

MEMORANDUM

DATE : March 11, 2024

TO : Shane LaFave / Roers Companies, LLC

FROM : Pratap Singh, Ph.D., PE / KSingh

SUBJECT : Weekly Report for the Week Ending 03/09/2024
Community Within the Corridor - East Block

COPY TO : Que El-Amin / Scott Crawford, Inc., Robert Reineke, PE, Robert Fedorchak, PE
Project #40441B

The purpose of this memorandum is to report test results and provide a summary of the work performed for the referenced project for the week ending 03/09/2024. This week's focus was on building preparation activities including conducting screening / pre-commissioning activities in order to plan and prepare for the 2nd round of commissioning that is planned to begin on March 11, 2024.

Tasks performed in the past week included:

1. Thorough GC testing with simulation of actual conditions at over 175 locations;
2. Vacuum measurements confirming sufficient vacuum at all vapor pin locations;
3. Additional sealing in specific areas within the 1st floor;
4. Adjustment of blower speeds to optimize performance;

Based on another round of discrete sampling of columns, it has been determined that column sealing was effective and TCE concentrations related to columns have decreased.

Thorough GC testing was conducted throughout the East Block at over 175 locations, and indoor air quality throughout the buildings was consistent and under 2.1 ug/m³ throughout the week with the exception of the N. Mechanical Room, 1056 Mechanical Room, and 1089 Mechanical Room.

Additional work was performed to determine potential pathways for TCE in the mechanical rooms. A water sample was taken from the North Mechanical Room sump for analytical testing and TCE was detected at TCE is at 0.29 ug/L. Additional corrective measures were performed in all mechanical rooms including sealing of sump crocks and sealing of saw cuts. In addition, the GBR 89 designated as Blower 10 was replaced with a GBR 123.

Screening activities resumed upon completing the remaining corrective measures. Vacuum data and GC testing throughout the building has suggested that the East Block is ready for the 2nd Round of Commissioning.

Attachments

KSingh has included the following attachments for reference:

- Attachment A: Daily Logs of Indoor Air Quality
- Attachment B: Eurofins Lab Report

Attachment A
Indoor Air Quality Readings

Daily TCE Detection Log
Community Within the Corridor – East Block
2748 N. 32nd Street, Milwaukee, WI

Date:	03/04/2024
Testing Performed by:	K. Singh & Associates, Inc., Ph: 262-821-1171
Professional on Site:	Samuel Ramirez
Signature:	<i>Samuel Ramirez</i>

No.	Location	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)
1	Standard (2ppbv)	8:45	2.1 ppbv
2	N. Mechanical Room	8:53	9.9
3	1056	9:01	2.3
4	1049	9:11	2.5
5	1055	9:24	1.4
6	1054	9:35	1.2
7	1053	9:45	1.3
8	1048	9:55	1.2
9	1044	10:05	0.7
10	1043	10:14	0.7
11	1042	10:41	ND
12	1041	10:52	ND
13	1040	11:03	ND
14	NW Garage	11:12	ND
15	SW Garage	11:23	ND
16	C Gym	11:32	ND
17	1052	11:40	0.6
18	1051	11:49	0.6
19	1056 Hallway	11:59	ND
20	Blower 10	13:06	639
21	N. Mechanical Room	13:39	10.0
22	1049	13:48	2.1
23	1056	14:02	2.3
24	1039	14:11	ND
25	1037	14:26	0.7
26	1036	14:36	ND
27	1035	14:44	ND
28	1058	14:53	0.7
29	1026	15:03	ND
30	1025	15:11	ND

31	1014	15:21	ND
32	Office Suite	15:29	ND

** Note that Workplace Safety Limit for TCE by OSHA is 100 ppm and NIOSH is 25 ppm.

** It is strongly recommended to wear a fit-tested respirator in the construction areas, and to wear appropriate Personal Protective Equipment at all times.

