GILES
ENGINEERING ASSOCIATES, INC.
GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

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August 3, 2016

Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Madison, Wisconsin 53711-5397

Attention: Ms. Janet DiMaggio

Subject: Investigation Update
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
BRRTS No. 02-13-552179
Giles Project No. 1E-1105024

Dear Ms. DiMaggio:

Giles Engineering Associates, Inc. (Giles) prepared this investigation update in response to your letter (dated June 29, 2016) to the operator of the above referenced facility, Mr. Mark Woppert. The purpose of this letter is to summarize the findings of the investigative activities conducted since the last submittal (dated April 25, 2014), which presented the results of on-site and off-site sub-slab soil vapor and indoor air sampling. The additional activities included the installation and development of five groundwater monitoring wells, and the collection of one round of groundwater samples.

MONITORING WELL INSTALLATION AND SOIL SAMPLING

Giles Engineering Associates, Inc. (Giles) oversaw the installation of five monitoring wells (MW-1 through MW-5) between August 26 and 28, 2014. Monitoring well MW-1 was completed in the northeast corner of the parking lot, near the front door of Smoke-Out Cleaners. Monitoring well MW-2 was completed near a sanitary sewer manhole located in the northwestern portion of the parking lot. The remaining wells (MW-3, MW-4 and MW-5) were installed north, east and south of the Smoke-Out facility, respectively. The site location is shown on Figure 1, and the monitoring well locations are depicted on Figure 2.

Hollow stem auger drilling methods were used to complete the soil borings. Soil samples were collected continuously during the drilling of borings MW-1, MW-2, MW-3 and a portion of MW-4, using a 2-foot long 2-inch outside diameter spilt-spoon sampler. However, due to mechanical problems with the rig's hammer, MW-5 and the lower portion of boring MW-4 were blind drilled (i.e. no split spoon samplers were driven). Soil cuttings generated from the borings were placed in a roll-off dumpster, and were transported by Waste Management (WM) to their Madison Prairie facility for disposal. WM approved a profile for disposal of the soil cuttings based upon volatile organic compounds (VOCs) analytical data from previous soil samples collected near the dry cleaning machine.

A Giles geologist prepared a boring log for each borehole on which the soil samples were described. In addition, a portion of each soil sample was field screened for the presence of organic vapors using a photoionization detector (PID) equipped with a 10.6 electron-volt lamp. The PID readings were recorded on the boring logs, which are presented as Attachment A.

A two-inch diameter polyvinyl chloride (PVC) monitoring well, with a 15-foot factory-slotted screen, was installed in each of the borings. The construction forms for monitoring wells MW-1 through MW-5 are included as Attachment B.

Three soil samples, one each from boring MW-1, MW-2 and MW-3, were submitted for laboratory analysis of VOCs by SW846 Method 8260. These samples were collected from near the groundwater interface. Soil samples from borings MW-4 and MW-5 were not submitted for laboratory analysis because mechanical issues prevented the collection of discreet split-spoon soil samples from these borings. The soil laboratory analytical report is included as Attachment C, and the results summarized on the attached Table 1.

GROUNDWATER SAMPLING

Following development of the monitoring wells (on September 3, 2014), Giles collected groundwater samples from the five monitoring wells (MW-1 through MW-5) on September 5, 2014. New disposable polyethylene bailers were used to collect the groundwater samples. The samples were submitted for VOC analysis. The laboratory analytical report is included as Attachment D, and the results are summarized on the attached Table 2.

INVESTIGATIVE RESULTS

Site Geology and Hydrogeology

The subsurface soil observed beneath the Site consisted primarily of silt and very fine sand with varying amounts of clay. Approximately four inches of asphalt underlain by approximately eight inches of base course sand and gravel was encountered during the completion of borings MW-1 through MW-5. In three of the borings (MW-1, MW-3, and MW-4), silty clay or sandy clay was present beneath the base course to depths ranging to 4 to 14 feet bgs. This material was underlain by very fine sand and clayey sand to depths of 17 and 10 feet bgs, respectively in borings MW-1 and MW-3. Silt and very fine sand comprised the bottom 27 to 34.5 feet In borings MW-1 and MW-3. In boring MW-2, the base course was underlain by fine to coarse sand to 9.5 feet bgs. This material was underlain by sandy or silty clay or clayey silt to 26 feet bgs. Sandy silt and fine to coarse sand were present from 26 to 48.5 feet bgs, the maximum depth explored. Due to mechanical problems with the rig's hammer, boring MW-5 and the lower part of boring MW-4 (below 16 feet bgs) were blind drilled. Detailed soil descriptions are included on the soil boring logs included in Attachment A.

Groundwater water levels were measured prior to groundwater sampling on September 5, 2014.The depth to water ranged from approximately 28.5 to 33.4 feet below the top of casing. Based on the water level data, groundwater appears to flow toward the northwest (Figure 3).

Soil Field Screening

A PID was used to conduct in-field organic vapor screening, and the PID readings were recorded on the soil boring logs. Review of the soil boring logs indicates that organic vapors were not detected in the soil samples from borings MW-2 and MW-4 which were screened. The PID readings in the samples from borings MW-1 and MW-3 ranged from 0 to 16.5 instrument units. Since soil samples were not collected from boring MW-5 and the lower portion of boring MW-4, no field screening was conducted for these intervals.

Soil Analytical Results

One soil sample per boring was collected during the drilling of borings MW-1, MW-2 and MW-3. These soil samples were submitted for laboratory VOC analysis. A copy of the laboratory report and chain of custody are included in Attachment C, and the soil analytical results are summarized on Table 1.

Review of the soil analytical results indicates that tetrachloroethene (PCE) was detected above NR 720 groundwater protection residual contaminant levels (RCLs) in soil samples MW-1(32-34) and MW-3(30-32). The concentration of PCE in these samples was 280 and 94 micrograms per kilogram (µg/kg), respectively. Based on the proximity of the water table to the depths at which these samples were collected, these samples may represent soil within the smear zone.

Groundwater Analytical Results

Groundwater samples were collected from the five monitoring wells ((MW-1 through MW-5) on September 5, 2014, and submitted for VOCs analysis.

Review of the groundwater analytical results for MW-1, located near the front door of the Smoke-Out facility, indicates that the concentrations of PCE, cis-1,2-dichloroethene (cis-1,2-DCE) and trichloroethene (TCE) exceeded their NR 140 Enforcement Standards (ESs). Those same three VOCs were detected in the groundwater sample from monitoring well MW-3. PCE was detected above its ES, and the other two compounds exceeded their NR 140 Preventive Action Limit (PAL). In addition, the concentration of PCE in the groundwater sample from monitoring well MW-5 exceeded its PAL.

Recommendations

Based on the analytical results, Giles recommends that an additional round of groundwater samples be collected to evaluate current conditions.

If you have any questions, please contact either me or Kevin Bugel at (262) 544-0118.

Respectfully submitted,

GILES ENGINEERING ASSOCIATES, INC.

Stephen M. Owens, P.G.
Project Manager

Kevin T. Bugel, P.G., C.P.G.
Environmental Division Manager

ATTACHMENTS / ENCLOSURES:

FIGURES

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Flow Map (9-2-14)

TABLES

Table 1	Soil Analytical Results (Detected VOCs)
Table 2:	Groundwater Analytical Results (Detected VOCs)

Attachment A	Soil Boring Logs
Attachment B	Monitoring Well Construction Forms
Attachment C	Soil Laboratory Analytical Report
Attachment D	Groundwater Laboratory Analytical Report

Distribution: Wisconsin Department of Natural Resources
Attn: Ms. Janet DiMaggio (1 by USPS)
Smoke-Out Cleaners
Attn: Mr. Mark Woppert (1 by email: mark@smoke-out.net; 1 by USPS)
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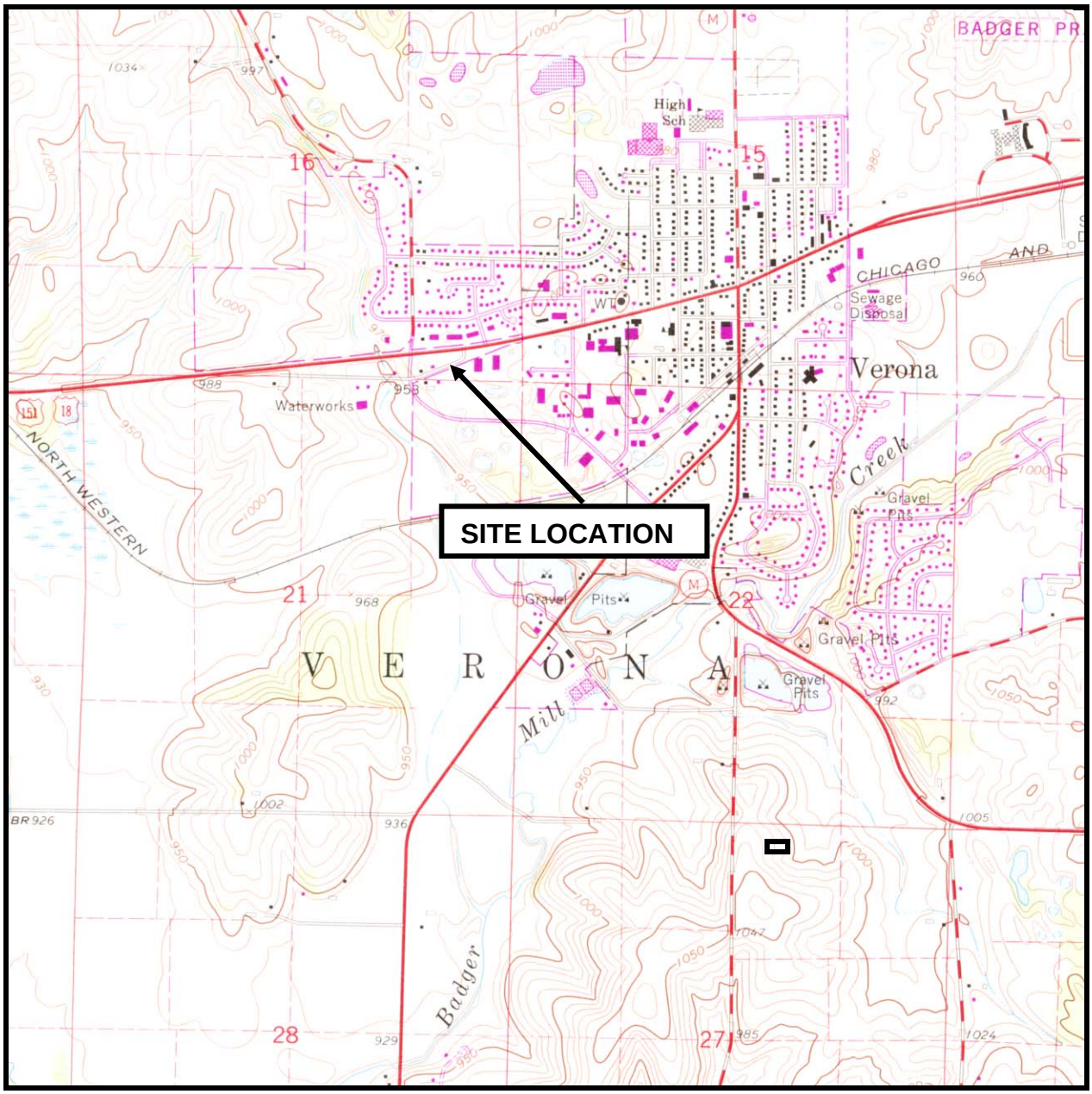

Source: USGS 7.5 Minute Series (Topographic) *Verona, Wisconsin* Quadrangle Map (1962, photo-revised 1982)

Scale: 1:24,000
Contour Interval: 10 feet

N
W E
S

FIGURE 1
SITE LOCATION MAP

Smoke-Out Cleaners
535 Half Mile Road
Verona, WI
Project No. 1E-1105024

GILES ENGINEERING ASSOCIATES, INC.

BETHKE HEATING & AIR CONDITIONING (SEE FIGURE 3C)

ATKINS VERONA BICYCLE SHOPPE (SEE FIGURE 3D)

HOLIDAY INN EXPRESS

SEMI-TRAILER PARKING (HAYES TRANSPORT, INC.)

KARATE AMERICA (SEE FIGURE 3B)

THE CHURCH IN VERONA

SCHULTZ VENDING

FOCUS ADVISORS

VACANT

ROOTER EXPRESS

PATCH STOR.

SHED

TRASH ENCLOSURE

SMOKE-OUT FACILITY

DRY CLEANING MACHINE

FORMER DUMPSTER AREA

RAMP UP

WALL

HALLWAY

OH DOOR

EXTENT OF SMOKE-OUT FACILITY

ASPHALT

GRASS

SIDEWALK

CONC.

