KSingh | Engineers Scientists Consultants

MEMORANDUM

DATE	:	June 3, 2023
TO	:	Shane LaFave / Roers Companies, LLC
FROM	:	Pratap Singh, Ph.D., PE / KSingh
SUBJECT	:	Weekly Progress Report for Week Ending 06/03/2023 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 summarize the work performed as a part of the emergency response for the referenced project for the week ending 06/03/2023. This document is intended to serve two purposes:

1. Summarizing the tasks performed during the past week, and
2. The action items for the following week.

The following tasks were performed this week which are summarized below:

1. Task #1 – GC Testing by KSingh
   KSingh continues to work on conducting gas chromatograph (GC) testing for measurement of TCE in various units of the East Block focused on the first floor. The focus of testing for TCE is concentrated in units that have detected elevated levels of TCE. The test results of TCE are shown in Tables 1 to 5 in Attachment A. Comprehensive data tables of Indoor Air Monitoring Data for TCE is provided in Attachment C. Graphs showing comprehensive data can be found in Attachment D. The findings of portable discrete testing for TCE are as follows:

   - TCE detections ranged from 45 ug/m^3 to 103 ug/m^3 in unit 1045.
   - TCE detections ranged from 78 ug/m^3 to 116 ug/m^3 in Unit 1050.
   - TCE was detected up to 21 ug/m^3 in Unit 1052 where the concrete was filled in under water pipe going out the wall onto the 32nd Street.
   - TCE detections were at 4 ug/m^3 in the First Floor Hallway.
   - The two north blowers detections of TCE were 5 ug/m^3 to 20 ug/m^3.
   - The two south blowers detections of TCE ranged from 20 ug/m^3 to 34 ug/m^3.
   - Units 1039, 1040, 1041,1043, and 1044 had detections of TCE ranging from 11 ug/m3 to 38ug/m3.
   - Sub-slab vapor concentrations taken from various locations were one to two orders of magnitude higher than those inside the units. For example, sub-slab TCE detections were 1443 ug/m3 in Unit 1050 and 750 ug/m3 in unit 1045 (refer to Table 5 in the attachment).

2. Task #2 – Televising of Fitness Room Pipe
   Water Blasting, LLC completed televising of the VMS piping on 05/30/2023. The fitness room end of the SSDS was televised (Access Point #14) to the south for approximately 100 feet. No blockage or water was documented.

3. Task #3 – Sealing of Access Points
   Horner Plumbing and KSingh facilitated the sealing of access points. Temporary sealing of all sumps and access ports were also completed on 6/2/2023 using a concrete layered over a plastic sheet to aid in vacuum.

4. Task #4 – Vapor Pin Measurements in Unit 1035
   Access to Unit 1035 was coordinated by CWC, and KSingh installed a vapor pin to detect pressure. Negative vapor pressure of –0.004 in H_2O was detected on 05/31/23. No vacuum has been observed since then.

5. Task #5 – Preparation for and Installation of Additional Blower
   An OBAR Fan was delivered on site and installation was completed by Horner Plumbing on 6/2/2023. Arrangements are being made to bring electrical power to start pressure measurement testing.

   Refer to Attachment E for photos related to work performed this week including a photograph showing the installation of the OBAR Fan. Please note that these are select photos and are not comprehensive of all work performed.

6. Task #6 – VMS Operations and Troubleshooting
   The following tasks were performed:

   - All four blowers are functioning. Fliteway Technologies and KSingh are monitoring the operations of the VMS.
   - No water was extracted throughout the month of May.
   - The vacuum measurements in the 1st floor hallway in Buildings 1B-SW and 1B-W continue to be 0, and those in the Gym also reported 0. The vacuum measurement near the exit of 3100 W. Center Street was between -0.57 to -0.69 in H_2O.
   - Vapor pins installed in the North Mechanical room, and in Units 1026, 1036, and 1058 had no vacuum detected. Vacuum measurements from all the blowers were also noted to be between – 8 and – 15 inches of water.
   - Installation of new vapor pins indicated no vacuum. The results of vacuum measurements are shown in Table 6 in Attachment B.
   - An additional VOC blower was installed to conduct vacuum measurement testing in the proximity of VMS in Buildings 1B-W and 1B-SW. The blower has 900 cfm capacity. By applying vacuum, we should be able to quantify the radius of influence in this area where no vacuum is observed, and this is the area where highest detections of TCE have been documented. We are awaiting an electrical connection in order to being operating.
   - A pilot work plan is being prepared to propose the use of Biochar – a carbonaceous material, to act as an adsorbent to reduce the TCE concentrations in Room 1049.

Action Items for Week of June 4, 2023 – June 10, 2023

KSingh plans to perform the following tasks in the upcoming week:

1. Meet with Roman Electric for electrical power supply to blower on 6/5/2023.
2. Prepare for continuous monitoring upon installation and startup of new blower.
3. Complete downspout work for redirection of storm water.
4. Coordinate installation of valve in Power House to control / limit vacuum draw from Power House and maximize vacuum from Northern Mechanical Room.
5. Attend Meeting with CWC, WDNR, DHS, and City of Milwaukee to discuss progress.
6. Continue discrete sampling in the various impacted units and add results to comprehensive table.
7. Conduct vacuum measurements at strategic locations within the buildings.
8. Continue to prepare comprehensive figure showing indoor air data using Tableau software.
9. Finalize work plan for the potential use of Biochar as an option for corrective action.