**For more information on TCE, please scan the QR Code or visit these links:

<https://www.dhs.wisconsin.gov/chemical/trichloroethylene.htm> and

<https://www.epa.gov/sites/default/files/2016-09/documents/trichloroethylene.pdf>



Indoor Air Quality Log
Community Within the Corridor – East Block
2748 N. 32nd Street, Milwaukee, WI

Date:	03/05/2024
Testing Performed by:	K. Singh & Associates, Inc., Ph: 262-821-1171
Professional on Site:	Sam Ramirez
Signature:	<i>Samuel Ramirez</i>

No.	Location	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)
1	1051 C1	13:56	ND		
2	1045 C2	14:05	0.7		
3	1045 C1	14:13	0.7		
4	1055 C1	14:35	0.8		
5	1053 C2	14:52	1.3		
6	1053 C1	14:43	1.3		
7	1044 C1	15:00	0.9		
8	1044 C2	15:08	0.6		
9	1043 C2	11:55	0.7		
10	1043 C3	12:03	0.7		
11	1043 C4	13:06	0.8		
12	1043 C1	11:47	0.8		
13	1049 C1	15:17	1.8		
14	1050 C1	15:25	0.7		
15	1048 C1	15:34	0.6		
16	1052 C2				

CWC EB Pre-Commissioning Building Preparation Activities

3/5/2024

Unit	Time	TCE	Vacuum	Vapor Pin ID	Anemometer	Blower %
		ug/m3	inches H2O		(fpm)	
N. Mech. Room	9:21	11	-0.499	VP-3	---	
1056	8:20	2		---	---	
1045	8:28	ND	-0.15	VP-29	---	
1050	8:37	0.7	-0.124	VP-28	---	
Hall Outside 1050	9:04	ND	-0.146	VP-27	---	
1048	8:45	0.7	-0.236	VP-26	---	
1049	9:13	1.8	-0.448	VP-25	---	
1051	9:29	ND	-0.144	VP-24	---	
Standard	8:56					
1043	9:37	ND				
1055	9:45	0.9				
1054	9:54	2.3	-0.605	VP-21		
1053	10:02	0.9				
1044	10:11	0.6				
1042	11:01	1.3				
1041	10:28	1				
1040	10:36	0.8				
1039	10:44	0.6				
Blower 5 (initial)	10:53	370	---	---	4607	60%
NWG	11:38	ND				
SWG	11:30	ND				
1037	11:10	0.9				
Blower 5 + 10%	13:14	340.1	---	---	5434	70%
1056	13:22	2.3		---	---	
1048	13:30	0.6	-0.231	VP-26	---	
1049	13:39	1.9	-0.458	VP-25	---	
1054	13:47	1.4	-0.682	VP-21		
1054	15:42	1.2				
N. Mech. Room	15:51	4.7				
1056	15:59	1.9				

Indoor Air Quality Log
Community Within the Corridor – East Block
2748 N. 32nd Street, Milwaukee, WI

Date:	03/06/2024
Testing Performed by:	K. Singh & Associates, Inc., Ph: 262-821-1171
Professional on Site:	Sam Ramirez
Signature:	<i>Samuel Ramirez</i>

No.	Location	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)
1	Standard	10:18	2.0 ppbv		
2	N. Mechanical Room	10:28	0.8	14:58	1.1
3	1056	10:36	1.8	15:17	1.9
4	1052 C2	10:45	ND		
5	1052	10:53	ND		
6	1054	11:01	0.9		
7	1049	11:11	1.8	15:09	1.7
8	1048	11:20	1.2		
9	St. 3 3 rd Floor	11:33	ND		
10	St. 2 3 rd Floor	11:41	ND		
11	3039 Hall	11:50	ND		
12	Elevator 1 3 rd Floor	12:00	ND		
13	Elevator 2 3 rd Floor	13:02	ND		
14	3058 Hall	13:11	ND		
15	Elevator 3 3 rd Floor	13:25	ND		
16	Elevator 3 2 nd Floor	13:34	ND		
17	Stair 5 2 nd Floor	13:45	ND		
18	Elevator 2 2 nd Floor	13:56	ND		
19	2077	14:14	ND		
20	St. 4 2 nd Floor	14:22	ND		
21	Elevator 1 2 nd Floor	14:31	ND		
22	St. 2 2 nd Floor	14:40	ND		
23	St. 3 2 nd Floor	14:48	ND		
24					
25					

