/16 11:15
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355122	10/07/16 13:46	LWN	TAL CHI

Client Sample ID: BS-2B
Date Collected: 10/06/16 11:15
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-4
Matrix: Solid
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 11:15	WRE	TAL CHI
Total/NA	Analysis	8260B		50	355499	10/11/16 18:17	EMA	TAL CHI
Total/NA	Prep	3541			355189	10/07/16 18:00	DEA	TAL CHI
Total/NA	Analysis	8270D		1	355343	10/10/16 14:06	AJD	TAL CHI

Client Sample ID: BS-3A
Date Collected: 10/06/16 11:45
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355122	10/07/16 13:46	LWN	TAL CHI

Client Sample ID: BS-3A
Date Collected: 10/06/16 11:45
Date Received: 10/07/16 08:50

Lab Sample ID: 500-118261-5
Matrix: Solid
Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 11:45	WRE	TAL CHI
Total/NA	Analysis	8260B		50	355499	10/11/16 18:45	EMA	TAL CHI
Total/NA	Prep	3541			355189	10/07/16 18:00	DEA	TAL CHI
Total/NA	Analysis	8270D		20	355509	10/11/16 20:03	GES	TAL CHI

Lab Chronicle

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Client Sample ID: BS-4A

Lab Sample ID: 500-118261-6

Date Collected: 10/06/16 12:00

Matrix: Solid

Date Received: 10/07/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355122	10/07/16 13:46	LWN	TAL CHI

Client Sample ID: BS-4A

Lab Sample ID: 500-118261-6

Date Collected: 10/06/16 12:00

Matrix: Solid

Date Received: 10/07/16 08:50

Percent Solids: 82.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 12:00	WRE	TAL CHI
Total/NA	Analysis	8260B		50	355499	10/11/16 19:12	EMA	TAL CHI
Total/NA	Prep	3541			355189	10/07/16 18:00	DEA	TAL CHI
Total/NA	Analysis	8270D		1	355509	10/11/16 18:36	GES	TAL CHI

Client Sample ID: MeOH Blank

Lab Sample ID: 500-118261-7

Date Collected: 10/06/16 00:00

Matrix: Solid

Date Received: 10/07/16 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	355389	10/10/16 12:08	LWN	TAL CHI

Client Sample ID: MeOH Blank

Lab Sample ID: 500-118261-7

Date Collected: 10/06/16 00:00

Matrix: Solid

Date Received: 10/07/16 08:50

Percent Solids: 100.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			355298	10/06/16 00:00	WRE	TAL CHI
Total/NA	Analysis	8260B		50	355499	10/11/16 19:40	EMA	TAL CHI

Laboratory References:

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

Certification Summary

Client: American Engineering Testing Inc.
Project/Site: Marathon City Center - 03-06391

TestAmerica Job ID: 500-118261-1

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-17

Analysis Method	Prep Method	Matrix	Analyte

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-118261

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 4.4

Report To (optional)	Bill To (optional)
Contact:	Contact:
Company:	Company:
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail:	PO#/Reference# 18174017

500-118261 COC

Client	Client Project #	Preservative	9. NaOH	8	8
AET	03-06391				
Project Name: Marathon City Center		Parameter	VOCs	PAHs	Dry wt
Project Location/State: Marathon, WI	Lab Project #				
Sampler: Michael R. Neal	Lab PM: Sandie F				

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix				Comments
1		BS-1A	10-6-16	10:00	3	SO	X	X	X	
2		BS-1B		10:15	3	SO	X	X	X	
3		BS-2A		11:00	3	SO	X	X	X	
4		BS-2B		11:15	3	SO	X	X	X	
5		BS-3A		11:45	3	SO	X	X	X	
		~~BS-3B No Sample~~			~~3~~	~~SO~~				
6		BS-4A		12:40	3	SO	X	X	X	
		~~BS-4B No Sample~~			~~3~~	~~SO~~				
7		MeOH Blank					X			

Turnaround Time Required (Business Days)
___ 1 Day X 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date 10-12-16

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	AET	10-6-16	15:00	Fedx			
				James	TA	10/7/16	0850

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments: Not PFC FA

Lab Comments:

ORIGIN ID:EAUA (715) 861-5045
MICHAEL NEAL
1837 COUNTY HIGHWAY OO
CHIPPEWA FALLS, WI 54729
UNITED STATES US

SHIP DATE: 06OCT16
ACTWGT: 21.00 LB
CAD: 104342606/INET3790

BILL THIRD PARTY

TO **SAMPLE RECEIPT**
TEST AMERICA
2417 BOND STREET

UNIVERSITY PARK IL 60484
(708) 534-5200
INV:
PO:
REF:
DEPT:

500-118261 Waybill

544J1/E52E/14E8

FedEx Express

TRK# 0201 **7774 1135 0711**

FRI - 07 OCT 3:00P
STANDARD OVERNIGHT

NA JOTA

60484
ORD
IL-US

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: American Engineering Testing Inc. Job Number: 500-118261-1

Login Number: 118261 **List Source: TestAmerica Chicago**
List Number: 1
Creator: James, Jeff A

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	4.4
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix E

WDNR Direct Contact Worksheets

Geotech boring B-2A

1/1

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :

# of Soil-Concentration Entries: 19

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
3	0.5875	3.2E-05

Bottom-Line: NO! This NON-INDUSTRIAL site sampling location will need either further cleanup to lower contaminant levels or the construction of a cap/cover to address the direct-contact pathway.