Attachment A
Summary of Monitoring Results by Date

Attachment A
Monitoring Results by Date
On-site EPA Method TO-14 Data from Indoor Air Samples

Instrument: SRI 8610 Gas Chromatograph with ECD

Operator: KSingh

Table 1: Monitoring Results from 05/29/2023

**No data collected due to Memorial Day holiday

Table 2: Monitoring Results from 05/30/2023

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	Comments
IA - 643	Unit 1057	15:38	0	ND	Mech Room Near 3100 Exit
IA - 644	Unit 1002	15:46	0	ND	Packages
IA - 645	Unit 1006	15:54	0	ND	
IA - 646	Unit 1014	16:02	0	ND	
IA - 647	Unit 1025	16:10	0	ND	
IA - 648	Unit 1026	16:18	0.7	ND	
IA - 649	Unit 1035	16:24	1.1	ND	
IA - 650	Unit 1036	16:32	1.2	ND	
IA - 651	Unit 1042	16:40	5.3	ND	
IA - 652	Unit 1045	16:48	103	ND	
IA - 653	Unit 1050	16:56	116	ND	
IA - 654	1st Hallway	17:04	3.6	ND	
IA - 655	Unit 1054	17:12	24.2	ND	Fitness Center
Reporting Limit ($\mu g/m3$)			0.6	0.6	
ND Indicates Not Detected at listed reporting level					

Table 3: Monitoring Results from 05/31/2023

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	Comments
IA - 656	SSD 3 – North 7.5 HP	15:34	4.8	0.75	
IA - 657	SSD 4 – North 10 HP	15:41	20.2	ND	
IA - 658	SSD 1 – South 7.5 HP	15:48	19.6	2.1	
IA - 659	SSD 2 – South 10 HP	15:55	33.8	2.6	
IA - 660	Unit 1037	16:04	3.7	ND	
IA - 661	Unit 1039	16:12	8.1	ND	
IA - 662	Unit 1040	16:20	11.5	ND	
IA - 663	Unit 1041	16:28	10.9	ND	
IA - 664	Unit 1043	16:36	11.7	ND	
IA - 665	Unit 1044	16:44	37.8	ND	
IA - 666	Unit 1045	16:52	26	ND	
IA - 667	Unit 1049	17:00	30.3	ND	Storage - Wooden Column
IA - 668	Unit 1050	17:08	78.4	ND	
IA - 669	Unit 1052	17:16	21.1	ND	Concrete Cut out
Reporting Limit (µg/m3)			0.6	0.6	
ND Indicates Not Detected at listed reporting level					

Table 4: Monitoring Results from 06/01/2023

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	Comments
IA - 670	1045 Bath	11:11	15.3	ND	
IA - 671	1045 Bed	11:23	45.3	ND	
IA - 672	1045 Living	11:31	9.3	ND	
IA - 673	1050 Mech Closet	11:41	23.1	ND	
IA - 674	1050 Living	11:48	28.9	ND	
IA - 675	1050 Bed	11:56	109	ND	
IA - 676	1050 Bath	12:04	80.5	ND	
IA - 677	Unit 1048	12:12	121	ND	
IA - 678	Unit 1049	12:20	21.8	ND	Storage - Wooden Column
IA - 679	Unit 1056	12:28	14.6	ND	
IA - 680	Unit 1051	12:36	16.9	ND	
IA - 681	Unit 1052	12:44	14.5	ND	Concrete Fill
IA - 682	Unit 1054	12:52	16.1	ND	Fitness
IA - 683	N Mech Room	13:00	1.5	ND	
Reporting Limit (µg/m3)			0.6	0.6	
ND Indicates Not Detected at listed reporting level					

Table 5: Monitoring Results from 06/02/2023

****Please note that all samples are from the sub-surface taken from the vapor pins****

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)
IA - 684	Unit 1039	8:28	23.5	0.9
IA - 685	Unit 1040	8:36	1.6	ND
IA - 686	Unit 1042	8:44	11.8	71.3
IA - 687	Unit 1044	8:52	456	24.6
IA - 688	Unit 1045	9:00	750	24.4
IA - 689	Unit 1050 - out	9:08	971	19
IA - 690	Unit 1050 - in	9:16	1443	1.1
IA - 691	Unit 1048	9:24	322	1.1
IA - 692	Unit 1049	9:32	426	2.1
IA - 693	Unit 1054	9:40	596	18.7
IA - 694	Stairwell 4	9:51	994	6.9
IA - 695	Basketball Court 1	9:59	328	18
IA - 696	Unit 1037	10:08	273	16.7
IA - 697	Unit 1036	10:18	144	ND
Reporting Limit (µg/m3)			0.6	0.6
ND Indicates Not Detected at listed reporting level				

