One Stanton Street
Marinette, WI 54143-2542

Tele: 715-735-7411

July 16, 2018

Mr. Conor Neal
Geologist
EPA Region 5
Land & Chemicals Division
77 West Jackson Blvd, LU-9J
Chicago, IL 60604-3590

Subject: Quarterly Progress Report (April through June 2018)
Administrative Order on Consent (February 26, 2009)
Tyco Fire Products LP
Stanton Street Facility
Marinette, Wisconsin
WID 006 125 215

Dear Mr. Neal:

Section VI, 21, b (Page 10) of the Administrative Order on Consent (AOC), dated February 26, 2009, requires Tyco Fire Products LP (Tyco) to submit quarterly progress reports to the U.S. Environmental Protection Agency (USEPA) Region 5 and the Wisconsin Department of Natural Resources (WDNR). The reports are required to document activities conducted as part of the Resource Conservation and Recovery Act (RCRA) Corrective Actions at the Tyco facility in Marinette, Wisconsin. The enclosed report covers the period from April 1, 2018 through June 30, 2018, and presents a brief description of the work completed to date, data collected, problems encountered, and schedule of activities as required by the February 2009 AOC.

Work Completed During this Reporting Period

Operation of the groundwater collection and treatment system (GWCTS) continued through the second quarter of 2018. A summary of the operational data is included as Attachment 1. The Discharge Monitoring Reports (DMRs) are included in Attachment 2.

The Semi-Annual Barrier Wall Inspection was completed on May 10, 2018 by Ryan Suennen and Jeff Danko from Tyco. The boat for the river side inspection was provided and operated by MJB industries. During the river side inspection, 3 tieback connections in the main plant area of the site were noted to have dripping water. MJB was contracted to correct the additional leaks, however high water levels in the river have prevented completion of this task. MJB had also been contracted to tighten the bolts in the general main plant area of the wall where leaks have been discovered during previous inspections. Details of the inspection are included in Attachment 3.

The Spring Barrier Wall Groundwater Monitoring Plan Update (BWGMPU) groundwater sampling event was completed the Week of April 30th 2018. Laboratory results from this event are included in Attachment 4.

The temporary dewatering system was continued in quarter 2 of 2018 under management by endpoint solutions. Progress reports are being submitted bi-weekly.

Additional Activities

Tyco completed the quarterly download of data from the transducers installed in prescribed monitoring wells on June 27, 2018. Manual groundwater elevation data was obtained at each transducer location for calibration of the data at the time of the download. Manual groundwater elevation data were also collected from the former 8th Street Slip and former Salt Vault areas throughout the quarter in accordance with the pump down program requirements.

Data Collected

Extraction and treatment volumes, analytical testing, and discharge data are required as part of the Wisconsin Pollutant Discharge and Elimination System (WPDES) permits obtained from WDNR for operation of the GWCTS. The GWCTS operates under permit WPDES WI-0001040-07-0. Attachment 2 includes the monthly WPDES DMRs for March 2018 through May 2018 for the GWCTS. Additional data on the operation of the GWCTS is included in Attachment 1.

The annual Vertical Barrier Wall Survey was completed on May 1, 2018. Data will be included in the 2018 annual report.

Groundwater elevation data recorded by installed transducers was downloaded on July 6, 2017 and is under evaluation. The site-wide data will be provided in the annual report.

Problems Encountered

River water levels have again been high this spring, continuing a trend from last year. Late heavy snows and spring rainfall were contributing factors. On a few noted occasions in May and June, the river water level reached high enough to lap over the Vertical Barrier Wall into the wetland area of the site. This additionally contributed to increased groundwater levels in that area. The GWCT system and Phyto Plots are working to manage the groundwater load at the site. The GWCTS has been generally working a 12 hour shift on Saturday to supplement the 24/5 operation and has added waste pick-ups to help facilitate additional dewatering site-wide.

Schedule of Upcoming Activities

The following is a summary of activities to be conducted during the next reporting period.

- Submit the quarterly progress report.
- Conduct 5 year review sediment sampling work.
- Complete the 3rd quarter semi-annual barrier wall and cover area inspections.
- Address inspection findings for the vertical barrier wall, cover areas, and monitoring wells.

- Complete the retrofit sealing of 3 catch basins that were noted to have structural issues during the sewer repair work in 2017 and complete comprehensive sampling.
- Complete conveyance system design and begin construction of permanents PDP conveyance system.
- Continue work on a suitable alternative to the dye test for verifying performance of the barrier wall long term.
- Continue work on 5 year review package.

List of Key Correspondence and Document Submittals

Table 1
Documents Submitted
Quarterly Progress Report (April through June 2018), Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Submittal	Submitted To	Date Submitted
2017 Annual BWGMP Report	USEPA	June 29, 2018
PDP Bi-Weekly Reports	USEPA	Throughout Reporting Period
May 16 Meeting Notes	USEPA	June 5, 2018
Response to RCRA 3007 Request	WDNR	May 11, 2018

Table 2
Correspondence from Agency
Quarterly Progress Report (April through June 2018) Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Correspondence	Received From	Date Received
DGT Disapproval Notification	USEPA	June 4, 2018
Comments to DGT Pilot Test Work Plan	USEPA	April 26, 2018
RCRA 3007 Request for Information	USEPA	April 19, 2017
Response to Tyco Institutional Controls Remedy review	USEPA	April 10, 2018

Please contact me at 715-587-6670 if you have any questions or require additional information.

Respectfully Yours,

Tyco Fire Products LP

Ryan Suennen

Ryan Suennen
Environmental Field Projects

Attachments

1 GWCTS Operation Summary
2 DMRs for the GWCTS
3 VBW Inspection Summary
4 BWGMPU sample results

cc: Angela Carey, WDNR
Jim Killian, WDNR
Joe Janeczek, Johnson Controls
Rich Mator, Johnson Controls
Jeff Danko, Tyco
Mariel Carter, Stephenson Public Library

Document Control No.: 20180716 US10.11014

Attachment 1
GWCTS Operation Summary

MEMORANDUM

Groundwater Collection and Treatment System Operation

SUBJECT: Groundwater Collection and Treatment System Operation for Tyco Fire Products LP, Marinette, Wisconsin

DATE: July 16, 2018

Operation of the groundwater collection and treatment system (GWCTS) occurring from April 1, 2017 through June 30, 2017 is summarized below:

- The GWCTS operated for 15 days in April, 20 days in May, and 24 days in June, for a total of 59 days.
- Approximately 254,700 gallons of reject water was produced during system operations and subsequently disposed of off-site.
- The precipitation recorded from the weather station in Marinette, Wisconsin was 10.23 inches of rain. (https://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USC00475091/detail).
- An estimated total of 753,368 gallons was discharged to the Menominee River as effluent under WPDES permit.
- An estimated total of 755,864 gallons of groundwater were extracted (not including volumes extracted as part of the pump down program) from the site during the reporting period. Details of water volumes extracted from each area of the site and changes in water levels are shown in the Table 1 below.

Table 1 – Extraction Well Data Summary

Extraction Well	Gallons Run Q2 2017 (4/01/2017-6/30/2017)	Gallons Run Q2 2018 (4/01/2018-6/30/2018)
EW-1	49,797	73,423
EW-2	205	85
EW-3	10,057	3,875
EW-4	15,585	3,447
EW-5	275,535	168,070
EW-6	389,537	291,992
EW-7	345,076	214,938
Total	979,280	755,864

Attachment 2
DMRs

eReport Certify - TYCO FIRE PROTECTION PRODUCTS LP - 423495

Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
394468
Reporting Period
3/1/2018 to 3/31/2018
Enter Certification Code
dittendefe
E-Mail was sent to
afleury@tycoint.com
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Certification complete.

The Official Internet site for the Wisconsin Department of Natural Resources

101 S. Webster Street . PO Box 7921 . Madison, Wisconsin 53707-7921 . 608.266.2621

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Facility Name
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Enter Certification Code
dittendefe
E-Mail was sent to
afleury@tycoint.com
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Without leaving THIS page, check E-Mail address for message containing Certification code. Enter code and click 'Certify' button to complete Submittal.
Submittal of this form is required by section 283.55, Wis. Stats., and chapters NR 205 and NR 214 or NR 204, Wis. Admin. Code.

Personally identifiable information collected on this form may be used for purposes other than that for which it was originally collected. Under Wisconsin's open records laws, DNR is required to provide all non-confidential information to any person who requests it. Such information may be provided to the public in written or electronic form. Information reported may be made available to the public via a DNR web page.

I certify under penalty of law that this form submitted to DNR on 4/18/2018 for the period 3/1/2018 to 3/31/2018 and identified by the DOC ID number listed above was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
394468
Reporting Period
3/1/2018 to 3/31/2018
Enter Certification Code

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afleury@tycoint.com

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Submittal of this form is required by section 283.55, Wis. Stats., and chapters NR 205 and NR 214 or NR 204, Wis. Admin. Code.

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eReport Submit - TYCO FIRE PROTECTION PRODUCTS LP - 423495

Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
394468
Reporting Period
3/1/2018 to 3/31/2018

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Wastewater Discharge Monitoring Long Report

Facility Name: TYCO FIRE PROTECTION PRODUCTS LP
Contact Address: One Stanton Street
Marinette, WI 54143
Facility Contact: Judith Rost, Sr Lab Tech
Phone Number: 715-735-7411
Reporting Period: 03/01/2018 - 03/31/2018
Form Due Date: 04/21/2018
Permit Number: 0001040

For DNR Use Only

Date Received:	
DOC:	394468
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Nicole E Krueger
Office:	Green Bay

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
	Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	0.14086		54	7.0	7.3
	2	0.12750		56	7.0	7.3
	3	0.08019		53	7.1	7.6
	4	0.05440		50	7.2	7.7
	5	0.15413		54	6.9	7.2
	6	0.12888		52	6.8	7.2
	7	0.20988		54	6.7	7.1
	8	0.15363		53	6.8	7.0
	9	0.11499		52	6.8	7.0
	10	0.00026		51	7.0	7.3
	11	0.15400		78	7.0	7.4
	12	0.15198		54	6.8	7.0
	13	0.14163		54	6.8	7.2
	14	0.14177		55	7.0	7.2
	15	0.15086		54	7.0	7.1
	16	0.13299		53	7.0	7.4
	17	0.11046		53	7.1	7.4
	18	0.05589		52	7.1	7.9
	19	0.14199		53	6.8	7.1
	20	0.14073		55	6.9	7.4
	21	0.14180		55	7.3	7.6
	22	0.15063	7.5	55	7.2	7.6
	23	0.12632		54	7.3	7.7
	24	0.07405		52	7.6	7.9
	25	0.05186		53	7.7	8.4
	26	0.16534		53	7.4	7.8
	27	0.14720		56	7.4	7.6
	28	0.14889		55	7.4	7.7
	29	0.15936		56	7.2	7.6
	30	0.07756		52	7.6	7.8
	31	0.02792		50	7.5	8.0

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.121224194	7.5	54.225806452	7.109677419	7.467741935
	Monthly Total					
	Daily Max	0.20988	7.5	78	7.7	8.4
	Daily Min	0.00026	7.5	50	6.7	7
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.2			
	LOQ		0.5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	379	376	388	231	35
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1			0.22	260	22
	2					
	3					
	4					
	5					
	6					
	7					
	8			0.11	310	27
	9					
	10					
	11					
	12					
	13					
	14					
	15			0.11	350	21
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26			0.20	210	30
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231		35	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3		Arsenic, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	**Monthly Avg**					0.16		282.5		25	
	Monthly Total										
	Daily Max					0.22		350		30	
	Daily Min					0.11		210		21	
	Rolling 12 Month Avg					0.2					
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total	446	0								
	Daily Max			0	0					680	0
	Daily Min										
	Rolling 12 Month Avg					1	0				
QA/QC Information	**LOD**					0.024				2.1	
	LOQ					0.05				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010		999580010		999580010	

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
	Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1	0.02574	7.6	0.008892	0.68	
	2					
	3					
	4					
	5					
	6					
	7					
	8	0.03456	8.0	0.01024	<0.49	<3.0
	9					
	10					
	11					
	12					
	13					
	14					
	15	0.02478	8.0	0.00944	<0.49	
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26	0.0414	11	0.01518	0.80	
	27					
	28					
	29					
	30					
	31					

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
Summary Values	Monthly Avg	0.03162	8.65	0.010938	0.37	0
	Monthly Total					
	Daily Max	0.0414	11	0.01518	0.8	<3
	Daily Min	0.02478	7.6	0.008892	<0.49	<3
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max	12 0	69 0	0.98 0		
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD		1.7		0.49	3
	LOQ		5		1	10
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010		999580010	999580010

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK
Sample Results	Day 1			0.02003	4.0	1.6
	2			0.01227	6.0	<1.5
	3			0.01085	5.4	
	4					
	5			0.02166	8.8	
	6			0.01797	9.0	
	7			0.02360	7.7	
	8			0.02143	7.2	<1.4
	9			0.01230	13.0	1.6
	10			0.00382	15.0	
	11					
	12			0.01922	19.8	
	13			0.01707	9.6	
	14			0.01387	6.0	
	15	25		0.01751	6.2	2.1
	16			0.01275	9.4	1.5
	17			0.00783	16.5	
	18					
	19			0.01393	11.2	
	20			0.01075	8.2	
	21			0.01281	5.1	
	22		2.1	0.01545	8.8	
	23			0.00968	16.0	1.5
	24			0.00551	21.7	
	25					1.8
	26			0.01798	24.2	
	27			0.01304	9.8	
	28			0.01092	11.2	
	29			0.01914	5.9	
	30			0.00637	5.7	
	31					

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
Summary Values	Monthly Avg	25	2.1	0.014144615	10.438461538	1.2625
	Monthly Total					
	Daily Max	25	2.1	0.0236	24.2	2.1
	Daily Min	25	2.1	0.00382	4	<1.4
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg				31 0	26 0
	Monthly Total					
	Daily Max				60 0	52 0
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD	30	0.2			1.4
	LOQ	100	0.5			5.3
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460		438039470	999580010

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY
Sample Results	Day 1	0.53	<2.2	12	48	
	2	<0.49	<2.2	18	42	
	3					
	4					
	5					
	6					
	7					
	8	<0.49	<2.2	4.0	35	<3.0
	9	<0.49	<2.2	4.7	45	
	10					
	11					
	12					
	13					
	14					
	15	<0.49	<2.2	3.0	33	
	16	<0.49	<2.2	4.5	39	
	17					
	18					
	19					
	20					
	21					
	22	<0.49	<2.2	8.8	40	
	23	<0.49	<2.2	7.9	40	
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg	0.06625		0		7.8625		40.25		0	
	Monthly Total										
	Daily Max	0.53		<2.2		18		48		<3	
	Daily Min	<0.49		<2.2		3		33		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.49		2.2		1.5		3.6		3	
	LOQ	1		5		5		10		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010		999580010		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2/WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	5.8	<1.3	<1.1	7.4	8.4
	2	6.4	<1.3	<1.1	7.4	8.6
	3				7.7	8.4
	4					
	5				7.4	8.0
	6				7.3	8.4
	7				7.4	8.3
	8	6.8	<1.3	<1.1	7.3	8.1
	9	6.6	<1.3	<1.1	7.0	8.1
	10				6.8	7.1
	11					
	12				7.6	8.2
	13				6.6	7.7
	14				6.7	7.0
	15	5.0	<1.3	<1.1	6.7	7.3
	16	4.3	<1.3	<1.1	6.9	7.4
	17				6.8	7.8
	18					
	19				6.8	7.8
	20				7.1	7.8
	21				7.2	7.5
	22	4.4	<1.3	<1.1	6.7	7.7
	23	4.2	<1.3	<1.1	7.0	8.0
	24				6.9	7.8
	25					
	26				7.1	7.7
	27				7.2	7.5
	28				6.8	7.3
	29				6.7	7.2
	30				6.9	7.5
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	5.4375		0		0		7.053846154		7.792307692	
	Monthly Total										
	Daily Max	6.8		<1.3		<1.1		7.7		8.6	
	Daily Min	4.2		<1.3		<1.1		6.6		7	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.7		1.3		1.1					
	LOQ	5		2.5		2.5					
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
	Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					<0.20
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg					0
	Monthly Total					
	Daily Max					<0.2
	Daily Min					<0.2
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					0.2
	LOQ					0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4					
	5	0.003750			6.4	7.0
	6					
	7					
	8					
	9	0.025329	<1.0	48	7.1	8.2
	10					
	11					
	12					
	13	0.011461			6.8	8.5
	14	0.009774			7.1	7.4
	15	0.010649			6.7	7.1
	16	0.007908			6.3	7.3
	17					
	18					
	19	0.012364			6.6	8.8
	20	0.014573	<1.0	120	6.2	8.9
	21	0.014577			6.4	7.5
	22	0.016703			6.1	8.6
	23	0.012861			6.1	8.2
	24					
	25					
	26					
	27					
	28	0.006192	<1.0	130	6.1	8.9
	29	0.016668			6.1	6.4
	30	0.011337			6.1	6.9
	31					

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
Summary Values	Monthly Avg	0.012439	0	99.333333333	6.435714286	7.835714286
	Monthly Total					
	Daily Max	0.025329	<1	130	7.1	8.9
	Daily Min	0.00375	<1	48	6.1	6.4
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max			680 0		11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD			0.15		
	LOQ			1		
	QC Exceedance	N	N	N	N	N
	Lab Certification		438039470	999580010		

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY
Sample Results	Day 1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

1. Based on my inquiry of the person or persons directly responsible for managing compiliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

The Ground Water System (OF003)was down but, for the night shift on one day the first week of sampling so, the sample was not taken.