Date of Entry: 9/27/2016.
Date of Worksheet Used: 12/11/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Benzene	71-43-2	111.	1.49	1.49	ca		0.087		0.0008	5.8E-08
Ethylbenzene	100-41-4	4,220.	7.47	7.47	ca		3.3		0.0008	4.4E-07
Toluene	108-88-3	5,300.	-	818.	Csat		0.52		0.0001	
Xylenes	1330-20-7	878.	-	260.	Csat		17.		0.0194	
Trimethylbenzene, 1,2,4-	95-63-6	89.8	-	89.8	nc		22.		0.245	
Trimethylbenzene, 1,3,5-	108-67-8	782.	-	182.	Csat		7.9		0.0101	
Naphthalene	91-20-3	188.	5.15	5.15	ca		26.	E	0.1383	5.0E-06
Acenaphthylene	208-96-8	-	-				1.8			
Benz[a]anthracene	56-55-3	-	0.147	0.147	ca		3.7	E		2.5E-05
Chrysene	218-01-9	-	14.8	14.8	ca		2.2			1.5E-07
Fluoranthene	206-44-0	2,290.	-	2,290.	nc		3.7		0.0016	
Fluorene	86-73-7	2,290.	-	2,290.	nc		1.1		0.0005	
Methylnaphthalene, 1-	90-12-0	4,010.	15.6	15.6	ca		24.	E	0.006	1.5E-06
Methylnaphthalene, 2-	91-57-6	229.	-	229.	nc		37.		0.1616	
Phenanthrene	85-01-8	-	-				4.5			
Pyrene	129-00-0	1,720.	-	1,720.	nc		3.4		0.002	
Butylbenzene, n-	104-51-8	3,910.	-	108.	Csat		5.		0.0013	
Butylbenzene, sec-	135-98-8	7,820.	-	145.	Csat		1.3		0.0002	
Isopropyltoluene, p-	99-87-6	-	-	162.	Csat		2.8			

BS-1A

1/1

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
Type BRRTS No. Here (If Known)

# of Soil-Concentration Entries: 16

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.1533	3.1E-07

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 10/13/2016.
Date of Worksheet Used: 12/11/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)		C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Ethylbenzene	100-41-4	4,220.		7.47	7.47	ca		0.33		0.0001	4.4E-08
Toluene	108-88-3	5,300.	-		818.	Csat		0.071		0.	
Xylenes	1330-20-7	878.	-		260.	Csat		4.3		0.0049	
Tetrachloroethylene	127-18-4	115.		30.7	30.7	ca		2.9		0.0252	9.4E-08
Trimethylbenzene, 1,2,4-	95-63-6	89.8	-		89.8	nc		10.		0.1114	
Trimethylbenzene, 1,3,5-	108-67-8	782.	-		182.	Csat		3.4		0.0043	
Naphthalene	91-20-3	188.		5.15	5.15	ca		0.75		0.004	1.5E-07
Chrysene	218-01-9	-		14.8	14.8	ca		0.099			6.7E-09
Fluoranthene	206-44-0	2,290.	-		2,290.	nc		0.04		0.	
Fluorene	86-73-7	2,290.	-		2,290.	nc		0.014		0.	
Methylnaphthalene, 1-	90-12-0	4,010.		15.6	15.6	ca		0.33		0.0001	2.1E-08
Methylnaphthalene, 2-	91-57-6	229.	-		229.	nc		0.58		0.0025	
Pyrene	129-00-0	1,720.	-		1,720.	nc		0.15		0.0001	
Butylbenzene, n-	104-51-8	3,910.	-		108.	Csat		1.6		0.0004	
Butylbenzene, sec-	135-98-8	7,820.	-		145.	Csat		0.73		0.0001	
Butylbenzene, tert-	98-06-6	7,820.	-		183.	Csat		1.		0.0001	

BS-2A

1/1

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS #:
Type BRRTS No. Here (If Known)

# of Soil-Concentration Entries: 12

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
1	0.0007	1.7E-06

Bottom-Line: NO! This NON-INDUSTRIAL site sampling location will need either further cleanup to lower contaminant levels or the construction of a cap/cover to address the direct-contact pathway.