Attachment B

Table 6: Comprehensive Vacuum Measurements (inches H_2O)

Location	30-May	31-May	1-Jun	2-Jun
Lobby	-0.573	-0.622	-0.69	-0.69
1026	-0.016	-0.021	-0.03	-0.03
1058-1	-0.008	-0.004	-0.004	-0.006
1058-2		-0.003	0	0
1035-in		-0.004	0	0
1036	0	0	0	0
1037		0	0	0
1039		0	0	0
1040	0	0	0	0
1042		0	0	0
1044	0	0	0	0
1045		0	0	0
1049- Storage		0	0	0
1050-out	0	0	0	0
1050-in		0	0	0
1054 - Fitness		0	0	0
St 4	0	0	0	0
BB1	0	0	0	0
BB2	0	0	0	0
BB3	-0.032	-0.029	-0.04	-0.04
SSD 1	-14	-14	-14	-15
SSD 2	-12	-12	-12	-13
SSD 3	-8	-8	-8	-8
SSD 4	-12	-12	-12	-11

Attachment C
Comprehensive Data Table

Community Within the Corridor - East Block

Table 7 - Discrete Sampling Test Results

Sample Location	30-Mar	31-Mar	1-Apr	3-Apr	4-Apr	5-Apr	6-Apr	7-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr
1045 Entry Floor Hole			400										
1045 North Wall			360										
1045 Wood Column			1500								352		
1050 South Wall Hole			8000										
1st Floor Hallway Center	15				3.5	17.7	64	25	81.1	35		42.7	63.3
1st Floor Hallway North	10												
1st Floor Hallway South	5.2												
2081 Hallway		0											
2nd Floor Corridor North		0											
2nd Floor Corridor South		0											
2nd Floor Hallway Center	0.7											3	3.6
2nd Floor Hallway North	0.8	0											
2nd Floor Hallway South	0.8												
Stairwell 2	3.2	2											
2nd Floor Stairwell 4		0											
2nd Floor Stairwell 8		0											
3rd Floor Corridor			0										
3rd Floor Hallway Center			0									3.3	2
3rd Floor Hallway South	0												
3rd Floor Stairwell 2	3.4					2.1							
Stairwell 3			0.6										
3rd Floor Stairwell 4			0.7										
Basket Ball Court	0.3												
Basket Ball Court 2	0												
Basket Ball Court 3													
Basket Ball Court 4													
Elevator	0												
Laundry Room													
Fitness Center										49.6	43.7		28.1
Front Lobby		0											
NW Garage	0.6												
N Garage	0												
SE Garage	0.8												
Hallway Outside 3021			0										
Hallway Outside 3035			0										
Hallway Outside 3065			0.7										
N Mechanical Room										6.26	2.4	5.9	14.8
Men's Locker Room						60.7	123		122		428	82.9	
Women's Locker Room													
Powerhouse													
Unit 1002 - Postboxes													
Unit 1006	0.3	0											
SSD Vent Pipe #1 - S - 7.5 HP			13	22	24.5	22	24.8	24	26.7	26.2	28	28	30.3
SSD Vent Pipe #2 - S - 10 HP			26	30	21.9	16.4	18.7	17.2	44.4	19.5	19	47.7	29.3
SSD Vent Pipe #3 - N - 7.5 HP					17.6	2.2	3	5	3.3	3	4.3	11.9	7.17
SSD Vent Pipe #4 - N - 10 HP					41.2	29.5	33	39	37	38.7	39.1	29.3	44
SSD Vent Pipe #5 / SW Garage													
Stairwell 4	1.6					2.2			2.7	2.6			
Stairwell 6													
Stairwell 7													
Unit 1011													
Unit 1014										0			
Unit 1025	0							0.96					
Unit 1026	0.3									0			
Unit 1035	0.3												
Unit 1036	0.5												
Unit 1037	2									0.9			
Unit 1039	4.7									11.4	8		
Unit 1040	10.3			12.7							14.5		
Unit 1041	11.6							19.9		16.8	14.4		
Unit 1042	11.4									16.2	15.2		
Unit 1043	17.6					21.6	31.3				24		
Unit 1044	56					77	95			69.7	84.5		
Unit 1045	350		293	298	287	272	267	279	28.9	230	352	236	151.5
Unit 1048													
Unit 1049													
Unit 1050	160		137	143	110	348	280	108	135	114	706	145	60
Unit 1051	19					23		25.4			45.3		
Unit 1052					72.5	88.7	96.6	95.7	128	103	88.6	51.4	38.4
Unit 1056					24.8								
Unit 1057													
Unit 1058													
Unit 1079													
Unit 2014													
Unit 2015													
Unit 2016		0											
Unit 2017		0											
Unit 2022		0											