Laboratory Quality Control Comments

Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: TYCO FIRE PROTECTION PRODUCTS LP
Contact Address: One Stanton Street
Marinette, WI 54143
Facility Contact: Judith Rost, Sr Lab Tech
Phone Number: 715-735-7411
Reporting Period: 04/01/2018 - 04/30/2018
Form Due Date: 05/21/2018
Permit Number: 0001040

Date Received:	
DOC:	401377
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Nicole E Krueger
Office:	Green Bay

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
	Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	0.032760		50	7.2	7.8
	2	0.151690		79	7.2	8.0
	3	0.134030		52	7.3	7.6
	4	0.149980		52	7.4	7.8
	5	0.147100		57	7.4	7.8
	6	0.131030		55	7.3	7.5
	7	0.039510		53	7.3	7.8
	8	0.045900		53	7.4	8.2
	9	0.154090		55	7.0	7.4
	10	0.125730		58	7.0	7.2
	11	0.197460		57	6.8	7.2
	12	0.153680		57	6.9	7.1
	13	0.120190		55	7.0	7.3
	14	0.004110		50	7.4	7.8
	15	0.013960		71	7.4	7.8
	16	0.109990		55	7.0	7.6
	17	0.151630		55	7.0	7.3
	18	0.148160		54	7.1	7.4
	19	0.164610	7.7	56	6.9	7.3
	20	0.151580		56	7.1	7.4
	21	0.154680		55	7.1	7.4
	22	0.152700		54	7.1	7.3
	23	0.170840		58	6.9	7.2
	24	0.185670		59	6.9	7.4
	25	0.166350		58	7.2	7.5
	26	0.175300		60	7.2	7.6
	27	0.132790		56	7.3	7.5
	28	0.046960		55	7.4	7.6
	29	0.069940		58	7.2	7.8
	30	0.177050		60	6.9	7.3
	31					

	Sample Point	001		703		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		Intake Water Monitoring		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	211		280		487		374		373	
	Description	Flow Rate		Mercury, Total Recoverable		Temperature		pH (Minimum)		pH (Maximum)	
	Units	MGD		ng/L		degF		su		su	
Summary Values	**Monthly Avg**	0.125315667		7.7		56.766666667		7.143333333		7.53	
	Monthly Total										
	Daily Max	0.19746		7.7		79		7.4		8.2	
	Daily Min	0.00411		7.7		50		6.8		7.1	
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total										
	Daily Max									11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	**LOD**			0.2							
	LOQ			0.5							
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460							

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	379	376	388	231	35
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2			0.13	380	44
	3					
	4					
	5					
	6					
	7					
	8					
	9			0.14		46
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17			0.12	270	64
	18					
	19					
	20					
	21					
	22					
	23			0.26	290	75
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231		35	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3		Arsenic, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	**Monthly Avg**					0.1625		313.333333333		57.25	
	Monthly Total										
	Daily Max					0.26		380		75	
	Daily Min					0.12		270		44	
	Rolling 12 Month Avg					0.2					
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total	446	0								
	Daily Max			0	0					680	0
	Daily Min										
	Rolling 12 Month Avg					1	0				
QA/QC Information	**LOD**					0.024				2.1	
	LOQ					0.05				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010		999580010		999580010	

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
	Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2	0.05544	8.0	0.01008	0.65	
	3					
	4					
	5					
	6					
	7					
	8					
	9	0.05888	19	0.02432	1.1	<3.0
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17	0.08064	12	0.01512	<0.49	
	18					
	19					
	20					
	21					
	22					
	23	0.1065	10	0.0142	0.54	
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
Summary Values	**Monthly Avg**	0.075365	12.25	0.01593	0.5725	0
	Monthly Total					
	Daily Max	0.1065	19	0.02432	1.1	<3
	Daily Min	0.05544	8	0.01008	<0.49	<3
	Rolling 12 Month Avg					
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max	12 0	69 0	0.98 0		
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	**LOD**		1.7		0.49	3
	LOQ		5		1	10
	QC Exceedance	N	N	N	N	N
	Lab Certification		999580010		999580010	999580010

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK
Sample Results	Day 1					
	2	10		0.0212	8.8	
	3			0.0262	5.8	<1.4
	4			0.0277	5.0	<1.4
	5			0.0287	3.9	
	6			0.0233	4.0	
	7			0.0083	2.9	
	8					
	9			0.0366	3.9	4.4
	10			0.0324	2.3	2.4
	11			0.0258	2.9	
	12			0.0321	3.0	
	13			0.0180	4.3	
	14			0.0025	12.8	
	15					
	16			0.0060	8.2	
	17			0.0401	1.9	
	18			0.0269	2.4	1.6
	19		13	0.0340	1.8	1.7
	20			0.0261	2.6	
	21			0.0126	5.6	
	22			0.0127	4.3	
	23			0.0244	5.5	1.8
	24			0.0360	3.8	<1.4
	25			0.0306	2.3	
	26			0.0235	2.2	
	27			0.0141	3.9	
	28			0.0054	5.0	
	29					
	30			0.0354	2.6	
	31					

	Sample Point	001		001		101		101		101	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	112		280		211		457		342	
	Description	Chlorine, Total Residual		Mercury, Total Recoverable		Flow Rate		Suspended Solids, Total		Oil & Grease (Freon)	
	Units	ug/L		ng/L		MGD		mg/L		mg/L	
Summary Values	**Monthly Avg**	10		13		0.023484615		4.296153846		1.4875	
	Monthly Total										
	Daily Max	10		13		0.0401		12.8		4.4	
	Daily Min	10		13		0.0025		1.8		<1.4	
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**							31	0	26	0
	Monthly Total										
	Daily Max							60	0	52	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	**LOD**	30		0.2						1.4	
	LOQ	100		0.5						5.3	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460				438039470		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY
Sample Results	**Day 1**					
	2	<0.49	<2.2	12	61	
	3	0.53	<2.2	12	42	
	4					
	5					
	6					
	7					
	8					
	9	<0.49	<2.2	43	47	<3.0
	10	<0.49	<2.2	16	42	
	11					
	12					
	13					
	14					
	15					
	16	<0.49	<2.2	11	110	
	17	<0.49	<2.2	9.0	42	
	18					
	19					
	20					
	21					
	22					
	23	<0.49	<2.2	39	86	
	24	<0.49	<2.2	62	53	
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**	0.06625		0		25.5		60.375		0	
	Monthly Total										
	Daily Max	0.53		<2.2		62		110		<3	
	Daily Min	<0.49		<2.2		9		42		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	**LOD**	0.49		2.2		1.5		3.6		3	
	LOQ	1		5		5		10		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010		999580010		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2/WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1					
	2	11	<1.3	<1.1	7.5	7.7
	3	12	<1.3	<1.1	7.3	7.6
	4				7.2	7.7
	5				7.2	7.6
	6				7.1	7.8
	7				7.0	7.4
	8					
	9	30	<1.3	<1.1	7.6	8.2
	10	22	<1.3	<1.1	7.1	7.7
	11				7.2	7.6
	12				6.8	7.3
	13				7.2	7.4
	14				7.2	7.3
	15					
	16	20	<1.3	<1.1	7.7	7.7
	17	16	<1.3	<1.1	7.0	7.8
	18				6.8	7.3
	19				7.2	7.4
	20				6.9	7.4
	21				7.0	7.2
	22				6.9	7.2
	23	9.3	<1.3	<1.1	6.9	7.3
	24	6.0	<1.3	<1.1	7.0	7.8
	25				7.0	7.5
	26				7.1	7.2
	27				7.1	7.3
	28				7.0	7.3
	29					
	30				7.5	7.9
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	**Monthly Avg**	15.7875		0		0		7.134615385		7.523076923	
	Monthly Total										
	Daily Max	30		<1.3		<1.1		7.7		8.2	
	Daily Min	6		<1.3		<1.1		6.8		7.2	
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	**LOD**	1.7		1.3		1.1					
	LOQ	5		2.5		2.5					
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	**LOD**										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	**Day 1**					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	**LOD**					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
	Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					<0.20
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	**Monthly Avg**					0
	Monthly Total					
	Daily Max					<0.2
	Daily Min					<0.2
	Rolling 12 Month Avg					
Limit(s) in Effect	**Monthly Avg**					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	**LOD**					0.2
	LOQ					0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3	0.013905			6.0	6.4
	4	0.018475	<1.0	180	6.4	8.2
	5	0.017979			6.4	8.3
	6	0.011675			6.8	8.3
	7					
	8					
	9					
	10	0.010910	<1.0	210	8.3	8.6
	11	0.010769			7.8	8.3
	12	0.011689			6.8	7.9
	13	0.011328			6.1	6.6
	14					
	15					
	16					
	17	0.011756	<1.0	120	6.2	8.8
	18	0.011493			7.2	8.9
	19	0.008076			7.8	8.6
	20	0.010894			6.7	8.6
	21					
	22					
	23					
	24	0.005585	<1.0	170	6.0	8.2
	25	0.017298			7.3	9.0
	26	0.009571			6.3	9.0
	27					
	28	0.008684			6.0	9.0
	29					
	30	0.012480			6.2	6.7
	31					

	Sample Point	003		003		003		003		003	
	Description	Future remedial action dischg		Future remedial action dischg		Future remedial action dischg		Future remedial action dischg		Future remedial action dischg	
	Parameter	211		457		35		374		373	
	Description	Flow Rate		Suspended Solids, Total		Arsenic, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	MGD		mg/L		ug/L		su		su	
Summary Values	**Monthly Avg**	0.011915706		0		170		6.723529412		8.2	
	Monthly Total										
	Daily Max	0.018475		<1		210		8.3		9	
	Daily Min	0.005585		<1		120		6		6.4	
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total										
	Daily Max					680	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	**LOD**					2.1					
	LOQ					5					
	QC Exceedance	N		N		N		N		N	
	Lab Certification			438039470		999580010					

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY
Sample Results	**Day 1**		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	**Monthly Avg**				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	**Monthly Avg**				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	**LOD**				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

1. Based on my inquiry of the person or persons directly responsible for managing compiliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

Laboratory Quality Control Comments

Submitted by afleury16 on 05/15/2018 10:59:55 AM

eReport Certify - TYCO FIRE PROTECTION PRODUCTS LP - 433163

Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
401378
Reporting Period
5/1/2018 to 5/31/2018
Enter Certification Code
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Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
401378
Reporting Period
5/1/2018 to 5/31/2018
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I certify under penalty of law that this form submitted to DNR on 6/13/2018 for the period 5/1/2018 to 5/31/2018 and identified by the DOC ID number listed above was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
401378
Reporting Period
5/1/2018 to 5/31/2018
Enter Certification Code

E-Mail was sent to
afleury@tycoint.com

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I certify under penalty of law that this form submitted to DNR on 6/13/2018 for the period 5/1/2018 to 5/31/2018 and identified by the DOC ID number listed above was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Facility Name
TYCO FIRE PROTECTION PRODUCTS LP
Form Type
Wastewater Discharge Monitoring Long Report
DOC ID
401378
Reporting Period
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Wastewater Discharge Monitoring Long Report

Facility Name: TYCO FIRE PROTECTION PRODUCTS LP
Contact Address: One Stanton Street
Marinette, WI 54143
Facility Contact: Judith Rost, Sr Lab Tech
Phone Number: 715-735-7411
Reporting Period: 05/01/2018 - 05/31/2018
Form Due Date: 06/21/2018
Permit Number: 0001040

For DNR Use Only

Date Received:	
DOC:	401378
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Nicole E Krueger
Office:	Green Bay

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
	Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	0.20806		63	7.0	7.3
	2	0.16390		60	7.2	7.6
	3	0.26115		61	7.0	7.4
	4	0.16897		61	7.0	7.3
	5	0.05975		59	7.1	7.3
	6	0.05523		62	7.1	7.4
	7	0.14830		62	6.9	7.4
	8	0.15333		83	7.0	8.0
	9	0.18732		61	7.0	7.6
	10	0.15461		64	7.1	7.6
	11	0.14263		63	7.1	7.4
	12	0.07164		62	7.3	7.6
	13	0.05191		64	7.5	8.0
	14	0.14434		62	7.4	8.0
	15	0.15973		64	7.4	7.6
	16	0.12886		65	7.0	7.3
	17	0.16310		65	7.3	7.5
	18	0.13678		66	7.2	7.6
	19	0.10376		63	7.2	7.6
	20	0.07623		88	7.4	8.0
	21	0.16346		66	7.0	7.2
	22	0.16272		68	7.1	7.7
	23	0.15687		70	7.3	7.6
	24	0.14552		70	7.1	7.4
	25	0.09970		68	6.8	7.6
	26	0.01324		75	6.7	7.0
	27	0.00447		75	6.9	7.2
	28	0.01398		73	6.9	7.2
	29	0.14241		70	6.7	7.4
	30	0.15462	0.86	70	6.6	7.1
	31	0.15048		71	6.5	6.7

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.127324839	0.86	66.903225806	7.058064516	7.470967742
	Monthly Total					
	Daily Max	0.26115	0.86	88	7.5	8
	Daily Min	0.00447	0.86	59	6.5	6.7
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.2			
	LOQ		0.5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	379	376	388	231	35
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable
	Units	minutes	Number	mg/L	mg/L	ug/L
	Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY
Sample Results	Day 1			0.16	310	88
	2					
	3					
	4					
	5					
	6					
	7					
	8			0.25	320	58
	9					
	10					
	11					
	12					
	13					
	14					
	15			0.15	300	59
	16					
	17					
	18					
	19					
	20					
	21					
	22			0.13	330	51
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231		35	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3		Arsenic, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	Monthly Avg					0.1725		315		64	
	Monthly Total										
	Daily Max					0.25		330		88	
	Daily Min					0.13		300		51	
	Rolling 12 Month Avg					0.2					
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0								
	Daily Max			0	0					680	0
	Daily Min										
	Rolling 12 Month Avg					1	0				
QA/QC Information	LOD					0.024				2.1	
	LOQ					0.05				5	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					999580010		999580010		999580010	

	Sample Point	001	001	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	35	147	147	87	152
	Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable
	Units	lbs/day	ug/L	lbs/day	ug/L	ug/L
	Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1	0.15224	7.2	0.012456	1.1	<3.0
	2					
	3					
	4					
	5					
	6					
	7					
	8	0.07424	9.1	0.0091	0.75	
	9					
	10					
	11					
	12					
	13					
	14					
	15	0.07847	8.2	0.010906	<0.49	
	16					
	17					
	18					
	19					
	20					
	21					
	22	0.06936	9.7	0.013192	<0.49	
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87		152	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		ug/L	
Summary Values	Monthly Avg	0.0935775		8.55		0.0114135		0.4625		0	
	Monthly Total										
	Daily Max	0.15224		9.7		0.013192		1.1		<3	
	Daily Min	0.06936		7.2		0.0091		<0.49		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max	12	0	69	0	0.98	0				
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD			1.7				0.49		3	
	LOQ			5				1		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			999580010				999580010		999580010	

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK
Sample Results	Day 1			0.0358	2.1	2.1
	2			0.0250	1.9	1.4
	3			0.0214	2.0	
	4			0.0100	5.6	
	5			0.0124	6.1	
	6					
	7			0.0266	5.0	
	8	10		0.0337	2.6	<1.4
	9			0.0250	4.1	<1.4
	10			0.0282	2.1	
	11			0.0263	1.4	
	12			0.0075	4.0	
	13					
	14			0.0157	7.4	
	15			0.0308	2.9	2.1
	16			0.0276	5.3	2.4
	17			0.0313	1.9	
	18			0.0247	2.8	
	19			0.0110	11.4	
	20					
	21			0.0407	1.8	
	22			0.0438	1.3	1.6
	23			0.0375	1.3	1.5
	24			0.0261	2.3	
	25			0.0155	2.6	
	26					
	27					
	28					
	29			0.0260	5.3	
	30		9.9	0.0406	2.1	
	31			0.0373	1.3	

	Sample Point	001	001	101	101	101
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	112	280	211	457	342
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)
	Units	ug/L	ng/L	MGD	mg/L	mg/L
Summary Values	Monthly Avg	10	9.9	0.02642	3.464	1.3875
	Monthly Total					
	Daily Max	10	9.9	0.0438	11.4	2.4
	Daily Min	10	9.9	0.0075	1.3	<1.4
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg				31 0	26 0
	Monthly Total					
	Daily Max				60 0	52 0
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD	30	0.2			1.4
	LOQ	100	0.5			5.4
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460		438039470	999580010