MW-1
MW-2
MW-3
MW-4
MW-5

HP-1
HP-2

GP-1

SS-1
SS-2
SS-3
SS-4
SS-5
SS-12

IA-2

N
W
E
S

0 15 30

APPROXIMATE SCALE

LEGEND:

- MW-1 — GROUNDWATER MONITORING WELL
- HP-1 — HAND PROBE SOIL BORING
- GP-1 — DIRECT-PUSH SOIL BORING
- SS-1 — SUBSLAB AIR SAMPLE
- IA-1 — INDOOR AIR SAMPLE
- PROPERTY LINE
- FENCE
- LIGHT POLE
- FIRE HYDRANT
- MANHOLE
- UE — UNDERGROUND ELECTRIC LINE
- W — WATER LINE
- FIRE HYDRANT
- SN — SANITARY SEWER LINE
- ST — STORM SEWER LINE
- T — TELECOMMUNICATIONS LINE
- MANHOLE
- G — GAS LINE

NOTES:

1.) BASE MAP IS APPROXIMATE AND BASED ON AERIAL PHOTOGRAPHY AND FIELD OBSERVATIONS.

2.) UTILITIES ARE APPROXIMATE AND MAY NEED TO BE FIELD VERIFIED.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 2
SITE PLAN
SMOKE-OUT CLEANERS AND VERONA BUSINESS CENTRE
535 HALF MILE ROAD
VERONA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
SMO	JSZ	approx. 1"=30'	04-08-14	08-29-14
PROJECT NO.: 1E-1105024			CAD No. 1E1105024A4	

BETHKE HEATING & AIR CONDITIONING (SEE FIGURE 3C)

GRASS

ATKINS VERONA BICYCLE SHOPPE (SEE FIGURE 3D)

HOLIDAY INN EXPRESS

N

W E

S

0 15 30

APPROXIMATE SCALE

ASPHALT

(64.04) MW-3

OH DOOR

OH DOOR

SMOKE-OUT FACILITY

FORMER DUMPSTER AREA

SEMI-TRAILER PARKING (HAYES TRANSPORT, INC.)

SHED

ASPHALT

GRASS

RAMP UP

WALL

(64.90) MW-4

DRY CLEANING MACHINE

OH DOOR

SIDEWALK

(63.48) MW-2

63.5

(63.86) MW-1

GRASS

HALLWAY

SMOKE-OUT FACILITY

GRASS

ASPHALT

EXTENT OF SMOKE-OUT FACILITY

64.0

64.5

65.0

SIDEWALK

VACANT

VACANT

SIDEWALK

GRASS

SIDEWALK

GRASS

KARATE AMERICA (SEE FIGURE 3B)

GRASS

VACANT

ROOTER EXPRESS

OH DOOR

THE CHURCH IN VERONA

SCHULTZ VENDING

FOCUS ADVISORS

VACANT

PATCH STOR.

OH DOOR

OH DOOR

MW-5 (65.04)

CONC.

ASPHALT

TRASH ENCLOSURE

ASPHALT

GRASS

ASPHALT

LEGEND:

- 64.5 — GROUNDWATER CONTOUR INTERVAL = 0.5'
- GROUNDWATER FLOW DIRECTION
- (64.90) — GROUNDWATER ELEVATION (IN FEET REFERENCED TO ARBITRARY BENCHMARK)
- MW-1 — GROUNDWATER MONITORING WELL
- PROPERTY LINE
- FENCE
- LIGHT POLE
- FIRE HYDRANT
- MANHOLE
- UE — UNDERGROUND ELECTRIC LINE
- W — WATER LINE
- FIRE HYDRANT
- SN — SANITARY SEWER LINE
- ST — STORM SEWER LINE
- T — TELECOMMUNICATIONS LINE
- MANHOLE
- G — GAS LINE

NOTES:

1.) BASE MAP IS APPROXIMATE AND BASED ON AERIAL PHOTOGRAPHY AND FIELD OBSERVATIONS.

2.) UTILITIES ARE APPROXIMATE AND MAY NEED TO BE FIELD VERIFIED.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 2
GROUNDWATER FLOW MAP (9-5-14)
SMOKE-OUT CLEANERS AND VERONA BUSINESS CENTRE
535 HALF MILE ROAD
VERONA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
SMO	JSZ	approx. 1"=30'	07-28-16	--

PROJECT NO.: 1E-1105024 CAD No. 1E1105024D

TABLE 1
SOIL ANALYTICAL RESULTS
(DETECTED VOCs)
Smoke-Out Cleaners
535 Half Mile Road
Verona, Wisconsin
1E-1105024

Analyte	Sample Location									NR 720 Residual Contaminant Levels (RCLs)[1]	
	GP-1		HP-1		HP-2		MW-1	MW-2	MW-3		
Sample Depth (feet)	2-4	18-20	4-6	12-14	4-6	12-14	32-34	40-42	30-32	**Direct Contact Pathway (Non-Industrial)**	**Soil to Goundwater Pathway**
Sample Date	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/27/14	8/26/14	8/27/14		
PID	<5	<5	266	40.3	209.5	964	<5	<5	<5		
Detected VOCs (µg/kg)											
cis-1,2-Dichloroethene	<29	<30	**1,400**	**320**	**1,400**	**170**	<7.3	<7.3	<7.3	**156,000**	**41.2**
Tetrachloroethene (PCE)	<29	<30	**34,000**	**10,000**	**7,600**	**2,800**	**280**	<9.9	**94**	**30,700**	**4.5**
Trichloroethene (TCE)	<29	<30	<280	**26**	**79**	<27	<11	<25	<11	**1,260**	**3.6**

NOTES:

***** : Wisconsin Adminiarative Code Natural Resources Chapter (NR) 720 RCLs from WDNR RCL Spreadsheet (updated June 2016)

PID: Photoionization Detector

VOCs: Volatile Organic Compounds

µg/kg: Micrograms per kilogram; equivalent to parts per billion (ppb)

J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

Results shown in red/underline exceed the RCL for Soil to Groundwater Pathway

Results shown in (green/parentheses) exceed the Non-Industrial Direct Contact RCLs (applies to 0 to 4 feet below ground surface)

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
(DETECTED VOCs)
Smoke-Out Clenaers
535 Half Mile Road
Verona, Wisconsin
Project No. 1E-1105024

Analyte	Sample Location					NR 140[1] PAL (µg/L)	NR 140[1] ES (µg/L)
	MW-1	MW-2	MW-3	MW-4	MW-5		
Sample Date	9/5/14	9/5/14	9/5/14	9/5/14	9/5/14		
Detected VOCs (µg/L)							
cis-1,2-Dichloroethene	**120**	<0.12	***(57)***	<0.12	<0.12	**7**	**70**
Toluene	<0.55	0.25 J	<0.11	<0.11	<0.11	**160**	**800**
Tetrachloroethene	**2,800**	<0.17	**56**	<0.17	***(2.5)***	**0.5**	**5**
Trichloroethene	**25**	<0.19	***(2.8)***	<0.19	<0.19	**0.5**	**5**

NOTES:

(1): Wisconsin Administrative Code Natural Resources Chapter (NR) 140

ES: Enforcement Standard

PAL: Preventive Action Limit

VOCs: Volatile Organic Compounds

µg/L: Micrograms per Liter; equivalent to parts per billion (ppb)

J: Result is less than the reporting limit but greater than the method detection limit and the concentration is an approxima

Concentrations expressed in (Italics / Blue / Parentheses) exceed NR 140 Preventive Action Limit

Concentrations expressed in Red / Underine exceed NR 140 Enforcement Standard

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/27/2014	8/27/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-1	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1-SS	24/0		1	Asphalt and Base Course Sand and Gravel										
				Greenish Brown Silty Clay with trace rootlets - Moist				0						
2-SS	24/11		2		CL									
			3					0.6						
3-SS	24/13		4											
			5	Tan very fine Sand - Moist				0						
4-SS	24/18		6		SP									
			7	Brown Clayey Sand with trace Orange staining - Moist	SC			3.0						
5-SS	24/16		8	Tan Silt and very fine Sand with little to trace Clay and trace Gravel - Moist										
			9					4.9						
6-SS	24/14		10		ML									
			11					6.5						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
Stephen Owens	Giles Engineering Associates, Inc. N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186	Tel: 262-544-0118 Fax: 262-549-5868

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $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 be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-1 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
7-SS	24/20		13	Brown Clayey very fine Sand with little to trace Gravel and trace Orange mottling - Moist				11.3						
8-SS	24/18		14		SC									
			15					7.8						
9-SS	24/24		16											
			17	Brown to Tan Silt and very fine Sand with trace Clay and dolomite rock chips - Moist				10.5						
10-SS	24/16		18											
			19					7.9						
11-SS	24/19		20											
			21					14.2						
12-SS	24/0		22											
			23											
13-SS	24/20		24		ML									
			25					6.7						
14-SS	24/20		26											
			27					8.1						
15-SS	24/22		28											
			29					8.8						
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-1 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			33	Brown to Tan Silt and very fine Sand with trace Clay and dolomite rock chips - Moist *(continued)*										
			34	Wet at 34 feet										
			35											
			36											
			37											
			38		ML									
			39											
			40											
			41											
			42											
			43											
			44											
				Borings Terminated at 44.5 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/26/2014	8/26/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-2	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Asphalt, fine to coarse Gravel										
1-SS	10/24		2	Tan fine to coarse Sand, some Silt, trace fine Gravel - Moist	SP			0						
2-SS	14/24		4					0						
3-SS	11/24		6					0						
4-SS	18/24		8					0						
5-SS	18/24		10	Tan fine to coarse grained Sandy Clay - Moist	SC									
			11	Tan Clayey Silt, soft, Gray and rust colored mottling - Moist	CL			0						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Lee M Wilson Jr. Firm Giles Engineering Associates, Inc.
N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186
Tel: 262-544-0118 Fax: 262-549-5868

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $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 be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

Boring Number MW-2 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
6-SS	24/24		13	Tan Clayey Silt, soft, Gray and rust colored mottling - Moist *(continued)*	CL			0						
7-SS	19/24		14	Tan fine to coarse grained Sandy Clay with Gray mottling - Moist	SC									
8-SS	16/24		15	Tan Silty Clay, some fine to coarse Sand, trace fine gravel - Moist				0						
9-SS	6/24		16											
10-SS	0/24		17					0						
11-SS	18/24		18	Increases in Gravel										
12-SS	24/24		19					0						
13-SS	10/24		20		CL									
14-SS	24/24		21					0						
15-SS	0/24		22											
			23	fine to medium grained Gravel seam				0						
			24											
			25					0						
			26	Tan Sandy Silt, fine to coarse grained, trace fine Gravel, Gray mottling - Moist										
			27					0						
			28		SM									
			29					0						
			30	Tan fine to coarse grained Sandy Silt, trace fine Gravel - Moist										
			31		SM			0						
			32											

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A

Boring Number MW-2 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
16-SS	18/24		33	Tan fine to coarse grained Sandy Silt, trace fine Gravel - Moist *(continued)*	SM			0						
17-SS	16/24		34 35	Tan fine to coarse Sand, Gray Mottling - Moist				0						
18-SS	13/24		36 37	some fine Gravel				0						
19-SS	12/24		38 39	some rust colored mottling				0						
20-SS	14/24		40 41		SW			0						
21-SS	6/24		42 43	Wet				0						
22-SS	24/24		44 45					0						
23-SS	/24		46 47					0						
24-SS	/24		48											
				Borings Terminated at 48.5 feet				0						

Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/27/2014	8/27/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-3	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Asphalt and Base Course Sand and Gravel										
1-SS	24/10		2	Dark Brown to Gray Silty or Sandy Clay and very fine Sand with little Clay and trace Gravel - Moist				0.5						
2-SS	24/12		4		CL			0.8						
3-SS	24*22		6											
			7	Tan very fine Sand - Moist				1.1						
4-SS	24/19		8		SP									
			9	Brown Clayey Sand - Moist				1.9						
5-SS	24/17		10		SC									
			11	Tan to Brown and Gray Silt with some to trace very fine Sand, locally with little Clay and trace Gravel - Moist	ML			3.4						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-544-0118
Stephen Owen	Giles Engineering Associates, Inc. N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186	Fax: 262-549-5868

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Boring Number MW-3 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
6-SS	24/22		13	Tan to Brown and Gray Silt with some to trace very fine Sand, locally with little Clay and trace Gravel - Moist *(continued)*				8.0						
7-SS	24/22		14		ML									
			15					12.2						
8-SS	24/19		16											
			17					13.0						
9-SS	24/24		18											
			19					2.0						
10-SS	24/17		20											
			21					13.1						
11-SS	24/22		22	trace dolomite rock chips										
			23					16.5						
12-SS	24/14		24		ML									
			25					2.7						
13-SS	24/15		26											
			27					3.0						
14-SS	24/21		28											
			29					7.4						
15-SS	24/16		30	Wet										
			31					6.8						
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-3 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
16-SS	24/19		33	Tan to Brown and Gray Silt with some to trace very fine Sand, locally with little Clay and trace Gravel - Moist *(continued)*				1.9						
17-SS	24/13		34											
			35					0.8						
18-SS	24/13		36											
			37					0.6						
19-SS	24/17		38		ML									
			39					1.7						
20-SS	24/19		40											
			41					0.3						
21-SS	24/9		42											
			43					0.9						
			44											
				Borings Terminated at 44.5 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/28/2014	8/28/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-4	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Asphalt and Base Course Sand and Gravel										
			2	Brown to Dark Brown Silty Clay with trace to little very fine Sand, locally trace Gravel - Moist										
1-SS	24/20		3					0						
2-SS	24/24		4											
			5					0						
3-SS	24/24		6		CL									
			7					0						
4-SS	24/14		8		SW									
			9	2" Brown very fine to medium Sand with trace Gravel - Moist				0						
5-SS	24/13		10											
			11	6" Brown very fine to medium Sand with trace Gravel - Moist	CL			0						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-544-0118
Stephen Owens	Giles Engineering Associates, Inc. N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186	Fax: 262-549-5868

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SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-4 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
6-SS	24/7		13	Brown to Dark Brown Silty Clay with trace to little very fine Sand, locally trace Gravel - Moist *(continued)*	CL			0						
7-SS	24/0		14	No recovery; Drilling on boulder										
			15											
			16	Remainder of boring blind drilled due to mechanical problem with motor for rig's hammer										
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-4 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			33	Remainder of boring blind drilled due to mechanical problem with motor for rig's hammer *(continued)*										
			34											
			35											
			36											
			37											
			38											
			39											
			40	Borings Terminated at 40 feet										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Smoke-Out Cleaners (1E-1105024)		MW-5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Beaufort Jones Giles Engineering Associates, Inc.	8/28/2014	8/28/2014	Hollow-Stem Auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-5	Feet MSL	Feet MSL	8.25 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 16, T 6 N, R 8E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Verona

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drilled due to mechanical problem with rig's hammer.										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel: 262-544-0118
Stephen Owens	Giles Engineering Associates, Inc. N8 W22350 Johnson Drive Suite A1 Waukesha, WI 53186	Fax: 262-549-5868

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-5 Use only as an attachment to Form 4400-122.

