State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Plymouth Service Center
1155 Pilgrim Road
Plymouth WI 53073

Tony Evers, Governor Preston D. Cole, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463

TTY Access via relay - 711



September 30, 2020

Mr. Brian Behrens Behrens 1106 LLC 1297 Hwy W Grafton, WI 53024

SUBJECT: Results of 4th Round Vapor Intrusion Sampling at 1102 Bridge St., Grafton, WI

Related to former Quality Cleaners, 1226 11th Avenue, Grafton, WI

BRRTS #: 02-46-560212, FID #: 246166470

Dear Mr. Behrens:

Included are the findings of a recent investigation on your property by the Wisconsin Department of Natural Resources (DNR). As you are aware, this investigation was conducted because of the potential for contaminant vapors from the nearby former Quality Cleaners property, identified above, to migrate through soils, accumulate beneath the foundation of your property, and possibly enter the indoor air. The contaminants of concern at the former Quality Cleaners property are the dry-cleaning solvent perchloroethylene (PCE), and its daughter product trichloroethylene (TCE). The history of this site and the potential concerns to neighboring residents were described in detail in the original letter sent to you, dated October 4, 2017, *Request for Access for Sampling at 1102 Bridge St.*, *Grafton* 

On April 23, 2020 the environmental contractor, AECOM, hired by the DNR, collected a 4<sup>th</sup> round of vapor samples. The samples were submitted to Pace Analytical for TO-15 analysis, which includes the contaminants of concern listed above.

### **Your Test Results**

Attached is a copy of the laboratory report for your sub-slab sample. The results show that a small amount of PCE was detected in the sub-slab vapor sample collected from beneath your foundation. Although PCE was detected in soil vapors beneath your foundation floor, the level at which it was detected is such that it does not pose a threat. This is called "a detection below screening level" and is explained in the enclosed fact sheet.

At this time, there does not appear to be a risk of the PCE vapor entering your property from beneath the foundation. No additional sampling is planned by the DNR. <u>AECOM will contact you to schedule abandonment of the vapor sampling pins.</u>

The laboratory report also shows very low levels of volatile organic compounds (VOCs) other than PCE and TCE in soil vapors from beneath your home/building. This is likely due to trace amounts of VOCs from products such as paints, adhesives, fragrances, etc. that are commonly found in the typical home or office, and unrelated to the activities that took place at Quality Cleaners in the past.



September 30, 2020

Please call me, the DNR project manager, at your earliest convenience, at 920-893-8523, or via email at <u>johnm.feeney@wisconsin.gov</u> if you have any questions. Please direct health related questions to Mr. Curtis Hedman at the Department of Health and Human Services at 608-266-6677, or email at Curtis.Hedman@wisconsin.gov.

Sincerely,

John Feeney, PG Hydrogeologist

Remediation & Redevelopment Program

Cc: Mr. Tory Schultz, AECOM

Mr. Curtis Hedman, DHS

Attachments: Email with Tabulated Results

Sample Location Map Laboratory Analytical Sheets From: Schultz, Tory <Tory.Schultz@aecom.com>

**Sent:** Wednesday, May 13, 2020 1:02 PM

**To:** Feeney, John M - DNR

**Cc:** Altenbach, Lanette; Mulcahy, Connor

**Subject:** Former Quality Cleaners Off-site Vapor Intrusion Assessment (BRRTS #02-46-560212) -

Third and FINAL Sample Event Results

Attachments: Lab.Report\_APR2020\_gw.pdf; Lab.Report\_APR2020\_1225\_1227\_12thAve.pdf;

Lab.Report\_APR2020\_1102BridgeSt.pdf

### Good afternoon John,

Here are the results of AECOM's VI testing in Grafton during April 2020. Sorry for the delay. During QC review we identified errors and requested revised laboratory reports which have been attached.

On April 22<sup>nd</sup>-23<sup>rd</sup>, 2020, AECOM conducted work associated with the Former Quality Cleaners Off-site Vapor Intrusion Assessment. Two sub-slab vapor pins at off-site locations were sampled (SS-4 and SS-5). One indoor air and one outdoor ambient air sample were collected from 1225-1227 12<sup>th</sup> Avenue. Air samples were collected in laboratory-supplied Summa canisters and were analyzed by method TO-15 by Pace Analytical in Minneapolis, MN. Field sampling was conducted in general accordance with the WDNR vapor intrusion guidance (RR-986) and compared to the most conservative values (Residential Wisc. Admin § NR 700.03(49g)) shown on the WI Vapor Quick Look-Up Table for Indoor Air Vapor Action Levels (VAL) and Vapor Risk Screening Levels (VRSL), dated November 2017. Results from this vapor intrusion sampling event collected during the cooling season are summarized below and the laboratory report is attached. All ambient, indoor air, and sub-slab vapor samples were reported below VALs and VRSLs, respectively. Figure 1 shows locations of the vapor pins on each property along with the indoor and outdoor ambient air sample collection points.

On April 22<sup>nd</sup>, AECOM collected groundwater samples from the two monitoring wells (MW1 & MW2) at the Former Quality Cleaners property.

### **Air Sample Methodology**

Vapor pins were installed during the initial site visit on July 23<sup>rd</sup>, 2019. Indoor and outdoor ambient air samples were initiated on April 22<sup>nd</sup>, 2020. On April 23<sup>rd</sup>, 2020, field staff returned to the properties to collect sub-slab vapor samples and collect the 24-hour ambient outdoor and indoor air samples. Prior to collection of sub-slab vapor samples, leak testing by use of a water dam and shut-in test with a laboratory-supplied Purge Manifold Assembly confirmed each vapor pin was properly installed and the sample train was constructed without leaks.