Sample Location	15-Apr	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	1-May	2-May	3-May	4-May	5-May	8-May	9-May	10-May
1045 Entry Floor Hole																			
1045 North Wall																			
1045 Wood Column																			
1050 South Wall Hole																			
1st Floor Hallway Center	106	181	147	8.5	22.4	7.4	7.8		4.7	17.7	2.7		14	9	3.5	2.3		3.49	
1st Floor Hallway North																			
1st Floor Hallway South																			
2081 Hallway																			
2nd Floor Corridor North																			
2nd Floor Corridor South																			
2nd Floor Hallway Center																			4.69
2nd Floor Hallway North																			
2nd Floor Hallway South																			
Stairwell 2							4.5				2.9								4.15
2nd Floor Stairwell 4								12.4									7.19		
2nd Floor Stairwell 8																			
3rd Floor Corridor																			
3rd Floor Hallway Center																			
3rd Floor Hallway South																			
3rd Floor Stairwell 2															2.35				
Stairwell 3																			3.9
3rd Floor Stairwell 4								11.2											
Basket Ball Court								12											
Basket Ball Court 2									7.5	6.3			2.2		3	2.3	0.624		
Basket Ball Court 3																			
Basket Ball Court 4																			
Elevator																			
Laundry Room																			
Fitness Center							29.3												29
Front Lobby								4											
NW Garage																			
N Garage									0										
SE Garage											7.7								
Hallway Outside 3021																			
Hallway Outside 3035																			
Hallway Outside 3065																			
N Mechanical Room	7	7.3	7.2	5.3	7.9		10	7	7.2	7.8	4.5	13.7	11.5			10.1	10.9	11.8	
Men's Locker Room			161	131		23.7	28.3					58	31.6					53.3	
Women's Locker Room																45			
Powerhouse									0.7	3.2									
Unit 1002 - Postboxes																			
Unit 1006				4.3			1.4					2.97							2.4
SSD Vent Pipe #1 - S - 7.5 HP	31.4	34.6	28.2	36.4	33.1	35.2	32		31.4	28.6		26.1	27.9			25.7		26.2	
SSD Vent Pipe #2 - S - 10 HP	57.8	20.5	21.1	19.8	21.4	20.9	20.7		20.6	28.5		1.2				20		15.7	
SSD Vent Pipe #3 - N - 7.5 HP	16.7	11.3	9.4	8.1	5.3	6.1	7.2		43.5	6.1		8.6				5.9		4.97	
SSD Vent Pipe #4 - N - 10 HP	41.9	36.8	38.2	35	42.8	43.1	46.3		5.7	44.4		38.3				37.7		22.4	
SSD Vent Pipe #5 / SW Garage				11.3	21					20.3		25.2			26.1		23.6	25.5	
Stairwell 4	14.4			7									12						
Stairwell 6																			
Stairwell 7																			
Unit 1011																			2.61
Unit 1014																			
Unit 1025				3.6						4.8									
Unit 1026																			1.67
Unit 1035																			
Unit 1036																			1.37
Unit 1037																			
Unit 1039								3.4						1.4					
Unit 1040			21.2	22.6															11.2
Unit 1041															13				
Unit 1042									12.6		9.3	15.5					11.9	13.1	
Unit 1043																			
Unit 1044			85.8		45.6		53.3												
Unit 1045	124	336	115	283	61	127	116	112	221	51.3	26.6	90.3	132	121		220	38.4	33.8	
Unit 1048																			
Unit 1049																142			159
Unit 1050	118	142	149	110	77.8	131	138	152	113	71.7	199	231	194	186	95.5	174	67.5	297	
Unit 1051																			
Unit 1052			70.5			57.2	70.3		72		20.2	73.6	62.6	340		76		70.7	
Unit 1056									44										
Unit 1057																			
Unit 1058																			
Unit 1079																			
Unit 2014														48.8					
Unit 2015																			0.77
Unit 2016																			
Unit 2017																			
Unit 2022																			