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY
Sample Results	Day 1	<0.49	<2.2	28	27	<3.0
	2	<0.49	<2.2	19	34	
	3					
	4					
	5					
	6					
	7					
	8	<0.49	<2.2	19	30	
	9	<0.49	<2.2	22	31	
	10					
	11					
	12					
	13					
	14					
	15	<0.49	<2.2	13	48	
	16	<0.49	<2.2	13	39	
	17					
	18					
	19					
	20					
	21					
	22	<0.49	<2.2	6.3	26	
	23	<0.49	<2.2	8.1	28	
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**	0		0		16.05		32.875		0	
	Monthly Total										
	Daily Max	<0.49		<2.2		28		48		<3	
	Daily Min	<0.49		<2.2		6.3		26		<3	
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	**LOD**	0.49		2.2		1.5		3.6		3	
	LOQ	1		5		5		10		10	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010		999580010		999580010	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2/WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	6.4	<1.3	<1.1	7.4	7.9
	2	4.5	<1.3	<1.1	7.1	7.4
	3				6.9	7.2
	4				6.9	7.8
	5				6.5	7.3
	6					
	7				7.4	7.7
	8	5.1	1.3	<1.1	7.4	7.6
	9	4.3	<1.3	<1.1	7.0	7.4
	10				7.0	7.3
	11				6.9	7.4
	12				6.8	7.2
	13					
	14				7.3	7.7
	15	4.2	<1.3	<1.1	7.2	7.8
	16	4.4	<1.3	<1.1	7.2	7.6
	17				7.2	7.6
	18				7.2	7.7
	19				7.1	7.5
	20					
	21				7.3	7.9
	22	3.4	<1.3	<1.1	7.4	7.7
	23	3.4	<1.3	<1.1	7.5	7.6
	24				7.0	7.9
	25				7.1	7.8
	26					
	27					
	28					
	29				7.1	8.0
	30				7.7	8.0
	31				7.7	8.0

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	4.4625		0.1625		0		7.172		7.64	
	Monthly Total										
	Daily Max	6.4		1.3		<1.1		7.7		8	
	Daily Min	3.4		<1.3		<1.1		6.5		7.2	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.7		1.3		1.1					
	LOQ	5		2.5		2.5					
	QC Exceedance	N		N		N		N		N	
	Lab Certification	999580010		999580010		999580010					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	**Monthly Avg**										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	**Monthly Avg**										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	**LOD**										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance					
	Lab Certification					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
	Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
	Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					0.32
	31					

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg					0.32
	Monthly Total					
	Daily Max					0.32
	Daily Min					0.32
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					0.2
	LOQ					0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1	0.012618	<1.0	55	6.2	6.8
	2	0.015379			6.0	9.0
	3	0.013747			6.0	8.8
	4	0.019639			8.0	8.8
	5	0.005839			8.7	8.8
	6					
	7	0.022622			7.8	8.6
	8	0.014677	<1.0	55	6.6	7.8
	9	0.010552			6.0	8.2
	10	0.015031			6.7	8.7
	11	0.012296			8.0	8.8
	12					
	13					
	14	0.022608			6.6	8.8
	15	0.020258	<1.0	58	6.2	9.0
	16				6.1	6.3
	17	0.010830			6.0	6.7
	18	0.018090			6.2	8.3
	19					
	20					
	21					
	22	0.015897			7.7	8.9
	23					
	24					
	25	0.004214			8.1	8.9
	26					
	27					
	28					
	29	0.004091			7.3	8.0
	30	0.006820			6.1	7.1
	31	0.008512			6.7	7.1

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
Summary Values	Monthly Avg	0.013353684	0	56	6.85	8.17
	Monthly Total					
	Daily Max	0.022622	<1	58	8.7	9
	Daily Min	0.004091	<1	55	6	6.3
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max			680 0		11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD			2.1		
	LOQ			5		
	QC Exceedance	N	N	N	N	N
	Lab Certification		438039470	999580010		

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY
Sample Results	Day 1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

1. Based on my inquiry of the person or persons directly responsible for managing compiliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

At OF003 outfall we did not get the sampler running on the fourth week because of issues. System was in recycle most of the week and we could not get a full 24 hour sample period.

Laboratory Quality Control Comments

Attachment 3
Barrier Wall Inspection Summary

Quarter 2 Spring Vertical Barrier Wall Inspection Summary

The 2018 Quarter 2 Vertical Barrier Wall Visual Inspection was performed by Ryan Suennen and Jeff Danko of Tyco. The inspection was completed on 5/10/18. The Inspection observations are below. There were additional small leaks located primarily again at the points of the tie back structures.

Observation 1

During the river side inspection of the Barrier Wall in the main plant area of the facility, Tyco noted 2 localized instances where site groundwater was dripping from the penetrations in the wall created to support the tieback structure and 1 instance of seepage in a wall joint. The general location of the leaks were in the coal dock area of the main plant consistence with the findings on previous inspections. MJB was contracted to tighten and seal the tieback bolts in a manner consistent with previous similar work. This work will be completed in quarter 3 ideally as soon as river water levels allows for the work to be completed. Tyco will complete a follow-up inspection in the next quarter to verify the corrective actions taken continue to be effective at stopping the leaks.

Attachment 4
BWGMPU Sampling Results

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: 500-145257-1
Client Project/Site: Barrier Wall Monitoring
Revision: 1

For:
Tyco Fire Protection Products
1 Stanton St
Marinette, Wisconsin 54143

Attn: Mr. Ryan Suennen

Jodie Bracken

Authorized for release by:
7/3/2018 3:07:58 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for

Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

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Case Narrative

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Job ID: 500-145257-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-145257-1

Comments
No additional comments.

Receipt
The samples were received on 5/10/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.
Received all three VOC vials for samples 2, 5, and 6 with headspace.

Revised Report
Per communication with client, the GC/MS VOA narrative has been amended to reference volatile analysis not performed within 7 days.

GC/MS VOA
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 within the 7 day holding time for unpreserved samples was not possible: MW045M (500-145257-3), MW045M (500-145257-3[MS]), MW045M (500-145257-3[MSD]) and MW041M (500-145257-4).

Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW045M (500-145257-3), MW045M (500-145257-3[MS]), MW045M (500-145257-3[MSD]), MW041S/D (500-145257-5), MW041S (500-145257-6), MW045S (500-145257-7), MW117S (500-145257-8) and MW117M (500-145257-11). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample was diluted due to the abundance of non-target analytes: MW108M (500-145257-1). Elevated reporting limits (RLs) are provided.

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

Detection Summary

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW108M — Lab Sample ID: 500-145257-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	100		5.0	1.5	ug/L	10		8260B	Total/NA
Chlorobenzene	180		10	3.9	ug/L	10		8260B	Total/NA
1,2-Dichlorobenzene	91		10	3.3	ug/L	10		8260B	Total/NA
Ethylbenzene	9.9		5.0	1.8	ug/L	10		8260B	Total/NA
p-Isopropyltoluene	8.6	J	10	3.6	ug/L	10		8260B	Total/NA
Naphthalene	150		10	3.4	ug/L	10		8260B	Total/NA
Toluene	9.9		5.0	1.5	ug/L	10		8260B	Total/NA
Xylenes, Total	32		10	2.2	ug/L	10		8260B	Total/NA

Client Sample ID: MW108S — Lab Sample ID: 500-145257-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	100		2.5	0.73	ug/L	5		8260B	Total/NA
Chlorobenzene	100		5.0	1.9	ug/L	5		8260B	Total/NA
1,2-Dichlorobenzene	110		5.0	1.7	ug/L	5		8260B	Total/NA
Dichlorodifluoromethane	8.0	J	10	3.4	ug/L	5		8260B	Total/NA
Ethylbenzene	8.8		2.5	0.92	ug/L	5		8260B	Total/NA
p-Isopropyltoluene	14		5.0	1.8	ug/L	5		8260B	Total/NA
Naphthalene	140		5.0	1.7	ug/L	5		8260B	Total/NA
Toluene	7.5		2.5	0.76	ug/L	5		8260B	Total/NA
1,2,4-Trimethylbenzene	5.7		5.0	1.8	ug/L	5		8260B	Total/NA
1,3,5-Trimethylbenzene	3.9	J	5.0	1.3	ug/L	5		8260B	Total/NA
Xylenes, Total	47		5.0	1.1	ug/L	5		8260B	Total/NA

Client Sample ID: MW045M — Lab Sample ID: 500-145257-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	27		2.5	0.73	ug/L	5		8260B	Total/NA
Chlorobenzene	240		5.0	1.9	ug/L	5		8260B	Total/NA
1,2-Dichlorobenzene	240		5.0	1.7	ug/L	5		8260B	Total/NA
1,1-Dichloroethane	7.2		5.0	2.1	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	3.9	J	5.0	2.0	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	320		5.0	2.0	ug/L	5		8260B	Total/NA
Isopropyl ether	2.1	J	5.0	1.4	ug/L	5		8260B	Total/NA
Ethylbenzene	17		2.5	0.92	ug/L	5		8260B	Total/NA
Methylene Chloride	100		25	8.2	ug/L	5		8260B	Total/NA
Toluene	270		2.5	0.76	ug/L	5		8260B	Total/NA
Vinyl chloride	54		5.0	1.0	ug/L	5		8260B	Total/NA
Xylenes, Total	92		5.0	1.1	ug/L	5		8260B	Total/NA
Trichloroethene - DL	1700		5.0	1.6	ug/L	10		8260B	Total/NA

Client Sample ID: MW041M — Lab Sample ID: 500-145257-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.6		0.50	0.15	ug/L	1		8260B	Total/NA
Chlorobenzene	3.3		1.0	0.39	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	2.2		1.0	0.41	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.66	J	1.0	0.39	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	45		1.0	0.41	ug/L	1		8260B	Total/NA
Isopropyl ether	0.91	J	1.0	0.28	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041M (Continued) — Lab Sample ID: 500-145257-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.6		0.50	0.18	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	0.59	J	1.0	0.36	ug/L	1		8260B	Total/NA
Methylene Chloride	120		5.0	1.6	ug/L	1		8260B	Total/NA
Toluene	120		0.50	0.15	ug/L	1		8260B	Total/NA
Trichloroethene	93		0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	13		1.0	0.20	ug/L	1		8260B	Total/NA
Xylenes, Total	8.2		1.0	0.22	ug/L	1		8260B	Total/NA

Client Sample ID: MW041S/D — Lab Sample ID: 500-145257-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	44		10	2.9	ug/L	20		8260B	Total/NA
Chlorobenzene	1300		20	7.7	ug/L	20		8260B	Total/NA
1,2-Dichlorobenzene	94		20	6.7	ug/L	20		8260B	Total/NA
Ethylbenzene	810		10	3.7	ug/L	20		8260B	Total/NA
Toluene	24		10	3.0	ug/L	20		8260B	Total/NA
Xylenes, Total - DL	6000		200	44	ug/L	200		8260B	Total/NA

Client Sample ID: MW041S — Lab Sample ID: 500-145257-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	48		10	2.9	ug/L	20		8260B	Total/NA
Chlorobenzene	1500		20	7.7	ug/L	20		8260B	Total/NA
1,2-Dichlorobenzene	170		20	6.7	ug/L	20		8260B	Total/NA
1,4-Dichlorobenzene	24		20	7.3	ug/L	20		8260B	Total/NA
Ethylbenzene	1500		10	3.7	ug/L	20		8260B	Total/NA
Isopropylbenzene	9.2	J	20	7.7	ug/L	20		8260B	Total/NA
Toluene	52		10	3.0	ug/L	20		8260B	Total/NA
Xylenes, Total - DL	9100		200	44	ug/L	200		8260B	Total/NA

Client Sample ID: MW045S — Lab Sample ID: 500-145257-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	76		10	2.9	ug/L	20		8260B	Total/NA
1,2-Dichlorobenzene	1800		20	6.7	ug/L	20		8260B	Total/NA
1,3-Dichlorobenzene	13	J	20	8.0	ug/L	20		8260B	Total/NA
1,4-Dichlorobenzene	84		20	7.3	ug/L	20		8260B	Total/NA
1,2-Dichloroethane	18	J	20	7.8	ug/L	20		8260B	Total/NA
cis-1,2-Dichloroethene	390		20	8.2	ug/L	20		8260B	Total/NA
Ethylbenzene	1200		10	3.7	ug/L	20		8260B	Total/NA
p-Isopropyltoluene	8.5	J	20	7.2	ug/L	20		8260B	Total/NA
Methylene Chloride	110		100	33	ug/L	20		8260B	Total/NA
Naphthalene	26		20	6.7	ug/L	20		8260B	Total/NA
Trichloroethene	56		10	3.3	ug/L	20		8260B	Total/NA
Vinyl chloride	32		20	4.1	ug/L	20		8260B	Total/NA
Chlorobenzene - DL	3800		200	77	ug/L	200		8260B	Total/NA
Toluene - DL	3900		100	30	ug/L	200		8260B	Total/NA
Xylenes, Total - DL	7600		200	44	ug/L	200		8260B	Total/NA

Client Sample ID: MW117S — Lab Sample ID: 500-145257-8

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Client Sample ID: MW117S (Continued) — Lab Sample ID: 500-145257-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	15		0.50	0.15	ug/L	1		8260B	Total/NA
1,2-Dichlorobenzene	21		1.0	0.33	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	1.9		1.0	0.36	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	2.0		1.0	0.41	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.94	J	1.0	0.35	ug/L	1		8260B	Total/NA
Isopropyl ether	1.2		1.0	0.28	ug/L	1		8260B	Total/NA
Ethylbenzene	4.3		0.50	0.18	ug/L	1		8260B	Total/NA
Isopropylbenzene	0.52	J	1.0	0.39	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	8.0		1.0	0.36	ug/L	1		8260B	Total/NA
Methylene Chloride	4.4	J	5.0	1.6	ug/L	1		8260B	Total/NA
Toluene	17		0.50	0.15	ug/L	1		8260B	Total/NA
Vinyl chloride	0.97	J	1.0	0.20	ug/L	1		8260B	Total/NA
Xylenes, Total	13		1.0	0.22	ug/L	1		8260B	Total/NA
Chlorobenzene - DL	260		10	3.9	ug/L	10		8260B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 500-145257-9

No Detections.

Client Sample ID: FB#1 — Lab Sample ID: 500-145257-10

No Detections.

Client Sample ID: MW117M — Lab Sample ID: 500-145257-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	24		1.0	0.29	ug/L	2		8260B	Total/NA
1,2-Dichlorobenzene	52		2.0	0.67	ug/L	2		8260B	Total/NA
1,4-Dichlorobenzene	2.0		2.0	0.73	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	7.4		2.0	0.82	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	1.8	J	2.0	0.70	ug/L	2		8260B	Total/NA
Isopropyl ether	1.2	J	2.0	0.55	ug/L	2		8260B	Total/NA
Ethylbenzene	40		1.0	0.37	ug/L	2		8260B	Total/NA
p-Isopropyltoluene	18		2.0	0.72	ug/L	2		8260B	Total/NA
Naphthalene	1.5	J	2.0	0.67	ug/L	2		8260B	Total/NA
Toluene	64		1.0	0.30	ug/L	2		8260B	Total/NA
Trichloroethene	1.4		1.0	0.33	ug/L	2		8260B	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.72	ug/L	2		8260B	Total/NA
Vinyl chloride	3.5		2.0	0.41	ug/L	2		8260B	Total/NA
Xylenes, Total	180		2.0	0.44	ug/L	2		8260B	Total/NA
Chlorobenzene - DL	540		20	7.7	ug/L	20		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	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: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-145257-1	MW108M	Water	05/03/18 11:42	05/10/18 09:20
500-145257-2	MW108S	Water	05/03/18 11:46	05/10/18 09:20
500-145257-3	MW045M	Water	05/03/18 09:15	05/10/18 09:20
500-145257-4	MW041M	Water	05/03/18 07:54	05/10/18 09:20
500-145257-5	MW041S/D	Water	05/03/18 08:04	05/10/18 09:20
500-145257-6	MW041S	Water	05/03/18 08:04	05/10/18 09:20
500-145257-7	MW045S	Water	05/03/18 09:07	05/10/18 09:20
500-145257-8	MW117S	Water	05/03/18 10:40	05/10/18 09:20
500-145257-9	Trip Blank	Water	05/03/18 00:00	05/10/18 09:20
500-145257-10	FB#1	Water	05/03/18 07:26	05/10/18 09:20
500-145257-11	MW117M	Water	05/07/18 11:00	05/10/18 09:20