Table 1 – Summary of Air Sampling Results for PCE (μg/m³)

Assessment	Sample ID	July 2019	November 2019	February 2020	April 2020
Property		(Cooling)	(Warming)	(Warming)	(Cooling)
	SS-1	3.9	1.7	1.0 J	Not Sampled
1102 Bridge Street	SS-5	Vapor Pin installed at later date	2.8	3.9	1.1 J
	SS-2	1,390	85.4	35.9	Not Sampled
1233 12 <sup>th</sup> Avenue	SS-3	169	491	335	Not Sampled
1233 12" Avenue	OA-1 (AA-1)	ND	ND	ND	Not Sampled
	IA-1 (AI-1)	1.1	2.5	2.5	Not Sampled
1225-1227 12 <sup>th</sup>	SS-4	2.8	Access Denied	0.79 J	0.76 J
Avenue	OA-2 (AA-2)	ND	During this event	ND	ND

IA-2 (AI-2)	ND	2.2	1 1 1
IA-2 (AI-2)	ן ואט	2.5	1.4

### Table 1 Notes

SS = sub-slab vapor sample collected at a rate of approximately 200mL/minute

OA = Outdoor Ambient air 24-hour sample duration, labeled "AA" during July 2019 sampling event.

IA = indoor air 24-hour sample duration, labeled "AI" during July 2019 sampling event.

Sub-Slab vapor risk screening level 1,400 μg/m<sup>3</sup>

ND = Non Detect

J = Estimated concentration at or above the Limit of Detection but below the Limit of Quantitation

Not Sampled = Contract required three sampling events previously completed

### **Deviations from the Sampling and Analysis Plan**

1. In place of a helium shroud to confirm a proper seal of the VP, Pace Analytical supplied a dedicated Purge Manifold Assembly (PMA) for each sample location to perform a shut-in test on the sample train prior to sample collection. Leak testing each sample train was conducted according to Pace Analytical's Assembly of the Purge Manifold Assembly (PMA).

### **Groundwater Sample Methodology**

Depth to water at each groundwater monitoring well was measured, purging, and sampled on April 22, 2020. Each monitoring well was purged at minimum of three well volumes with a new disposable bailer. Water quality parameters (After purging, samples were taken via bailer. Care was taken to not agitate the water with the bailer during purging, sampling, or filling of the sample vials.

Sample labels were adhered to each sample vial containing the sample identification number (project and facility), date and time of collection, analysis to be conducted, preservative, and the sampler's initials. A chain-of-custody (COC) form was completed after sample collection and the samples were placed in a cooler and shipped under standard COC procedures to the analytical laboratory (Pace Analytical in Green Bay, WI).

Table 2 – Summary of Groundwater Sampling from Former Quality Cleaner Property

Monitoring Well	Sample ID	DTW (feet)	PCE (μg/m³)
MW-1	MW-1-042220	6.74	7.7
MW-2	MW-2-042220	6.45	<u>2.4</u>

Table 2Notes

DTW=Depth to Water (feet)

PCE PAL =  $0.5 \mu g/m^3$  (exceedance italicized and underlined)

PCE ES =  $5 \mu g/m^3$  (exceedance **bold**)

All other VOCs analyzed for the wells listed above were non-detect

### **Further Work**

With the completion of the third sampling event and added scope of groundwater sampling two wells, remaining work includes removal of the five vapor pins from the building's concrete flooring and seal the holes. The estimated budget for this proposed work is approximately \$1,000.

Please let us know if you have comments or questions.

Kind regards,

### **Tory Schultz**

Senior Project Manager, Environment, Central Region D +1-414-944-6168 M +1-414-690-8405 tory.schultz@aecom.com

### **AECOM**

1555 N River Center Drive, STE 214 Milwaukee, WI 53212, United States T +1-414-944-6080 aecom.com

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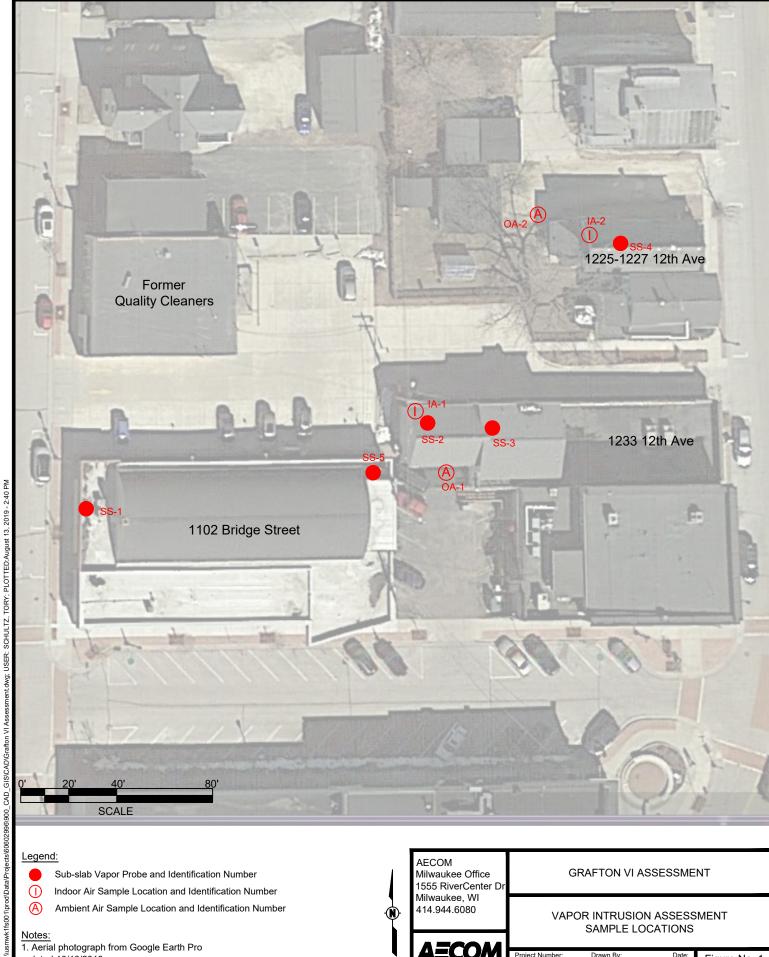