Sample Location	11-May	12-May	15-May	16-May	17-May	18-May	19-May	22-May	23-May	24-May	25-May	26-May	30-May	31-May	1-Jun
1045 Entry Floor Hole															
1045 North Wall															
1045 Wood Column															
1050 South Wall Hole															
1st Floor Hallway Center						21.2	3.48	5.39				2.38	3.6		
1st Floor Hallway North															
1st Floor Hallway South	0.947	1.92	1.96		0										
2081 Hallway															
2nd Floor Corridor North															
2nd Floor Corridor South															
2nd Floor Hallway Center			4.2									2.74			
2nd Floor Hallway North															
2nd Floor Hallway South															
Stairwell 2															
2nd Floor Stairwell 4															
2nd Floor Stairwell 8															
3rd Floor Corridor															
3rd Floor Hallway Center			1.7									1.71			
3rd Floor Hallway South															
3rd Floor Stairwell 2															
Stairwell 3															
3rd Floor Stairwell 4															
Basket Ball Court						1.84			8.96						
Basket Ball Court 2	1.02					1.53			0						
Basket Ball Court 3						1.56			0.536						
Basket Ball Court 4						0.816			0.734						
Elevator															
Laundry Room															
Fitness Center				33.8	21	21	24.5	16.6		42.5	15.1		24.2		16.1
Front Lobby															
NW Garage					14			0.62							
N Garage		1.78			0.607		0	0.63		0.776					
SE Garage								6.6		0.6					
Hallway Outside 3021															
Hallway Outside 3035															
Hallway Outside 3065															
N Mechanical Room	6.89		10.7						0.737						1.5
Men's Locker Room			52.3	7.62							21.7				
Women's Locker Room											25.8				
Powerhouse															
Unit 1002 - Postboxes													0		
Unit 1006			1.7						0.737				0		
SSD Vent Pipe #1 - S - 7.5 HP	21.9				27.01		26.7			7.04				19.6	
SSD Vent Pipe #2 - S - 10 HP	18.7				18.2		19.3			11.1				33.8	
SSD Vent Pipe #3 - N - 7.5 HP	0				3.47		3.41			1.85				4.8	
SSD Vent Pipe #4 - N - 10 HP	4.83				31.1		21.9			4.7				20.2	
SSD Vent Pipe #5 / SW Garage	21.4				0.683	1.15	0	7.84							
Stairwell 4		6			9.03										
Stairwell 6															
Stairwell 7															
Unit 1011	0														
Unit 1014													0		
Unit 1025									1.1	0		0	0		
Unit 1026	0	0											0.7		
Unit 1035													1.1		
Unit 1036									4.59			2.37	1.2		
Unit 1037														3.7	
Unit 1039				5.18				6.06			1.19			8.1	
Unit 1040	7.37			7.25							5.29			11.5	
Unit 1041				7.07							9.13			10.9	
Unit 1042		8.22	13.6	6.61	0.53		1.42	5.16		3.88	10.1		5.3		
Unit 1043				117							12.2			11.7	
Unit 1044				37.6							29.3			37.8	
Unit 1045	17.2	14.3	22.6	9.82	60.7		14.9	24.1	46.3	13.7	38.1		103	26	23.3
Unit 1048		86.2							45.7						121
Unit 1049		96.9							66.1		21.4			30.3	21.8
Unit 1050	80.2	75.7	228	77.9		103	90.7	90.9	88.5	147	170		116	78.4	60.4
Unit 1051				52.7						39.8	18.2				16.9
Unit 1052				55.7					32		16.8			21.1	14.5
Unit 1056															14.6
Unit 1057													0		
Unit 1058									1.46			0			
Unit 1079			152												
Unit 2014		0													
Unit 2015															
Unit 2016															
Unit 2017															
Unit 2022															

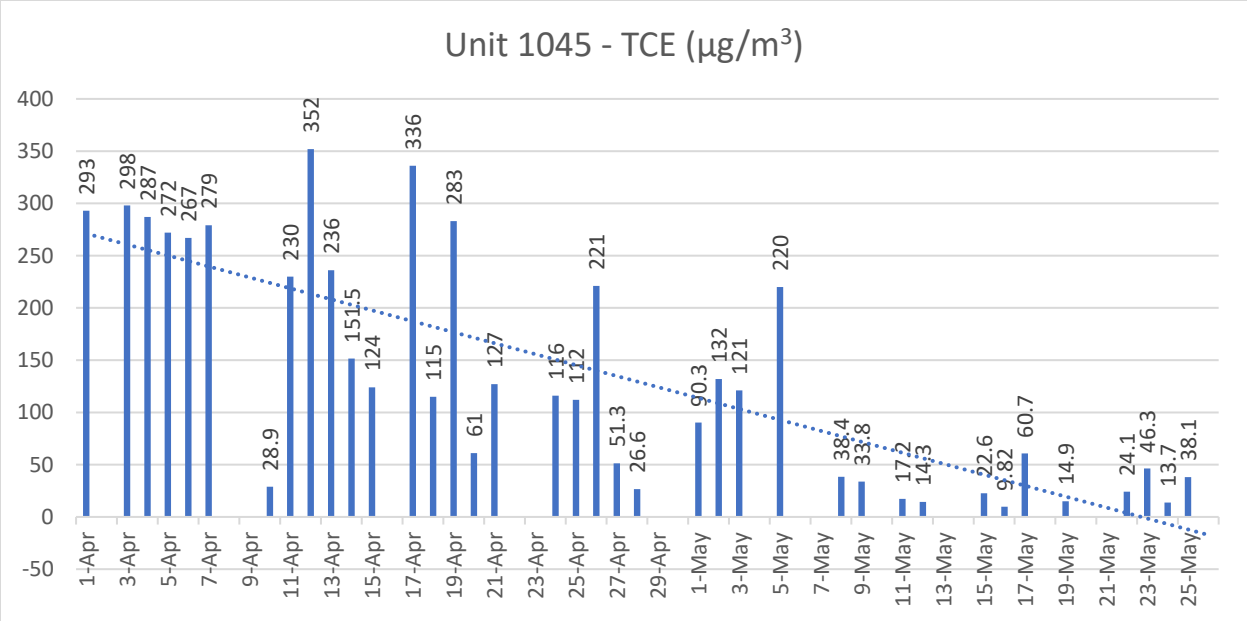
KSingh | Engineers Scientists Consultants