Sample										Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			13	Blind drilled due to mechanical problem with rig's hammer. *(continued)*										
			14											
			15											
			16											
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-5 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			33	Blind drilled due to mechanical problem with rig's hammer. *(continued)*										
			34											
			35											
			36											
			37											
			38											
			39											
			40											
			41											
			42	Borings Terminated at 42 feet										

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105024

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 08/27/2014 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16 T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ ____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 1.5 ft.

F. Fine sand, top ____ ft. MSL or 27.5 ft.

G. Filter pack, top ____ ft. MSL or 28.5 ft.

H. Screen joint, top ____ ft. MSL or 29.5 ft.

I. Well bottom ____ ft. MSL or 44.5 ft.

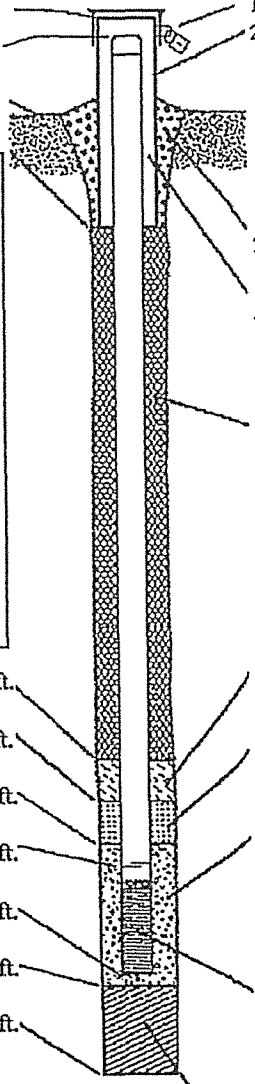
J. Filter pack, bottom ____ ft. MSL or 44.5 ft.

K. Borehole, bottom ____ ft. MSL or 44.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ ____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ ____

4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 / Other ☐ ____

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. ____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. ____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐ ____

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ ____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ ____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 / Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens | Firm: Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105084

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-2
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 08/26/2014 (m m d d y y y y)
Type of Well — Well Code: 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16 T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ ____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ____ ft. MSL or 1.5 ft.

F. Fine sand, top ____ ft. MSL or 31.5 ft.

G. Filter pack, top ____ ft. MSL or 32.5 ft.

H. Screen joint, top ____ ft. MSL or 33.5 ft.

I. Well bottom ____ ft. MSL or 48.5 ft.

J. Filter pack, bottom ____ ft. MSL or 48.5 ft.

K. Borehole, bottom ____ ft. MSL or 48.5 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ ____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ ____

4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 / Other ☐ ____

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. ____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. ____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐ ____

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ ____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ ____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 / Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens | Firm: Giles Engineering Associates, Inc.

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State of Wisconsin
Department of Natural Resources
IE-1105084

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-3
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VQ718 / DNR Well ID No.:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 08/27/2014 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16 T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

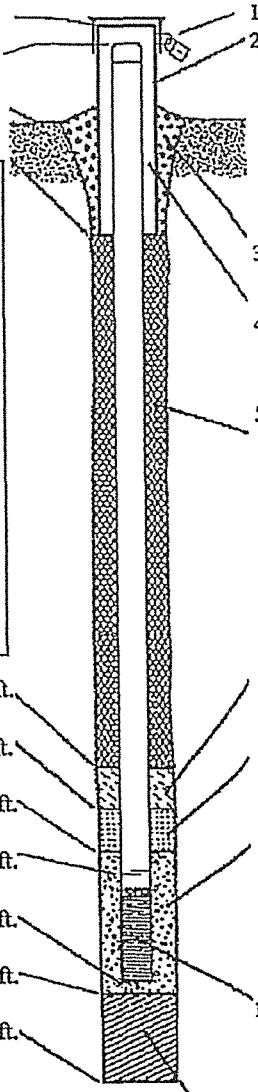
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ _____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.
F. Fine sand, top _____ ft. MSL or 27.5 ft.
G. Filter pack, top _____ ft. MSL or 28.5 ft.
H. Screen joint, top _____ ft. MSL or 29.5 ft.
I. Well bottom _____ ft. MSL or 44.5 ft.
J. Filter pack, bottom _____ ft. MSL or 44.5 ft.
K. Borehole, bottom _____ ft. MSL or 44.5 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.375 in.
N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐ _____
4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 / Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐ _____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens | Firm: Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105084

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well ☐N. ☐S. ft. ☐E. ☐W. ft.	Well Name: MW-4
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VQ719 / DNR Well ID No.
Facility ID	St. Plane ft. N, ft. E. S/C/N	Date Well Installed: 08/28/2014 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16 T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 23 ft.

G. Filter pack, top _____ ft. MSL or 24 ft.

H. Screen joint, top _____ ft. MSL or 25 ft.

I. Well bottom _____ ft. MSL or 40 ft.

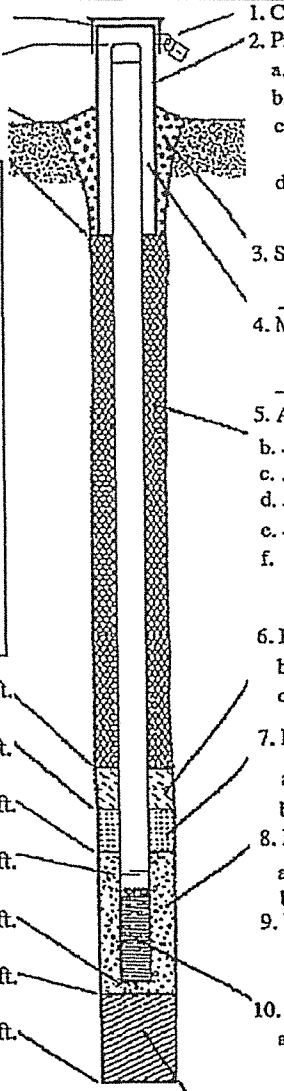
J. Filter pack, bottom _____ ft. MSL or 40 ft.

K. Borehole, bottom _____ ft. MSL or 40 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / Other ☐

4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 / Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 10-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 / Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Stephen Owens | Firm: Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

IE-1105084

Facility/Project Name: Smoke-Out Cleaners	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-5
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: VQ720 / DNR Well ID No.:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 08/28/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 16, T. 6 N, R. 8 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Beaufort Jones / Giles Engineering Associates, Inc.
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐ ____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 1.5 ft.

F. Fine sand, top _____ ft. MSL or 25 ft.

G. Filter pack, top _____ ft. MSL or 26 ft.

H. Screen joint, top _____ ft. MSL or 27 ft.

I. Well bottom _____ ft. MSL or 42 ft.

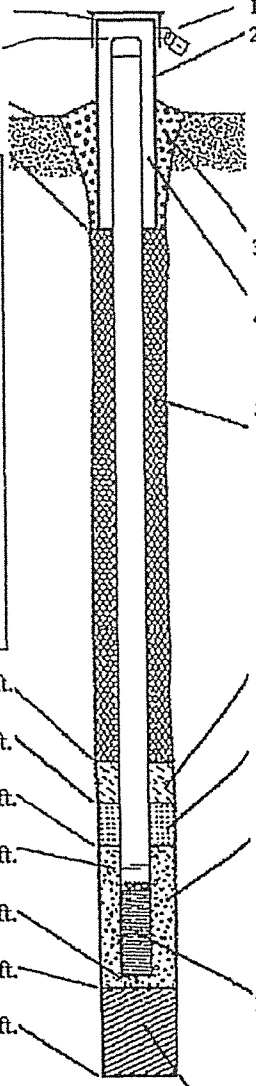
J. Filter pack, bottom _____ ft. MSL or 42 ft.

K. Borehole, bottom _____ ft. MSL or 42 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.375 in.

N. I.D. well casing 2.067 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: Flush Mount
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 Other ☐ ____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 30 Concrete ☒ 01 Other ☐ ____

4. Material between well casing and protective pipe: Fine Sand
Bentonite ☐ 30 Other ☐ ____

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. ____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. ____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐ ____

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 1-50# bag ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 9-50# bags ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐ ____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐ ____
b. Manufacturer Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15 ft.

11. Backfill material (below filter pack): None ☒ 14 Other ☐ ____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Stephen Owens	Giles Engineering Associates, Inc.

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	_____	___

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other _____	☐	

3. Time spent developing well 32 min.

4. Depth of well (from top of well casisng) 44.0 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 13.5 gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	32.78 ft.	43.95 ft.
Date b. (mm dd yyyy)	09/03/2014	09/03/2014
Time c.	11:26 ☒ a.m. ☐ p.m.	14:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-2
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / _____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 60 min.

4. Depth of well (from top of well casisng) 46.0 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 30.5 gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 33.32 ft.	46.00 ft.
Date	b. 09/03/2014 (m m d d y y y y)	09/03/2014 (m m d d y y y y)
Time	c. 10:15 ☒ a.m. ☐ p.m.	11:15 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) medium	Clear ☐ 20 Turbid ☒ 25 (Describe) low-medium
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-3

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	_____	___

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 25 min.

4. Depth of well (from top of well casisng) 42.2 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 160.0 gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 33.35 ft.	42.18 ft.
Date	b. 09/03/2014 (mm/dd/yyyy)	09/03/2014 (mm/dd/yyyy)
Time	c. 13:15 ☐ a.m. ☒ p.m.	15:15 ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-4
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / ___

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other _____	☐	

3. Time spent developing well 43 min.

4. Depth of well (from top of well casisng) 39.5 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 160. gal.

8. Volume of water added (if any) ___.__ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	28.56 ft.	39.53 ft.
Date b. (m m d d y y y y)	09/03/2014	09/03/2014
Time c.	12:51 ☐ a.m. ☒ p.m.	14:55 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) low	Clear ☐ 20 Turbid ☒ 25 (Describe) low
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐ _____

Facility/Project Name	County Name	Well Name
Smoke-Out Cleaners	Dane	MW-5
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	13	_____ / _____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well ___15___ min.

4. Depth of well (from top of well casisng) __413__ ft.

5. Inside diameter of well __2.07__ in.

6. Volume of water in filter pack and well casing ___.___ gal.

7. Volume of water removed from well __7.0__ gal.

8. Volume of water added (if any) ___.___ gal.

9. Source of water added _____

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☐ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 31.84 ft.	41.27 ft.
Date	b. 09/03/2014 (m m d d y y y y)	09/03/2014
Time	c. 14:08 ☐ a.m. ☒ p.m.	14:23 ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.___ inches	___.___ inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.___ mg/l	____.___ mg/l
15. COD	____.___ mg/l	____.___ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Lee Last Name: Wilson
Firm: Giles Engineering Associates, Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Mark Last Name: Woppert
Facility/Firm: Smoke-Out Cleaners
Street: 535 Half Mile Road
City/State/Zip: Verona, WI 53593

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Stephen Owens
Print Name: Stephen Owens
Firm: Giles Engineering Associates, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

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: 500-83251-1
Client Project/Site: Smoke-Out Cleaners 1E-1105024

For:
Giles Engineering Associates
N8 W 22350 Johnson Road
Waukesha, Wisconsin 53186

Attn: Mr. Steve Owens

Sandie Fredrick

Authorized for release by:
9/5/2014 3:49:43 PM

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

Table of Contents

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Job ID: 500-83251-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-83251-1

Comments
No additional comments.

Receipt
The samples were received on 8/29/2014 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.6º C. ON ICE

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

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

Detection Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Client Sample ID: MW-2 (40-42) — Lab Sample ID: 500-83251-1

No Detections.