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW108M
Date Collected: 05/03/18 11:42
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**100**		5.0	1.5	ug/L			05/17/18 12:55	10
Bromobenzene	<3.6		10	3.6	ug/L			05/17/18 12:55	10
Bromochloromethane	<4.3		10	4.3	ug/L			05/17/18 12:55	10
Bromodichloromethane	<3.7		10	3.7	ug/L			05/17/18 12:55	10
Bromoform	<4.8		10	4.8	ug/L			05/17/18 12:55	10
Bromomethane	<8.0		20	8.0	ug/L			05/17/18 12:55	10
n-Butylbenzene	<3.9		10	3.9	ug/L			05/17/18 12:55	10
sec-Butylbenzene	<4.0		10	4.0	ug/L			05/17/18 12:55	10
tert-Butylbenzene	<4.0		10	4.0	ug/L			05/17/18 12:55	10
Carbon tetrachloride	<3.8		10	3.8	ug/L			05/17/18 12:55	10
Chlorobenzene	**180**		10	3.9	ug/L			05/17/18 12:55	10
Dibromochloromethane	<4.9		10	4.9	ug/L			05/17/18 12:55	10
Chloroethane	<5.1		10	5.1	ug/L			05/17/18 12:55	10
Chloroform	<3.7		20	3.7	ug/L			05/17/18 12:55	10
Chloromethane	<3.2		10	3.2	ug/L			05/17/18 12:55	10
2-Chlorotoluene	<3.1		10	3.1	ug/L			05/17/18 12:55	10
4-Chlorotoluene	<3.5		10	3.5	ug/L			05/17/18 12:55	10
1,2-Dibromo-3-Chloropropane	<20		50	20	ug/L			05/17/18 12:55	10
1,2-Dibromoethane	<3.9		10	3.9	ug/L			05/17/18 12:55	10
Dibromomethane	<2.7		10	2.7	ug/L			05/17/18 12:55	10
1,2-Dichlorobenzene	**91**		10	3.3	ug/L			05/17/18 12:55	10
1,3-Dichlorobenzene	<4.0		10	4.0	ug/L			05/17/18 12:55	10
1,4-Dichlorobenzene	<3.6		10	3.6	ug/L			05/17/18 12:55	10
Dichlorodifluoromethane	<6.7		20	6.7	ug/L			05/17/18 12:55	10
1,1-Dichloroethane	<4.1		10	4.1	ug/L			05/17/18 12:55	10
1,2-Dichloroethane	<3.9		10	3.9	ug/L			05/17/18 12:55	10
1,1-Dichloroethene	<3.9		10	3.9	ug/L			05/17/18 12:55	10
cis-1,2-Dichloroethene	<4.1		10	4.1	ug/L			05/17/18 12:55	10
trans-1,2-Dichloroethene	<3.5		10	3.5	ug/L			05/17/18 12:55	10
1,2-Dichloropropane	<4.3		10	4.3	ug/L			05/17/18 12:55	10
1,3-Dichloropropane	<3.6		10	3.6	ug/L			05/17/18 12:55	10
2,2-Dichloropropane	<4.4		10	4.4	ug/L			05/17/18 12:55	10
1,1-Dichloropropene	<3.0		10	3.0	ug/L			05/17/18 12:55	10
cis-1,3-Dichloropropene	<4.2		10	4.2	ug/L			05/17/18 12:55	10
trans-1,3-Dichloropropene	<3.6		10	3.6	ug/L			05/17/18 12:55	10
Isopropyl ether	<2.8		10	2.8	ug/L			05/17/18 12:55	10
Ethylbenzene	**9.9**		5.0	1.8	ug/L			05/17/18 12:55	10
Hexachlorobutadiene	<4.5		10	4.5	ug/L			05/17/18 12:55	10
Isopropylbenzene	<3.9		10	3.9	ug/L			05/17/18 12:55	10
p-Isopropyltoluene	**8.6**	**J**	10	3.6	ug/L			05/17/18 12:55	10
Methylene Chloride	<16		50	16	ug/L			05/17/18 12:55	10
Methyl tert-butyl ether	<3.9		10	3.9	ug/L			05/17/18 12:55	10
Naphthalene	**150**		10	3.4	ug/L			05/17/18 12:55	10
N-Propylbenzene	<4.1		10	4.1	ug/L			05/17/18 12:55	10
Styrene	<3.9		10	3.9	ug/L			05/17/18 12:55	10
1,1,1,2-Tetrachloroethane	<4.6		10	4.6	ug/L			05/17/18 12:55	10
1,1,2,2-Tetrachloroethane	<4.0		10	4.0	ug/L			05/17/18 12:55	10
Tetrachloroethene	<3.7		10	3.7	ug/L			05/17/18 12:55	10
Toluene	**9.9**		5.0	1.5	ug/L			05/17/18 12:55	10

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW108M
Date Collected: 05/03/18 11:42
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<4.6		10	4.6	ug/L			05/17/18 12:55	10
1,2,4-Trichlorobenzene	<3.4		10	3.4	ug/L			05/17/18 12:55	10
1,1,1-Trichloroethane	<3.8		10	3.8	ug/L			05/17/18 12:55	10
1,1,2-Trichloroethane	<3.5		10	3.5	ug/L			05/17/18 12:55	10
Trichloroethene	<1.6		5.0	1.6	ug/L			05/17/18 12:55	10
Trichlorofluoromethane	<4.3		10	4.3	ug/L			05/17/18 12:55	10
1,2,3-Trichloropropane	<4.1		10	4.1	ug/L			05/17/18 12:55	10
1,2,4-Trimethylbenzene	<3.6		10	3.6	ug/L			05/17/18 12:55	10
1,3,5-Trimethylbenzene	<2.5		10	2.5	ug/L			05/17/18 12:55	10
Vinyl chloride	<2.0		10	2.0	ug/L			05/17/18 12:55	10
Xylenes, Total	**32**		10	2.2	ug/L			05/17/18 12:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 126*		*05/17/18 12:55*	*10*
Toluene-d8 (Surr)	*102*		*75 - 120*		*05/17/18 12:55*	*10*
4-Bromofluorobenzene (Surr)	*98*		*72 - 124*		*05/17/18 12:55*	*10*
Dibromofluoromethane	*96*		*75 - 120*		*05/17/18 12:55*	*10*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW108S
Date Collected: 05/03/18 11:46
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**100**		2.5	0.73	ug/L			05/17/18 13:24	5
Bromobenzene	<1.8		5.0	1.8	ug/L			05/17/18 13:24	5
Bromochloromethane	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
Bromodichloromethane	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
Bromoform	<2.4		5.0	2.4	ug/L			05/17/18 13:24	5
Bromomethane	<4.0		10	4.0	ug/L			05/17/18 13:24	5
n-Butylbenzene	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
sec-Butylbenzene	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
tert-Butylbenzene	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
Chlorobenzene	**100**		5.0	1.9	ug/L			05/17/18 13:24	5
Dibromochloromethane	<2.4		5.0	2.4	ug/L			05/17/18 13:24	5
Chloroethane	<2.5		5.0	2.5	ug/L			05/17/18 13:24	5
Chloroform	<1.9		10	1.9	ug/L			05/17/18 13:24	5
Chloromethane	<1.6		5.0	1.6	ug/L			05/17/18 13:24	5
2-Chlorotoluene	<1.6		5.0	1.6	ug/L			05/17/18 13:24	5
4-Chlorotoluene	<1.7		5.0	1.7	ug/L			05/17/18 13:24	5
1,2-Dibromo-3-Chloropropane	<10		25	10	ug/L			05/17/18 13:24	5
1,2-Dibromoethane	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
Dibromomethane	<1.4		5.0	1.4	ug/L			05/17/18 13:24	5
1,2-Dichlorobenzene	**110**		5.0	1.7	ug/L			05/17/18 13:24	5
1,3-Dichlorobenzene	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
1,4-Dichlorobenzene	<1.8		5.0	1.8	ug/L			05/17/18 13:24	5
Dichlorodifluoromethane	**8.0**	**J**	10	3.4	ug/L			05/17/18 13:24	5
1,1-Dichloroethane	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
1,1-Dichloroethene	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
cis-1,2-Dichloroethene	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
trans-1,2-Dichloroethene	<1.7		5.0	1.7	ug/L			05/17/18 13:24	5
1,2-Dichloropropane	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
1,3-Dichloropropane	<1.8		5.0	1.8	ug/L			05/17/18 13:24	5
2,2-Dichloropropane	<2.2		5.0	2.2	ug/L			05/17/18 13:24	5
1,1-Dichloropropene	<1.5		5.0	1.5	ug/L			05/17/18 13:24	5
cis-1,3-Dichloropropene	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
trans-1,3-Dichloropropene	<1.8		5.0	1.8	ug/L			05/17/18 13:24	5
Isopropyl ether	<1.4		5.0	1.4	ug/L			05/17/18 13:24	5
Ethylbenzene	**8.8**		2.5	0.92	ug/L			05/17/18 13:24	5
Hexachlorobutadiene	<2.2		5.0	2.2	ug/L			05/17/18 13:24	5
Isopropylbenzene	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
p-Isopropyltoluene	**14**		5.0	1.8	ug/L			05/17/18 13:24	5
Methylene Chloride	<8.2		25	8.2	ug/L			05/17/18 13:24	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
Naphthalene	**140**		5.0	1.7	ug/L			05/17/18 13:24	5
N-Propylbenzene	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
Styrene	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
1,1,1,2-Tetrachloroethane	<2.3		5.0	2.3	ug/L			05/17/18 13:24	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			05/17/18 13:24	5
Tetrachloroethene	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
Toluene	**7.5**		2.5	0.76	ug/L			05/17/18 13:24	5

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW108S
Date Collected: 05/03/18 11:46
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<2.3		5.0	2.3	ug/L			05/17/18 13:24	5
1,2,4-Trichlorobenzene	<1.7		5.0	1.7	ug/L			05/17/18 13:24	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			05/17/18 13:24	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			05/17/18 13:24	5
Trichloroethene	<0.82		2.5	0.82	ug/L			05/17/18 13:24	5
Trichlorofluoromethane	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
1,2,3-Trichloropropane	<2.1		5.0	2.1	ug/L			05/17/18 13:24	5
1,2,4-Trimethylbenzene	**5.7**		5.0	1.8	ug/L			05/17/18 13:24	5
1,3,5-Trimethylbenzene	**3.9**	**J**	5.0	1.3	ug/L			05/17/18 13:24	5
Vinyl chloride	<1.0		5.0	1.0	ug/L			05/17/18 13:24	5
Xylenes, Total	**47**		5.0	1.1	ug/L			05/17/18 13:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 126*		*05/17/18 13:24*	*5*
Toluene-d8 (Surr)	*102*		*75 - 120*		*05/17/18 13:24*	*5*
4-Bromofluorobenzene (Surr)	*96*		*72 - 124*		*05/17/18 13:24*	*5*
Dibromofluoromethane	*94*		*75 - 120*		*05/17/18 13:24*	*5*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW045M
Date Collected: 05/03/18 09:15
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**27**		2.5	0.73	ug/L			05/17/18 20:26	5
Bromobenzene	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
Bromochloromethane	<2.1		5.0	2.1	ug/L			05/17/18 20:26	5
Bromodichloromethane	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
Bromoform	<2.4		5.0	2.4	ug/L			05/17/18 20:26	5
Bromomethane	<4.0		10	4.0	ug/L			05/17/18 20:26	5
n-Butylbenzene	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
sec-Butylbenzene	<2.0		5.0	2.0	ug/L			05/17/18 20:26	5
tert-Butylbenzene	<2.0		5.0	2.0	ug/L			05/17/18 20:26	5
Carbon tetrachloride	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
Chlorobenzene	**240**		5.0	1.9	ug/L			05/17/18 20:26	5
Dibromochloromethane	<2.4		5.0	2.4	ug/L			05/17/18 20:26	5
Chloroethane	<2.5		5.0	2.5	ug/L			05/17/18 20:26	5
Chloroform	<1.9		10	1.9	ug/L			05/17/18 20:26	5
Chloromethane	<1.6		5.0	1.6	ug/L			05/17/18 20:26	5
2-Chlorotoluene	<1.6		5.0	1.6	ug/L			05/17/18 20:26	5
4-Chlorotoluene	<1.7		5.0	1.7	ug/L			05/17/18 20:26	5
1,2-Dibromo-3-Chloropropane	<10		25	10	ug/L			05/17/18 20:26	5
1,2-Dibromoethane	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
Dibromomethane	<1.4		5.0	1.4	ug/L			05/17/18 20:26	5
1,2-Dichlorobenzene	**240**		5.0	1.7	ug/L			05/17/18 20:26	5
1,3-Dichlorobenzene	<2.0		5.0	2.0	ug/L			05/17/18 20:26	5
1,4-Dichlorobenzene	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
Dichlorodifluoromethane	<3.4		10	3.4	ug/L			05/17/18 20:26	5
1,1-Dichloroethane	**7.2**		5.0	2.1	ug/L			05/17/18 20:26	5
1,2-Dichloroethane	<2.0		5.0	2.0	ug/L			05/17/18 20:26	5
1,1-Dichloroethene	**3.9**	**J**	5.0	2.0	ug/L			05/17/18 20:26	5
cis-1,2-Dichloroethene	**320**		5.0	2.0	ug/L			05/17/18 20:26	5
trans-1,2-Dichloroethene	<1.7		5.0	1.7	ug/L			05/17/18 20:26	5
1,2-Dichloropropane	<2.1		5.0	2.1	ug/L			05/17/18 20:26	5
1,3-Dichloropropane	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
2,2-Dichloropropane	<2.2		5.0	2.2	ug/L			05/17/18 20:26	5
1,1-Dichloropropene	<1.5		5.0	1.5	ug/L			05/17/18 20:26	5
cis-1,3-Dichloropropene	<2.1		5.0	2.1	ug/L			05/17/18 20:26	5
trans-1,3-Dichloropropene	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
Isopropyl ether	**2.1**	**J**	5.0	1.4	ug/L			05/17/18 20:26	5
Ethylbenzene	**17**		2.5	0.92	ug/L			05/17/18 20:26	5
Hexachlorobutadiene	<2.2		5.0	2.2	ug/L			05/17/18 20:26	5
Isopropylbenzene	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
p-Isopropyltoluene	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
Methylene Chloride	**100**		25	8.2	ug/L			05/17/18 20:26	5
Methyl tert-butyl ether	<2.0		5.0	2.0	ug/L			05/17/18 20:26	5
Naphthalene	<1.7		5.0	1.7	ug/L			05/17/18 20:26	5
N-Propylbenzene	<2.1		5.0	2.1	ug/L			05/17/18 20:26	5
Styrene	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
1,1,1,2-Tetrachloroethane	<2.3		5.0	2.3	ug/L			05/17/18 20:26	5
1,1,2,2-Tetrachloroethane	<2.0		5.0	2.0	ug/L			05/17/18 20:26	5
Tetrachloroethene	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
Toluene	**270**		2.5	0.76	ug/L			05/17/18 20:26	5

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW045M
Date Collected: 05/03/18 09:15
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<2.3		5.0	2.3	ug/L			05/17/18 20:26	5
1,2,4-Trichlorobenzene	<1.7		5.0	1.7	ug/L			05/17/18 20:26	5
1,1,1-Trichloroethane	<1.9		5.0	1.9	ug/L			05/17/18 20:26	5
1,1,2-Trichloroethane	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
Trichlorofluoromethane	<2.1		5.0	2.1	ug/L			05/17/18 20:26	5
1,2,3-Trichloropropane	<2.1		5.0	2.1	ug/L			05/17/18 20:26	5
1,2,4-Trimethylbenzene	<1.8		5.0	1.8	ug/L			05/17/18 20:26	5
1,3,5-Trimethylbenzene	<1.3		5.0	1.3	ug/L			05/17/18 20:26	5
Vinyl chloride	**54**		5.0	1.0	ug/L			05/17/18 20:26	5
Xylenes, Total	**92**		5.0	1.1	ug/L			05/17/18 20:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 126*		*05/17/18 20:26*	*5*
Toluene-d8 (Surr)	*103*		*75 - 120*		*05/17/18 20:26*	*5*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*		*05/17/18 20:26*	*5*
Dibromofluoromethane	*97*		*75 - 120*		*05/17/18 20:26*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**1700**		5.0	1.6	ug/L			05/17/18 13:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 126*		*05/17/18 13:50*	*10*
Toluene-d8 (Surr)	*103*		*75 - 120*		*05/17/18 13:50*	*10*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*		*05/17/18 13:50*	*10*
Dibromofluoromethane	*95*		*75 - 120*		*05/17/18 13:50*	*10*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041M
Date Collected: 05/03/18 07:54
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.6**		0.50	0.15	ug/L			05/17/18 14:44	1
Bromobenzene	<0.36		1.0	0.36	ug/L			05/17/18 14:44	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			05/17/18 14:44	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			05/17/18 14:44	1
Bromoform	<0.48		1.0	0.48	ug/L			05/17/18 14:44	1
Bromomethane	<0.80		2.0	0.80	ug/L			05/17/18 14:44	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 14:44	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 14:44	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 14:44	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			05/17/18 14:44	1
Chlorobenzene	**3.3**		1.0	0.39	ug/L			05/17/18 14:44	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			05/17/18 14:44	1
Chloroethane	<0.51		1.0	0.51	ug/L			05/17/18 14:44	1
Chloroform	<0.37		2.0	0.37	ug/L			05/17/18 14:44	1
Chloromethane	<0.32		1.0	0.32	ug/L			05/17/18 14:44	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			05/17/18 14:44	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			05/17/18 14:44	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			05/17/18 14:44	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			05/17/18 14:44	1
Dibromomethane	<0.27		1.0	0.27	ug/L			05/17/18 14:44	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			05/17/18 14:44	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			05/17/18 14:44	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			05/17/18 14:44	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			05/17/18 14:44	1
1,1-Dichloroethane	**2.2**		1.0	0.41	ug/L			05/17/18 14:44	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			05/17/18 14:44	1
1,1-Dichloroethene	**0.66**	**J**	1.0	0.39	ug/L			05/17/18 14:44	1
cis-1,2-Dichloroethene	**45**		1.0	0.41	ug/L			05/17/18 14:44	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			05/17/18 14:44	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			05/17/18 14:44	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			05/17/18 14:44	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			05/17/18 14:44	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			05/17/18 14:44	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/17/18 14:44	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			05/17/18 14:44	1
Isopropyl ether	**0.91**	**J**	1.0	0.28	ug/L			05/17/18 14:44	1
Ethylbenzene	**1.6**		0.50	0.18	ug/L			05/17/18 14:44	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			05/17/18 14:44	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 14:44	1
p-Isopropyltoluene	**0.59**	**J**	1.0	0.36	ug/L			05/17/18 14:44	1
Methylene Chloride	**120**		5.0	1.6	ug/L			05/17/18 14:44	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			05/17/18 14:44	1
Naphthalene	<0.34		1.0	0.34	ug/L			05/17/18 14:44	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			05/17/18 14:44	1
Styrene	<0.39		1.0	0.39	ug/L			05/17/18 14:44	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			05/17/18 14:44	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			05/17/18 14:44	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/17/18 14:44	1
Toluene	**120**		0.50	0.15	ug/L			05/17/18 14:44	1