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Sub-slab Vapor Probe and Identification Number

Indoor Air Sample Location and Identification Number ①

(A) Ambient Air Sample Location and Identification Number

Notes:

1. Aerial photograph from Google Earth Pro dated 10/10/2013.



VAPOR INTRUSION ASSESSMENT SAMPLE LOCATIONS

GRAFTON VI ASSESSMENT



Figure No. 1



(612)607-1700



April 28, 2020

Lanette Altenbach AECOM 1555 N RiverCenter Drive Suite 214 Milwaukee, WI 53212

RE: Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

### Dear Lanette Altenbach:

Enclosed are the analytical results for sample(s) received by the laboratory on April 24, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne That

Carolynne Trout carolynne.trout@pacelabs.com 1(612)607-6351 Project Manager

Enclosures

cc: Tory Schultz, AECOM







### **CERTIFICATIONS**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

**Pace Analytical Services Minneapolis** 

A2LA Certification #: 2926.01 Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929

CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-

053-137

Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064 Hawaii Certification #: MN00064

Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064

Maine Certification #: MN00064 Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Massachusetts DWP Certification #: via MN 027-053-137

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certifcation #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647

North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C

Wyoming UST Certification #: via A2LA 2926.01

Wisconsin Certification #: 999407970





### **SAMPLE SUMMARY**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10515880001	SS-5 (1102 Bridge St.)	Air	04/23/20 10:45	04/24/20 11:50





### **SAMPLE ANALYTE COUNT**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10515880001	SS-5 (1102 Bridge St.)	TO-15	MLS	61	PASI-M

PASI-M = Pace Analytical Services - Minneapolis





### **SUMMARY OF DETECTION**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10515880001	SS-5 (1102 Bridge St.)					
TO-15	Benzene	1.1	ug/m3	0.62	04/27/20 17:51	
TO-15	Dichlorodifluoromethane	2.4	ug/m3	1.9	04/27/20 17:51	
TO-15	Ethanol	100	ug/m3	3.7	04/27/20 17:51	
TO-15	Ethylbenzene	0.90J	ug/m3	1.7	04/27/20 17:51	
TO-15	4-Ethyltoluene	1.0J	ug/m3	4.8	04/27/20 17:51	
TO-15	n-Heptane	0.64J	ug/m3	1.6	04/27/20 17:51	
TO-15	n-Hexane	0.53J	ug/m3	1.4	04/27/20 17:51	
TO-15	Propylene	0.21J	ug/m3	0.67	04/27/20 17:51	
TO-15	Styrene	1.1J	ug/m3	1.7	04/27/20 17:51	
TO-15	Tetrachloroethene	1.1J	ug/m3	1.3	04/27/20 17:51	
TO-15	Toluene	3.0	ug/m3	1.5	04/27/20 17:51	
TO-15	Trichlorofluoromethane	1.3J	ug/m3	2.2	04/27/20 17:51	
TO-15	1,2,4-Trimethylbenzene	2.1	ug/m3	1.9	04/27/20 17:51	
TO-15	1,3,5-Trimethylbenzene	1.4J	ug/m3	1.9	04/27/20 17:51	
TO-15	m&p-Xylene	4.7	ug/m3	3.4	04/27/20 17:51	
TO-15	o-Xylene	1.4J	ug/m3	1.7	04/27/20 17:51	

Matrix: Air

04/27/20 17:51 156-60-5

04/27/20 17:51 10061-01-5

10061-02-6

76-14-2

64-17-5

141-78-6

100-41-4

622-96-8

142-82-5

87-68-3

110-54-3

591-78-6

04/27/20 17:51 78-87-5

04/27/20 17:51

04/27/20 17:51

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04/27/20 17:51

04/27/20 17:51

04/27/20 17:51

04/27/20 17:51

04/27/20 17:51 75-09-2

04/27/20 17:51 108-10-1

04/27/20 17:51 91-20-3

04/27/20 17:51 67-63-0

04/27/20 17:51 115-07-1

04/27/20 17:51 100-42-5

04/27/20 17:51 1634-04-4

(612)607-1700



### **ANALYTICAL RESULTS**

Collected: 04/23/20 10:45

Received: 04/24/20 11:50

Lab ID: 10515880001

< 0.32

< 0.38

< 0.71

<0.50

<0.30

<0.35

0.90J

1.0J

0.64J

<2.4

0.53J

<0.66

<1.8

< 0.34

<0.19

<2.4

<0.73

0.21J

1.1J

100

ug/m3

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Sample: SS-5 (1102 Bridge St.)

trans-1.2-Dichloroethene

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

Dichlorotetrafluoroethane

Hexachloro-1.3-butadiene

4-Methyl-2-pentanone (MIBK)