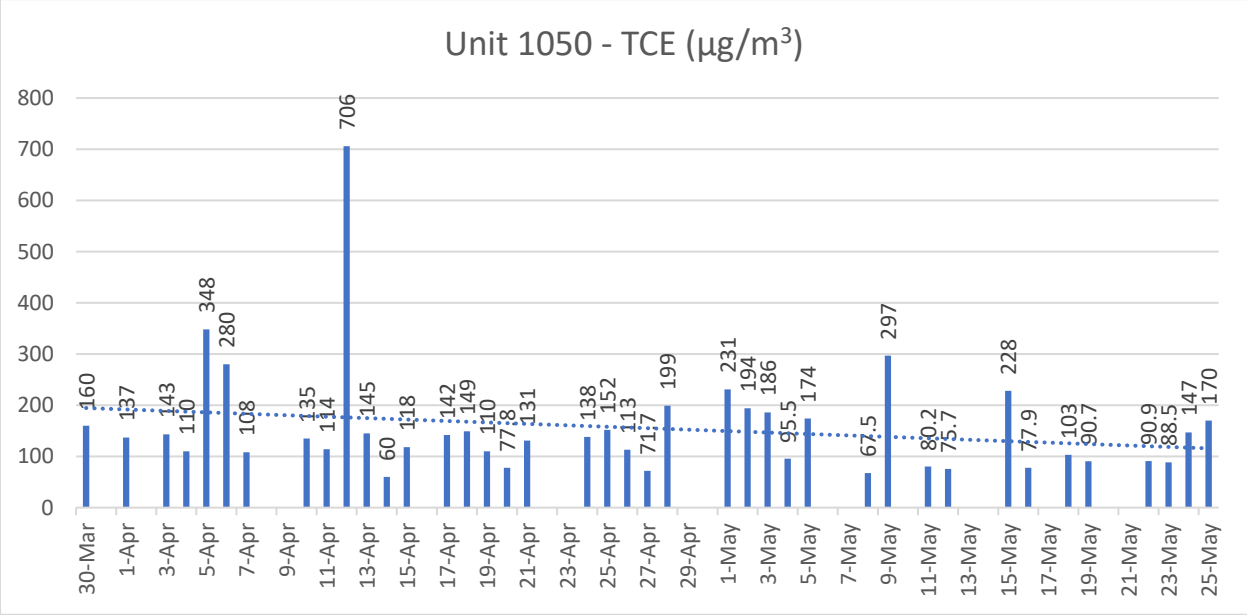
**Note that highlighted cell values indicate levels that are higher than the vapor risk screening levels for large commercial or industrial facilities.

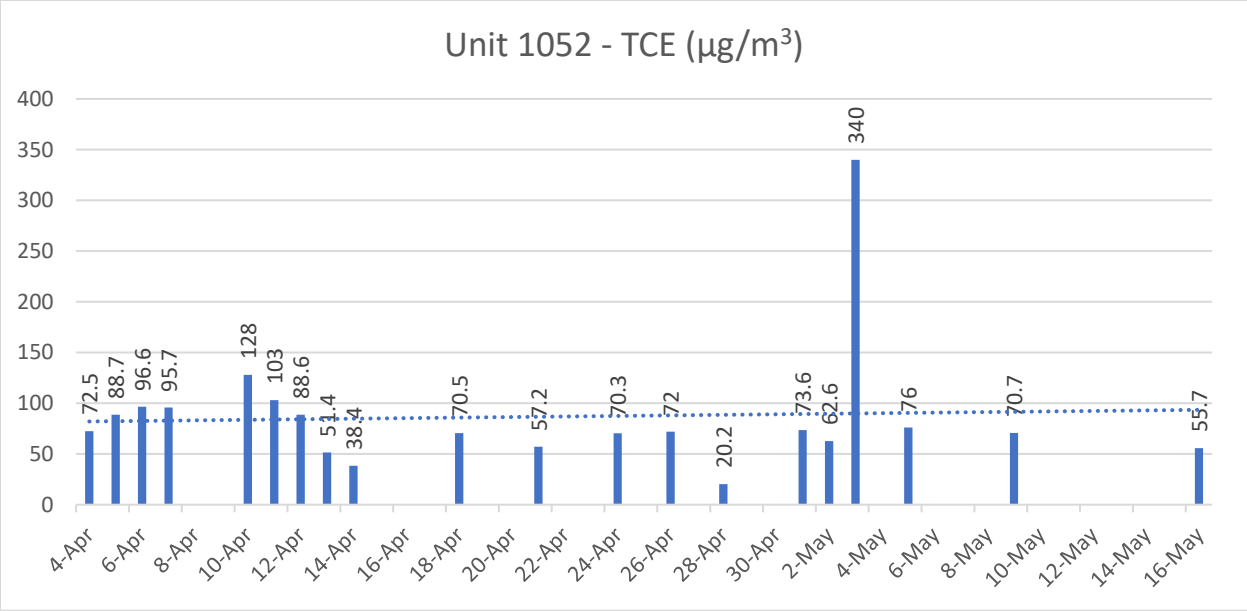
Unit 2025		0																																													
Unit 2036		0																			0																										
Unit 2037		0																																													
Unit 2039		0										2.5	2.5																			0.77															
Unit 2040		0						0													0																										
Unit 2042		0																										2.5																			
Unit 2043	0.4	0																																													
Unit 2044		0																																													
Unit 2045	23	18				8		9	2.9			3.7	5.2														19.1			1.36					0.99			1.97		2.99				11.8			
Unit 2049																																		1.07													
Unit 2056	60	52				42.2	24.7	49.2	9.6			3.4	6.6								1.5														1.11			5.89		11.5				66.4			
Unit 2057		4.7																												1.24			0.64														
Unit 2058	3.8	4.2				8.5			3.8																			2.9																			
Unit 2059	0.3	0																																													
Unit 2061		0																																													
Unit 2062		0																																													
Unit 2064	0					1																								1.78																	
Unit 2077	0					1.6																						1.7		0.838																	
Unit 2111		0																																								0					
Unit 3015			0					0																																							
Unit 3023																																			0												
Unit 3025																					0																										
Unit 3035			0																																												
Unit 3036			0																																												
Unit 3037			0					2	ND																																						
Unit 3039			0										1.8																																		
Unit 3040			0																		0																										
Unit 3041			0																									2.45																			
Unit 3042			0																																												
Unit 3043			0																																												
Unit 3044		0																																													
Unit 3045		6.6										2.7	2.7																	0										3.75				8.11			
Unit 3056	6	9.6				2.4		5.13	0.9			2.4	2.4								0																			1.21				6.99			
Unit 3057		0																												0																	
Unit 3058			0																																												
Unit 3059			0																																												
Unit 3061			0																																												
Unit 3062			0																																												
Unit 3063																														0																	
Unit 3092																												1.67																			