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041M
Date Collected: 05/03/18 07:54
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			05/17/18 14:44	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			05/17/18 14:44	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/17/18 14:44	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			05/17/18 14:44	1
Trichloroethene	**93**		0.50	0.16	ug/L			05/17/18 14:44	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			05/17/18 14:44	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			05/17/18 14:44	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			05/17/18 14:44	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			05/17/18 14:44	1
Vinyl chloride	**13**		1.0	0.20	ug/L			05/17/18 14:44	1
Xylenes, Total	**8.2**		1.0	0.22	ug/L			05/17/18 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*05/17/18 14:44*	*1*
Toluene-d8 (Surr)	*103*		*75 - 120*		*05/17/18 14:44*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*		*05/17/18 14:44*	*1*
Dibromofluoromethane	*92*		*75 - 120*		*05/17/18 14:44*	*1*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041S/D
Date Collected: 05/03/18 08:04
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**44**		10	2.9	ug/L			05/17/18 15:37	20
Bromobenzene	<7.1		20	7.1	ug/L			05/17/18 15:37	20
Bromochloromethane	<8.6		20	8.6	ug/L			05/17/18 15:37	20
Bromodichloromethane	<7.4		20	7.4	ug/L			05/17/18 15:37	20
Bromoform	<9.7		20	9.7	ug/L			05/17/18 15:37	20
Bromomethane	<16		40	16	ug/L			05/17/18 15:37	20
n-Butylbenzene	<7.8		20	7.8	ug/L			05/17/18 15:37	20
sec-Butylbenzene	<8.0		20	8.0	ug/L			05/17/18 15:37	20
tert-Butylbenzene	<8.0		20	8.0	ug/L			05/17/18 15:37	20
Carbon tetrachloride	<7.7		20	7.7	ug/L			05/17/18 15:37	20
Chlorobenzene	**1300**		20	7.7	ug/L			05/17/18 15:37	20
Dibromochloromethane	<9.8		20	9.8	ug/L			05/17/18 15:37	20
Chloroethane	<10		20	10	ug/L			05/17/18 15:37	20
Chloroform	<7.4		40	7.4	ug/L			05/17/18 15:37	20
Chloromethane	<6.4		20	6.4	ug/L			05/17/18 15:37	20
2-Chlorotoluene	<6.3		20	6.3	ug/L			05/17/18 15:37	20
4-Chlorotoluene	<7.0		20	7.0	ug/L			05/17/18 15:37	20
1,2-Dibromo-3-Chloropropane	<40		100	40	ug/L			05/17/18 15:37	20
1,2-Dibromoethane	<7.7		20	7.7	ug/L			05/17/18 15:37	20
Dibromomethane	<5.4		20	5.4	ug/L			05/17/18 15:37	20
1,2-Dichlorobenzene	**94**		20	6.7	ug/L			05/17/18 15:37	20
1,3-Dichlorobenzene	<8.0		20	8.0	ug/L			05/17/18 15:37	20
1,4-Dichlorobenzene	<7.3		20	7.3	ug/L			05/17/18 15:37	20
Dichlorodifluoromethane	<13		40	13	ug/L			05/17/18 15:37	20
1,1-Dichloroethane	<8.2		20	8.2	ug/L			05/17/18 15:37	20
1,2-Dichloroethane	<7.8		20	7.8	ug/L			05/17/18 15:37	20
1,1-Dichloroethene	<7.8		20	7.8	ug/L			05/17/18 15:37	20
cis-1,2-Dichloroethene	<8.2		20	8.2	ug/L			05/17/18 15:37	20
trans-1,2-Dichloroethene	<7.0		20	7.0	ug/L			05/17/18 15:37	20
1,2-Dichloropropane	<8.6		20	8.6	ug/L			05/17/18 15:37	20
1,3-Dichloropropane	<7.2		20	7.2	ug/L			05/17/18 15:37	20
2,2-Dichloropropane	<8.9		20	8.9	ug/L			05/17/18 15:37	20
1,1-Dichloropropene	<5.9		20	5.9	ug/L			05/17/18 15:37	20
cis-1,3-Dichloropropene	<8.3		20	8.3	ug/L			05/17/18 15:37	20
trans-1,3-Dichloropropene	<7.2		20	7.2	ug/L			05/17/18 15:37	20
Isopropyl ether	<5.5		20	5.5	ug/L			05/17/18 15:37	20
Ethylbenzene	**810**		10	3.7	ug/L			05/17/18 15:37	20
Hexachlorobutadiene	<8.9		20	8.9	ug/L			05/17/18 15:37	20
Isopropylbenzene	<7.7		20	7.7	ug/L			05/17/18 15:37	20
p-Isopropyltoluene	<7.2		20	7.2	ug/L			05/17/18 15:37	20
Methylene Chloride	<33		100	33	ug/L			05/17/18 15:37	20
Methyl tert-butyl ether	<7.9		20	7.9	ug/L			05/17/18 15:37	20
Naphthalene	<6.7		20	6.7	ug/L			05/17/18 15:37	20
N-Propylbenzene	<8.3		20	8.3	ug/L			05/17/18 15:37	20
Styrene	<7.7		20	7.7	ug/L			05/17/18 15:37	20
1,1,1,2-Tetrachloroethane	<9.2		20	9.2	ug/L			05/17/18 15:37	20
1,1,2,2-Tetrachloroethane	<8.0		20	8.0	ug/L			05/17/18 15:37	20
Tetrachloroethene	<7.4		20	7.4	ug/L			05/17/18 15:37	20
Toluene	**24**		10	3.0	ug/L			05/17/18 15:37	20

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041S/D
Date Collected: 05/03/18 08:04
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<9.2		20	9.2	ug/L			05/17/18 15:37	20
1,2,4-Trichlorobenzene	<6.8		20	6.8	ug/L			05/17/18 15:37	20
1,1,1-Trichloroethane	<7.6		20	7.6	ug/L			05/17/18 15:37	20
1,1,2-Trichloroethane	<7.0		20	7.0	ug/L			05/17/18 15:37	20
Trichloroethene	<3.3		10	3.3	ug/L			05/17/18 15:37	20
Trichlorofluoromethane	<8.5		20	8.5	ug/L			05/17/18 15:37	20
1,2,3-Trichloropropane	<8.3		20	8.3	ug/L			05/17/18 15:37	20
1,2,4-Trimethylbenzene	<7.2		20	7.2	ug/L			05/17/18 15:37	20
1,3,5-Trimethylbenzene	<5.1		20	5.1	ug/L			05/17/18 15:37	20
Vinyl chloride	<4.1		20	4.1	ug/L			05/17/18 15:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 126*		*05/17/18 15:37*	*20*
Toluene-d8 (Surr)	*101*		*75 - 120*		*05/17/18 15:37*	*20*
4-Bromofluorobenzene (Surr)	*103*		*72 - 124*		*05/17/18 15:37*	*20*
Dibromofluoromethane	*97*		*75 - 120*		*05/17/18 15:37*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**6000**		200	44	ug/L			05/17/18 16:04	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 126*		*05/17/18 16:04*	*200*
Toluene-d8 (Surr)	*101*		*75 - 120*		*05/17/18 16:04*	*200*
4-Bromofluorobenzene (Surr)	*101*		*72 - 124*		*05/17/18 16:04*	*200*
Dibromofluoromethane	*95*		*75 - 120*		*05/17/18 16:04*	*200*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041S
Date Collected: 05/03/18 08:04
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**48**		10	2.9	ug/L			05/17/18 16:30	20
Bromobenzene	<7.1		20	7.1	ug/L			05/17/18 16:30	20
Bromochloromethane	<8.6		20	8.6	ug/L			05/17/18 16:30	20
Bromodichloromethane	<7.4		20	7.4	ug/L			05/17/18 16:30	20
Bromoform	<9.7		20	9.7	ug/L			05/17/18 16:30	20
Bromomethane	<16		40	16	ug/L			05/17/18 16:30	20
n-Butylbenzene	<7.8		20	7.8	ug/L			05/17/18 16:30	20
sec-Butylbenzene	<8.0		20	8.0	ug/L			05/17/18 16:30	20
tert-Butylbenzene	<8.0		20	8.0	ug/L			05/17/18 16:30	20
Carbon tetrachloride	<7.7		20	7.7	ug/L			05/17/18 16:30	20
Chlorobenzene	**1500**		20	7.7	ug/L			05/17/18 16:30	20
Dibromochloromethane	<9.8		20	9.8	ug/L			05/17/18 16:30	20
Chloroethane	<10		20	10	ug/L			05/17/18 16:30	20
Chloroform	<7.4		40	7.4	ug/L			05/17/18 16:30	20
Chloromethane	<6.4		20	6.4	ug/L			05/17/18 16:30	20
2-Chlorotoluene	<6.3		20	6.3	ug/L			05/17/18 16:30	20
4-Chlorotoluene	<7.0		20	7.0	ug/L			05/17/18 16:30	20
1,2-Dibromo-3-Chloropropane	<40		100	40	ug/L			05/17/18 16:30	20
1,2-Dibromoethane	<7.7		20	7.7	ug/L			05/17/18 16:30	20
Dibromomethane	<5.4		20	5.4	ug/L			05/17/18 16:30	20
1,2-Dichlorobenzene	**170**		20	6.7	ug/L			05/17/18 16:30	20
1,3-Dichlorobenzene	<8.0		20	8.0	ug/L			05/17/18 16:30	20
1,4-Dichlorobenzene	**24**		20	7.3	ug/L			05/17/18 16:30	20
Dichlorodifluoromethane	<13		40	13	ug/L			05/17/18 16:30	20
1,1-Dichloroethane	<8.2		20	8.2	ug/L			05/17/18 16:30	20
1,2-Dichloroethane	<7.8		20	7.8	ug/L			05/17/18 16:30	20
1,1-Dichloroethene	<7.8		20	7.8	ug/L			05/17/18 16:30	20
cis-1,2-Dichloroethene	<8.2		20	8.2	ug/L			05/17/18 16:30	20
trans-1,2-Dichloroethene	<7.0		20	7.0	ug/L			05/17/18 16:30	20
1,2-Dichloropropane	<8.6		20	8.6	ug/L			05/17/18 16:30	20
1,3-Dichloropropane	<7.2		20	7.2	ug/L			05/17/18 16:30	20
2,2-Dichloropropane	<8.9		20	8.9	ug/L			05/17/18 16:30	20
1,1-Dichloropropene	<5.9		20	5.9	ug/L			05/17/18 16:30	20
cis-1,3-Dichloropropene	<8.3		20	8.3	ug/L			05/17/18 16:30	20
trans-1,3-Dichloropropene	<7.2		20	7.2	ug/L			05/17/18 16:30	20
Isopropyl ether	<5.5		20	5.5	ug/L			05/17/18 16:30	20
Ethylbenzene	**1500**		10	3.7	ug/L			05/17/18 16:30	20
Hexachlorobutadiene	<8.9		20	8.9	ug/L			05/17/18 16:30	20
Isopropylbenzene	**9.2**	**J**	20	7.7	ug/L			05/17/18 16:30	20
p-Isopropyltoluene	<7.2		20	7.2	ug/L			05/17/18 16:30	20
Methylene Chloride	<33		100	33	ug/L			05/17/18 16:30	20
Methyl tert-butyl ether	<7.9		20	7.9	ug/L			05/17/18 16:30	20
Naphthalene	<6.7		20	6.7	ug/L			05/17/18 16:30	20
N-Propylbenzene	<8.3		20	8.3	ug/L			05/17/18 16:30	20
Styrene	<7.7		20	7.7	ug/L			05/17/18 16:30	20
1,1,1,2-Tetrachloroethane	<9.2		20	9.2	ug/L			05/17/18 16:30	20
1,1,2,2-Tetrachloroethane	<8.0		20	8.0	ug/L			05/17/18 16:30	20
Tetrachloroethene	<7.4		20	7.4	ug/L			05/17/18 16:30	20
Toluene	**52**		10	3.0	ug/L			05/17/18 16:30	20

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW041S
Date Collected: 05/03/18 08:04
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<9.2		20	9.2	ug/L			05/17/18 16:30	20
1,2,4-Trichlorobenzene	<6.8		20	6.8	ug/L			05/17/18 16:30	20
1,1,1-Trichloroethane	<7.6		20	7.6	ug/L			05/17/18 16:30	20
1,1,2-Trichloroethane	<7.0		20	7.0	ug/L			05/17/18 16:30	20
Trichloroethene	<3.3		10	3.3	ug/L			05/17/18 16:30	20
Trichlorofluoromethane	<8.5		20	8.5	ug/L			05/17/18 16:30	20
1,2,3-Trichloropropane	<8.3		20	8.3	ug/L			05/17/18 16:30	20
1,2,4-Trimethylbenzene	<7.2		20	7.2	ug/L			05/17/18 16:30	20
1,3,5-Trimethylbenzene	<5.1		20	5.1	ug/L			05/17/18 16:30	20
Vinyl chloride	<4.1		20	4.1	ug/L			05/17/18 16:30	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 126*		*05/17/18 16:30*	*20*
Toluene-d8 (Surr)	*102*		*75 - 120*		*05/17/18 16:30*	*20*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*		*05/17/18 16:30*	*20*
Dibromofluoromethane	*95*		*75 - 120*		*05/17/18 16:30*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**9100**		200	44	ug/L			05/17/18 16:57	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 126*		*05/17/18 16:57*	*200*
Toluene-d8 (Surr)	*100*		*75 - 120*		*05/17/18 16:57*	*200*
4-Bromofluorobenzene (Surr)	*102*		*72 - 124*		*05/17/18 16:57*	*200*
Dibromofluoromethane	*100*		*75 - 120*		*05/17/18 16:57*	*200*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW045S
Date Collected: 05/03/18 09:07
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**76**		10	2.9	ug/L			05/17/18 17:24	20
Bromobenzene	<7.1		20	7.1	ug/L			05/17/18 17:24	20
Bromochloromethane	<8.6		20	8.6	ug/L			05/17/18 17:24	20
Bromodichloromethane	<7.4		20	7.4	ug/L			05/17/18 17:24	20
Bromoform	<9.7		20	9.7	ug/L			05/17/18 17:24	20
Bromomethane	<16		40	16	ug/L			05/17/18 17:24	20
n-Butylbenzene	<7.8		20	7.8	ug/L			05/17/18 17:24	20
sec-Butylbenzene	<8.0		20	8.0	ug/L			05/17/18 17:24	20
tert-Butylbenzene	<8.0		20	8.0	ug/L			05/17/18 17:24	20
Carbon tetrachloride	<7.7		20	7.7	ug/L			05/17/18 17:24	20
Dibromochloromethane	<9.8		20	9.8	ug/L			05/17/18 17:24	20
Chloroethane	<10		20	10	ug/L			05/17/18 17:24	20
Chloroform	<7.4		40	7.4	ug/L			05/17/18 17:24	20
Chloromethane	<6.4		20	6.4	ug/L			05/17/18 17:24	20
2-Chlorotoluene	<6.3		20	6.3	ug/L			05/17/18 17:24	20
4-Chlorotoluene	<7.0		20	7.0	ug/L			05/17/18 17:24	20
1,2-Dibromo-3-Chloropropane	<40		100	40	ug/L			05/17/18 17:24	20
1,2-Dibromoethane	<7.7		20	7.7	ug/L			05/17/18 17:24	20
Dibromomethane	<5.4		20	5.4	ug/L			05/17/18 17:24	20
1,2-Dichlorobenzene	**1800**		20	6.7	ug/L			05/17/18 17:24	20
1,3-Dichlorobenzene	**13**	**J**	20	8.0	ug/L			05/17/18 17:24	20
1,4-Dichlorobenzene	**84**		20	7.3	ug/L			05/17/18 17:24	20
Dichlorodifluoromethane	<13		40	13	ug/L			05/17/18 17:24	20
1,1-Dichloroethane	<8.2		20	8.2	ug/L			05/17/18 17:24	20
1,2-Dichloroethane	**18**	**J**	20	7.8	ug/L			05/17/18 17:24	20
1,1-Dichloroethene	<7.8		20	7.8	ug/L			05/17/18 17:24	20
cis-1,2-Dichloroethene	**390**		20	8.2	ug/L			05/17/18 17:24	20
trans-1,2-Dichloroethene	<7.0		20	7.0	ug/L			05/17/18 17:24	20
1,2-Dichloropropane	<8.6		20	8.6	ug/L			05/17/18 17:24	20
1,3-Dichloropropane	<7.2		20	7.2	ug/L			05/17/18 17:24	20
2,2-Dichloropropane	<8.9		20	8.9	ug/L			05/17/18 17:24	20
1,1-Dichloropropene	<5.9		20	5.9	ug/L			05/17/18 17:24	20
cis-1,3-Dichloropropene	<8.3		20	8.3	ug/L			05/17/18 17:24	20
trans-1,3-Dichloropropene	<7.2		20	7.2	ug/L			05/17/18 17:24	20
Isopropyl ether	<5.5		20	5.5	ug/L			05/17/18 17:24	20
Ethylbenzene	**1200**		10	3.7	ug/L			05/17/18 17:24	20
Hexachlorobutadiene	<8.9		20	8.9	ug/L			05/17/18 17:24	20
Isopropylbenzene	<7.7		20	7.7	ug/L			05/17/18 17:24	20
p-Isopropyltoluene	**8.5**	**J**	20	7.2	ug/L			05/17/18 17:24	20
Methylene Chloride	**110**		100	33	ug/L			05/17/18 17:24	20
Methyl tert-butyl ether	<7.9		20	7.9	ug/L			05/17/18 17:24	20
Naphthalene	**26**		20	6.7	ug/L			05/17/18 17:24	20
N-Propylbenzene	<8.3		20	8.3	ug/L			05/17/18 17:24	20
Styrene	<7.7		20	7.7	ug/L			05/17/18 17:24	20
1,1,1,2-Tetrachloroethane	<9.2		20	9.2	ug/L			05/17/18 17:24	20
1,1,2,2-Tetrachloroethane	<8.0		20	8.0	ug/L			05/17/18 17:24	20
Tetrachloroethene	<7.4		20	7.4	ug/L			05/17/18 17:24	20
1,2,3-Trichlorobenzene	<9.2		20	9.2	ug/L			05/17/18 17:24	20
1,2,4-Trichlorobenzene	<6.8		20	6.8	ug/L			05/17/18 17:24	20