1,2-Dichloropropane

Ethanol

Ethyl acetate

Ethylbenzene

4-Ethyltoluene

n-Heptane

n-Hexane

2-Hexanone

Naphthalene

2-Propanol

Propylene

Styrene

Methylene Chloride

Methyl-tert-butyl ether

Date: 04/28/2020 11:32 AM

DF **Parameters** Results Units 100 LOD Prepared CAS No. Analyzed Qual **TO15 MSV AIR** Analytical Method: TO-15 Pace Analytical Services - Minneapolis <2.5 ug/m3 11.6 2.5 1.92 04/27/20 17:51 67-64-1 Acetone Benzene 1.1 ug/m3 0.62 0.25 1.92 04/27/20 17:51 71-43-2 Benzyl chloride <0.91 ug/m3 5.0 0.91 1.92 04/27/20 17:51 100-44-7 Bromodichloromethane < 0.34 ug/m3 2.6 0.34 1.92 04/27/20 17:51 75-27-4 Bromoform <3.5 ug/m3 10 1 3.5 1 92 04/27/20 17:51 75-25-2 Bromomethane <0.28 ug/m3 1.5 0.28 1.92 04/27/20 17:51 74-83-9 1.3-Butadiene <0.20 ug/m3 0.86 0.20 1.92 04/27/20 17:51 106-99-0 2-Butanone (MEK) <1.1 ug/m3 5.8 1.1 1.92 04/27/20 17:51 78-93-3 Carbon disulfide <0.21 ug/m3 1.2 0.21 1.92 04/27/20 17:51 75-15-0 Carbon tetrachloride < 0.49 ug/m3 2.5 0.49 1.92 04/27/20 17:51 56-23-5 Chlorobenzene <0.26 ug/m3 1.8 0.26 1.92 04/27/20 17:51 108-90-7 Chloroethane < 0.24 ug/m3 1.0 0.24 1.92 04/27/20 17:51 75-00-3 0.95 Chloroform <0.26 ug/m3 0.26 1.92 04/27/20 17:51 67-66-3 Chloromethane < 0.13 ug/m3 0.81 0.13 1.92 04/27/20 17:51 74-87-3 ug/m3 Cyclohexane <0.28 3.4 0.28 1.92 04/27/20 17:51 110-82-7 1.92 Dibromochloromethane <0.77 ug/m3 3.3 0.77 04/27/20 17:51 124-48-1 <0.53 0.53 1.92 04/27/20 17:51 106-93-4 1,2-Dibromoethane (EDB) ug/m3 1.5 1,2-Dichlorobenzene < 0.61 ug/m3 2.3 0.61 1.92 04/27/20 17:51 95-50-1 0.92 <0.92 1.92 04/27/20 17:51 541-73-1 1.3-Dichlorobenzene ug/m3 2.3 1,4-Dichlorobenzene <1.4 ug/m3 5.9 1.4 1.92 04/27/20 17:51 106-46-7 Dichlorodifluoromethane 2.4 ug/m3 1.9 0.32 1.92 04/27/20 17:51 75-71-8 1,1-Dichloroethane <0.22 ug/m3 0.22 1.92 04/27/20 17:51 75-34-3 1.6 1,2-Dichloroethane <0.32 ug/m3 0.79 0.32 1.92 04/27/20 17:51 107-06-2 0.23 1.92 1,1-Dichloroethene <0.23 ug/m3 1.5 04/27/20 17:51 75-35-4 cis-1,2-Dichloroethene <0.22 ug/m3 1.5 0.22 1.92 04/27/20 17:51 156-59-2

1.5

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2.7

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4.8

1.6

10.4

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6.8

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7.0

5.1

4.8

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04/27/20 17:51 95-47-6



### **ANALYTICAL RESULTS**

Project: 60602996 Grafton VI; Format Qu

1.4J

ug/m3

Pace Project No.: 10515880

o-Xylene

Date: 04/28/2020 11:32 AM

Sample: SS-5 (1102 Bridge St.)	Lab ID:	10515880001	Collected	: 04/23/20	0 10:45	Received: 04	/24/20 11:50 Ma	atrix: Air	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical	Method: TO-15							
	Pace Anal	ytical Services	- Minneapoli	s					
1,1,2,2-Tetrachloroethane	<0.59	ug/m3	1.3	0.59	1.92		04/27/20 17:51	79-34-5	
Tetrachloroethene	1.1J	ug/m3	1.3	0.51	1.92		04/27/20 17:51	127-18-4	
Tetrahydrofuran	<0.35	ug/m3	1.2	0.35	1.92		04/27/20 17:51	109-99-9	
Toluene	3.0	ug/m3	1.5	0.33	1.92		04/27/20 17:51	108-88-3	
1,2,4-Trichlorobenzene	<6.4	ug/m3	14.5	6.4	1.92		04/27/20 17:51	120-82-1	
1,1,1-Trichloroethane	<0.29	ug/m3	2.1	0.29	1.92		04/27/20 17:51	71-55-6	
1,1,2-Trichloroethane	<0.38	ug/m3	1.1	0.38	1.92		04/27/20 17:51	79-00-5	
Trichloroethene	<0.42	ug/m3	1.0	0.42	1.92		04/27/20 17:51	79-01-6	
Trichlorofluoromethane	1.3J	ug/m3	2.2	0.44	1.92		04/27/20 17:51	75-69-4	
1,1,2-Trichlorotrifluoroethane	< 0.49	ug/m3	3.0	0.49	1.92		04/27/20 17:51	76-13-1	
1,2,4-Trimethylbenzene	2.1	ug/m3	1.9	0.60	1.92		04/27/20 17:51	95-63-6	
1,3,5-Trimethylbenzene	1.4J	ug/m3	1.9	0.48	1.92		04/27/20 17:51	108-67-8	
Vinyl acetate	<0.34	ug/m3	1.4	0.34	1.92		04/27/20 17:51	108-05-4	
Vinyl chloride	<0.18	ug/m3	0.50	0.18	1.92		04/27/20 17:51	75-01-4	
m&p-Xylene	4.7	ug/m3	3.4	0.65	1.92		04/27/20 17:51	179601-23-1	