Client Sample ID: MW-1 (32-34) — Lab Sample ID: 500-83251-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	280		59	9.9	ug/Kg	50	☼	8260B	Total/NA

Client Sample ID: MW-3 (30-32) — Lab Sample ID: 500-83251-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	94		60	10	ug/Kg	50	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile 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: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-83251-1	MW-2 (40-42)	Solid	08/26/14 13:35	08/29/14 10:30
500-83251-2	MW-1 (32-34)	Solid	08/27/14 11:30	08/29/14 10:30
500-83251-3	MW-3 (30-32)	Solid	08/27/14 14:30	08/29/14 10:30

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Client Sample ID: MW-2 (40-42)
Date Collected: 08/26/14 13:35
Date Received: 08/29/14 10:30

Lab Sample ID: 500-83251-1
Matrix: Solid
Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,1,1-Trichloroethane	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,1,2,2-Tetrachloroethane	<14		59	14	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,1,2-Trichloroethane	<17		59	17	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,1-Dichloroethane	<11		59	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,1-Dichloroethene	<18		59	18	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,1-Dichloropropene	<20		59	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2,3-Trichlorobenzene	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2,3-Trichloropropane	<34		120	34	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2,4-Trichlorobenzene	<22		120	22	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2,4-Trimethylbenzene	<13		120	13	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2-Dibromo-3-Chloropropane	<52		120	52	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2-Dibromoethane	<19		120	19	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2-Dichlorobenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2-Dichloroethane	<17		59	17	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,2-Dichloropropane	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,3,5-Trimethylbenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,3-Dichlorobenzene	<15		120	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,3-Dichloropropane	<8.0		59	8.0	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
1,4-Dichlorobenzene	<10		120	10	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
2,2-Dichloropropane	<19		59	19	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
2-Chlorotoluene	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
4-Chlorotoluene	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Benzene	<4.4		15	4.4	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Bromobenzene	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Bromochloromethane	<22		120	22	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Bromodichloromethane	<20		120	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Bromoform	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Bromomethane	<40		120	40	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Carbon tetrachloride	<15		59	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Chlorobenzene	<8.5		59	8.5	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Chloroethane	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Chloroform	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Chloromethane	<27		120	27	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
cis-1,2-Dichloroethene	<7.3		59	7.3	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
cis-1,3-Dichloropropene	<11		59	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Dibromochloromethane	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Dibromomethane	<28		120	28	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Dichlorodifluoromethane	<30		120	30	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Ethylbenzene	<7.5		15	7.5	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Hexachlorobutadiene	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Isopropyl ether	<8.7		120	8.7	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Isopropylbenzene	<15		120	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Methyl tert-butyl ether	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Methylene Chloride	<41		300	41	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Naphthalene	<29		120	29	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
n-Butylbenzene	<7.7		59	7.7	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
N-Propylbenzene	<10		120	10	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
p-Isopropyltoluene	<11		120	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Client Sample ID: MW-2 (40-42)

Lab Sample ID: 500-83251-1

Date Collected: 08/26/14 13:35
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<9.1		59	9.1	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Styrene	<5.9		59	5.9	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
tert-Butylbenzene	<8.1		59	8.1	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Tetrachloroethene	<9.9		59	9.9	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Toluene	<6.8		15	6.8	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
trans-1,2-Dichloroethene	<15		59	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
trans-1,3-Dichloropropene	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Trichloroethene	<11		30	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Trichlorofluoromethane	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Vinyl chloride	<6.2		15	6.2	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50
Xylenes, Total	<4.1		30	4.1	ug/Kg	☼	08/27/14 09:15	09/03/14 18:29	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 125*	*08/27/14 09:15*	*09/03/14 18:29*	*50*
4-Bromofluorobenzene (Surr)	*114*		*75 - 120*	*08/27/14 09:15*	*09/03/14 18:29*	*50*
Dibromofluoromethane	*93*		*75 - 120*	*08/27/14 09:15*	*09/03/14 18:29*	*50*
Toluene-d8 (Surr)	*98*		*75 - 120*	*08/27/14 09:15*	*09/03/14 18:29*	*50*

Client Sample ID: MW-1 (32-34)

Lab Sample ID: 500-83251-2

Date Collected: 08/27/14 11:30
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<20		120	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,1,1-Trichloroethane	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,1,2,2-Tetrachloroethane	<14		59	14	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,1,2-Trichloroethane	<16		59	16	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,1-Dichloroethane	<11		59	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,1-Dichloroethene	<18		59	18	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,1-Dichloropropene	<20		59	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2,3-Trichlorobenzene	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2,3-Trichloropropane	<34		120	34	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2,4-Trichlorobenzene	<22		120	22	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2,4-Trimethylbenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2-Dibromo-3-Chloropropane	<51		120	51	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2-Dibromoethane	<19		120	19	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2-Dichlorobenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2-Dichloroethane	<17		59	17	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,2-Dichloropropane	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,3,5-Trimethylbenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,3-Dichlorobenzene	<15		120	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,3-Dichloropropane	<7.9		59	7.9	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
1,4-Dichlorobenzene	<10		120	10	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
2,2-Dichloropropane	<19		59	19	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
2-Chlorotoluene	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
4-Chlorotoluene	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Benzene	<4.4		15	4.4	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Bromobenzene	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Bromochloromethane	<22		120	22	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50

Client Sample ID: MW-1 (32-34)

Lab Sample ID: 500-83251-2

Date Collected: 08/27/14 11:30
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<20		120	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Bromoform	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Bromomethane	<40		120	40	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Carbon tetrachloride	<15		59	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Chlorobenzene	<8.5		59	8.5	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Chloroethane	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Chloroform	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Chloromethane	<27		120	27	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
cis-1,2-Dichloroethene	<7.3		59	7.3	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
cis-1,3-Dichloropropene	<11		59	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Dibromochloromethane	<20		120	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Dibromomethane	<28		120	28	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Dichlorodifluoromethane	<30		120	30	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Ethylbenzene	<7.4		15	7.4	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Hexachlorobutadiene	<20		120	20	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Isopropyl ether	<8.7		120	8.7	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Isopropylbenzene	<15		120	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Methyl tert-butyl ether	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Methylene Chloride	<40		300	40	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Naphthalene	<29		120	29	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
n-Butylbenzene	<7.6		59	7.6	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
N-Propylbenzene	<10		120	10	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
p-Isopropyltoluene	<11		120	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
sec-Butylbenzene	<9.1		59	9.1	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Styrene	<5.8		59	5.8	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
tert-Butylbenzene	<8.0		59	8.0	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Tetrachloroethene	**280**		59	9.9	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Toluene	<6.8		15	6.8	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
trans-1,2-Dichloroethene	<15		59	15	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
trans-1,3-Dichloropropene	<12		59	12	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Trichloroethene	<11		30	11	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Trichlorofluoromethane	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Vinyl chloride	<6.1		15	6.1	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50
Xylenes, Total	<4.0		30	4.0	ug/Kg	☼	08/27/14 09:15	09/03/14 18:54	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 125*	*08/27/14 09:15*	*09/03/14 18:54*	*50*
4-Bromofluorobenzene (Surr)	*115*		*75 - 120*	*08/27/14 09:15*	*09/03/14 18:54*	*50*
Dibromofluoromethane	*91*		*75 - 120*	*08/27/14 09:15*	*09/03/14 18:54*	*50*
Toluene-d8 (Surr)	*99*		*75 - 120*	*08/27/14 09:15*	*09/03/14 18:54*	*50*

Client Sample ID: MW-3 (30-32)

Lab Sample ID: 500-83251-3

Date Collected: 08/27/14 14:30
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,1,1-Trichloroethane	<12		60	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,1,2,2-Tetrachloroethane	<14		60	14	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Client Sample ID: MW-3 (30-32)
Date Collected: 08/27/14 14:30
Date Received: 08/29/14 10:30

Lab Sample ID: 500-83251-3
Matrix: Solid
Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<17		60	17	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,1-Dichloroethane	<11		60	11	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,1-Dichloroethene	<18		60	18	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,1-Dichloropropene	<21		60	21	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2,3-Trichlorobenzene	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2,3-Trichloropropane	<34		120	34	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2,4-Trichlorobenzene	<23		120	23	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2,4-Trimethylbenzene	<13		120	13	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2-Dibromo-3-Chloropropane	<52		120	52	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2-Dibromoethane	<19		120	19	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2-Dichlorobenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2-Dichloroethane	<17		60	17	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,2-Dichloropropane	<12		60	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,3,5-Trimethylbenzene	<12		120	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,3-Dichlorobenzene	<15		120	15	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,3-Dichloropropane	<8.0		60	8.0	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
1,4-Dichlorobenzene	<10		120	10	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
2,2-Dichloropropane	<19		60	19	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
2-Chlorotoluene	<12		60	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
4-Chlorotoluene	<12		60	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Benzene	<4.4		15	4.4	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Bromobenzene	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Bromochloromethane	<23		120	23	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Bromodichloromethane	<20		120	20	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Bromoform	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Bromomethane	<41		120	41	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Carbon tetrachloride	<15		60	15	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Chlorobenzene	<8.5		60	8.5	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Chloroethane	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Chloroform	<12		60	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Chloromethane	<28		120	28	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
cis-1,2-Dichloroethene	<7.3		60	7.3	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
cis-1,3-Dichloropropene	<11		60	11	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Dibromochloromethane	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Dibromomethane	<29		120	29	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Dichlorodifluoromethane	<31		120	31	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Ethylbenzene	<7.5		15	7.5	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Hexachlorobutadiene	<21		120	21	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Isopropyl ether	<8.8		120	8.8	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Isopropylbenzene	<15		120	15	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Methyl tert-butyl ether	<26		120	26	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Methylene Chloride	<41		300	41	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Naphthalene	<30		120	30	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
n-Butylbenzene	<7.7		60	7.7	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
N-Propylbenzene	<10		120	10	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
p-Isopropyltoluene	<11		120	11	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
sec-Butylbenzene	<9.2		60	9.2	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Styrene	<5.9		60	5.9	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
tert-Butylbenzene	<8.1		60	8.1	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Client Sample ID: MW-3 (30-32)
Date Collected: 08/27/14 14:30
Date Received: 08/29/14 10:30

Lab Sample ID: 500-83251-3
Matrix: Solid
Percent Solids: 91.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	94		60	10	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Toluene	<6.9		15	6.9	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
trans-1,2-Dichloroethene	<15		60	15	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
trans-1,3-Dichloropropene	<12		60	12	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Trichloroethene	<11		30	11	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Trichlorofluoromethane	<25		120	25	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Vinyl chloride	<6.2		15	6.2	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50
Xylenes, Total	<4.1		30	4.1	ug/Kg	☼	08/27/14 09:15	09/03/14 19:19	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 125*	*08/27/14 09:15*	*09/03/14 19:19*	*50*
4-Bromofluorobenzene (Surr)	*116*		*75 - 120*	*08/27/14 09:15*	*09/03/14 19:19*	*50*
Dibromofluoromethane	*90*		*75 - 120*	*08/27/14 09:15*	*09/03/14 19:19*	*50*
Toluene-d8 (Surr)	*100*		*75 - 120*	*08/27/14 09:15*	*09/03/14 19:19*	*50*

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: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

GC/MS VOA

Prep Batch: 252434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-83251-1	MW-2 (40-42)	Total/NA	Solid	5035	
500-83251-2	MW-1 (32-34)	Total/NA	Solid	5035	
500-83251-3	MW-3 (30-32)	Total/NA	Solid	5035	
LB3 500-252434/19-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 252675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-83251-1	MW-2 (40-42)	Total/NA	Solid	8260B	252434
500-83251-2	MW-1 (32-34)	Total/NA	Solid	8260B	252434
500-83251-3	MW-3 (30-32)	Total/NA	Solid	8260B	252434
LB3 500-252434/19-A	Method Blank	Total/NA	Solid	8260B	252434
LCS 500-252675/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 500-252675/7	Method Blank	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 252301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-83251-1	MW-2 (40-42)	Total/NA	Solid	Moisture	
500-83251-2	MW-1 (32-34)	Total/NA	Solid	Moisture	
500-83251-3	MW-3 (30-32)	Total/NA	Solid	Moisture	

Surrogate Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-125)	(75-120)	(75-120)	(75-120)
500-83251-1	MW-2 (40-42)	93	114	93	98
500-83251-2	MW-1 (32-34)	92	115	91	99
500-83251-3	MW-3 (30-32)	91	116	90	100
LB3 500-252434/19-A	Method Blank	92	116	91	96
LCS 500-252675/5	Lab Control Sample	85	108	89	106
MB 500-252675/7	Method Blank	90	114	89	98