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW045S
Date Collected: 05/03/18 09:07
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<7.6		20	7.6	ug/L			05/17/18 17:24	20
1,1,2-Trichloroethane	<7.0		20	7.0	ug/L			05/17/18 17:24	20
Trichloroethene	**56**		10	3.3	ug/L			05/17/18 17:24	20
Trichlorofluoromethane	<8.5		20	8.5	ug/L			05/17/18 17:24	20
1,2,3-Trichloropropane	<8.3		20	8.3	ug/L			05/17/18 17:24	20
1,2,4-Trimethylbenzene	<7.2		20	7.2	ug/L			05/17/18 17:24	20
1,3,5-Trimethylbenzene	<5.1		20	5.1	ug/L			05/17/18 17:24	20
Vinyl chloride	**32**		20	4.1	ug/L			05/17/18 17:24	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 126*		*05/17/18 17:24*	*20*
Toluene-d8 (Surr)	*100*		*75 - 120*		*05/17/18 17:24*	*20*
4-Bromofluorobenzene (Surr)	*102*		*72 - 124*		*05/17/18 17:24*	*20*
Dibromofluoromethane	*99*		*75 - 120*		*05/17/18 17:24*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	**3800**		200	77	ug/L			05/17/18 17:51	200
Toluene	**3900**		100	30	ug/L			05/17/18 17:51	200
Xylenes, Total	**7600**		200	44	ug/L			05/17/18 17:51	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*05/17/18 17:51*	*200*
Toluene-d8 (Surr)	*100*		*75 - 120*		*05/17/18 17:51*	*200*
4-Bromofluorobenzene (Surr)	*104*		*72 - 124*		*05/17/18 17:51*	*200*
Dibromofluoromethane	*97*		*75 - 120*		*05/17/18 17:51*	*200*

Client Sample ID: MW117S
Date Collected: 05/03/18 10:40
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**15**		0.50	0.15	ug/L			05/17/18 18:18	1
Bromobenzene	<0.36		1.0	0.36	ug/L			05/17/18 18:18	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			05/17/18 18:18	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			05/17/18 18:18	1
Bromoform	<0.48		1.0	0.48	ug/L			05/17/18 18:18	1
Bromomethane	<0.80		2.0	0.80	ug/L			05/17/18 18:18	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 18:18	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 18:18	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 18:18	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			05/17/18 18:18	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			05/17/18 18:18	1
Chloroethane	<0.51		1.0	0.51	ug/L			05/17/18 18:18	1
Chloroform	<0.37		2.0	0.37	ug/L			05/17/18 18:18	1
Chloromethane	<0.32		1.0	0.32	ug/L			05/17/18 18:18	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			05/17/18 18:18	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			05/17/18 18:18	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			05/17/18 18:18	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			05/17/18 18:18	1
Dibromomethane	<0.27		1.0	0.27	ug/L			05/17/18 18:18	1
1,2-Dichlorobenzene	**21**		1.0	0.33	ug/L			05/17/18 18:18	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			05/17/18 18:18	1
1,4-Dichlorobenzene	**1.9**		1.0	0.36	ug/L			05/17/18 18:18	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			05/17/18 18:18	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			05/17/18 18:18	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			05/17/18 18:18	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			05/17/18 18:18	1
cis-1,2-Dichloroethene	**2.0**		1.0	0.41	ug/L			05/17/18 18:18	1
trans-1,2-Dichloroethene	**0.94**	**J**	1.0	0.35	ug/L			05/17/18 18:18	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			05/17/18 18:18	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			05/17/18 18:18	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			05/17/18 18:18	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			05/17/18 18:18	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/17/18 18:18	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			05/17/18 18:18	1
Isopropyl ether	**1.2**		1.0	0.28	ug/L			05/17/18 18:18	1
Ethylbenzene	**4.3**		0.50	0.18	ug/L			05/17/18 18:18	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			05/17/18 18:18	1
Isopropylbenzene	**0.52**	**J**	1.0	0.39	ug/L			05/17/18 18:18	1
p-Isopropyltoluene	**8.0**		1.0	0.36	ug/L			05/17/18 18:18	1
Methylene Chloride	**4.4**	**J**	5.0	1.6	ug/L			05/17/18 18:18	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			05/17/18 18:18	1
Naphthalene	<0.34		1.0	0.34	ug/L			05/17/18 18:18	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			05/17/18 18:18	1
Styrene	<0.39		1.0	0.39	ug/L			05/17/18 18:18	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			05/17/18 18:18	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			05/17/18 18:18	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/17/18 18:18	1
Toluene	**17**		0.50	0.15	ug/L			05/17/18 18:18	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			05/17/18 18:18	1

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW117S
Date Collected: 05/03/18 10:40
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			05/17/18 18:18	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/17/18 18:18	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			05/17/18 18:18	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/17/18 18:18	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			05/17/18 18:18	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			05/17/18 18:18	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			05/17/18 18:18	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			05/17/18 18:18	1
Vinyl chloride	**0.97**	**J**	1.0	0.20	ug/L			05/17/18 18:18	1
Xylenes, Total	**13**		1.0	0.22	ug/L			05/17/18 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 126*		*05/17/18 18:18*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*05/17/18 18:18*	*1*
4-Bromofluorobenzene (Surr)	*95*		*72 - 124*		*05/17/18 18:18*	*1*
Dibromofluoromethane	*98*		*75 - 120*		*05/17/18 18:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	**260**		10	3.9	ug/L			05/17/18 18:45	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 126*		*05/17/18 18:45*	*10*
Toluene-d8 (Surr)	*101*		*75 - 120*		*05/17/18 18:45*	*10*
4-Bromofluorobenzene (Surr)	*98*		*72 - 124*		*05/17/18 18:45*	*10*
Dibromofluoromethane	*100*		*75 - 120*		*05/17/18 18:45*	*10*

Client Sample ID: Trip Blank
Date Collected: 05/03/18 00:00
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			05/17/18 12:27	1
Bromobenzene	<0.36		1.0	0.36	ug/L			05/17/18 12:27	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			05/17/18 12:27	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			05/17/18 12:27	1
Bromoform	<0.48		1.0	0.48	ug/L			05/17/18 12:27	1
Bromomethane	<0.80		2.0	0.80	ug/L			05/17/18 12:27	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 12:27	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 12:27	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			05/17/18 12:27	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			05/17/18 12:27	1
Chloroethane	<0.51		1.0	0.51	ug/L			05/17/18 12:27	1
Chloroform	<0.37		2.0	0.37	ug/L			05/17/18 12:27	1
Chloromethane	<0.32		1.0	0.32	ug/L			05/17/18 12:27	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			05/17/18 12:27	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			05/17/18 12:27	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			05/17/18 12:27	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
Dibromomethane	<0.27		1.0	0.27	ug/L			05/17/18 12:27	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			05/17/18 12:27	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			05/17/18 12:27	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			05/17/18 12:27	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			05/17/18 12:27	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			05/17/18 12:27	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/17/18 12:27	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			05/17/18 12:27	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			05/17/18 12:27	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			05/17/18 12:27	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			05/17/18 12:27	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			05/17/18 12:27	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/17/18 12:27	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			05/17/18 12:27	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			05/17/18 12:27	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			05/17/18 12:27	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			05/17/18 12:27	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			05/17/18 12:27	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			05/17/18 12:27	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
Naphthalene	<0.34		1.0	0.34	ug/L			05/17/18 12:27	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			05/17/18 12:27	1
Styrene	<0.39		1.0	0.39	ug/L			05/17/18 12:27	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			05/17/18 12:27	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			05/17/18 12:27	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/17/18 12:27	1
Toluene	<0.15		0.50	0.15	ug/L			05/17/18 12:27	1

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: Trip Blank
Date Collected: 05/03/18 00:00
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			05/17/18 12:27	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			05/17/18 12:27	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/17/18 12:27	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			05/17/18 12:27	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/17/18 12:27	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			05/17/18 12:27	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			05/17/18 12:27	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			05/17/18 12:27	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			05/17/18 12:27	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			05/17/18 12:27	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			05/17/18 12:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 126*		*05/17/18 12:27*	*1*
Toluene-d8 (Surr)	*104*		*75 - 120*		*05/17/18 12:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*		*05/17/18 12:27*	*1*
Dibromofluoromethane	*96*		*75 - 120*		*05/17/18 12:27*	*1*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: FB#1
Date Collected: 05/03/18 07:26
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			05/17/18 19:12	1
Bromobenzene	<0.36		1.0	0.36	ug/L			05/17/18 19:12	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			05/17/18 19:12	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			05/17/18 19:12	1
Bromoform	<0.48		1.0	0.48	ug/L			05/17/18 19:12	1
Bromomethane	<0.80		2.0	0.80	ug/L			05/17/18 19:12	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 19:12	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 19:12	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			05/17/18 19:12	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			05/17/18 19:12	1
Chloroethane	<0.51		1.0	0.51	ug/L			05/17/18 19:12	1
Chloroform	<0.37		2.0	0.37	ug/L			05/17/18 19:12	1
Chloromethane	<0.32		1.0	0.32	ug/L			05/17/18 19:12	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			05/17/18 19:12	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			05/17/18 19:12	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			05/17/18 19:12	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
Dibromomethane	<0.27		1.0	0.27	ug/L			05/17/18 19:12	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			05/17/18 19:12	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			05/17/18 19:12	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			05/17/18 19:12	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			05/17/18 19:12	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			05/17/18 19:12	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/17/18 19:12	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			05/17/18 19:12	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			05/17/18 19:12	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			05/17/18 19:12	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			05/17/18 19:12	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			05/17/18 19:12	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/17/18 19:12	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			05/17/18 19:12	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			05/17/18 19:12	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			05/17/18 19:12	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			05/17/18 19:12	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			05/17/18 19:12	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			05/17/18 19:12	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
Naphthalene	<0.34		1.0	0.34	ug/L			05/17/18 19:12	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			05/17/18 19:12	1
Styrene	<0.39		1.0	0.39	ug/L			05/17/18 19:12	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			05/17/18 19:12	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			05/17/18 19:12	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/17/18 19:12	1
Toluene	<0.15		0.50	0.15	ug/L			05/17/18 19:12	1

Client Sample ID: FB#1
Date Collected: 05/03/18 07:26
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			05/17/18 19:12	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			05/17/18 19:12	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/17/18 19:12	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			05/17/18 19:12	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/17/18 19:12	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			05/17/18 19:12	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			05/17/18 19:12	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			05/17/18 19:12	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			05/17/18 19:12	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			05/17/18 19:12	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			05/17/18 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 126*		*05/17/18 19:12*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*05/17/18 19:12*	*1*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*		*05/17/18 19:12*	*1*
Dibromofluoromethane	*97*		*75 - 120*		*05/17/18 19:12*	*1*

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW117M
Date Collected: 05/07/18 11:00
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**24**		1.0	0.29	ug/L			05/18/18 12:18	2
Bromobenzene	<0.71		2.0	0.71	ug/L			05/18/18 12:18	2
Bromochloromethane	<0.86		2.0	0.86	ug/L			05/18/18 12:18	2
Bromodichloromethane	<0.74		2.0	0.74	ug/L			05/18/18 12:18	2
Bromoform	<0.97		2.0	0.97	ug/L			05/18/18 12:18	2
Bromomethane	<1.6		4.0	1.6	ug/L			05/18/18 12:18	2
n-Butylbenzene	<0.78		2.0	0.78	ug/L			05/18/18 12:18	2
sec-Butylbenzene	<0.80		2.0	0.80	ug/L			05/18/18 12:18	2
tert-Butylbenzene	<0.80		2.0	0.80	ug/L			05/18/18 12:18	2
Carbon tetrachloride	<0.77		2.0	0.77	ug/L			05/18/18 12:18	2
Dibromochloromethane	<0.98		2.0	0.98	ug/L			05/18/18 12:18	2
Chloroethane	<1.0		2.0	1.0	ug/L			05/18/18 12:18	2
Chloroform	<0.74		4.0	0.74	ug/L			05/18/18 12:18	2
Chloromethane	<0.64		2.0	0.64	ug/L			05/18/18 12:18	2
2-Chlorotoluene	<0.63		2.0	0.63	ug/L			05/18/18 12:18	2
4-Chlorotoluene	<0.70		2.0	0.70	ug/L			05/18/18 12:18	2
1,2-Dibromo-3-Chloropropane	<4.0		10	4.0	ug/L			05/18/18 12:18	2
1,2-Dibromoethane	<0.77		2.0	0.77	ug/L			05/18/18 12:18	2
Dibromomethane	<0.54		2.0	0.54	ug/L			05/18/18 12:18	2
1,2-Dichlorobenzene	**52**		2.0	0.67	ug/L			05/18/18 12:18	2
1,3-Dichlorobenzene	<0.80		2.0	0.80	ug/L			05/18/18 12:18	2
1,4-Dichlorobenzene	**2.0**		2.0	0.73	ug/L			05/18/18 12:18	2
Dichlorodifluoromethane	<1.3		4.0	1.3	ug/L			05/18/18 12:18	2
1,1-Dichloroethane	<0.82		2.0	0.82	ug/L			05/18/18 12:18	2
1,2-Dichloroethane	<0.78		2.0	0.78	ug/L			05/18/18 12:18	2
1,1-Dichloroethene	<0.78		2.0	0.78	ug/L			05/18/18 12:18	2
cis-1,2-Dichloroethene	**7.4**		2.0	0.82	ug/L			05/18/18 12:18	2
trans-1,2-Dichloroethene	**1.8**	**J**	2.0	0.70	ug/L			05/18/18 12:18	2
1,2-Dichloropropane	<0.86		2.0	0.86	ug/L			05/18/18 12:18	2
1,3-Dichloropropane	<0.72		2.0	0.72	ug/L			05/18/18 12:18	2
2,2-Dichloropropane	<0.89		2.0	0.89	ug/L			05/18/18 12:18	2
1,1-Dichloropropene	<0.59		2.0	0.59	ug/L			05/18/18 12:18	2
cis-1,3-Dichloropropene	<0.83		2.0	0.83	ug/L			05/18/18 12:18	2
trans-1,3-Dichloropropene	<0.72		2.0	0.72	ug/L			05/18/18 12:18	2
Isopropyl ether	**1.2**	**J**	2.0	0.55	ug/L			05/18/18 12:18	2
Ethylbenzene	**40**		1.0	0.37	ug/L			05/18/18 12:18	2
Hexachlorobutadiene	<0.89		2.0	0.89	ug/L			05/18/18 12:18	2
Isopropylbenzene	<0.77		2.0	0.77	ug/L			05/18/18 12:18	2
p-Isopropyltoluene	**18**		2.0	0.72	ug/L			05/18/18 12:18	2
Methylene Chloride	<3.3		10	3.3	ug/L			05/18/18 12:18	2
Methyl tert-butyl ether	<0.79		2.0	0.79	ug/L			05/18/18 12:18	2
Naphthalene	**1.5**	**J**	2.0	0.67	ug/L			05/18/18 12:18	2
N-Propylbenzene	<0.83		2.0	0.83	ug/L			05/18/18 12:18	2
Styrene	<0.77		2.0	0.77	ug/L			05/18/18 12:18	2
1,1,1,2-Tetrachloroethane	<0.92		2.0	0.92	ug/L			05/18/18 12:18	2
1,1,2,2-Tetrachloroethane	<0.80		2.0	0.80	ug/L			05/18/18 12:18	2
Tetrachloroethene	<0.74		2.0	0.74	ug/L			05/18/18 12:18	2
Toluene	**64**		1.0	0.30	ug/L			05/18/18 12:18	2
1,2,3-Trichlorobenzene	<0.92		2.0	0.92	ug/L			05/18/18 12:18	2