Indoor Air Quality Log
Community Within the Corridor – East Block
2748 N. 32nd Street, Milwaukee, WI

Date:	03/07/2024
Testing Performed by:	K. Singh & Associates, Inc., Ph: 262-821-1171
Professional on Site:	Sam Ramirez
Signature:	<i>Samuel Ramirez</i>

No.	Location	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)	Notes
1	N. Mechanical Room	8:48	0.9	
2	Elevator 3 Lobby (NMR)	8:57	0.8	Ran elevator prior to testing
3	1056 Mechanical	9:06	1.4	
4	1054 Fitness Room	9:14	ND	
5	1053 Men's Locker	9:22	0.6	
6	1055 Women's Locker	9:31	ND	
7	1049 Storage	9:40	1.3	
8	1048 Laundry	9:49	ND	
9	Unit 1045	9:59	ND	Kitchen Exhaust on
10	Unit 1044	10:11	0.6	
11	SWG1	10:19	ND	
12	Unit 1051	10:28	ND	
13	Unit 1050	10:37	ND	Kitchen Exhaust on
14	Unit 1050 Bathroom	10:47	ND	Bathroom Fan on
15	GYM 2	10:55	ND	
16	NWG1	11:05	ND	
17	1089 Mechanical	11:13	16.2	Room has been closed for months during construction
18	Unit 1026	11:21	ND	
19	Unit 1037	11:48	ND	
20	Unit 1043 Bathroom	11:56	0.6	Bathroom Fan On
21	Unit 2044	13:19	ND	
22	Unit 2042	13:27	ND	
23	Unit 2041	13:35	ND	
24	Unit 2040	13:44	ND	
25	Unit 2056	13:02	ND	
26	Unit 2074	13:55	ND	Ran Elevator 2 prior to testing
27	Unit 2037	14:03	ND	
28	Unit 2035	14:11	ND	
29	Unit 2026	14:19	ND	

30	Blower 10	14:28	559.1	
31	Blower 8	15:01	6.9	
32	Blower 5	15:09	300.3	
33	N. Mechanical Room	14:47	1.4	
34	Elevator 3 Lobby (2 nd Floor)	15:18	1.4	Ran Elevator 3 prior to testing
35	1056 Mechanical	15:26	1.6	Retest
36	Stair 7, 1 st floor	13:11	ND	
37	1089 Mechanical Room	14:36	ND	Retest
38	Stairwell 6	15:37	ND	
39	Stairwell 7	15:47	0.7	
40	Stairwell 8	15:56	ND	
41	1089 Mechanical Room	16:04	4.2	Closed door

Indoor Air Quality Log
Community Within the Corridor – East Block
2748 N. 32nd Street, Milwaukee, WI

Date:	03/08/2024
Testing Performed by:	K. Singh & Associates, Inc., Ph: 262-821-1171
Professional on Site:	Sam Ramirez, Nick Bach
Signature:	<i>Samuel Ramirez</i>

No.	Location	Time	TCE Reading ($\mu\text{g}/\text{m}^3$)	Notes
1	N. Mechanical Room	07:58	1.6	Door Open
2	Unit 1089	07:49	ND	Door Open
3	Elevator 3 Lobby (NMR)	09:09	ND	
4	1056 Mechanical	08:07	1.3	Door Closed
5	1054 Fitness Room	08:15	ND	
6	1053 Men's Locker	08:24	0.6	
7	1055 Women's Locker	08:33	ND	
8	Standard	08:44	2.4 ppbv	File Name: 3358
9	1049 Storage	08:52	1.2	
10	1048 Laundry	09:00	ND	
11	Room 1089 – Pipe	09:18	9.7	Pipe sealed after sampling
12	Unit 1045	09:52	ND	
13	1012 Community Room	09:34	ND	
14	1006 Office Suite	09:43	ND	
15	1009 Office	10:00	ND	
16	1011 Conference Room	10:09	ND	
17	1001 Lobby A	10:17	0.6	
18	1001 Lobby B	10:26	1.1	
19	Unit 2016	10:34	1.6	
20	Unit 2018	10:42	0.6	
21	Unit 2022	10:50	ND	
22	Unit 2093	11:07	ND	
23	Unit 2110	11:18	ND	
24	Gym Skywalk	11:27	ND	
25	Unit 3095	11:39	ND	
26	Unit 3093	11:46	ND	
27	Unit 3092	11:55	ND	
28	Unit 3087	13:29	ND	
29	Unit 3083	13:39	ND	
30	Unit 3110	13:47	ND	