1.7

0.28 1.92

(612)607-1700



### **QUALITY CONTROL DATA**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Date: 04/28/2020 11:32 AM

QC Batch: 672172 Analysis Method: TO-15

QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10515880001

METHOD BLANK: 3600619 Matrix: Air

Associated Lab Samples: 10515880001

		Blank	Reporting			
Parameter	Units	Result	Limit	Analyzed	Qualifiers	
1,1,1-Trichloroethane	ug/m3	<0.15	1.1	04/27/20 10:54		
1,1,2,2-Tetrachloroethane	ug/m3	<0.31	0.70	04/27/20 10:54		
1,1,2-Trichloroethane	ug/m3	<0.20	0.56	04/27/20 10:54		
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.26	1.6	04/27/20 10:54		
1,1-Dichloroethane	ug/m3	<0.11	0.82	04/27/20 10:54		
1,1-Dichloroethene	ug/m3	<0.12	0.81	04/27/20 10:54		
1,2,4-Trichlorobenzene	ug/m3	<3.3	7.5	04/27/20 10:54		
1,2,4-Trimethylbenzene	ug/m3	<0.31	1.0	04/27/20 10:54		
1,2-Dibromoethane (EDB)	ug/m3	<0.28	0.78	04/27/20 10:54		
1,2-Dichlorobenzene	ug/m3	< 0.32	1.2	04/27/20 10:54		
1,2-Dichloroethane	ug/m3	<0.17	0.41	04/27/20 10:54		
1,2-Dichloropropane	ug/m3	<0.20	0.94	04/27/20 10:54		
1,3,5-Trimethylbenzene	ug/m3	<0.25	1.0	04/27/20 10:54		
1,3-Butadiene	ug/m3	<0.10	0.45	04/27/20 10:54		
1,3-Dichlorobenzene	ug/m3	<0.48	1.2	04/27/20 10:54		
1,4-Dichlorobenzene	ug/m3	< 0.74	3.1	04/27/20 10:54		
2-Butanone (MEK)	ug/m3	<0.56	3.0	04/27/20 10:54		
2-Hexanone	ug/m3	< 0.34	4.2	04/27/20 10:54		
2-Propanol	ug/m3	<0.38	2.5	04/27/20 10:54		
4-Ethyltoluene	ug/m3	< 0.43	2.5	04/27/20 10:54		
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.18	4.2	04/27/20 10:54		
Acetone	ug/m3	<1.3	6.0	04/27/20 10:54		
Benzene	ug/m3	<0.13	0.32	04/27/20 10:54		
Benzyl chloride	ug/m3	<0.47	2.6	04/27/20 10:54		
Bromodichloromethane	ug/m3	<0.18	1.4	04/27/20 10:54		
Bromoform	ug/m3	<1.8	5.2	04/27/20 10:54		
Bromomethane	ug/m3	<0.15	0.79	04/27/20 10:54		
Carbon disulfide	ug/m3	<0.11	0.63	04/27/20 10:54		
Carbon tetrachloride	ug/m3	<0.26	1.3	04/27/20 10:54		
Chlorobenzene	ug/m3	<0.13	0.94	04/27/20 10:54		
Chloroethane	ug/m3	<0.13	0.54	04/27/20 10:54		
Chloroform	ug/m3	<0.13	0.50	04/27/20 10:54		
Chloromethane	ug/m3	<0.066	0.42	04/27/20 10:54		
cis-1,2-Dichloroethene	ug/m3	<0.12	0.81	04/27/20 10:54		
cis-1,3-Dichloropropene	ug/m3	< 0.37	0.92	04/27/20 10:54		
Cyclohexane	ug/m3	<0.15	1.8	04/27/20 10:54		
Dibromochloromethane	ug/m3	< 0.40	1.7	04/27/20 10:54		
Dichlorodifluoromethane	ug/m3	<0.17	1.0	04/27/20 10:54		
Dichlorotetrafluoroethane	ug/m3	<0.16	1.4	04/27/20 10:54		
Ethanol	ug/m3	<0.94	1.9	04/27/20 10:54		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Date: 04/28/2020 11:32 AM