Date of Entry: 10/13/2016.
Date of Worksheet Used: 12/11/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Xylenes	1330-20-7	878.	-	260.	Csat		0.029		0.	
Trimethylbenzene, 1,2,4-	95-63-6	89.8	-	89.8	nc		0.036		0.0004	
Naphthalene	91-20-3	188.	5.15	5.15	ca		0.022		0.0001	4.3E-09
Benzo[a]pyrene	50-32-8	-	0.015	0.015	ca		0.02	E		1.4E-06
Benz[a]anthracene	56-55-3	-	0.147	0.147	ca		0.014			9.5E-08
Benzo[b]fluoranthene	205-99-2	-	0.148	0.148	ca		0.042			2.8E-07
Benzo[k]fluoranthene	207-08-9	-	1.48	1.48	ca		0.013			8.8E-09
Chrysene	218-01-9	-	14.8	14.8	ca		0.028			1.9E-09
Fluoranthene	206-44-0	2,290.	-	2,290.	nc		0.038		0.	
Methylnaphthalene, 1-	90-12-0	4,010.	15.6	15.6	ca		0.016		0.	1.0E-09
Methylnaphthalene, 2-	91-57-6	229.	-	229.	nc		0.02		0.0001	
Pyrene	129-00-0	1,720.	-	1,720.	nc		0.039		0.	

B-3A

1/1

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS #:
Type BRRTS No. Here (If Known)

# of Soil-Concentration Entries: 12

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0085	2.3E-07

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 10/13/2016.
Date of Worksheet Used: 12/11/2015

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Toluene	108-88-3	5,300.	-	818.	Csat		0.028		0.	
Xylenes	1330-20-7	878.	-	260.	Csat		0.068		0.0001	
Trimethylbenzene, 1,2,4-	95-63-6	89.8	-	89.8	nc		0.16		0.0018	
Trimethylbenzene, 1,3,5-	108-67-8	782.	-	182.	Csat		0.07		0.0001	
Naphthalene	91-20-3	188.	5.15	5.15	ca		0.59		0.0031	1.1E-07
Acenaphthylene	208-96-8	-	-				0.11			
Chrysene	218-01-9	-	14.8	14.8	ca		0.74			5.0E-08
Fluoranthene	206-44-0	2,290.	-	2,290.	nc		0.41		0.0002	
Fluorene	86-73-7	2,290.	-	2,290.	nc		0.11		0.	
Methylnaphthalene, 1-	90-12-0	4,010.	15.6	15.6	ca		1.		0.0002	6.4E-08
Methylnaphthalene, 2-	91-57-6	229.	-	229.	nc		0.5		0.0022	
Pyrene	129-00-0	1,720.	-	1,720.	nc		1.3		0.0008	

BS-4A

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS #:
Type BRRTS No. Here (If Known)

# of Soil-Concentration Entries: 17

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
3	0.0005	1.4E-05

Bottom-Line: NO! This NON-INDUSTRIAL site sampling location will need either further cleanup to lower contaminant levels or the construction of a cap/cover to address the direct-contact pathway.

Date of Entry: 10/13/2016.
Date of Worksheet Used: 12/11/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Naphthalene	91-20-3	188.	5.15	5.15	ca		0.014		0.0001	2.7E-09
Benzo[a]pyrene	50-32-8	-	0.015	0.015	ca		0.15	E		1.0E-05
Acenaphthylene	208-96-8	-	-				0.027			
Anthracene	120-12-7	17,200.	-	17,200.	nc		0.029		0.	
Benz[a]anthracene	56-55-3	-	0.147	0.147	ca		0.14			9.5E-07
Benzo[b]fluoranthene	205-99-2	-	0.148	0.148	ca		0.22	E		1.5E-06
Benzo[g,h,i]perylene	191-24-2	-	-				0.057			
Benzo[k]fluoranthene	207-08-9	-	1.48	1.48	ca		0.082			5.5E-08
Chrysene	218-01-9	-	14.8	14.8	ca		0.18			1.2E-08
Dibenz[a,h]anthracene	53-70-3	-	0.015	0.015	ca		0.02	E		1.4E-06
Fluoranthene	206-44-0	2,290.	-	2,290.	nc		0.26		0.0001	
Fluorene	86-73-7	2,290.	-	2,290.	nc		0.014		0.	
Indeno[1,2,3-cd]pyrene	193-39-5	-	0.148	0.148	ca		0.064			4.3E-07
Methylnaphthalene, 1-	90-12-0	4,010.	15.6	15.6	ca		0.014		0.	9.0E-10
Methylnaphthalene, 2-	91-57-6	229.	-	229.	nc		0.014		0.0001	
Phenanthrene	85-01-8	-	-				0.19			
Pyrene	129-00-0	1,720.	-	1,720.	nc		0.33		0.0002	