31	Unit 3113	14:02	ND	
32	Unit 3079	14:12	ND	
33	Unit 3117	14:20	ND	
34	Unit 2112	14:40	ND	
35	Unit 2115	14:50	ND	
36	Unit 3027	14:32	ND	
37	Unit 3026	14:59	ND	
38	Unit 3036	15:07	ND	
39	Unit 3039	15:16	ND	
40	1089	15:34	ND	Tested after pipe was sealed
41	N. Mechanical Room	15:43	1.3	
42	1056	15:51	1.7	

Attachment B
Eurofins Lab Report

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Mr. Robert Reineke
K. Singh & Associates, Inc
3636 N. 124th Street
Wauwatosa, Wisconsin 53222

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JOB DESCRIPTION

Community Within the Corridor East Block - 40576

JOB NUMBER

500-246935-1

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits

- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Chain of Custody	5
Detection Summary	7
Method Summary	8
Sample Summary	9
Client Sample Results	10
Definitions	12
QC Association	13
Surrogate Summary	14
QC Sample Results	15
Chronicle	18
Certification Summary	19
Receipt Checklists	20

Case Narrative

Client: K. Singh & Associates, Inc
Project: Community Within the Corridor East Block - 40576

Job ID: 500-246935-1

Job ID: 500-246935-1

Eurofins Chicago

Job Narrative 500-246935-1

Receipt

The sample was received on 3/5/2024 9:55 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.1° C.

GC/MS VOA

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

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500-246935 Waybi

JIAN EVANS
EUROFINS
4125 N 124TH STREET
BROOKFIELD, WI 53005
UNITED STATES US

ACTWGT: 47.10 LB
CAD: 0780307/CAFE3755

BILL RECIPIENT

Part # 15949-434 MTW EXP 03/24
LBA/RESR/CS/5R
ERR

TO **SAMPLE RECEIPT**
EUROFINS - CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

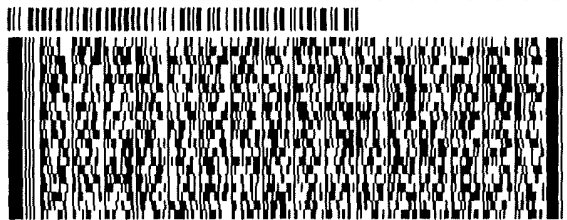
(708) 634-6200

REF:

THU:

DEPT:

PO:



FedEx
Express



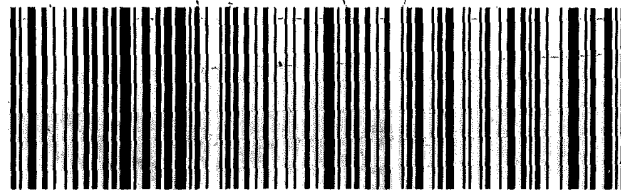
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TUE - 05 MAR 10:30A
PRIORITY OVERNIGHT

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Detection Summary

Client: K. Singh & Associates, Inc
 Project/Site: Community Within the Corridor East Block -
 40576

