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MEMORANDUM

DATE : November 4, 2023

TO : Shane LaFave / Roers Companies, LLC

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

SUBJECT : Weekly Test Results for the Week Ending 11/04/2023
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 the test results and provide a summary of the work performed as a part of the emergency response for the referenced project for the week ending 11/04/2023. The following tasks were performed throughout the week:

1. Task #1 - Blower Fan Exhaust Sampling
   Samples were collected from blower exhaust of all 11 operational blowers. All bowers had a cumulative blow rate of about 4300 cfm leading to about 0.2 lbs removal of TCE in the first week of November. Due to the ongoing excavation work, Blowers 8, 9, and 10 are currently functioning as an exhaust for the indoor air as compared to the others that are connected to the VMS and Blower 8 had an elevated reading on account of the construction work in the N Mechanical Room. Since March, we have successfully removed over 2 lbs. of TCE from the site. The individual blower exhaust rates and their corresponding actual TCE removal with Year-To-Date exhaust quantities can be seen in Tables 1 and 2. Layout of the floor plan with the placement of blowers can be found in Figure 1.

2. Task #2 – Additional Excavation Work
   Excavation work commenced in the North Mechanical Room on 10/30/2023 and was completed on 11/02/2023. Approximately 13 cu. yards of soil was recovered from the area. Upon completion of excavation in N Mechanical Room, excavation commenced in the SW Garage area in Building 1B-NW. Approximately 75% of the area was excavated in two days with over 40 cu. yards being excavated. 4 soil borings were conducted in the hallway outside the storage room and the laundry room to determine the hazardous characteristics of the soil. The pictures from the excavation activity and the corresponding air quality readings can be found in Attachment A.

Attachments

KSingh has included the following figures, tables, and pictures for reference:

- Figure 1: CWC EB Floor Plan
- Table 1: Blower Fan Exhaust Data Table for November
- Table 2: Blower Fan Exhaust Data Table since March
- Attachment A: Indoor Air Quality and Pictures of areas of Excavation

Table 1: Blower Fan Exhaust Data Table for November

GC TCE Measurements of Blower Effluent and Estimated Removal Rates						
Date: November 3, 2023						
Blower No.	Pipe Diameter	Exhaust Velocity	Flow Rate	TCE Concentration	TCE Removal Rate	TCE Removal
	inches	fpm	cfm	ug/m3	lbs/day	lbs
1	4	4567	399	4.73	0.000169	0.001186
2	4	4626	404	13.97	0.000507	0.003549
2A	4	5788	505	16.96	0.000770	0.005391
3 and 4	6	5827	1144	12.91	0.001328	0.009295
5	4	5079	443	246.87	0.009836	0.068855
6	4	3957	345	65.3	0.002027	0.014189
7	4	1083	95	7.35	0.000062	0.000437
8	4	4370	381	356	0.012205	0.085432
9	4	1654	144	4.21	0.000055	0.000382
10	4	2697	235	3.34	0.000071	0.000495
11	4	2776	242	46.6	0.001015	0.007104
			4338		**Total**	**0.20**

Table 2: Blower Fan Exhaust Data Table since March

TCE Measurements of Blower Effluent and Removal								
TCE Removal (lbs in Month)								
Blower No.	May	June	July	August	September	October	November	Total
1	0.0172	0.0619	0.0250	0.0039	0.0049	0.0033	0.0012	0.1174
2	0.0313	0.0206	0.0190	0.0149	0.0144	0.0166	0.0035	0.1204
2A				0.0277	0.0201	0.0170	0.0054	0.0702
3+4	0.0241	0.0154	0.0387	0.0471	0.0220	0.0154	0.0093	0.1719
5		0.4196	0.2556	0.3277	0.1883	0.3067	0.0689	1.5667
6		0.0229	0.0085	0.0886	0.0445	0.0669	0.0142	0.2457
7		0.0093	0.0210	0.0179	0.0000	0.0212	0.0004	0.0698
8		0.0015		0.0052	0.0066	0.0035	0.0854	0.1022
9				0.0001	0.0004	0.0011	0.0004	0.0019
10					0.0003	0.0011	0.0005	0.0019
11					0.0252	0.0292	0.0071	0.0615
Total	**0.0726**	**0.5511**	**0.3677**	**0.5330**	**0.3267**	**0.4821**	**0.1963**	**2.5296**
Cumulative Flow Rate (cfm)	1342	2078	2766	3523	3817	4422	4338	**22286**