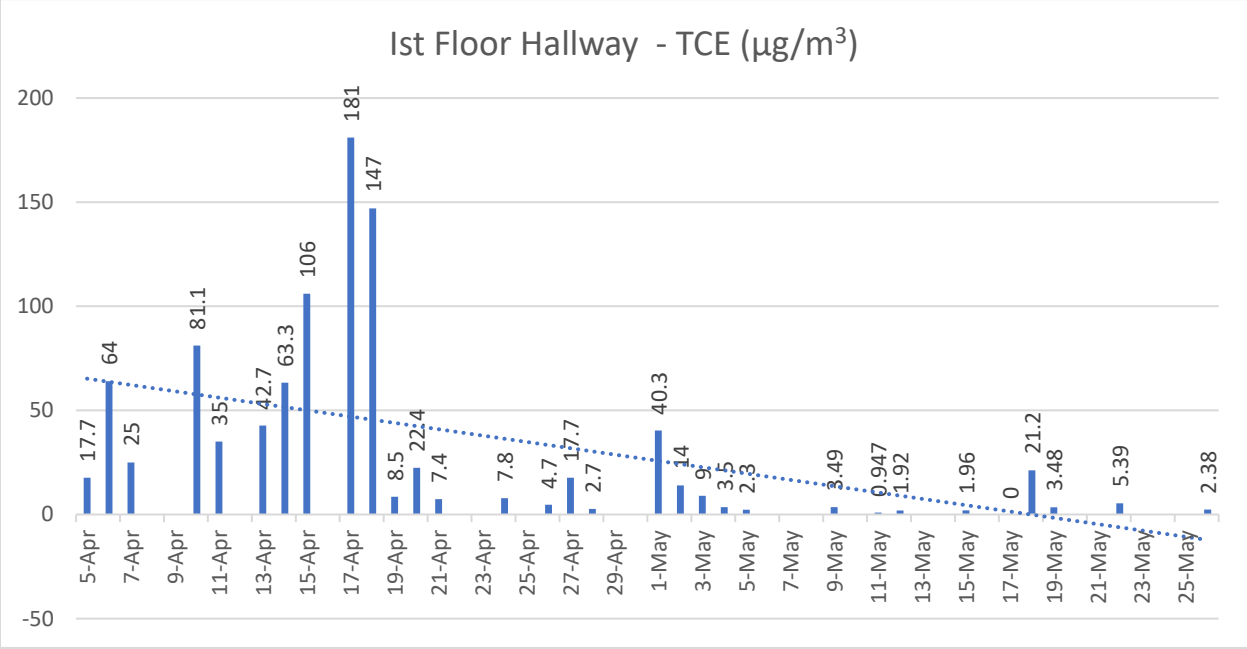
**Note that highlighted cell values indicate levels that are higher than the vapor risk screening levels for large commercial or industrial facilities.