Surrogate Legend

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

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

Lab Sample ID: LB3 500-252434/19-A
Matrix: Solid
Analysis Batch: 252675

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 252434

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<17		100	17	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,1,1-Trichloroethane	<10		50	10	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,1,2,2-Tetrachloroethane	<12		50	12	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,1,2-Trichloroethane	<14		50	14	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,1-Dichloroethane	<9.3		50	9.3	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,1-Dichloroethene	<15		50	15	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,1-Dichloropropene	<17		50	17	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2,3-Trichlorobenzene	<18		100	18	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2,3-Trichloropropane	<29		100	29	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2,4-Trichlorobenzene	<19		100	19	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2,4-Trimethylbenzene	<11		100	11	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2-Dibromo-3-Chloropropane	<44		100	44	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2-Dibromoethane	<16		100	16	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2-Dichlorobenzene	<10		100	10	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2-Dichloroethane	<14		50	14	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,2-Dichloropropane	<9.8		50	9.8	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,3,5-Trimethylbenzene	<10		100	10	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,3-Dichlorobenzene	<13		100	13	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,3-Dichloropropane	<6.7		50	6.7	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
1,4-Dichlorobenzene	<8.7		100	8.7	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
2,2-Dichloropropane	<16		50	16	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
2-Chlorotoluene	<10		50	10	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
4-Chlorotoluene	<9.9		50	9.9	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Benzene	<3.7		13	3.7	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Bromobenzene	<21		100	21	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Bromochloromethane	<19		100	19	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Bromodichloromethane	<17		100	17	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Bromoform	<22		100	22	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Bromomethane	<34		100	34	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Carbon tetrachloride	<13		50	13	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Chlorobenzene	<7.2		50	7.2	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Chloroethane	<22		100	22	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Chloroform	<10		50	10	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Chloromethane	<23		100	23	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
cis-1,2-Dichloroethene	<6.2		50	6.2	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
cis-1,3-Dichloropropene	<8.9		50	8.9	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Dibromochloromethane	<17		100	17	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Dibromomethane	<24		100	24	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Dichlorodifluoromethane	<26		100	26	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Ethylbenzene	<6.3		13	6.3	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Hexachlorobutadiene	<17		100	17	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Isopropyl ether	<7.4		100	7.4	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Isopropylbenzene	<13		100	13	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Methyl tert-butyl ether	<22		100	22	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Methylene Chloride	<34		250	34	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Naphthalene	<25		100	25	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
n-Butylbenzene	<6.5		50	6.5	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
N-Propylbenzene	<8.8		100	8.8	ug/Kg		08/31/14 15:50	09/03/14 19:44	50

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

Lab Sample ID: LB3 500-252434/19-A
Matrix: Solid
Analysis Batch: 252675

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 252434

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<9.3		100	9.3	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
sec-Butylbenzene	<7.7		50	7.7	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Styrene	<4.9		50	4.9	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
tert-Butylbenzene	<6.8		50	6.8	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Tetrachloroethene	<8.4		50	8.4	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Toluene	<5.8		13	5.8	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
trans-1,2-Dichloroethene	<13		50	13	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
trans-1,3-Dichloropropene	<10		50	10	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Trichloroethene	<9.3		25	9.3	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Trichlorofluoromethane	<21		100	21	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Vinyl chloride	<5.2		13	5.2	ug/Kg		08/31/14 15:50	09/03/14 19:44	50
Xylenes, Total	<3.4		25	3.4	ug/Kg		08/31/14 15:50	09/03/14 19:44	50

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 125*	*08/31/14 15:50*	*09/03/14 19:44*	*50*
4-Bromofluorobenzene (Surr)	*116*		*75 - 120*	*08/31/14 15:50*	*09/03/14 19:44*	*50*
Dibromofluoromethane	*91*		*75 - 120*	*08/31/14 15:50*	*09/03/14 19:44*	*50*
Toluene-d8 (Surr)	*96*		*75 - 120*	*08/31/14 15:50*	*09/03/14 19:44*	*50*

Lab Sample ID: MB 500-252675/7
Matrix: Solid
Analysis Batch: 252675

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	<0.35		2.0	0.35	ug/Kg			09/03/14 11:26	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/Kg			09/03/14 11:26	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/Kg			09/03/14 11:26	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/Kg			09/03/14 11:26	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/Kg			09/03/14 11:26	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/Kg			09/03/14 11:26	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/Kg			09/03/14 11:26	1
1,2,3-Trichlorobenzene	<0.35		2.0	0.35	ug/Kg			09/03/14 11:26	1
1,2,3-Trichloropropane	<0.57		2.0	0.57	ug/Kg			09/03/14 11:26	1
1,2,4-Trichlorobenzene	<0.38		2.0	0.38	ug/Kg			09/03/14 11:26	1
1,2,4-Trimethylbenzene	<0.21		2.0	0.21	ug/Kg			09/03/14 11:26	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/Kg			09/03/14 11:26	1
1,2-Dibromoethane	<0.31		2.0	0.31	ug/Kg			09/03/14 11:26	1
1,2-Dichlorobenzene	<0.21		2.0	0.21	ug/Kg			09/03/14 11:26	1
1,2-Dichloroethane	<0.29		1.0	0.29	ug/Kg			09/03/14 11:26	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/Kg			09/03/14 11:26	1
1,3,5-Trimethylbenzene	<0.21		2.0	0.21	ug/Kg			09/03/14 11:26	1
1,3-Dichlorobenzene	<0.26		2.0	0.26	ug/Kg			09/03/14 11:26	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/Kg			09/03/14 11:26	1
1,4-Dichlorobenzene	<0.17		2.0	0.17	ug/Kg			09/03/14 11:26	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/Kg			09/03/14 11:26	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/Kg			09/03/14 11:26	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/Kg			09/03/14 11:26	1
Benzene	<0.074		0.25	0.074	ug/Kg			09/03/14 11:26	1

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

Lab Sample ID: MB 500-252675/7
Matrix: Solid
Analysis Batch: 252675

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	<0.43		2.0	0.43	ug/Kg			09/03/14 11:26	1
Bromochloromethane	<0.38		2.0	0.38	ug/Kg			09/03/14 11:26	1
Bromodichloromethane	<0.34		2.0	0.34	ug/Kg			09/03/14 11:26	1
Bromoform	<0.44		2.0	0.44	ug/Kg			09/03/14 11:26	1
Bromomethane	<0.68		2.0	0.68	ug/Kg			09/03/14 11:26	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/Kg			09/03/14 11:26	1
Chlorobenzene	<0.14		1.0	0.14	ug/Kg			09/03/14 11:26	1
Chloroethane	<0.44		2.0	0.44	ug/Kg			09/03/14 11:26	1
Chloroform	<0.21		1.0	0.21	ug/Kg			09/03/14 11:26	1
Chloromethane	<0.46		2.0	0.46	ug/Kg			09/03/14 11:26	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/Kg			09/03/14 11:26	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/Kg			09/03/14 11:26	1
Dibromochloromethane	<0.35		2.0	0.35	ug/Kg			09/03/14 11:26	1
Dibromomethane	<0.48		2.0	0.48	ug/Kg			09/03/14 11:26	1
Dichlorodifluoromethane	<0.51		2.0	0.51	ug/Kg			09/03/14 11:26	1
Ethylbenzene	<0.13		0.25	0.13	ug/Kg			09/03/14 11:26	1
Hexachlorobutadiene	<0.35		2.0	0.35	ug/Kg			09/03/14 11:26	1
Isopropyl ether	<0.15		2.0	0.15	ug/Kg			09/03/14 11:26	1
Isopropylbenzene	<0.25		2.0	0.25	ug/Kg			09/03/14 11:26	1
Methyl tert-butyl ether	<0.43		2.0	0.43	ug/Kg			09/03/14 11:26	1
Methylene Chloride	<0.68		5.0	0.68	ug/Kg			09/03/14 11:26	1
Naphthalene	<0.49		2.0	0.49	ug/Kg			09/03/14 11:26	1
n-Butylbenzene	<0.13		1.0	0.13	ug/Kg			09/03/14 11:26	1
N-Propylbenzene	<0.18		2.0	0.18	ug/Kg			09/03/14 11:26	1
p-Isopropyltoluene	<0.19		2.0	0.19	ug/Kg			09/03/14 11:26	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/Kg			09/03/14 11:26	1
Styrene	<0.099		1.0	0.099	ug/Kg			09/03/14 11:26	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/Kg			09/03/14 11:26	1
Tetrachloroethene	<0.17		1.0	0.17	ug/Kg			09/03/14 11:26	1
Toluene	<0.12		0.25	0.12	ug/Kg			09/03/14 11:26	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/Kg			09/03/14 11:26	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/Kg			09/03/14 11:26	1
Trichloroethene	<0.19		0.50	0.19	ug/Kg			09/03/14 11:26	1
Trichlorofluoromethane	<0.42		2.0	0.42	ug/Kg			09/03/14 11:26	1
Vinyl chloride	<0.10		0.25	0.10	ug/Kg			09/03/14 11:26	1
Xylenes, Total	<0.068		0.50	0.068	ug/Kg			09/03/14 11:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 125*		*09/03/14 11:26*	*1*
4-Bromofluorobenzene (Surr)	*114*		*75 - 120*		*09/03/14 11:26*	*1*
Dibromofluoromethane	*89*		*75 - 120*		*09/03/14 11:26*	*1*
Toluene-d8 (Surr)	*98*		*75 - 120*		*09/03/14 11:26*	*1*

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

Lab Sample ID: LCS 500-252675/5
Matrix: Solid
Analysis Batch: 252675

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	50.0	52.3		ug/Kg		105	75 - 122
1,1,1-Trichloroethane	50.0	44.4		ug/Kg		89	72 - 130
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/Kg		100	72 - 130
1,1,2-Trichloroethane	50.0	49.0		ug/Kg		98	75 - 120
1,1-Dichloroethane	50.0	42.4		ug/Kg		85	75 - 120
1,1-Dichloroethene	50.0	44.0		ug/Kg		88	69 - 120
1,1-Dichloropropene	50.0	43.1		ug/Kg		86	75 - 130
1,2,3-Trichlorobenzene	50.0	57.9		ug/Kg		116	69 - 131
1,2,3-Trichloropropane	50.0	50.9		ug/Kg		102	65 - 132
1,2,4-Trichlorobenzene	50.0	56.9		ug/Kg		114	73 - 130
1,2,4-Trimethylbenzene	50.0	53.7		ug/Kg		107	75 - 121
1,2-Dibromo-3-Chloropropane	50.0	49.7		ug/Kg		99	62 - 130
1,2-Dibromoethane	50.0	48.4		ug/Kg		97	78 - 122
1,2-Dichlorobenzene	50.0	53.4		ug/Kg		107	75 - 120
1,2-Dichloroethane	50.0	41.6		ug/Kg		83	69 - 130
1,2-Dichloropropane	50.0	41.5		ug/Kg		83	75 - 120
1,3,5-Trimethylbenzene	50.0	53.9		ug/Kg		108	75 - 121
1,3-Dichlorobenzene	50.0	54.0		ug/Kg		108	75 - 120
1,3-Dichloropropane	50.0	47.3		ug/Kg		95	77 - 124
1,4-Dichlorobenzene	50.0	53.5		ug/Kg		107	75 - 120
2,2-Dichloropropane	50.0	47.2		ug/Kg		94	65 - 132
2-Chlorotoluene	50.0	53.0		ug/Kg		106	75 - 120
4-Chlorotoluene	50.0	53.4		ug/Kg		107	75 - 120
Benzene	50.0	41.8		ug/Kg		84	75 - 120
Bromobenzene	50.0	53.2		ug/Kg		106	75 - 120
Bromochloromethane	50.0	41.1		ug/Kg		82	76 - 120
Bromodichloromethane	50.0	41.1		ug/Kg		82	77 - 121
Bromoform	50.0	50.3		ug/Kg		101	68 - 126
Bromomethane	50.0	47.0		ug/Kg		94	45 - 169
Carbon tetrachloride	50.0	43.4		ug/Kg		87	70 - 130
Chlorobenzene	50.0	51.7		ug/Kg		103	75 - 120
Chloroethane	50.0	46.5		ug/Kg		93	58 - 147
Chloroform	50.0	42.4		ug/Kg		85	76 - 120
Chloromethane	50.0	45.6		ug/Kg		91	63 - 133
cis-1,2-Dichloroethene	50.0	43.7		ug/Kg		87	75 - 120
cis-1,3-Dichloropropene	50.0	49.4		ug/Kg		99	78 - 130
Dibromochloromethane	50.0	49.4		ug/Kg		99	71 - 126
Dibromomethane	50.0	39.3		ug/Kg		79	75 - 120
Dichlorodifluoromethane	50.0	46.9		ug/Kg		94	41 - 146
Ethylbenzene	50.0	51.4		ug/Kg		103	75 - 120
Hexachlorobutadiene	50.0	59.7		ug/Kg		119	71 - 131
Isopropylbenzene	50.0	54.7		ug/Kg		109	75 - 121
Methyl tert-butyl ether	50.0	40.3		ug/Kg		81	75 - 130
Methylene Chloride	50.0	44.0		ug/Kg		88	73 - 130
Naphthalene	50.0	55.0		ug/Kg		110	69 - 135
n-Butylbenzene	50.0	56.2		ug/Kg		112	75 - 121
N-Propylbenzene	50.0	54.3		ug/Kg		109	75 - 120
p-Isopropyltoluene	50.0	55.2		ug/Kg		110	75 - 121

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

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

Lab Sample ID: LCS 500-252675/5
Matrix: Solid
Analysis Batch: 252675

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
sec-Butylbenzene			50.0	55.0		ug/Kg		110	75 - 120		
Styrene			50.0	52.4		ug/Kg		105	75 - 120		
tert-Butylbenzene			50.0	55.0		ug/Kg		110	75 - 123		
Tetrachloroethene			50.0	53.8		ug/Kg		108	75 - 120		
Toluene			50.0	51.3		ug/Kg		103	75 - 120		
trans-1,2-Dichloroethene			50.0	41.9		ug/Kg		84	77 - 120		
trans-1,3-Dichloropropene			50.0	47.4		ug/Kg		95	74 - 130		
Trichloroethene			50.0	43.6		ug/Kg		87	75 - 120		
Trichlorofluoromethane			50.0	47.4		ug/Kg		95	71 - 130		
Vinyl chloride			50.0	44.6		ug/Kg		89	72 - 123		
Xylenes, Total			100	104		ug/Kg		104	75 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*75 - 125*
4-Bromofluorobenzene (Surr)	*108*		*75 - 120*
Dibromofluoromethane	*89*		*75 - 120*
Toluene-d8 (Surr)	*106*		*75 - 120*