Attachment A

Indoor Air Quality Readings and Pictures

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

Date:	**10/30/2023**
Testing Performed by:	**K. Singh & Associates, Inc., Ph: 262-821-1171**
Engineer on Site:	**Sameer Neve, Ph.D., ENV SP, Cell: 551-262-9210**
Signature:	

No.	Location	Time	TCE Reading (ppb)	>25 ppm
1	N Mech Room	7:28	1.00	No
2	N Mech Room	12:30	2.5	No
3	N Mech Room	1:15	5.82	No
4	Titan Desk	1:25	<0.6	No
5	N Mech Room	2:30	21.1	No
6	N Mech Room	3:45	130.9	No
7				
8				
9				
10				
11				
12				
13				
14				
15				

** 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

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

Date:	**10/31/2023**
Testing Performed by:	**K. Singh & Associates, Inc., Ph: 262-821-1171**
Engineer on Site:	**Sameer Neve, Ph.D., ENV SP, Cell: 551-262-9210**
Signature:	

No.	Location	Time	TCE Reading (ppb)	>25 ppm
1	N Mech Room	7:30	6.84	No
2	Blower 8	7:39	6.67	No
3	Titan Desk	7:52	1.52	No
4	N Mech Room	9:05	9.77	No
5	N Mech Room	10:15	36.62	No
6	Titan Desk	11:25	5.6	No
7	N Mech Room	11:33	93.6	No
8	Blower 8	11:43	88.7	No
9	N Mech Room	16:05	221.1	No
10	Blower 8	16:15	217.1	No
11	N Mech Room	16:22	161.9	No
12				
13				
14				
15				

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

Date:	**11/01/2023**
Testing Performed by:	**K. Singh & Associates, Inc., Ph: 262-821-1171**
Engineer on Site:	**Sameer Neve, Ph.D., ENV SP, Cell: 551-262-9210**
Signature:	

No.	Location	Time	TCE Reading (ppb)	>25 ppm
1	Titan Desk	7:26	0.96	No
2	N Mech Room	7:33	41.9	No
3	N Mech Room	8:50	632	No
4	Titan Desk	9:30	42.9	No
5	N Mech Room	9:38	422.7	No
6	Blower 8	9:45	389.4	No
7	SW Garage	9:55	29.8	No
8	Titan Desk	11:03	24.4	No
9	N Mech Room	11:12	98.26	No
10	SW Garage	11:27	27.09	No
11	Titan Desk	12:16	161.9	No
12	N Mech Room	12:21	211.8	No
13	SW Garage	12:53	12.9	No
14	Titan Desk	14:05	60.55	No
15	N Mech Room	14:18	547.4	No
16	Blower 8	14:28	521.2	No
17	N Mech Room	15:27	333.8	No
18	Blower 8	15:34	352.8	No

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

Date:	**11/02/2023**
Testing Performed by:	**K. Singh & Associates, Inc., Ph: 262-821-1171**
Engineer on Site:	**Sameer Neve, Ph.D., ENV SP, Cell: 551-262-9210**
Signature:	

No.	Location	Time	TCE Reading (ppb)	>25 ppm
1	Titan Desk	7:12	5.49	No
2	N Mech Room	7:22	38.26	No
3	SW Garage	7:31	2.44	No
4	N Mech Room	8:15	356	No
5	N Mech Room	9:56	337	No
6	Blower 8	11:20	474.8	No
7	Titan Desk	14:05	83.1	No
8	N Mech Room	14:47	377	No
9	SW Garage	14:57	13.56	No
10				
11				
12				
13				
14				
15				
16				
17				
18				

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

Date:	**11/03/2023**
Testing Performed by:	**K. Singh & Associates, Inc., Ph: 262-821-1171**
Engineer on Site:	**Sameer Neve, Ph.D., ENV SP, Cell: 551-262-9210**
Signature:	

No.	Location	Time	TCE Reading (ppb)	>25 ppm
1	SW Garage	7:10	6.71	No
2	N Mech Room	8:40	47.31	No
3	SW Garage	8:50	3.29	No
4	N Mech Room	10:10	63.9	No
5	SW Garage	10:27	1.35	No
6	N Mech Room	12:04	74.42	No
7	SW Garage	12:10	1.52	No
8	N Mech Room	13:05	80.82	No
9	SW Garage	13:11	1.18	No
10	N Mech Room	14:59	79.26	No
11	Titan Desk	15:11	6.42	No
12	SW Garage	15:18	3.15	No
13				
14				
15				
16				
17				
18				

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Picture 1 – N Mechanical Room Excavated Area

Picture 2 – SW Garage Excavated Area