METHOD BLANK: 3600619 Matrix: Air

Associated Lab Samples: 10515880001

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.18	0.73	04/27/20 10:54	
Ethylbenzene	ug/m3	<0.14	0.88	04/27/20 10:54	
Hexachloro-1,3-butadiene	ug/m3	<1.2	5.4	04/27/20 10:54	
m&p-Xylene	ug/m3	< 0.34	1.8	04/27/20 10:54	
Methyl-tert-butyl ether	ug/m3	<0.10	3.7	04/27/20 10:54	
Methylene Chloride	ug/m3	< 0.93	3.5	04/27/20 10:54	
n-Heptane	ug/m3	< 0.20	0.83	04/27/20 10:54	
n-Hexane	ug/m3	<0.20	0.72	04/27/20 10:54	
Naphthalene	ug/m3	<1.3	2.7	04/27/20 10:54	
o-Xylene	ug/m3	<0.15	0.88	04/27/20 10:54	
Propylene	ug/m3	<0.098	0.35	04/27/20 10:54	
Styrene	ug/m3	< 0.43	0.87	04/27/20 10:54	
Tetrachloroethene	ug/m3	<0.27	0.69	04/27/20 10:54	
Tetrahydrofuran	ug/m3	<0.18	0.60	04/27/20 10:54	
Toluene	ug/m3	<0.17	0.77	04/27/20 10:54	
trans-1,2-Dichloroethene	ug/m3	<0.17	0.81	04/27/20 10:54	
trans-1,3-Dichloropropene	ug/m3	<0.26	0.92	04/27/20 10:54	
Trichloroethene	ug/m3	<0.22	0.55	04/27/20 10:54	
Trichlorofluoromethane	ug/m3	< 0.23	1.1	04/27/20 10:54	
Vinyl acetate	ug/m3	<0.18	0.72	04/27/20 10:54	
Vinyl chloride	ug/m3	< 0.096	0.26	04/27/20 10:54	

LABORATORY CONTROL SAMPLE:	3600620					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3		60.9	107	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	71.9	84.5	118	70-132	
1,1,2-Trichloroethane	ug/m3	57.3	61.4	107	70-133	
1,1,2-Trichlorotrifluoroethane	ug/m3	80.3	83.3	104	70-130	
1,1-Dichloroethane	ug/m3	42.7	49.3	115	70-130	
1,1-Dichloroethene	ug/m3	41.4	43.9	106	69-137	
1,2,4-Trichlorobenzene	ug/m3	156	147	94	70-130	
1,2,4-Trimethylbenzene	ug/m3	51.5	59.9	116	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.3	92.6	115	70-138	
1,2-Dichlorobenzene	ug/m3	63.1	68.9	109	70-136	
1,2-Dichloroethane	ug/m3	42.4	47.1	111	70-130	
1,2-Dichloropropane	ug/m3	48.6	54.5	112	70-132	
1,3,5-Trimethylbenzene	ug/m3	51.6	67.0	130	70-136	
1,3-Butadiene	ug/m3	23.3	24.9	107	67-139	
1,3-Dichlorobenzene	ug/m3	63.4	73.5	116	70-138	
1,4-Dichlorobenzene	ug/m3	63.4	73.7	116	70-145	
2-Butanone (MEK)	ug/m3	31.4	35.5	113	61-130	
2-Hexanone	ug/m3	42.8	55.5	130	70-138	
2-Propanol	ug/m3	119	140	118	70-136	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Date: 04/28/2020 11:32 AM

LABORATORY CONTROL SAMPLE:	3600620	0-1-	1.00	1.00	0/ <b>D</b> = -	
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.4	68.1	130	70-142	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.6	55.1	126	70-134	
Acetone	ug/m3	126	156	123	59-137	
Benzene	ug/m3	33.5	34.7	103	70-133	
Benzyl chloride	ug/m3	55.1	57.1	104	70-139	
Bromodichloromethane	ug/m3	71.5	81.3	114	70-130	
Bromoform	ug/m3	110	122	111	60-140	
Bromomethane	ug/m3	41.3	44.5	108	70-131	
Carbon disulfide	ug/m3	33.3	38.0	114	70-130	
Carbon tetrachloride	ug/m3	66.2	77.7	117	70-133	
Chlorobenzene	ug/m3	48.3	52.3	108	70-131	
Chloroethane	ug/m3	28.1	35.2	125	70-141	
Chloroform	ug/m3	51.1	59.5	117	70-130	
Chloromethane	ug/m3	21.9	23.7	108	64-137	
cis-1,2-Dichloroethene	ug/m3	41.6	43.8	105	70-132	
cis-1,3-Dichloropropene	ug/m3	47.7	59.6	125	70-138	
Cyclohexane	ug/m3	36.7	42.0	114	70-133	
Dibromochloromethane	ug/m3	90.7	103	113	70-139	
Dichlorodifluoromethane	ug/m3	51.6	54.4	105	70-130	
Dichlorotetrafluoroethane	ug/m3	72.7	78.3	108	65-133	
Ethanol	ug/m3	103	105	103	65-135	
Ethyl acetate	ug/m3	38.6	41.3	107	70-135	
Ethylbenzene	ug/m3	45.6	56.0	123	70-142	
Hexachloro-1,3-butadiene	ug/m3	112	116	104	70-134	
m&p-Xylene	ug/m3	91.2	113	124	70-141	
Methyl-tert-butyl ether	ug/m3	38.4	41.1	107	70-131	
Methylene Chloride	ug/m3	182	213	117	69-130	
n-Heptane	ug/m3	43.6	44.0	101	70-130	
n-Hexane	ug/m3	37.6	38.5	102	70-131	
Naphthalene	ug/m3	57.7	53.1	92	63-130	
o-Xylene	ug/m3	45.5	54.0	119	70-135	
Propylene	ug/m3	18.2	18.9	104	63-139	
Styrene	ug/m3	44.9	50.9	113	70-143	
Tetrachloroethene	ug/m3	71	71.8	101	70-136	
Tetrahydrofuran	ug/m3	31.5	35.6	113	70-137	
Toluene	ug/m3	39.5	47.2	119	70-136	
trans-1,2-Dichloroethene	ug/m3	42.2	43.5	103	70-132	
trans-1,3-Dichloropropene	ug/m3	47.7	53.2	112	70-139	
Trichloroethene	ug/m3	56.3	56.7	101	70-132	
Trichlorofluoromethane	ug/m3	59.7	63.6	107	65-136	
Vinyl acetate	ug/m3	34.5	42.5	123	66-140	
Vinyl chloride	ug/m3	26.7	31.9	120	68-141	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Date: 04/28/2020 11:32 AM