Lab Chronicle

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

Client Sample ID: MW-2 (40-42)

Lab Sample ID: 500-83251-1

Date Collected: 08/26/14 13:35
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			252434	08/27/14 09:15	WRE	TAL CHI
Total/NA	Analysis	8260B		50	252675	09/03/14 18:29	BDA	TAL CHI
Total/NA	Analysis	Moisture		1	252301	08/29/14 14:20	LWN	TAL CHI

Client Sample ID: MW-1 (32-34)

Lab Sample ID: 500-83251-2

Date Collected: 08/27/14 11:30
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			252434	08/27/14 09:15	WRE	TAL CHI
Total/NA	Analysis	8260B		50	252675	09/03/14 18:54	BDA	TAL CHI
Total/NA	Analysis	Moisture		1	252301	08/29/14 14:20	LWN	TAL CHI

Client Sample ID: MW-3 (30-32)

Lab Sample ID: 500-83251-3

Date Collected: 08/27/14 14:30
Matrix: Solid
Date Received: 08/29/14 10:30
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			252434	08/27/14 09:15	WRE	TAL CHI
Total/NA	Analysis	8260B		50	252675	09/03/14 19:19	BDA	TAL CHI
Total/NA	Analysis	Moisture		1	252301	08/29/14 14:20	LWN	TAL CHI

Laboratory References:

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

Certification Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners 1E-1105024

TestAmerica Job ID: 500-83251-1

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	08-31-15 *

The following analytes are included in this report, but certification is not offered by the governing authority:

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

* Certification renewal pending - certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.534

500-83251 COC

Chain of Custody Record

Lab Job #: 500-83257

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 6.4

Report To (optional)		Bill To (optional)	
Contact:	Steve Owens	Contact:	
Company:	Giles Engineering Associates	Company:	
Address:	N8W22350 Johnson Dr. Ste. A1	Address:	
Address:	Waukesha, WI 53186	Address:	SAME
Phone:	262.544.0118	Phone:	
Fax:	262.549.5868	Fax:	
E-Mail:	sowens@gilesengr.com	PO#/Reference#	

Client	Client Project #	Preservative	MeOH								
Giles Engineering Associates	IE-1105024										
Project Name: Smoke-Out Cleaners		Parameter	VOC								
Project Location/State: Verona, WI	Lab Project #										
Sampler: L. Wilson	Lab PM: Sandie Fredrick										

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		MW-2 (40-42)	8/26/14	1335	2	S	X	
2		MW-1 (32-34)	8/27/14	1130	2	S	X	
3		MW-3 (30-32)	8/27/14	1430	2	S	X	

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 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
Stephen Owens	Giles Engineering	8-28-14	17:30	Sherri Scott	TA-Cot	8/29/14	1030
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier
Shipped FedEx
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: Smoke-Out Cleaners
IE-1105024
535 Half Mile Road
Verona, WI

Lab Comments:

TAL-4124-500 (1209)

9/5/2014

Login Sample Receipt Checklist

Client: Giles Engineering Associates

Job Number: 500-83251-1

Login Number: 83251

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

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.	N/A	
Cooler Temperature is recorded.	True	6.6
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.	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	

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-83650-1
Client Project/Site: Smoke-Out Cleaners - 1E-1105024

For:
Giles Engineering Associates
N8 W 22350 Johnson Road
Waukesha, Wisconsin 53186

Attn: Mr. Steve Owens

Sandie Fredrick

Authorized for release by:
9/9/2014 10:55:12 AM

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

Table of Contents

Job ID: 500-83650-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-83650-1

Comments
No additional comments.

Receipt
The samples were received on 9/6/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with batch 253332: Trans-1,2-Dichloroethene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-1 (500-83650-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: MW-2 (500-83650-2), MW-3 (500-83650-3).

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

Detection Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-1 — Lab Sample ID: 500-83650-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	120		5.0	0.60	ug/L	5		8260B	Total/NA
Trichloroethene	25		2.5	0.95	ug/L	5		8260B	Total/NA
Tetrachloroethene - DL	2800		50	8.5	ug/L	50		8260B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 500-83650-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.25	J	0.50	0.11	ug/L	1		8260B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 500-83650-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	57		1.0	0.12	ug/L	1		8260B	Total/NA
Tetrachloroethene	56		1.0	0.17	ug/L	1		8260B	Total/NA
Trichloroethene	2.8		0.50	0.19	ug/L	1		8260B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 500-83650-4

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 500-83650-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.5		1.0	0.17	ug/L	1		8260B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 500-83650-6

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI

Protocol References:

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: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-83650-1	MW-1	Water	09/05/14 11:30	09/06/14 10:00
500-83650-2	MW-2	Water	09/05/14 11:05	09/06/14 10:00
500-83650-3	MW-3	Water	09/05/14 12:50	09/06/14 10:00
500-83650-4	MW-4	Water	09/05/14 12:30	09/06/14 10:00
500-83650-5	MW-5	Water	09/05/14 11:55	09/06/14 10:00
500-83650-6	Trip Blank	Water	09/05/14 00:00	09/06/14 10:00

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-1
Date Collected: 09/05/14 11:30
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.3		5.0	1.3	ug/L			09/08/14 11:45	5
1,1,1-Trichloroethane	<1.0		5.0	1.0	ug/L			09/08/14 11:45	5
1,1,2,2-Tetrachloroethane	<1.2		5.0	1.2	ug/L			09/08/14 11:45	5
1,1,2-Trichloroethane	<1.4		5.0	1.4	ug/L			09/08/14 11:45	5
1,1-Dichloroethane	<0.95		5.0	0.95	ug/L			09/08/14 11:45	5
1,1-Dichloroethene	<1.6		5.0	1.6	ug/L			09/08/14 11:45	5
1,1-Dichloropropene	<1.7		5.0	1.7	ug/L			09/08/14 11:45	5
1,2,3-Trichlorobenzene	<1.2		5.0	1.2	ug/L			09/08/14 11:45	5
1,2,3-Trichloropropane	<2.3		5.0	2.3	ug/L			09/08/14 11:45	5
1,2,4-Trichlorobenzene	<1.6		5.0	1.6	ug/L			09/08/14 11:45	5
1,2,4-Trimethylbenzene	<0.70		5.0	0.70	ug/L			09/08/14 11:45	5
1,2-Dibromo-3-Chloropropane	<4.4		10	4.4	ug/L			09/08/14 11:45	5
1,2-Dibromoethane	<1.8		5.0	1.8	ug/L			09/08/14 11:45	5
1,2-Dichlorobenzene	<1.4		5.0	1.4	ug/L			09/08/14 11:45	5
1,2-Dichloroethane	<1.4		5.0	1.4	ug/L			09/08/14 11:45	5
1,2-Dichloropropane	<1.0		5.0	1.0	ug/L			09/08/14 11:45	5
1,3,5-Trimethylbenzene	<0.90		5.0	0.90	ug/L			09/08/14 11:45	5
1,3-Dichlorobenzene	<0.75		5.0	0.75	ug/L			09/08/14 11:45	5
1,3-Dichloropropane	<0.65		5.0	0.65	ug/L			09/08/14 11:45	5
1,4-Dichlorobenzene	<0.75		5.0	0.75	ug/L			09/08/14 11:45	5
2,2-Dichloropropane	<1.6		5.0	1.6	ug/L			09/08/14 11:45	5
2-Chlorotoluene	<1.1		5.0	1.1	ug/L			09/08/14 11:45	5
4-Chlorotoluene	<1.0		5.0	1.0	ug/L			09/08/14 11:45	5
Benzene	<0.37		2.5	0.37	ug/L			09/08/14 11:45	5
Bromobenzene	<1.3		5.0	1.3	ug/L			09/08/14 11:45	5
Bromochloromethane	<2.0		5.0	2.0	ug/L			09/08/14 11:45	5
Bromodichloromethane	<0.85		5.0	0.85	ug/L			09/08/14 11:45	5
Bromoform	<1.4		5.0	1.4	ug/L			09/08/14 11:45	5
Bromomethane	<1.6		5.0	1.6	ug/L			09/08/14 11:45	5
Carbon tetrachloride	<1.3		5.0	1.3	ug/L			09/08/14 11:45	5
Chlorobenzene	<0.70		5.0	0.70	ug/L			09/08/14 11:45	5
Chloroethane	<1.7		5.0	1.7	ug/L			09/08/14 11:45	5
Chloroform	<1.0		5.0	1.0	ug/L			09/08/14 11:45	5
Chloromethane	<0.90		5.0	0.90	ug/L			09/08/14 11:45	5
cis-1,2-Dichloroethene	**120**		5.0	0.60	ug/L			09/08/14 11:45	5
cis-1,3-Dichloropropene	<0.90		5.0	0.90	ug/L			09/08/14 11:45	5
Dibromochloromethane	<1.6		5.0	1.6	ug/L			09/08/14 11:45	5
Dibromomethane	<1.7		5.0	1.7	ug/L			09/08/14 11:45	5
Dichlorodifluoromethane	<1.0		5.0	1.0	ug/L			09/08/14 11:45	5
Ethylbenzene	<0.65		2.5	0.65	ug/L			09/08/14 11:45	5
Hexachlorobutadiene	<1.3		5.0	1.3	ug/L			09/08/14 11:45	5
Isopropyl ether	<0.75		5.0	0.75	ug/L			09/08/14 11:45	5
Isopropylbenzene	<0.70		5.0	0.70	ug/L			09/08/14 11:45	5
Methyl tert-butyl ether	<1.2		5.0	1.2	ug/L			09/08/14 11:45	5
Methylene Chloride	<3.4		25	3.4	ug/L			09/08/14 11:45	5
Naphthalene	<0.80		5.0	0.80	ug/L			09/08/14 11:45	5
n-Butylbenzene	<0.65		5.0	0.65	ug/L			09/08/14 11:45	5
N-Propylbenzene	<0.65		5.0	0.65	ug/L			09/08/14 11:45	5
p-Isopropyltoluene	<0.85		5.0	0.85	ug/L			09/08/14 11:45	5

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-1

Lab Sample ID: 500-83650-1

Date Collected: 09/05/14 11:30

Matrix: Water

Date Received: 09/06/14 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.75		5.0	0.75	ug/L			09/08/14 11:45	5
Styrene	<0.50		5.0	0.50	ug/L			09/08/14 11:45	5
tert-Butylbenzene	<0.70		5.0	0.70	ug/L			09/08/14 11:45	5
Toluene	<0.55		2.5	0.55	ug/L			09/08/14 11:45	5
trans-1,2-Dichloroethene	<1.3	*	5.0	1.3	ug/L			09/08/14 11:45	5
trans-1,3-Dichloropropene	<1.1		5.0	1.1	ug/L			09/08/14 11:45	5
Trichloroethene	**25**		2.5	0.95	ug/L			09/08/14 11:45	5
Trichlorofluoromethane	<0.95		5.0	0.95	ug/L			09/08/14 11:45	5
Vinyl chloride	<0.50		2.5	0.50	ug/L			09/08/14 11:45	5
Xylenes, Total	<0.34		5.0	0.34	ug/L			09/08/14 11:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*75 - 125*		*09/08/14 11:45*	*5*
4-Bromofluorobenzene (Surr)	*114*		*75 - 120*		*09/08/14 11:45*	*5*
Dibromofluoromethane	*82*		*75 - 120*		*09/08/14 11:45*	*5*
Toluene-d8 (Surr)	*105*		*75 - 120*		*09/08/14 11:45*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**2800**		50	8.5	ug/L			09/08/14 12:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 125*		*09/08/14 12:12*	*50*
4-Bromofluorobenzene (Surr)	*118*		*75 - 120*		*09/08/14 12:12*	*50*
Dibromofluoromethane	*83*		*75 - 120*		*09/08/14 12:12*	*50*
Toluene-d8 (Surr)	*101*		*75 - 120*		*09/08/14 12:12*	*50*

Client Sample ID: MW-2

Lab Sample ID: 500-83650-2

Date Collected: 09/05/14 11:05

Matrix: Water

Date Received: 09/06/14 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			09/08/14 12:38	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			09/08/14 12:38	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			09/08/14 12:38	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 12:38	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			09/08/14 12:38	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			09/08/14 12:38	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			09/08/14 12:38	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			09/08/14 12:38	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			09/08/14 12:38	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			09/08/14 12:38	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 12:38	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			09/08/14 12:38	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			09/08/14 12:38	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/08/14 12:38	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 12:38	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			09/08/14 12:38	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			09/08/14 12:38	1