Job ID: 500-246935-1

Client Sample ID: Northern Mechanical Room East Sump

Lab Sample ID: 500-246935-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	20		0.50	0.15	ug/L	1		8260D	Total/NA
Chloroethane	100		5.0	0.51	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	180		1.0	0.41	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	10		1.0	0.39	ug/L	1		8260D	Total/NA
Isopropylbenzene	75		1.0	0.39	ug/L	1		8260D	Total/NA
Naphthalene	100		1.0	0.34	ug/L	1		8260D	Total/NA
N-Propylbenzene	150		1.0	0.41	ug/L	1		8260D	Total/NA
p-Isopropyltoluene	120		1.0	0.36	ug/L	1		8260D	Total/NA
sec-Butylbenzene	90		1.0	0.40	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.85	J	1.0	0.37	ug/L	1		8260D	Total/NA
Toluene	120		0.50	0.15	ug/L	1		8260D	Total/NA
Trichloroethene	0.29	J	0.50	0.16	ug/L	1		8260D	Total/NA
Vinyl chloride	54		1.0	0.20	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene - DL	280		10	4.1	ug/L	10		8260D	Total/NA
Ethylbenzene - DL	180		5.0	1.8	ug/L	10		8260D	Total/NA
1,1,1-Trichloroethane - DL	240		10	3.8	ug/L	10		8260D	Total/NA
1,2,4-Trimethylbenzene - DL	580		10	3.6	ug/L	10		8260D	Total/NA
1,3,5-Trimethylbenzene - DL	180		10	2.5	ug/L	10		8260D	Total/NA
Xylenes, Total - DL	550		10	2.2	ug/L	10		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CHI
5030B	Purge and Trap	SW846	EET CHI

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
500-246935-1	Northern Mechanical Room East Sump	Ground Water	03/03/24 16:00	03/05/24 09:55

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Client Sample Results

Client: K. Singh & Associates, Inc
 Project/Site: Community Within the Corridor East Block -
 40576

Job ID: 500-246935-1

Client Sample ID: Northern Mechanical Room East Sump

Lab Sample ID: 500-246935-1

Date Collected: 03/03/24 16:00

Matrix: Ground Water

Date Received: 03/05/24 09:55

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	20		0.50	0.15	ug/L			03/06/24 11:01	1
Bromobenzene	<0.36		1.0	0.36	ug/L			03/06/24 11:01	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			03/06/24 11:01	1
Bromoform	<0.48		1.0	0.48	ug/L			03/06/24 11:01	1
Bromomethane	<0.80		3.0	0.80	ug/L			03/06/24 11:01	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			03/06/24 11:01	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			03/06/24 11:01	1
Chloroethane	100		5.0	0.51	ug/L			03/06/24 11:01	1
Chloroform	<0.37		2.0	0.37	ug/L			03/06/24 11:01	1
Chloromethane	<0.32		5.0	0.32	ug/L			03/06/24 11:01	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			03/06/24 11:01	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			03/06/24 11:01	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			03/06/24 11:01	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			03/06/24 11:01	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			03/06/24 11:01	1
1,2-Dibromoethane (EDB)	<0.39		1.0	0.39	ug/L			03/06/24 11:01	1
Dibromomethane	<0.27		1.0	0.27	ug/L			03/06/24 11:01	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			03/06/24 11:01	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			03/06/24 11:01	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			03/06/24 11:01	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			03/06/24 11:01	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			03/06/24 11:01	1
1,1-Dichloroethane	180		1.0	0.41	ug/L			03/06/24 11:01	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			03/06/24 11:01	1
1,1-Dichloroethene	10		1.0	0.39	ug/L			03/06/24 11:01	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			03/06/24 11:01	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			03/06/24 11:01	1
2,2-Dichloropropane	<0.44		5.0	0.44	ug/L			03/06/24 11:01	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			03/06/24 11:01	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			03/06/24 11:01	1
Isopropylbenzene	75		1.0	0.39	ug/L			03/06/24 11:01	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			03/06/24 11:01	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			03/06/24 11:01	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			03/06/24 11:01	1
Naphthalene	100		1.0	0.34	ug/L			03/06/24 11:01	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			03/06/24 11:01	1
N-Propylbenzene	150		1.0	0.41	ug/L			03/06/24 11:01	1
p-Isopropyltoluene	120		1.0	0.36	ug/L			03/06/24 11:01	1
sec-Butylbenzene	90		1.0	0.40	ug/L			03/06/24 11:01	1
Styrene	<0.39		1.0	0.39	ug/L			03/06/24 11:01	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			03/06/24 11:01	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			03/06/24 11:01	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			03/06/24 11:01	1
Tetrachloroethene	0.85 J		1.0	0.37	ug/L			03/06/24 11:01	1
Toluene	120		0.50	0.15	ug/L			03/06/24 11:01	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			03/06/24 11:01	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			03/06/24 11:01	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			03/06/24 11:01	1