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW117M
Date Collected: 05/07/18 11:00
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.68		2.0	0.68	ug/L			05/18/18 12:18	2
1,1,1-Trichloroethane	<0.76		2.0	0.76	ug/L			05/18/18 12:18	2
1,1,2-Trichloroethane	<0.70		2.0	0.70	ug/L			05/18/18 12:18	2
Trichloroethene	**1.4**		1.0	0.33	ug/L			05/18/18 12:18	2
Trichlorofluoromethane	<0.85		2.0	0.85	ug/L			05/18/18 12:18	2
1,2,3-Trichloropropane	<0.83		2.0	0.83	ug/L			05/18/18 12:18	2
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	0.72	ug/L			05/18/18 12:18	2
1,3,5-Trimethylbenzene	<0.51		2.0	0.51	ug/L			05/18/18 12:18	2
Vinyl chloride	**3.5**		2.0	0.41	ug/L			05/18/18 12:18	2
Xylenes, Total	**180**		2.0	0.44	ug/L			05/18/18 12:18	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*75 - 126*		*05/18/18 12:18*	*2*
Toluene-d8 (Surr)	*97*		*75 - 120*		*05/18/18 12:18*	*2*
4-Bromofluorobenzene (Surr)	*95*		*72 - 124*		*05/18/18 12:18*	*2*
Dibromofluoromethane	*99*		*75 - 120*		*05/18/18 12:18*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	**540**		20	7.7	ug/L			05/18/18 13:17	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*75 - 126*		*05/18/18 13:17*	*20*
Toluene-d8 (Surr)	*97*		*75 - 120*		*05/18/18 13:17*	*20*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*		*05/18/18 13:17*	*20*
Dibromofluoromethane	*100*		*75 - 120*		*05/18/18 13:17*	*20*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Association Summary

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

GC/MS VOA

Analysis Batch: 432696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145257-1	MW108M	Total/NA	Water	8260B	
500-145257-2	MW108S	Total/NA	Water	8260B	
500-145257-3 - DL	MW045M	Total/NA	Water	8260B	
500-145257-3	MW045M	Total/NA	Water	8260B	
500-145257-4	MW041M	Total/NA	Water	8260B	
500-145257-5	MW041S/D	Total/NA	Water	8260B	
500-145257-5 - DL	MW041S/D	Total/NA	Water	8260B	
500-145257-6	MW041S	Total/NA	Water	8260B	
500-145257-6 - DL	MW041S	Total/NA	Water	8260B	
500-145257-7	MW045S	Total/NA	Water	8260B	
500-145257-7 - DL	MW045S	Total/NA	Water	8260B	
500-145257-8	MW117S	Total/NA	Water	8260B	
500-145257-8 - DL	MW117S	Total/NA	Water	8260B	
500-145257-9	Trip Blank	Total/NA	Water	8260B	
500-145257-10	FB#1	Total/NA	Water	8260B	
MB 500-432696/6	Method Blank	Total/NA	Water	8260B	
LCS 500-432696/4	Lab Control Sample	Total/NA	Water	8260B	
500-145257-3 MS	MW045M	Total/NA	Water	8260B	
500-145257-3 MSD	MW045M	Total/NA	Water	8260B	

Analysis Batch: 432884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145257-11	MW117M	Total/NA	Water	8260B	
500-145257-11 - DL	MW117M	Total/NA	Water	8260B	
MB 500-432884/6	Method Blank	Total/NA	Water	8260B	
LCS 500-432884/25	Lab Control Sample	Total/NA	Water	8260B	

Surrogate Summary

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(75-126)	(75-120)	(72-124)	(75-120)
500-145257-1	MW108M	104	102	98	96
500-145257-2	MW108S	100	102	96	94
500-145257-3	MW045M	98	103	100	97
500-145257-3 - DL	MW045M	101	103	100	95
500-145257-3 MS	MW045M	98	101	98	96
500-145257-3 MSD	MW045M	99	100	99	96
500-145257-4	MW041M	102	103	100	92
500-145257-5	MW041S/D	103	101	103	97
500-145257-5 - DL	MW041S/D	104	101	101	95
500-145257-6	MW041S	101	102	99	95
500-145257-6 - DL	MW041S	103	100	102	100
500-145257-7	MW045S	101	100	102	99
500-145257-7 - DL	MW045S	102	100	104	97
500-145257-8	MW117S	104	101	95	98
500-145257-8 - DL	MW117S	102	101	98	100
500-145257-9	Trip Blank	100	104	100	96
500-145257-10	FB#1	104	102	100	97
500-145257-11	MW117M	87	97	95	99
500-145257-11 - DL	MW117M	89	97	99	100
LCS 500-432696/4	Lab Control Sample	100	103	93	94
LCS 500-432884/25	Lab Control Sample	83	100	93	94
MB 500-432696/6	Method Blank	106	100	99	97
MB 500-432884/6	Method Blank	90	97	97	102

Surrogate Legend

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

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

Lab Sample ID: MB 500-432696/6
Matrix: Water
Analysis Batch: 432696

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			05/17/18 11:58	1
Bromobenzene	<0.36		1.0	0.36	ug/L			05/17/18 11:58	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			05/17/18 11:58	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			05/17/18 11:58	1
Bromoform	<0.48		1.0	0.48	ug/L			05/17/18 11:58	1
Bromomethane	<0.80		2.0	0.80	ug/L			05/17/18 11:58	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 11:58	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			05/17/18 11:58	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			05/17/18 11:58	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			05/17/18 11:58	1
Chloroethane	<0.51		1.0	0.51	ug/L			05/17/18 11:58	1
Chloroform	<0.37		2.0	0.37	ug/L			05/17/18 11:58	1
Chloromethane	<0.32		1.0	0.32	ug/L			05/17/18 11:58	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			05/17/18 11:58	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			05/17/18 11:58	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			05/17/18 11:58	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
Dibromomethane	<0.27		1.0	0.27	ug/L			05/17/18 11:58	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			05/17/18 11:58	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			05/17/18 11:58	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			05/17/18 11:58	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			05/17/18 11:58	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			05/17/18 11:58	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/17/18 11:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			05/17/18 11:58	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			05/17/18 11:58	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			05/17/18 11:58	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			05/17/18 11:58	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			05/17/18 11:58	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/17/18 11:58	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			05/17/18 11:58	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			05/17/18 11:58	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			05/17/18 11:58	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			05/17/18 11:58	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			05/17/18 11:58	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			05/17/18 11:58	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
Naphthalene	<0.34		1.0	0.34	ug/L			05/17/18 11:58	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			05/17/18 11:58	1
Styrene	<0.39		1.0	0.39	ug/L			05/17/18 11:58	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			05/17/18 11:58	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			05/17/18 11:58	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/17/18 11:58	1

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

Lab Sample ID: MB 500-432696/6
Matrix: Water
Analysis Batch: 432696

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.15		0.50	0.15	ug/L			05/17/18 11:58	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			05/17/18 11:58	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			05/17/18 11:58	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/17/18 11:58	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			05/17/18 11:58	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/17/18 11:58	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			05/17/18 11:58	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			05/17/18 11:58	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			05/17/18 11:58	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			05/17/18 11:58	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			05/17/18 11:58	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			05/17/18 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 126*		*05/17/18 11:58*	*1*
Toluene-d8 (Surr)	*100*		*75 - 120*		*05/17/18 11:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*		*05/17/18 11:58*	*1*
Dibromofluoromethane	*97*		*75 - 120*		*05/17/18 11:58*	*1*

Lab Sample ID: LCS 500-432696/4
Matrix: Water
Analysis Batch: 432696

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	45.7		ug/L		91	70 - 120
Bromobenzene	50.0	48.3		ug/L		97	70 - 122
Bromochloromethane	50.0	43.7		ug/L		87	65 - 122
Bromodichloromethane	50.0	47.3		ug/L		95	69 - 120
Bromoform	50.0	53.0		ug/L		106	56 - 132
Bromomethane	50.0	44.6		ug/L		89	40 - 130
n-Butylbenzene	50.0	46.7		ug/L		93	68 - 125
sec-Butylbenzene	50.0	46.3		ug/L		93	70 - 123
tert-Butylbenzene	50.0	45.7		ug/L		91	70 - 121
Carbon tetrachloride	50.0	44.7		ug/L		89	65 - 122
Chlorobenzene	50.0	47.5		ug/L		95	70 - 120
Dibromochloromethane	50.0	50.9		ug/L		102	68 - 125
Chloroethane	50.0	44.9		ug/L		90	45 - 127
Chloroform	50.0	45.3		ug/L		91	70 - 120
Chloromethane	50.0	61.5		ug/L		123	54 - 147
2-Chlorotoluene	50.0	47.6		ug/L		95	70 - 125
4-Chlorotoluene	50.0	48.1		ug/L		96	68 - 124
1,2-Dibromo-3-Chloropropane	50.0	50.0		ug/L		100	56 - 123
1,2-Dibromoethane	50.0	50.1		ug/L		100	70 - 125
Dibromomethane	50.0	45.0		ug/L		90	70 - 120
1,2-Dichlorobenzene	50.0	49.0		ug/L		98	70 - 125
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	70 - 125
1,4-Dichlorobenzene	50.0	47.6		ug/L		95	70 - 120
Dichlorodifluoromethane	50.0	57.6		ug/L		115	40 - 150

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

Lab Sample ID: LCS 500-432696/4
Matrix: Water
Analysis Batch: 432696

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	50.0	47.0		ug/L		94	70 - 125
1,2-Dichloroethane	50.0	48.1		ug/L		96	68 - 127
1,1-Dichloroethene	50.0	46.5		ug/L		93	67 - 122
cis-1,2-Dichloroethene	50.0	45.9		ug/L		92	70 - 125
trans-1,2-Dichloroethene	50.0	45.1		ug/L		90	70 - 125
1,2-Dichloropropane	50.0	47.7		ug/L		95	67 - 130
1,3-Dichloropropane	50.0	49.5		ug/L		99	62 - 136
2,2-Dichloropropane	50.0	44.5		ug/L		89	58 - 129
1,1-Dichloropropene	50.0	45.3		ug/L		91	70 - 121
cis-1,3-Dichloropropene	50.0	49.5		ug/L		99	64 - 127
trans-1,3-Dichloropropene	50.0	50.2		ug/L		100	62 - 128
Ethylbenzene	50.0	47.4		ug/L		95	70 - 120
Hexachlorobutadiene	50.0	47.3		ug/L		95	51 - 150
Isopropylbenzene	50.0	45.9		ug/L		92	70 - 126
p-Isopropyltoluene	50.0	46.2		ug/L		92	70 - 125
Methylene Chloride	50.0	46.2		ug/L		92	69 - 125
Methyl tert-butyl ether	50.0	46.9		ug/L		94	70 - 120
Naphthalene	50.0	51.8		ug/L		104	59 - 130
N-Propylbenzene	50.0	47.7		ug/L		95	69 - 127
Styrene	50.0	48.9		ug/L		98	70 - 120
1,1,1,2-Tetrachloroethane	50.0	49.6		ug/L		99	70 - 125
1,1,2,2-Tetrachloroethane	50.0	48.3		ug/L		97	67 - 127
Tetrachloroethene	50.0	47.3		ug/L		95	70 - 128
Toluene	50.0	49.7		ug/L		99	70 - 125
1,2,3-Trichlorobenzene	50.0	51.8		ug/L		104	55 - 140
1,2,4-Trichlorobenzene	50.0	49.3		ug/L		99	66 - 127
1,1,1-Trichloroethane	50.0	46.2		ug/L		92	70 - 125
1,1,2-Trichloroethane	50.0	51.1		ug/L		102	70 - 122
Trichloroethene	50.0	46.2		ug/L		92	70 - 125
Trichlorofluoromethane	50.0	47.1		ug/L		94	70 - 126
1,2,3-Trichloropropane	50.0	47.9		ug/L		96	50 - 133
1,2,4-Trimethylbenzene	50.0	47.3		ug/L		95	70 - 123
1,3,5-Trimethylbenzene	50.0	47.1		ug/L		94	70 - 123
Vinyl chloride	50.0	45.7		ug/L		91	64 - 126
Xylenes, Total	100	97.6		ug/L		98	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 126*
Toluene-d8 (Surr)	*103*		*75 - 120*
4-Bromofluorobenzene (Surr)	*93*		*72 - 124*
Dibromofluoromethane	*94*		*75 - 120*

Lab Sample ID: 500-145257-3 MS
Matrix: Water
Analysis Batch: 432696

Client Sample ID: MW045M
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	27		250	249		ug/L		89	70 - 120

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

Lab Sample ID: 500-145257-3 MS
Matrix: Water
Analysis Batch: 432696

Client Sample ID: MW045M
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	<1.8		250	244		ug/L		98	70 - 122
Bromochloromethane	<2.1		250	209		ug/L		84	65 - 122
Bromodichloromethane	<1.9		250	235		ug/L		94	69 - 120
Bromoform	<2.4		250	255		ug/L		102	56 - 132
Bromomethane	<4.0		250	204		ug/L		82	40 - 130
n-Butylbenzene	<1.9		250	240		ug/L		96	68 - 125
sec-Butylbenzene	<2.0		250	239		ug/L		95	70 - 123
tert-Butylbenzene	<2.0		250	235		ug/L		94	70 - 121
Carbon tetrachloride	<1.9		250	225		ug/L		90	65 - 122
Chlorobenzene	240		250	466		ug/L		91	70 - 120
Dibromochloromethane	<2.4		250	247		ug/L		99	68 - 125
Chloroethane	<2.5		250	209		ug/L		83	45 - 127
Chloroform	<1.9		250	224		ug/L		90	70 - 120
Chloromethane	<1.6		250	242		ug/L		97	54 - 147
2-Chlorotoluene	<1.6		250	241		ug/L		96	70 - 125
4-Chlorotoluene	<1.7		250	243		ug/L		97	68 - 124
1,2-Dibromo-3-Chloropropane	<10		250	237		ug/L		95	56 - 123
1,2-Dibromoethane	<1.9		250	233		ug/L		93	70 - 125
Dibromomethane	<1.4		250	222		ug/L		89	70 - 120
1,2-Dichlorobenzene	240		250	492		ug/L		99	70 - 125
1,3-Dichlorobenzene	<2.0		250	245		ug/L		98	70 - 125
1,4-Dichlorobenzene	<1.8		250	244		ug/L		98	70 - 120
Dichlorodifluoromethane	<3.4		250	176		ug/L		70	40 - 150
1,1-Dichloroethane	7.2		250	230		ug/L		89	70 - 125
1,2-Dichloroethane	<2.0		250	231		ug/L		92	68 - 127
1,1-Dichloroethene	3.9	J	250	228		ug/L		90	67 - 122
cis-1,2-Dichloroethene	320		250	540		ug/L		88	70 - 125
trans-1,2-Dichloroethene	<1.7		250	224		ug/L		90	70 - 125
1,2-Dichloropropane	<2.1		250	232		ug/L		93	67 - 130
1,3-Dichloropropane	<1.8		250	236		ug/L		94	62 - 136
2,2-Dichloropropane	<2.2		250	213		ug/L		85	58 - 129
1,1-Dichloropropene	<1.5		250	224		ug/L		90	70 - 121
cis-1,3-Dichloropropene	<2.1		250	234		ug/L		94	64 - 127
trans-1,3-Dichloropropene	<1.8		250	230		ug/L		92	62 - 128
Ethylbenzene	17		250	250		ug/L		93	70 - 120
Hexachlorobutadiene	<2.2		250	244		ug/L		98	51 - 150
Isopropylbenzene	<1.9		250	238		ug/L		95	70 - 126
p-Isopropyltoluene	<1.8		250	241		ug/L		97	70 - 125
Methylene Chloride	100		250	326		ug/L		89	69 - 125
Methyl tert-butyl ether	<2.0		250	216		ug/L		86	70 - 120
Naphthalene	<1.7		250	286		ug/L		114	59 - 130
N-Propylbenzene	<2.1		250	242		ug/L		97	69 - 127
Styrene	<1.9		250	239		ug/L		95	70 - 120
1,1,1,2-Tetrachloroethane	<2.3		250	240		ug/L		96	70 - 125
1,1,2,2-Tetrachloroethane	<2.0		250	245		ug/L		98	67 - 127
Tetrachloroethene	<1.9		250	236		ug/L		95	70 - 128
Toluene	270		250	504		ug/L		95	70 - 125
1,2,3-Trichlorobenzene	<2.3		250	287		ug/L		115	55 - 140

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

Lab Sample ID: 500-145257-3 MS
Matrix: Water
Analysis Batch: 432696

Client Sample ID: MW045M
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	<1.7		250	260		ug/L		104	66 - 127
1,1,1-Trichloroethane	<1.9		250	226		ug/L		90	70 - 125
1,1,2-Trichloroethane	<1.8		250	248		ug/L		99	70 - 122
Trichloroethene	1600	E	250	1840	E 4	ug/L		96	70 - 125
Trichlorofluoromethane	<2.1		250	218		ug/L		87	70 - 126
1,2,3-Trichloropropane	<2.1		250	237		ug/L		95	50 - 133
1,2,4-Trimethylbenzene	<1.8		250	240		ug/L		96	70 - 123
1,3,5-Trimethylbenzene	<1.3		250	237		ug/L		95	70 - 123
Vinyl chloride	54		250	253		ug/L		80	64 - 126
Xylenes, Total	92		500	578		ug/L		97	70 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 126*
Toluene-d8 (Surr)	*101*		*75 - 120*
4-Bromofluorobenzene (Surr)	*98*		*72 - 124*
Dibromofluoromethane	*96*		*75 - 120*