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-2
Date Collected: 09/05/14 11:05
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 12:38	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			09/08/14 12:38	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 12:38	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			09/08/14 12:38	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			09/08/14 12:38	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			09/08/14 12:38	1
Benzene	<0.074		0.50	0.074	ug/L			09/08/14 12:38	1
Bromobenzene	<0.25		1.0	0.25	ug/L			09/08/14 12:38	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			09/08/14 12:38	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			09/08/14 12:38	1
Bromoform	<0.28		1.0	0.28	ug/L			09/08/14 12:38	1
Bromomethane	<0.31		1.0	0.31	ug/L			09/08/14 12:38	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			09/08/14 12:38	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			09/08/14 12:38	1
Chloroethane	<0.34		1.0	0.34	ug/L			09/08/14 12:38	1
Chloroform	<0.20		1.0	0.20	ug/L			09/08/14 12:38	1
Chloromethane	<0.18		1.0	0.18	ug/L			09/08/14 12:38	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			09/08/14 12:38	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			09/08/14 12:38	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			09/08/14 12:38	1
Dibromomethane	<0.33		1.0	0.33	ug/L			09/08/14 12:38	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			09/08/14 12:38	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			09/08/14 12:38	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			09/08/14 12:38	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			09/08/14 12:38	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 12:38	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			09/08/14 12:38	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			09/08/14 12:38	1
Naphthalene	<0.16		1.0	0.16	ug/L			09/08/14 12:38	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 12:38	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 12:38	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			09/08/14 12:38	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			09/08/14 12:38	1
Styrene	<0.10		1.0	0.10	ug/L			09/08/14 12:38	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 12:38	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			09/08/14 12:38	1
Toluene	**0.25**	**J**	0.50	0.11	ug/L			09/08/14 12:38	1
trans-1,2-Dichloroethene	<0.25	*	1.0	0.25	ug/L			09/08/14 12:38	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			09/08/14 12:38	1
Trichloroethene	<0.19		0.50	0.19	ug/L			09/08/14 12:38	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			09/08/14 12:38	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			09/08/14 12:38	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			09/08/14 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 125*		*09/08/14 12:38*	*1*
4-Bromofluorobenzene (Surr)	*117*		*75 - 120*		*09/08/14 12:38*	*1*
Dibromofluoromethane	*85*		*75 - 120*		*09/08/14 12:38*	*1*
Toluene-d8 (Surr)	*103*		*75 - 120*		*09/08/14 12:38*	*1*

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-3
Date Collected: 09/05/14 12:50
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			09/08/14 13:06	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			09/08/14 13:06	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			09/08/14 13:06	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 13:06	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			09/08/14 13:06	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			09/08/14 13:06	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			09/08/14 13:06	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			09/08/14 13:06	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			09/08/14 13:06	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			09/08/14 13:06	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:06	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			09/08/14 13:06	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			09/08/14 13:06	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/08/14 13:06	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 13:06	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			09/08/14 13:06	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			09/08/14 13:06	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 13:06	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			09/08/14 13:06	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 13:06	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			09/08/14 13:06	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			09/08/14 13:06	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			09/08/14 13:06	1
Benzene	<0.074		0.50	0.074	ug/L			09/08/14 13:06	1
Bromobenzene	<0.25		1.0	0.25	ug/L			09/08/14 13:06	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			09/08/14 13:06	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			09/08/14 13:06	1
Bromoform	<0.28		1.0	0.28	ug/L			09/08/14 13:06	1
Bromomethane	<0.31		1.0	0.31	ug/L			09/08/14 13:06	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			09/08/14 13:06	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:06	1
Chloroethane	<0.34		1.0	0.34	ug/L			09/08/14 13:06	1
Chloroform	<0.20		1.0	0.20	ug/L			09/08/14 13:06	1
Chloromethane	<0.18		1.0	0.18	ug/L			09/08/14 13:06	1
cis-1,2-Dichloroethene	**57**		1.0	0.12	ug/L			09/08/14 13:06	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			09/08/14 13:06	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			09/08/14 13:06	1
Dibromomethane	<0.33		1.0	0.33	ug/L			09/08/14 13:06	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			09/08/14 13:06	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			09/08/14 13:06	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			09/08/14 13:06	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			09/08/14 13:06	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:06	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			09/08/14 13:06	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			09/08/14 13:06	1
Naphthalene	<0.16		1.0	0.16	ug/L			09/08/14 13:06	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 13:06	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 13:06	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			09/08/14 13:06	1

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-3

Lab Sample ID: 500-83650-3

Date Collected: 09/05/14 12:50
Matrix: Water
Date Received: 09/06/14 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			09/08/14 13:06	1
Styrene	<0.10		1.0	0.10	ug/L			09/08/14 13:06	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:06	1
Tetrachloroethene	**56**		1.0	0.17	ug/L			09/08/14 13:06	1
Toluene	<0.11		0.50	0.11	ug/L			09/08/14 13:06	1
trans-1,2-Dichloroethene	<0.25	*	1.0	0.25	ug/L			09/08/14 13:06	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			09/08/14 13:06	1
Trichloroethene	**2.8**		0.50	0.19	ug/L			09/08/14 13:06	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			09/08/14 13:06	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			09/08/14 13:06	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			09/08/14 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 125*		*09/08/14 13:06*	*1*
4-Bromofluorobenzene (Surr)	*118*		*75 - 120*		*09/08/14 13:06*	*1*
Dibromofluoromethane	*84*		*75 - 120*		*09/08/14 13:06*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*09/08/14 13:06*	*1*

Client Sample ID: MW-4

Lab Sample ID: 500-83650-4

Date Collected: 09/05/14 12:30
Matrix: Water
Date Received: 09/06/14 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			09/08/14 13:34	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			09/08/14 13:34	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			09/08/14 13:34	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 13:34	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			09/08/14 13:34	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			09/08/14 13:34	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			09/08/14 13:34	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			09/08/14 13:34	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			09/08/14 13:34	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			09/08/14 13:34	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:34	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			09/08/14 13:34	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			09/08/14 13:34	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/08/14 13:34	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 13:34	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			09/08/14 13:34	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			09/08/14 13:34	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 13:34	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			09/08/14 13:34	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 13:34	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			09/08/14 13:34	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			09/08/14 13:34	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			09/08/14 13:34	1
Benzene	<0.074		0.50	0.074	ug/L			09/08/14 13:34	1
Bromobenzene	<0.25		1.0	0.25	ug/L			09/08/14 13:34	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			09/08/14 13:34	1

Client Sample ID: MW-4
Date Collected: 09/05/14 12:30
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.17		1.0	0.17	ug/L			09/08/14 13:34	1
Bromoform	<0.28		1.0	0.28	ug/L			09/08/14 13:34	1
Bromomethane	<0.31		1.0	0.31	ug/L			09/08/14 13:34	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			09/08/14 13:34	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:34	1
Chloroethane	<0.34		1.0	0.34	ug/L			09/08/14 13:34	1
Chloroform	<0.20		1.0	0.20	ug/L			09/08/14 13:34	1
Chloromethane	<0.18		1.0	0.18	ug/L			09/08/14 13:34	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			09/08/14 13:34	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			09/08/14 13:34	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			09/08/14 13:34	1
Dibromomethane	<0.33		1.0	0.33	ug/L			09/08/14 13:34	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			09/08/14 13:34	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			09/08/14 13:34	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			09/08/14 13:34	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			09/08/14 13:34	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:34	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			09/08/14 13:34	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			09/08/14 13:34	1
Naphthalene	<0.16		1.0	0.16	ug/L			09/08/14 13:34	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 13:34	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 13:34	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			09/08/14 13:34	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			09/08/14 13:34	1
Styrene	<0.10		1.0	0.10	ug/L			09/08/14 13:34	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 13:34	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			09/08/14 13:34	1
Toluene	<0.11		0.50	0.11	ug/L			09/08/14 13:34	1
trans-1,2-Dichloroethene	<0.25	*	1.0	0.25	ug/L			09/08/14 13:34	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			09/08/14 13:34	1
Trichloroethene	<0.19		0.50	0.19	ug/L			09/08/14 13:34	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			09/08/14 13:34	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			09/08/14 13:34	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			09/08/14 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 125*		*09/08/14 13:34*	*1*
4-Bromofluorobenzene (Surr)	*116*		*75 - 120*		*09/08/14 13:34*	*1*
Dibromofluoromethane	*84*		*75 - 120*		*09/08/14 13:34*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*09/08/14 13:34*	*1*

Client Sample ID: MW-5
Date Collected: 09/05/14 11:55
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			09/08/14 14:02	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			09/08/14 14:02	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			09/08/14 14:02	1

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-5
Date Collected: 09/05/14 11:55
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 14:02	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			09/08/14 14:02	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			09/08/14 14:02	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			09/08/14 14:02	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			09/08/14 14:02	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			09/08/14 14:02	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			09/08/14 14:02	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:02	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			09/08/14 14:02	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			09/08/14 14:02	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/08/14 14:02	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 14:02	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			09/08/14 14:02	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			09/08/14 14:02	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 14:02	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			09/08/14 14:02	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 14:02	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			09/08/14 14:02	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			09/08/14 14:02	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			09/08/14 14:02	1
Benzene	<0.074		0.50	0.074	ug/L			09/08/14 14:02	1
Bromobenzene	<0.25		1.0	0.25	ug/L			09/08/14 14:02	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			09/08/14 14:02	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			09/08/14 14:02	1
Bromoform	<0.28		1.0	0.28	ug/L			09/08/14 14:02	1
Bromomethane	<0.31		1.0	0.31	ug/L			09/08/14 14:02	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			09/08/14 14:02	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:02	1
Chloroethane	<0.34		1.0	0.34	ug/L			09/08/14 14:02	1
Chloroform	<0.20		1.0	0.20	ug/L			09/08/14 14:02	1
Chloromethane	<0.18		1.0	0.18	ug/L			09/08/14 14:02	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			09/08/14 14:02	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			09/08/14 14:02	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			09/08/14 14:02	1
Dibromomethane	<0.33		1.0	0.33	ug/L			09/08/14 14:02	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			09/08/14 14:02	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			09/08/14 14:02	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			09/08/14 14:02	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			09/08/14 14:02	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:02	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			09/08/14 14:02	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			09/08/14 14:02	1
Naphthalene	<0.16		1.0	0.16	ug/L			09/08/14 14:02	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 14:02	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 14:02	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			09/08/14 14:02	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			09/08/14 14:02	1
Styrene	<0.10		1.0	0.10	ug/L			09/08/14 14:02	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:02	1

Client Sample ID: MW-5

Lab Sample ID: 500-83650-5

Date Collected: 09/05/14 11:55

Matrix: Water

Date Received: 09/06/14 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2.5		1.0	0.17	ug/L			09/08/14 14:02	1
Toluene	<0.11		0.50	0.11	ug/L			09/08/14 14:02	1
trans-1,2-Dichloroethene	<0.25	*	1.0	0.25	ug/L			09/08/14 14:02	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			09/08/14 14:02	1
Trichloroethene	<0.19		0.50	0.19	ug/L			09/08/14 14:02	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			09/08/14 14:02	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			09/08/14 14:02	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			09/08/14 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 125*		*09/08/14 14:02*	*1*
4-Bromofluorobenzene (Surr)	*118*		*75 - 120*		*09/08/14 14:02*	*1*
Dibromofluoromethane	*84*		*75 - 120*		*09/08/14 14:02*	*1*
Toluene-d8 (Surr)	*104*		*75 - 120*		*09/08/14 14:02*	*1*

Client Sample ID: Trip Blank

Lab Sample ID: 500-83650-6

Date Collected: 09/05/14 00:00

Matrix: Water

Date Received: 09/06/14 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			09/08/14 14:30	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			09/08/14 14:30	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			09/08/14 14:30	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 14:30	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			09/08/14 14:30	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			09/08/14 14:30	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			09/08/14 14:30	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			09/08/14 14:30	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			09/08/14 14:30	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			09/08/14 14:30	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:30	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			09/08/14 14:30	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			09/08/14 14:30	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/08/14 14:30	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 14:30	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			09/08/14 14:30	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			09/08/14 14:30	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 14:30	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			09/08/14 14:30	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 14:30	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			09/08/14 14:30	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			09/08/14 14:30	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			09/08/14 14:30	1
Benzene	<0.074		0.50	0.074	ug/L			09/08/14 14:30	1
Bromobenzene	<0.25		1.0	0.25	ug/L			09/08/14 14:30	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			09/08/14 14:30	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			09/08/14 14:30	1
Bromoform	<0.28		1.0	0.28	ug/L			09/08/14 14:30	1
Bromomethane	<0.31		1.0	0.31	ug/L			09/08/14 14:30	1

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: Trip Blank
Date Collected: 09/05/14 00:00
Date Received: 09/06/14 10:00

Lab Sample ID: 500-83650-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			09/08/14 14:30	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:30	1
Chloroethane	<0.34		1.0	0.34	ug/L			09/08/14 14:30	1
Chloroform	<0.20		1.0	0.20	ug/L			09/08/14 14:30	1
Chloromethane	<0.18		1.0	0.18	ug/L			09/08/14 14:30	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			09/08/14 14:30	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			09/08/14 14:30	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			09/08/14 14:30	1
Dibromomethane	<0.33		1.0	0.33	ug/L			09/08/14 14:30	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			09/08/14 14:30	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			09/08/14 14:30	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			09/08/14 14:30	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			09/08/14 14:30	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:30	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			09/08/14 14:30	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			09/08/14 14:30	1
Naphthalene	<0.16		1.0	0.16	ug/L			09/08/14 14:30	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 14:30	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 14:30	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			09/08/14 14:30	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			09/08/14 14:30	1
Styrene	<0.10		1.0	0.10	ug/L			09/08/14 14:30	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 14:30	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			09/08/14 14:30	1
Toluene	<0.11		0.50	0.11	ug/L			09/08/14 14:30	1
trans-1,2-Dichloroethene	<0.25	*	1.0	0.25	ug/L			09/08/14 14:30	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			09/08/14 14:30	1
Trichloroethene	<0.19		0.50	0.19	ug/L			09/08/14 14:30	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			09/08/14 14:30	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			09/08/14 14:30	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			09/08/14 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*75 - 125*		*09/08/14 14:30*	*1*
4-Bromofluorobenzene (Surr)	*116*		*75 - 120*		*09/08/14 14:30*	*1*
Dibromofluoromethane	*85*		*75 - 120*		*09/08/14 14:30*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*09/08/14 14:30*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
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: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