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Client Sample Results

Client: K. Singh & Associates, Inc
 Project/Site: Community Within the Corridor East Block -
 40576

Job ID: 500-246935-1

Client Sample ID: Northern Mechanical Room East Sump

Lab Sample ID: 500-246935-1

Date Collected: 03/03/24 16:00

Matrix: Ground Water

Date Received: 03/05/24 09:55

Method: SW846 8260D - Volatile Organic Compounds by 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			03/06/24 11:01	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			03/06/24 11:01	1
Trichloroethene	0.29	J	0.50	0.16	ug/L			03/06/24 11:01	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			03/06/24 11:01	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			03/06/24 11:01	1
Vinyl chloride	54		1.0	0.20	ug/L			03/06/24 11:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		72 - 124		03/06/24 11:01	1
Dibromofluoromethane (Surr)	108		75 - 120		03/06/24 11:01	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		03/06/24 11:01	1
Toluene-d8 (Surr)	105		75 - 120		03/06/24 11:01	1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	280		10	4.1	ug/L			03/06/24 11:26	10
Ethylbenzene	180		5.0	1.8	ug/L			03/06/24 11:26	10
1,1,1-Trichloroethane	240		10	3.8	ug/L			03/06/24 11:26	10
1,2,4-Trimethylbenzene	580		10	3.6	ug/L			03/06/24 11:26	10
1,3,5-Trimethylbenzene	180		10	2.5	ug/L			03/06/24 11:26	10
Xylenes, Total	550		10	2.2	ug/L			03/06/24 11:26	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		72 - 124		03/06/24 11:26	10
Dibromofluoromethane (Surr)	105		75 - 120		03/06/24 11:26	10
1,2-Dichloroethane-d4 (Surr)	101		75 - 126		03/06/24 11:26	10
Toluene-d8 (Surr)	99		75 - 120		03/06/24 11:26	10

Definitions/Glossary

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

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.

Glossary

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

QC Association Summary

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

GC/MS VOA

Analysis Batch: 756998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-246935-1	Northern Mechanical Room East Sump	Total/NA	Ground Water	8260D	
500-246935-1 - DL	Northern Mechanical Room East Sump	Total/NA	Ground Water	8260D	
MB 500-756998/6	Method Blank	Total/NA	Water	8260D	
LCS 500-756998/4	Lab Control Sample	Total/NA	Water	8260D	

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Surrogate Summary

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Ground Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	DCA	TOL
		(72-124)	(75-120)	(75-126)	(75-120)
500-246935-1 - DL	Northern Mechanical Room East	102	105	101	99
500-246935-1	Northern Mechanical Room East Sump	120	108	103	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	DCA	TOL
		(72-124)	(75-120)	(75-126)	(75-120)
LCS 500-756998/4	Lab Control Sample	94	107	95	99
MB 500-756998/6	Method Blank	99	108	101	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: K. Singh & Associates, Inc
 Project/Site: Community Within the Corridor East Block -
 40576

Job ID: 500-246935-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 500-756998/6
Matrix: Water
Analysis Batch: 756998