SAMPLE DUPLICATE: 3601165			_			
Parameter	Units	10515889001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.31	<0.31		25	
1,1,2,2-Tetrachloroethane	ug/m3	< 0.62	< 0.62		25	
1,1,2-Trichloroethane	ug/m3	< 0.40	< 0.40		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	0.55J	< 0.52		25	
1,1-Dichloroethane	ug/m3	< 0.23	< 0.23		25	
1,1-Dichloroethene	ug/m3	<0.24	<0.24		25	
1,2,4-Trichlorobenzene	ug/m3	<6.7	<6.7		25	
1,2,4-Trimethylbenzene	ug/m3	< 0.63	< 0.63		25	
1,2-Dibromoethane (EDB)	ug/m3	< 0.55	<0.55		25	
1,2-Dichlorobenzene	ug/m3	< 0.64	< 0.64		25	
1,2-Dichloroethane	ug/m3	< 0.34	< 0.34		25	
1,2-Dichloropropane	ug/m3	< 0.40	<0.40		25	
1,3,5-Trimethylbenzene	ug/m3	< 0.50	<0.50		25	
1,3-Butadiene	ug/m3	<0.21	<0.21		25	
1,3-Dichlorobenzene	ug/m3	< 0.96	<0.96		25	
1,4-Dichlorobenzene	ug/m3	<1.5	<1.5		25	
2-Butanone (MEK)	ug/m3	<1.1	<1.1		25	
2-Hexanone	ug/m3	<0.69	<0.69		25	
2-Propanol	ug/m3	<0.76	<0.76		25	
4-Ethyltoluene	ug/m3	<0.86	<0.86		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.36	<0.36		25	
Acetone	ug/m3	<2.6	<2.6		25	
Benzene	ug/m3	0.42J	0.38J		25	
Benzyl chloride	ug/m3	<0.95	< 0.95		25	
Bromodichloromethane	ug/m3	<0.35	<0.35		25	
Bromoform	ug/m3	<3.6	<3.6		25	
Bromomethane	ug/m3	<0.29	<0.29		25	
Carbon disulfide	ug/m3	<0.22	<0.22		25	
Carbon tetrachloride	ug/m3	<0.51	<0.51		25	
Chlorobenzene	ug/m3	<0.27	<0.27		25	
Chloroethane	ug/m3	<0.25	<0.25		25	
Chloroform	ug/m3	<0.27	<0.27		25	
Chloromethane	ug/m3	0.98	1.1	11	25	
cis-1,2-Dichloroethene	ug/m3	<0.23	<0.23		25	
cis-1,3-Dichloropropene	ug/m3	<0.75	<0.75		25	
Cyclohexane	ug/m3	0.76J	0.72J		25	
Dibromochloromethane	ug/m3	<0.81	<0.81		25	
Dichlorodifluoromethane	ug/m3	2.7	2.6	4	25	
Dichlorotetrafluoroethane	ug/m3	<0.32	<0.32	-₹	25	
Ethanol	ug/m3	18.6	21.1	13	25	
Ethyl acetate	ug/m3	<0.37	<0.37	10	25	
Ethylbenzene	ug/m3	<0.28	<0.28		25	
Hexachloro-1,3-butadiene	ug/m3	<2.5	<2.5		25	
m&p-Xylene	ug/m3	<0.68	<0.68		25	
Methyl-tert-butyl ether	ug/m3	<0.20	<0.00		25 25	
Methylene Chloride	ug/m3	<1.9	<1.9		25 25	
n-Heptane	ug/m3	<0.40	<0.40		25	
וו-ו ובףומוופ	ug/IIIS	<b>~</b> 0. <del>4</del> 0	<0.40		∠5	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

(612)607-1700



### **QUALITY CONTROL DATA**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Date: 04/28/2020 11:32 AM

		10515889001	Dup		Max	Qualifiers
Parameter	Units	Result	Result	RPD	RPD	
n-Hexane	ug/m3	0.55J	<0.40		25	
Naphthalene	ug/m3	<2.6	<2.6		25	
o-Xylene	ug/m3	< 0.30	< 0.30		25	
Propylene	ug/m3	0.92	< 0.20		25	
Styrene	ug/m3	<0.86	<0.86		25	
Tetrachloroethene	ug/m3	< 0.54	< 0.54		25	
Tetrahydrofuran	ug/m3	< 0.37	< 0.37		25	
Toluene	ug/m3	0.44J	0.42J		25	
rans-1,2-Dichloroethene	ug/m3	< 0.34	< 0.34		25	
rans-1,3-Dichloropropene	ug/m3	< 0.53	< 0.53		25	
Trichloroethene	ug/m3	<0.44	< 0.44		25	
Trichlorofluoromethane	ug/m3	1.2J	1.5J		25	
/inyl acetate	ug/m3	< 0.36	< 0.36		25	
Vinyl chloride	ug/m3	<0.19	< 0.19		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Minneapolis, MN 55414 (612)607-1700

### **QUALIFIERS**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 04/28/2020 11:32 AM





### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 60602996 Grafton VI; Format Qu