Lab Sample ID: 500-145257-3 MSD
Matrix: Water
Analysis Batch: 432696

Client Sample ID: MW045M
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	27		250	244		ug/L		87	70 - 120	2	20
Bromobenzene	<1.8		250	239		ug/L		96	70 - 122	2	20
Bromochloromethane	<2.1		250	211		ug/L		85	65 - 122	1	20
Bromodichloromethane	<1.9		250	233		ug/L		93	69 - 120	1	20
Bromoform	<2.4		250	261		ug/L		104	56 - 132	3	20
Bromomethane	<4.0		250	202		ug/L		81	40 - 130	1	20
n-Butylbenzene	<1.9		250	230		ug/L		92	68 - 125	5	20
sec-Butylbenzene	<2.0		250	231		ug/L		92	70 - 123	3	20
tert-Butylbenzene	<2.0		250	229		ug/L		92	70 - 121	3	20
Carbon tetrachloride	<1.9		250	220		ug/L		88	65 - 122	2	20
Chlorobenzene	240		250	443		ug/L		82	70 - 120	5	20
Dibromochloromethane	<2.4		250	246		ug/L		98	68 - 125	1	20
Chloroethane	<2.5		250	202		ug/L		81	45 - 127	3	20
Chloroform	<1.9		250	220		ug/L		88	70 - 120	2	20
Chloromethane	<1.6		250	232		ug/L		93	54 - 147	4	20
2-Chlorotoluene	<1.6		250	237		ug/L		95	70 - 125	2	20
4-Chlorotoluene	<1.7		250	239		ug/L		95	68 - 124	2	20
1,2-Dibromo-3-Chloropropane	<10		250	241		ug/L		96	56 - 123	1	20
1,2-Dibromoethane	<1.9		250	230		ug/L		92	70 - 125	2	20
Dibromomethane	<1.4		250	215		ug/L		86	70 - 120	3	20
1,2-Dichlorobenzene	240		250	467		ug/L		89	70 - 125	5	20
1,3-Dichlorobenzene	<2.0		250	238		ug/L		95	70 - 125	3	20
1,4-Dichlorobenzene	<1.8		250	242		ug/L		97	70 - 120	1	20
Dichlorodifluoromethane	<3.4		250	162		ug/L		65	40 - 150	8	20
1,1-Dichloroethane	7.2		250	227		ug/L		88	70 - 125	1	20
1,2-Dichloroethane	<2.0		250	234		ug/L		94	68 - 127	1	20

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

Lab Sample ID: 500-145257-3 MSD
Matrix: Water
Analysis Batch: 432696

Client Sample ID: MW045M
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	3.9	J	250	220		ug/L		86	67 - 122	4	20
cis-1,2-Dichloroethene	320		250	520		ug/L		81	70 - 125	4	20
trans-1,2-Dichloroethene	<1.7		250	217		ug/L		87	70 - 125	3	20
1,2-Dichloropropane	<2.1		250	227		ug/L		91	67 - 130	2	20
1,3-Dichloropropane	<1.8		250	238		ug/L		95	62 - 136	1	20
2,2-Dichloropropane	<2.2		250	206		ug/L		82	58 - 129	3	20
1,1-Dichloropropene	<1.5		250	215		ug/L		86	70 - 121	4	20
cis-1,3-Dichloropropene	<2.1		250	229		ug/L		91	64 - 127	2	20
trans-1,3-Dichloropropene	<1.8		250	232		ug/L		93	62 - 128	1	20
Ethylbenzene	17		250	242		ug/L		90	70 - 120	3	20
Hexachlorobutadiene	<2.2		250	234		ug/L		94	51 - 150	4	20
Isopropylbenzene	<1.9		250	229		ug/L		92	70 - 126	4	20
p-Isopropyltoluene	<1.8		250	234		ug/L		94	70 - 125	3	20
Methylene Chloride	100		250	316		ug/L		85	69 - 125	3	20
Methyl tert-butyl ether	<2.0		250	222		ug/L		89	70 - 120	3	20
Naphthalene	<1.7		250	278		ug/L		111	59 - 130	3	20
N-Propylbenzene	<2.1		250	235		ug/L		94	69 - 127	3	20
Styrene	<1.9		250	234		ug/L		94	70 - 120	2	20
1,1,1,2-Tetrachloroethane	<2.3		250	240		ug/L		96	70 - 125	0	20
1,1,2,2-Tetrachloroethane	<2.0		250	242		ug/L		97	67 - 127	1	20
Tetrachloroethene	<1.9		250	227		ug/L		91	70 - 128	4	20
Toluene	270		250	479		ug/L		85	70 - 125	5	20
1,2,3-Trichlorobenzene	<2.3		250	263		ug/L		105	55 - 140	9	20
1,2,4-Trichlorobenzene	<1.7		250	249		ug/L		100	66 - 127	4	20
1,1,1-Trichloroethane	<1.9		250	220		ug/L		88	70 - 125	3	20
1,1,2-Trichloroethane	<1.8		250	248		ug/L		99	70 - 122	0	20
Trichloroethene	1600	E	250	1710	E 4	ug/L		46	70 - 125	7	20
Trichlorofluoromethane	<2.1		250	211		ug/L		84	70 - 126	3	20
1,2,3-Trichloropropane	<2.1		250	231		ug/L		93	50 - 133	2	20
1,2,4-Trimethylbenzene	<1.8		250	234		ug/L		93	70 - 123	3	20
1,3,5-Trimethylbenzene	<1.3		250	233		ug/L		93	70 - 123	2	20
Vinyl chloride	54		250	252		ug/L		79	64 - 126	0	20
Xylenes, Total	92		500	563		ug/L		94	70 - 125	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 126*
Toluene-d8 (Surr)	*100*		*75 - 120*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*
Dibromofluoromethane	*96*		*75 - 120*

Lab Sample ID: MB 500-432884/6
Matrix: Water
Analysis Batch: 432884

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			05/18/18 11:18	1
Bromobenzene	<0.36		1.0	0.36	ug/L			05/18/18 11:18	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			05/18/18 11:18	1

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

Lab Sample ID: MB 500-432884/6
Matrix: Water
Analysis Batch: 432884

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			05/18/18 11:18	1
Bromoform	<0.48		1.0	0.48	ug/L			05/18/18 11:18	1
Bromomethane	<0.80		2.0	0.80	ug/L			05/18/18 11:18	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			05/18/18 11:18	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			05/18/18 11:18	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			05/18/18 11:18	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			05/18/18 11:18	1
Chloroethane	<0.51		1.0	0.51	ug/L			05/18/18 11:18	1
Chloroform	<0.37		2.0	0.37	ug/L			05/18/18 11:18	1
Chloromethane	<0.32		1.0	0.32	ug/L			05/18/18 11:18	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			05/18/18 11:18	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			05/18/18 11:18	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			05/18/18 11:18	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
Dibromomethane	<0.27		1.0	0.27	ug/L			05/18/18 11:18	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			05/18/18 11:18	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			05/18/18 11:18	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			05/18/18 11:18	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			05/18/18 11:18	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			05/18/18 11:18	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/18/18 11:18	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			05/18/18 11:18	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			05/18/18 11:18	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			05/18/18 11:18	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			05/18/18 11:18	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			05/18/18 11:18	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/18/18 11:18	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			05/18/18 11:18	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			05/18/18 11:18	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			05/18/18 11:18	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			05/18/18 11:18	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			05/18/18 11:18	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			05/18/18 11:18	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
Naphthalene	<0.34		1.0	0.34	ug/L			05/18/18 11:18	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			05/18/18 11:18	1
Styrene	<0.39		1.0	0.39	ug/L			05/18/18 11:18	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			05/18/18 11:18	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			05/18/18 11:18	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			05/18/18 11:18	1
Toluene	<0.15		0.50	0.15	ug/L			05/18/18 11:18	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			05/18/18 11:18	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			05/18/18 11:18	1

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

Lab Sample ID: MB 500-432884/6
Matrix: Water
Analysis Batch: 432884

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			05/18/18 11:18	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			05/18/18 11:18	1
Trichloroethene	<0.16		0.50	0.16	ug/L			05/18/18 11:18	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			05/18/18 11:18	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			05/18/18 11:18	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			05/18/18 11:18	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			05/18/18 11:18	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			05/18/18 11:18	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			05/18/18 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 126*		*05/18/18 11:18*	*1*
Toluene-d8 (Surr)	*97*		*75 - 120*		*05/18/18 11:18*	*1*
4-Bromofluorobenzene (Surr)	*97*		*72 - 124*		*05/18/18 11:18*	*1*
Dibromofluoromethane	*102*		*75 - 120*		*05/18/18 11:18*	*1*

Lab Sample ID: LCS 500-432884/25
Matrix: Water
Analysis Batch: 432884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	42.9		ug/L		86	70 - 120
Bromobenzene	50.0	44.8		ug/L		90	70 - 122
Bromochloromethane	50.0	44.0		ug/L		88	65 - 122
Bromodichloromethane	50.0	42.8		ug/L		86	69 - 120
Bromoform	50.0	42.6		ug/L		85	56 - 132
Bromomethane	50.0	54.1		ug/L		108	40 - 130
n-Butylbenzene	50.0	49.0		ug/L		98	68 - 125
sec-Butylbenzene	50.0	49.4		ug/L		99	70 - 123
tert-Butylbenzene	50.0	47.6		ug/L		95	70 - 121
Carbon tetrachloride	50.0	41.5		ug/L		83	65 - 122
Chlorobenzene	50.0	47.6		ug/L		95	70 - 120
Dibromochloromethane	50.0	47.3		ug/L		95	68 - 125
Chloroethane	50.0	37.6		ug/L		75	45 - 127
Chloroform	50.0	41.7		ug/L		83	70 - 120
Chloromethane	50.0	54.0		ug/L		108	54 - 147
2-Chlorotoluene	50.0	46.4		ug/L		93	70 - 125
4-Chlorotoluene	50.0	47.1		ug/L		94	68 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.2		ug/L		86	56 - 123
1,2-Dibromoethane	50.0	49.2		ug/L		98	70 - 125
Dibromomethane	50.0	44.4		ug/L		89	70 - 120
1,2-Dichlorobenzene	50.0	47.0		ug/L		94	70 - 125
1,3-Dichlorobenzene	50.0	47.1		ug/L		94	70 - 125
1,4-Dichlorobenzene	50.0	46.2		ug/L		92	70 - 120
Dichlorodifluoromethane	50.0	46.2		ug/L		92	40 - 150
1,1-Dichloroethane	50.0	39.7		ug/L		79	70 - 125
1,2-Dichloroethane	50.0	40.3		ug/L		81	68 - 127
1,1-Dichloroethene	50.0	44.7		ug/L		89	67 - 122

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

Lab Sample ID: LCS 500-432884/25
Matrix: Water
Analysis Batch: 432884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	44.5		ug/L		89	70 - 125
trans-1,2-Dichloroethene	50.0	44.3		ug/L		89	70 - 125
1,2-Dichloropropane	50.0	40.7		ug/L		81	67 - 130
1,3-Dichloropropane	50.0	48.5		ug/L		97	62 - 136
2,2-Dichloropropane	50.0	34.1		ug/L		68	58 - 129
1,1-Dichloropropene	50.0	44.3		ug/L		89	70 - 121
cis-1,3-Dichloropropene	50.0	45.5		ug/L		91	64 - 127
trans-1,3-Dichloropropene	50.0	44.7		ug/L		89	62 - 128
Ethylbenzene	50.0	49.6		ug/L		99	70 - 120
Hexachlorobutadiene	50.0	41.0		ug/L		82	51 - 150
Isopropylbenzene	50.0	48.3		ug/L		97	70 - 126
p-Isopropyltoluene	50.0	47.9		ug/L		96	70 - 125
Methylene Chloride	50.0	45.0		ug/L		90	69 - 125
Methyl tert-butyl ether	50.0	37.8		ug/L		76	70 - 120
Naphthalene	50.0	44.6		ug/L		89	59 - 130
N-Propylbenzene	50.0	48.8		ug/L		98	69 - 127
Styrene	50.0	48.2		ug/L		96	70 - 120
1,1,1,2-Tetrachloroethane	50.0	45.0		ug/L		90	70 - 125
1,1,2,2-Tetrachloroethane	50.0	50.2		ug/L		100	67 - 127
Tetrachloroethene	50.0	44.7		ug/L		89	70 - 128
Toluene	50.0	48.6		ug/L		97	70 - 125
1,2,3-Trichlorobenzene	50.0	43.2		ug/L		86	55 - 140
1,2,4-Trichlorobenzene	50.0	40.9		ug/L		82	66 - 127
1,1,1-Trichloroethane	50.0	39.9		ug/L		80	70 - 125
1,1,2-Trichloroethane	50.0	49.5		ug/L		99	70 - 122
Trichloroethene	50.0	43.9		ug/L		88	70 - 125
Trichlorofluoromethane	50.0	39.9		ug/L		80	70 - 126
1,2,3-Trichloropropane	50.0	48.0		ug/L		96	50 - 133
1,2,4-Trimethylbenzene	50.0	48.2		ug/L		96	70 - 123
1,3,5-Trimethylbenzene	50.0	48.9		ug/L		98	70 - 123
Vinyl chloride	50.0	42.7		ug/L		85	64 - 126
Xylenes, Total	100	95.0		ug/L		95	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*75 - 126*
Toluene-d8 (Surr)	*100*		*75 - 120*
4-Bromofluorobenzene (Surr)	*93*		*72 - 124*
Dibromofluoromethane	*94*		*75 - 120*

Lab Chronicle

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW108M
Date Collected: 05/03/18 11:42
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	432696	05/17/18 12:55	JMP	TAL CHI

Client Sample ID: MW108S
Date Collected: 05/03/18 11:46
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	432696	05/17/18 13:24	JMP	TAL CHI

Client Sample ID: MW045M
Date Collected: 05/03/18 09:15
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	10	432696	05/17/18 13:50	JMP	TAL CHI
Total/NA	Analysis	8260B		5	432696	05/17/18 20:26	JMP	TAL CHI

Client Sample ID: MW041M
Date Collected: 05/03/18 07:54
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	432696	05/17/18 14:44	JMP	TAL CHI

Client Sample ID: MW041S/D
Date Collected: 05/03/18 08:04
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	432696	05/17/18 15:37	JMP	TAL CHI
Total/NA	Analysis	8260B	DL	200	432696	05/17/18 16:04	JMP	TAL CHI

Client Sample ID: MW041S
Date Collected: 05/03/18 08:04
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	432696	05/17/18 16:30	JMP	TAL CHI
Total/NA	Analysis	8260B	DL	200	432696	05/17/18 16:57	JMP	TAL CHI

Lab Chronicle

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Client Sample ID: MW045S
Date Collected: 05/03/18 09:07
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	432696	05/17/18 17:24	JMP	TAL CHI
Total/NA	Analysis	8260B	DL	200	432696	05/17/18 17:51	JMP	TAL CHI

Client Sample ID: MW117S
Date Collected: 05/03/18 10:40
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	432696	05/17/18 18:18	JMP	TAL CHI
Total/NA	Analysis	8260B	DL	10	432696	05/17/18 18:45	JMP	TAL CHI

Client Sample ID: Trip Blank
Date Collected: 05/03/18 00:00
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	432696	05/17/18 12:27	JMP	TAL CHI

Client Sample ID: FB#1
Date Collected: 05/03/18 07:26
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	432696	05/17/18 19:12	JMP	TAL CHI

Client Sample ID: MW117M
Date Collected: 05/07/18 11:00
Date Received: 05/10/18 09:20

Lab Sample ID: 500-145257-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	432884	05/18/18 12:18	PMF	TAL CHI
Total/NA	Analysis	8260B	DL	20	432884	05/18/18 13:17	PMF	TAL CHI

Laboratory References:

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

Accreditation/Certification Summary

Client: Tyco Fire Protection Products
Project/Site: Barrier Wall Monitoring

TestAmerica Job ID: 500-145257-1

Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL T

2417 Bond Street, University Park, IL 6048
Phone: 708.534.5200 Fax: 708.534.52

500-145257 COC

(optional)

Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)

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

Chain of Custody Record

Lab Job #: 500-145257

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 0.5 7.20

Client: Tyco Fire Products
Client Project #:
Project Name: Barrier Wall Monitoring
Project Location/State: Marinette, WI
Lab Project #:
Sampler: R. Suennen/J. Danko
Lab PM:

Preservative: 1
Parameter: VOC

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	VOC	Comments
1		MW108M	5/3/18	1142	3	W	X	
2		MW108S	5/3/18	1146	3	W	X	
3	X	MW045M	5/3/18	915	9	W	X	
4		MW041M	5/3/18	754	3	W	X	
5		MW041S/D	5/3/18	804	3	W	X	
6		MW041S	5/3/18	804	3	W	X	
7		MW045S	5/3/18	907	3	W	X	
8		MW117S	5/3/18	1040	3	W	X	
9		Trip Blank	4/26/18	—	2	W	X	
10		FB#1	5/3/18	726	3	W	X	

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

Sample Disposal
[ ] Return to Client [Y] Disposal by Lab [Y] Archive for 6 Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	Tyco	5/9/18	1319	Sherri Scott	TA-Cdt	5/10/18	0920
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier
Shipped: Fed-X
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

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-145257
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: Tyco Fire Products
Client Project #:
Project Name: Barrier Wall Monitoring
Project Location/State: Marinette WI
Lab Project #:
Sampler: J. Danko
Lab PM:

Preservative: 1
Parameter: VOC

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	VOC	Comments
11		MW117M	5/7/18	1100	3	W	X	

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

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [X] Archive for 6 Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	Tyco	5/9/18	1319		TA-CHI	5/10/18	0920

Lab Courier:
Shipped: Fed X
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:

Lab Comments:

Login Sample Receipt Checklist

Client: Tyco Fire Protection Products

Job Number: 500-145257-1

Login Number: 145257
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	