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			03/06/24 10:14	1
Bromobenzene	<0.36		1.0	0.36	ug/L			03/06/24 10:14	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			03/06/24 10:14	1
Bromoform	<0.48		1.0	0.48	ug/L			03/06/24 10:14	1
Bromomethane	<0.80		3.0	0.80	ug/L			03/06/24 10:14	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			03/06/24 10:14	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
Chloroethane	<0.51		5.0	0.51	ug/L			03/06/24 10:14	1
Chloroform	<0.37		2.0	0.37	ug/L			03/06/24 10:14	1
Chloromethane	<0.32		5.0	0.32	ug/L			03/06/24 10:14	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			03/06/24 10:14	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			03/06/24 10:14	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			03/06/24 10:14	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			03/06/24 10:14	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			03/06/24 10:14	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			03/06/24 10:14	1
1,2-Dibromoethane (EDB)	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
Dibromomethane	<0.27		1.0	0.27	ug/L			03/06/24 10:14	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			03/06/24 10:14	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			03/06/24 10:14	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			03/06/24 10:14	1
Dichlorobromomethane	<0.37		1.0	0.37	ug/L			03/06/24 10:14	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			03/06/24 10:14	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			03/06/24 10:14	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			03/06/24 10:14	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			03/06/24 10:14	1
2,2-Dichloropropane	<0.44		5.0	0.44	ug/L			03/06/24 10:14	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			03/06/24 10:14	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			03/06/24 10:14	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			03/06/24 10:14	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			03/06/24 10:14	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			03/06/24 10:14	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
Naphthalene	<0.34		1.0	0.34	ug/L			03/06/24 10:14	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			03/06/24 10:14	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			03/06/24 10:14	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			03/06/24 10:14	1
Styrene	<0.39		1.0	0.39	ug/L			03/06/24 10:14	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			03/06/24 10:14	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			03/06/24 10:14	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			03/06/24 10:14	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			03/06/24 10:14	1
Toluene	<0.15		0.50	0.15	ug/L			03/06/24 10:14	1

Eurofins Chicago

QC Sample Results

Client: K. Singh & Associates, Inc
 Project/Site: Community Within the Corridor East Block -
 40576

Job ID: 500-246935-1

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

Lab Sample ID: MB 500-756998/6
Matrix: Water
Analysis Batch: 756998

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			03/06/24 10:14	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			03/06/24 10:14	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			03/06/24 10:14	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			03/06/24 10:14	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			03/06/24 10:14	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			03/06/24 10:14	1
Trichloroethene	<0.16		0.50	0.16	ug/L			03/06/24 10:14	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			03/06/24 10:14	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			03/06/24 10:14	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			03/06/24 10:14	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			03/06/24 10:14	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			03/06/24 10:14	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			03/06/24 10:14	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		72 - 124		03/06/24 10:14	1
Dibromofluoromethane (Surr)	108		75 - 120		03/06/24 10:14	1
1,2-Dichloroethane-d4 (Surr)	101		75 - 126		03/06/24 10:14	1
Toluene-d8 (Surr)	97		75 - 120		03/06/24 10:14	1

Lab Sample ID: LCS 500-756998/4
Matrix: Water
Analysis Batch: 756998

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromobenzene	50.0	46.7		ug/L		93	70 - 122
Bromochloromethane	50.0	49.3		ug/L		99	65 - 122
Bromoform	50.0	43.8		ug/L		88	56 - 132
Bromomethane	50.0	58.8		ug/L		118	40 - 152
Carbon tetrachloride	50.0	50.5		ug/L		101	59 - 133
Chlorobenzene	50.0	46.3		ug/L		93	70 - 120
Chloroethane	50.0	42.2		ug/L		84	48 - 136
Chloroform	50.0	44.1		ug/L		88	70 - 120
Chloromethane	50.0	33.6		ug/L		67	56 - 152
2-Chlorotoluene	50.0	42.3		ug/L		85	70 - 125
4-Chlorotoluene	50.0	42.4		ug/L		85	68 - 124
cis-1,2-Dichloroethene	50.0	45.2		ug/L		90	70 - 125
cis-1,3-Dichloropropene	50.0	37.0		ug/L		74	64 - 127
Dibromochloromethane	50.0	43.4		ug/L		87	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	34.6		ug/L		69	56 - 123
1,2-Dibromoethane (EDB)	50.0	42.1		ug/L		84	70 - 125
Dibromomethane	50.0	43.5		ug/L		87	70 - 120
1,2-Dichlorobenzene	50.0	46.4		ug/L		93	70 - 125
1,3-Dichlorobenzene	50.0	45.8		ug/L		92	70 - 125
1,4-Dichlorobenzene	50.0	46.5		ug/L		93	70 - 120
Dichlorobromomethane	50.0	42.8		ug/L		86	69 - 120

Eurofins Chicago

QC Sample Results

Client: K. Singh & Associates, Inc
 Project/Site: Community Within the Corridor East Block -
 40576