Pace Project No.: 10515880

Date: 04/28/2020 11:32 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10515880001	SS-5 (1102 Bridge St.)	TO-15	672172		

# AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical®

N/A N/Y samples intact Y/N Clean Air Act SAMPLE CONDITIONS Pace Lab ID Sealed Cooler N/A N/A N/A RCRA V 3 ug/m² 🗶 PPBV \_\_\_ Other \_\_\_ MO#:10515880 Page: Other eo| N/X N/A N/A Received on UST Superfund Emissions Voluntary Clean Up Dry Clean O° ni qmeT 4831 Program TIME DATE Signed (MM / DD / YY) 04.23.70 0 Location of Sampling by State 12/12 Report Level DATE .0515880 Method: J 8 ACCEPTED BY / AFFIL!ATION Control Number Flow Ø たき Willention: USAP IMAGING EAGLEM. CON 0 Nielse Summa Can Number O XCN prolyna J ~ えれた SAMPLER NAME AND SIGNATURE (Final Field - in Hg) 2 500 Canister Pressure TIME Canister Pressure (Initial Field - in Hg) 32 88 Pace Project Manager/Sales Rep. 78 RINT Name of SAMPLER: 04.23.20 DATE GNATURE of SAMPLER: >40 2.83.40 TIME Pace Quote Reference: Pace Profile #: COLLECTED DATE company Name: RELINQUISHED BY / AFFILIATION Section C روع 4610M ddress: TIME 10 02.22.40 CopyTo: Cleaners Altersach DATE Project Number 660299 ٥. PID Reading (Client only) E Section B
Required Project Information: MEDIA CODE andte Purchase Order No.: ħ Tedlar Bag 1 Liter Summa Can Report To: Sciolse ORIGINAL River Center Drive Soft 214 Hillyantee UI, 53th Section D Required Client Information 2011 toy, shotte @ kecom, an Sample IDs MUST BE UNIQUE **AIR SAMPLE ID** Phone: 144.6168 Fax: 1/q
Requested Due Date/TAT: STIS 人ののア Required Client Information: Company: # WHL 3 6 8

# Pace Analytical®

## Document Name: Air Sample Condition Upon Receipt

Document No.: F-MN-A-106-rev.20

Document Revised: 19Nov2019 Page 1 of 1

Pace Analytical Services - **Minneapolis** 

Air Sample Condition Client Name				Pro	ject #: [	_ WO# : 10515880				
Upon Receipt  Courier:	Fed Ex	<i>ECOV</i> Tups	□USPS	— ПClient		PM: CT1			05/01/20	
Tracking Number: \(\frac{1}{2}\)	Pace 723	SpeeDee 254	Comm	ercial See Exce		CLIENT:	RECOM-WI		· .	
Custody Seal on Cooler	Box Present?	[∑XYes [	∐No	Seals Intact?	<b>⊠</b> res	□No				*
Packing Material:	ubble Wrap	Bubble Ba	ıgs 🕍 oan	n  None	∏Tin	Can   Other	:	Temp	Blank rec:	Yes 🖄 No
Temp. (TO17 and TO13 san	nples only) (°C):		Corrected Tem	p (°C):	· ——		Thermome	eter Used:	G87A91706 G87A9155£	
Temp should be above free		10	or:		Da	te & Initials of Pe	erson Examining	g Contents: 🗼	204/	24/20
Type of ice Received	siue [_]wet	LMMone						Comments:		
Chain of Custody Present	?			∮es □No		1.				
Chain of Custody Filled Ou			NO.			2.				
Chain of Custody Relinqui	shed?		( <u>O</u>			3.				
Sampler Name and/or Sig		?	<u>1</u> 20		□N/A	4.			· · · · · ·	
Samples Arrived within Ho			<u> </u>		,,,,	5.				·
Short Hold Time Analysis		<del></del>		res ☑No		6,				<del></del>
Rush Turn Around Time R				res <b>X</b> No		7.		· · · · · · · · · · · · · · · · · · ·		
Sufficient Volume?			_ <b>∑20</b> ^	res 🔲 No		8.				
Correct Containers Used?										·
(Tedlar bags not acce	ptable contai	iner for TO-1				-				
TO-15 or APH)			<b>∑</b> Y			9.		,		
-Pace Containers Used	)		[ <b>X</b> 2]Y	′es □No		<u> </u>				1 1/4
Containers Intact?										
(visual inspection/no			[XI)	'es 🔲 No		10.				
Media: Air Can	, Airbag	Filter	TDT P	'assive		11. Ind	lividually Certif	fied Cans Y	N (list which	h samples)
Is sufficient information at the COC?	vailable to reco	ncile samples t	:o <b>ì∕Ω</b> iγ	'es ∏No		12.				
Do cans need to be pressu	rized?			<u></u>	٠.					
(DO NOT PRESSURIZ		M 1946!!!)	<b>(S)</b>	'es □No		13.				
-		Gauge #	] 10AIR26	☐ 10AIR34	□1	0AIR35 □	4097			
	Cani	isters					Ca	nisters		
	T	Flow	Initial	Final				Flow	Initial	Final
Sample Number	Can ID	Controller	Pressure	Pressure	San	nple Number	Can ID	Controller	Pressure	Pressure
65-5	3400	2814	-9	+5	ľ					
									****	***
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										***************************************
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CLIENT NOTIFICATION/R									Yes No	
Person Cont	acted:				Date	/Time:				
Comments/Resol	ution:									
										·
	0 .	1	1					·····		
Project Manager Review	: Lawl	yme b	ius			Date:	4/24/20		Page	16 of 16