GC/MS VOA

Analysis Batch: 253332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-83650-1	MW-1	Total/NA	Water	8260B	
500-83650-1 - DL	MW-1	Total/NA	Water	8260B	
500-83650-2	MW-2	Total/NA	Water	8260B	
500-83650-3	MW-3	Total/NA	Water	8260B	
500-83650-4	MW-4	Total/NA	Water	8260B	
500-83650-5	MW-5	Total/NA	Water	8260B	
500-83650-6	Trip Blank	Total/NA	Water	8260B	
LCS 500-253332/4	Lab Control Sample	Total/NA	Water	8260B	
MB 500-253332/6	Method Blank	Total/NA	Water	8260B	

Surrogate Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-125)	(75-120)	(75-120)	(75-120)
500-83650-1	MW-1	88	114	82	105
500-83650-1 - DL	MW-1	92	118	83	101
500-83650-2	MW-2	92	117	85	103
500-83650-3	MW-3	92	118	84	102
500-83650-4	MW-4	93	116	84	101
500-83650-5	MW-5	92	118	84	104
500-83650-6	Trip Blank	95	116	85	102
LCS 500-253332/4	Lab Control Sample	87	111	83	109
MB 500-253332/6	Method Blank	90	118	85	102

Surrogate Legend

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

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

Lab Sample ID: MB 500-253332/6
Matrix: Water
Analysis Batch: 253332

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	<0.25		1.0	0.25	ug/L			09/08/14 10:25	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			09/08/14 10:25	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			09/08/14 10:25	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 10:25	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			09/08/14 10:25	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			09/08/14 10:25	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			09/08/14 10:25	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			09/08/14 10:25	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			09/08/14 10:25	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			09/08/14 10:25	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 10:25	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			09/08/14 10:25	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			09/08/14 10:25	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/08/14 10:25	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			09/08/14 10:25	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			09/08/14 10:25	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			09/08/14 10:25	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 10:25	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			09/08/14 10:25	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			09/08/14 10:25	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			09/08/14 10:25	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			09/08/14 10:25	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			09/08/14 10:25	1
Benzene	<0.074		0.50	0.074	ug/L			09/08/14 10:25	1
Bromobenzene	<0.25		1.0	0.25	ug/L			09/08/14 10:25	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			09/08/14 10:25	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			09/08/14 10:25	1
Bromoform	<0.28		1.0	0.28	ug/L			09/08/14 10:25	1
Bromomethane	<0.31		1.0	0.31	ug/L			09/08/14 10:25	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			09/08/14 10:25	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			09/08/14 10:25	1
Chloroethane	<0.34		1.0	0.34	ug/L			09/08/14 10:25	1
Chloroform	<0.20		1.0	0.20	ug/L			09/08/14 10:25	1
Chloromethane	<0.18		1.0	0.18	ug/L			09/08/14 10:25	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			09/08/14 10:25	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			09/08/14 10:25	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			09/08/14 10:25	1
Dibromomethane	<0.33		1.0	0.33	ug/L			09/08/14 10:25	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			09/08/14 10:25	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			09/08/14 10:25	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			09/08/14 10:25	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			09/08/14 10:25	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 10:25	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			09/08/14 10:25	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			09/08/14 10:25	1
Naphthalene	<0.16		1.0	0.16	ug/L			09/08/14 10:25	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 10:25	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			09/08/14 10:25	1

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

Lab Sample ID: MB 500-253332/6
Matrix: Water
Analysis Batch: 253332

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			09/08/14 10:25	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			09/08/14 10:25	1
Styrene	<0.10		1.0	0.10	ug/L			09/08/14 10:25	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			09/08/14 10:25	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			09/08/14 10:25	1
Toluene	<0.11		0.50	0.11	ug/L			09/08/14 10:25	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			09/08/14 10:25	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			09/08/14 10:25	1
Trichloroethene	<0.19		0.50	0.19	ug/L			09/08/14 10:25	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			09/08/14 10:25	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			09/08/14 10:25	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			09/08/14 10:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 125*		*09/08/14 10:25*	*1*
4-Bromofluorobenzene (Surr)	*118*		*75 - 120*		*09/08/14 10:25*	*1*
Dibromofluoromethane	*85*		*75 - 120*		*09/08/14 10:25*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*09/08/14 10:25*	*1*

Lab Sample ID: LCS 500-253332/4
Matrix: Water
Analysis Batch: 253332

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	50.0	52.0		ug/L		104	75 - 122
1,1,1-Trichloroethane	50.0	36.7		ug/L		73	72 - 130
1,1,2,2-Tetrachloroethane	50.0	62.4		ug/L		125	72 - 130
1,1,2-Trichloroethane	50.0	58.2		ug/L		116	75 - 120
1,1-Dichloroethane	50.0	39.8		ug/L		80	75 - 120
1,1-Dichloroethene	50.0	40.9		ug/L		82	69 - 120
1,1-Dichloropropene	50.0	43.1		ug/L		86	75 - 130
1,2,3-Trichlorobenzene	50.0	59.3		ug/L		119	69 - 131
1,2,3-Trichloropropane	50.0	60.5		ug/L		121	65 - 132
1,2,4-Trichlorobenzene	50.0	58.2		ug/L		116	73 - 130
1,2,4-Trimethylbenzene	50.0	55.7		ug/L		111	75 - 121
1,2-Dibromo-3-Chloropropane	50.0	54.4		ug/L		109	62 - 130
1,2-Dibromoethane	50.0	55.5		ug/L		111	78 - 122
1,2-Dichlorobenzene	50.0	55.6		ug/L		111	75 - 120
1,2-Dichloroethane	50.0	44.9		ug/L		90	69 - 130
1,2-Dichloropropane	50.0	44.7		ug/L		89	75 - 120
1,3,5-Trimethylbenzene	50.0	55.5		ug/L		111	75 - 121
1,3-Dichlorobenzene	50.0	56.2		ug/L		112	75 - 120
1,3-Dichloropropane	50.0	58.6		ug/L		117	77 - 124
1,4-Dichlorobenzene	50.0	56.9		ug/L		114	75 - 120
2,2-Dichloropropane	50.0	35.0		ug/L		70	65 - 132
2-Chlorotoluene	50.0	55.4		ug/L		111	75 - 120
4-Chlorotoluene	50.0	56.4		ug/L		113	75 - 120
Benzene	50.0	41.5		ug/L		83	75 - 120

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

Lab Sample ID: LCS 500-253332/4
Matrix: Water
Analysis Batch: 253332

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	58.6		ug/L		117	75 - 120
Bromochloromethane	50.0	41.3		ug/L		83	76 - 120
Bromodichloromethane	50.0	45.0		ug/L		90	77 - 121
Bromoform	50.0	54.5		ug/L		109	68 - 126
Bromomethane	50.0	37.3		ug/L		75	45 - 169
Carbon tetrachloride	50.0	38.5		ug/L		77	70 - 130
Chlorobenzene	50.0	55.2		ug/L		110	75 - 120
Chloroethane	50.0	39.1		ug/L		78	58 - 147
Chloroform	50.0	40.8		ug/L		82	76 - 120
Chloromethane	50.0	39.7		ug/L		79	63 - 133
cis-1,2-Dichloroethene	50.0	41.3		ug/L		83	75 - 120
cis-1,3-Dichloropropene	50.0	57.0		ug/L		114	78 - 130
Dibromochloromethane	50.0	56.7		ug/L		113	71 - 126
Dibromomethane	50.0	43.5		ug/L		87	75 - 120
Dichlorodifluoromethane	50.0	41.4		ug/L		83	41 - 146
Ethylbenzene	50.0	52.5		ug/L		105	75 - 120
Hexachlorobutadiene	50.0	57.2		ug/L		114	71 - 131
Isopropylbenzene	50.0	57.3		ug/L		115	75 - 121
Methyl tert-butyl ether	50.0	39.7		ug/L		79	75 - 130
Methylene Chloride	50.0	38.3		ug/L		77	73 - 130
Naphthalene	50.0	57.6		ug/L		115	69 - 135
n-Butylbenzene	50.0	55.5		ug/L		111	75 - 121
N-Propylbenzene	50.0	57.3		ug/L		115	75 - 120
p-Isopropyltoluene	50.0	55.7		ug/L		111	75 - 121
sec-Butylbenzene	50.0	55.7		ug/L		111	75 - 120
Styrene	50.0	53.4		ug/L		107	75 - 120
tert-Butylbenzene	50.0	56.9		ug/L		114	75 - 123
Tetrachloroethene	50.0	57.2		ug/L		114	75 - 120
Toluene	50.0	55.1		ug/L		110	75 - 120
trans-1,2-Dichloroethene	50.0	38.1	*	ug/L		76	77 - 120
trans-1,3-Dichloropropene	50.0	56.3		ug/L		113	74 - 130
Trichloroethene	50.0	44.8		ug/L		90	75 - 120
Trichlorofluoromethane	50.0	37.1		ug/L		74	71 - 130
Vinyl chloride	50.0	38.3		ug/L		77	72 - 123
Xylenes, Total	100	103		ug/L		103	75 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*75 - 125*
4-Bromofluorobenzene (Surr)	*111*		*75 - 120*
Dibromofluoromethane	*83*		*75 - 120*
Toluene-d8 (Surr)	*109*		*75 - 120*

Lab Chronicle

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Client Sample ID: MW-1

Lab Sample ID: 500-83650-1

Date Collected: 09/05/14 11:30

Matrix: Water

Date Received: 09/06/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	253332	09/08/14 11:45	BDA	TAL CHI
Total/NA	Analysis	8260B	DL	50	253332	09/08/14 12:12	BDA	TAL CHI

Client Sample ID: MW-2

Lab Sample ID: 500-83650-2

Date Collected: 09/05/14 11:05

Matrix: Water

Date Received: 09/06/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	253332	09/08/14 12:38	BDA	TAL CHI

Client Sample ID: MW-3

Lab Sample ID: 500-83650-3

Date Collected: 09/05/14 12:50

Matrix: Water

Date Received: 09/06/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	253332	09/08/14 13:06	BDA	TAL CHI

Client Sample ID: MW-4

Lab Sample ID: 500-83650-4

Date Collected: 09/05/14 12:30

Matrix: Water

Date Received: 09/06/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	253332	09/08/14 13:34	BDA	TAL CHI

Client Sample ID: MW-5

Lab Sample ID: 500-83650-5

Date Collected: 09/05/14 11:55

Matrix: Water

Date Received: 09/06/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	253332	09/08/14 14:02	BDA	TAL CHI

Client Sample ID: Trip Blank

Lab Sample ID: 500-83650-6

Date Collected: 09/05/14 00:00

Matrix: Water

Date Received: 09/06/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	253332	09/08/14 14:30	BDA	TAL CHI

Laboratory References:

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

Certification Summary

Client: Giles Engineering Associates
Project/Site: Smoke-Out Cleaners - 1E-1105024

TestAmerica Job ID: 500-83650-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-15 *

* Certification renewal pending - certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMEN

2417 Bond Street, University Park, .
Phone: 708.534.5200 Fax: 708

500-83650 COC

(optional)

Report To
Contact: Steve Owens
Company: Giles Engineering Associates
Address: N8W22350 Johnson Dr. St. A1
Address: Waukesha, WI 53186
Phone: 262.544.0118
Fax: 262.549.5868
E-Mail: sowens@gilesengr.com

(optional)

Bill To
Contact:
Company:
Address:
Address: Same
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-83650

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 2.8

Client	Client Project #	Preservative	HCl									
Giles Engineering Associates	IE-1105024											
Project Name: Smoke-Out Cleaners		Parameter	VOCs									
Project Location/State: Verona, WI	Lab Project #											
Sampler: L. Wilson	Lab PM: Sandie Fredrick											

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		MW-1	9/5/14	1130	3	W	x	
2		MW-2	9/5/14	1105	3	W	x	
3		MW-3	9/5/14	1250	3	W	x	
4		MW-4	9/5/14	1230	3	W	x	
5		MW-5	9/5/14	1155	3	W	x	
6		TRIP BLANK			1	W	x	

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

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
J. M. Wilson	GILES	9/5/14	1630		TA	9/6/14	1000
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier
Shipped FX
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: Smoke-Out Cleaners
IE-1105024
585 Half Mile Road
Verona, WI

Lab Comments:

TAL-4124-580 (1209)

9/9/2014

Login Sample Receipt Checklist

Client: Giles Engineering Associates

Job Number: 500-83650-1

Login Number: 83650

List Source: TestAmerica Chicago

List Number: 1

Creator: Lunt, Jeff T

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	2.8
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	