Job ID: 500-246935-1

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

Lab Sample ID: LCS 500-756998/4

Matrix: Water

Analysis Batch: 756998

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	50.0	45.5		ug/L		91	40 - 159
1,1-Dichloroethane	50.0	40.4		ug/L		81	70 - 125
1,2-Dichloroethane	50.0	42.7		ug/L		85	68 - 127
1,1-Dichloroethene	50.0	48.4		ug/L		97	67 - 122
1,2-Dichloropropane	50.0	37.1		ug/L		74	67 - 130
1,3-Dichloropropane	50.0	37.8		ug/L		76	62 - 136
2,2-Dichloropropane	50.0	46.9		ug/L		94	58 - 139
1,1-Dichloropropene	50.0	43.5		ug/L		87	70 - 121
Ethylbenzene	50.0	44.6		ug/L		89	70 - 123
Hexachlorobutadiene	50.0	50.0		ug/L		100	51 - 150
Isopropylbenzene	50.0	45.4		ug/L		91	70 - 126
Methylene Chloride	50.0	41.9		ug/L		84	69 - 125
Methyl tert-butyl ether	50.0	36.6		ug/L		73	55 - 123
Naphthalene	50.0	41.0		ug/L		82	53 - 144
n-Butylbenzene	50.0	44.6		ug/L		89	68 - 125
N-Propylbenzene	50.0	44.0		ug/L		88	69 - 127
p-Isopropyltoluene	50.0	48.2		ug/L		96	70 - 125
sec-Butylbenzene	50.0	45.6		ug/L		91	70 - 123
Styrene	50.0	44.9		ug/L		90	70 - 120
tert-Butylbenzene	50.0	47.3		ug/L		95	70 - 121
1,1,1,2-Tetrachloroethane	50.0	45.1		ug/L		90	70 - 125
1,1,2,2-Tetrachloroethane	50.0	36.7		ug/L		73	62 - 140
Tetrachloroethene	50.0	49.2		ug/L		98	70 - 128
Toluene	50.0	40.1		ug/L		80	70 - 125
trans-1,2-Dichloroethene	50.0	47.3		ug/L		95	70 - 125
trans-1,3-Dichloropropene	50.0	37.2		ug/L		74	62 - 128
1,2,3-Trichlorobenzene	50.0	45.7		ug/L		91	51 - 145
1,2,4-Trichlorobenzene	50.0	46.0		ug/L		92	57 - 137
1,1,1-Trichloroethane	50.0	48.5		ug/L		97	70 - 125
1,1,2-Trichloroethane	50.0	39.7		ug/L		79	71 - 130
Trichloroethene	50.0	49.7		ug/L		99	70 - 125
Trichlorofluoromethane	50.0	56.4		ug/L		113	55 - 128
1,2,3-Trichloropropane	50.0	38.0		ug/L		76	50 - 133
1,2,4-Trimethylbenzene	50.0	44.5		ug/L		89	70 - 123
1,3,5-Trimethylbenzene	50.0	45.5		ug/L		91	70 - 123
Vinyl chloride	50.0	38.8		ug/L		78	64 - 126
Xylenes, Total	100	82.5		ug/L		82	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		72 - 124
Dibromofluoromethane (Surr)	107		75 - 120
1,2-Dichloroethane-d4 (Surr)	95		75 - 126
Toluene-d8 (Surr)	99		75 - 120

Lab Chronicle

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

Client Sample ID: Northern Mechanical Room East Sump

Lab Sample ID: 500-246935-1

Date Collected: 03/03/24 16:00

Matrix: Ground Water

Date Received: 03/05/24 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	756998	EA	EET CHI	03/06/24 11:01
Total/NA	Analysis	8260D	DL	10	756998	EA	EET CHI	03/06/24 11:26

Laboratory References:

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

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Accreditation/Certification Summary

Client: K. Singh & Associates, Inc
Project/Site: Community Within the Corridor East Block -
40576

Job ID: 500-246935-1

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

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Login Sample Receipt Checklist

Client: K. Singh & Associates, Inc

Job Number: 500-246935-1

Login Number: 246935

List Number: 1

Creator: Scott, Sherri L

List Source: Eurofins 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	5.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