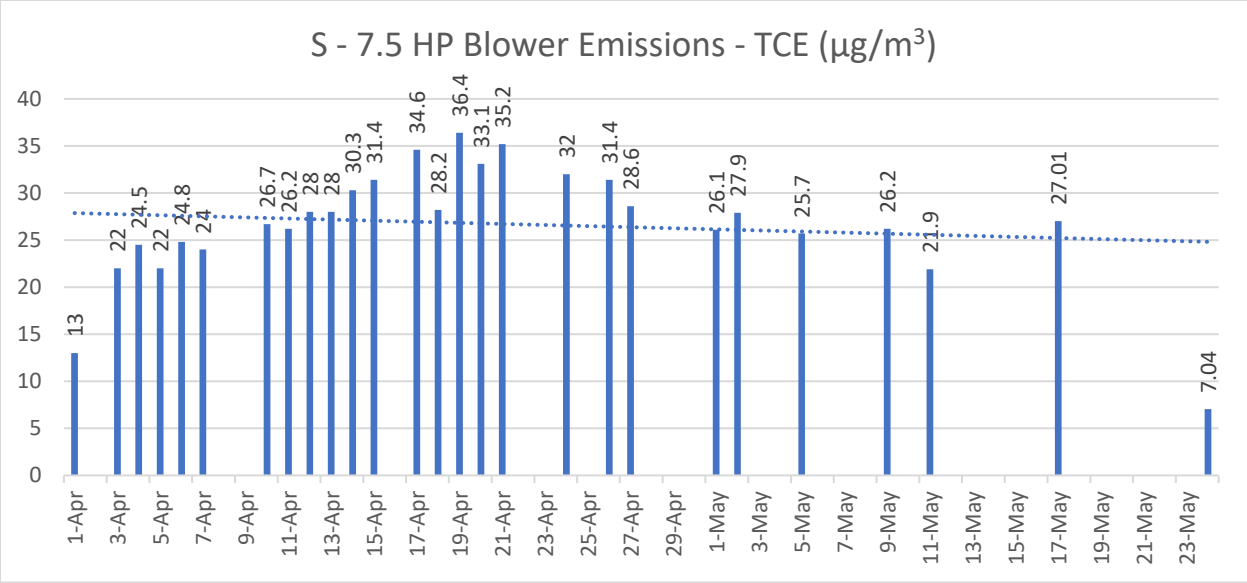
Attachment D
Figures of TCE Levels through May 24, 2023

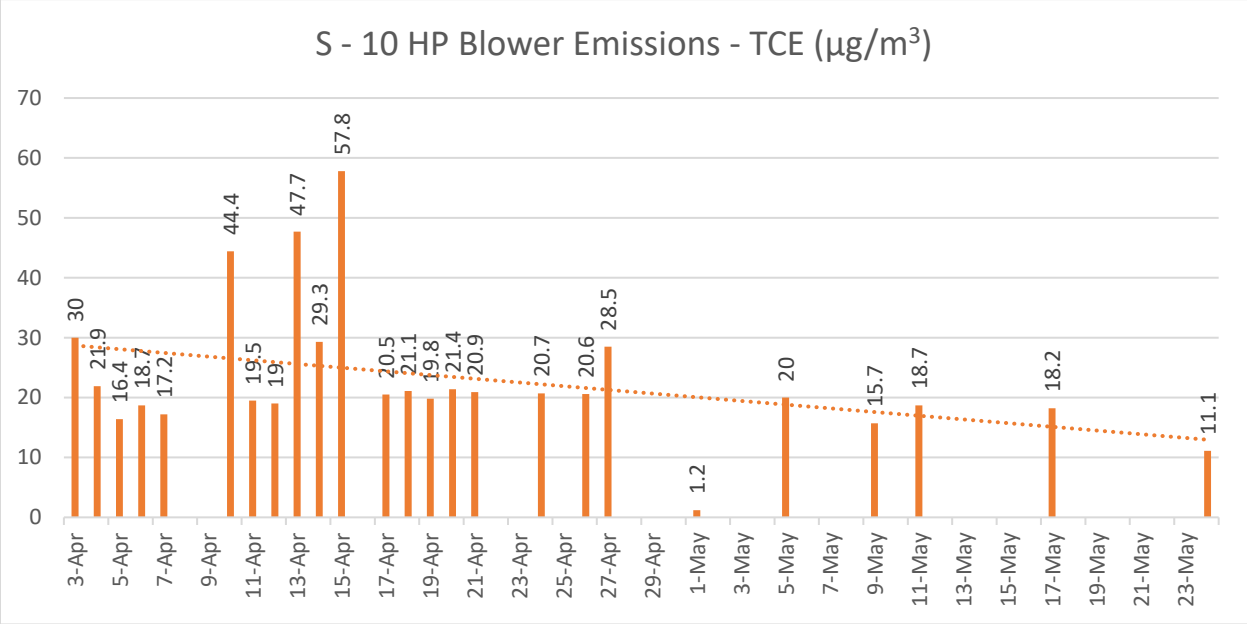

Unit 1045 - TCE (µg/m3)
400
350
300
250
200
150
100
50
0
-50
293
298
287
272
267
279
28.9
230
352
236
151.5
124
336
115
283
61
127
116
112
221
51.3
26.6
90.3
132
121
220
38.4
33.8
17.2
14.3
22.6
9.82
60.7
14.9
24.1
46.3
13.7
38.1
1-Apr
3-Apr
5-Apr
7-Apr
9-Apr
11-Apr
13-Apr
15-Apr
17-Apr
19-Apr
21-Apr
23-Apr
25-Apr
27-Apr
29-Apr
1-May
3-May
5-May
7-May
9-May
11-May
13-May
15-May
17-May
19-May
21-May
23-May
25-May

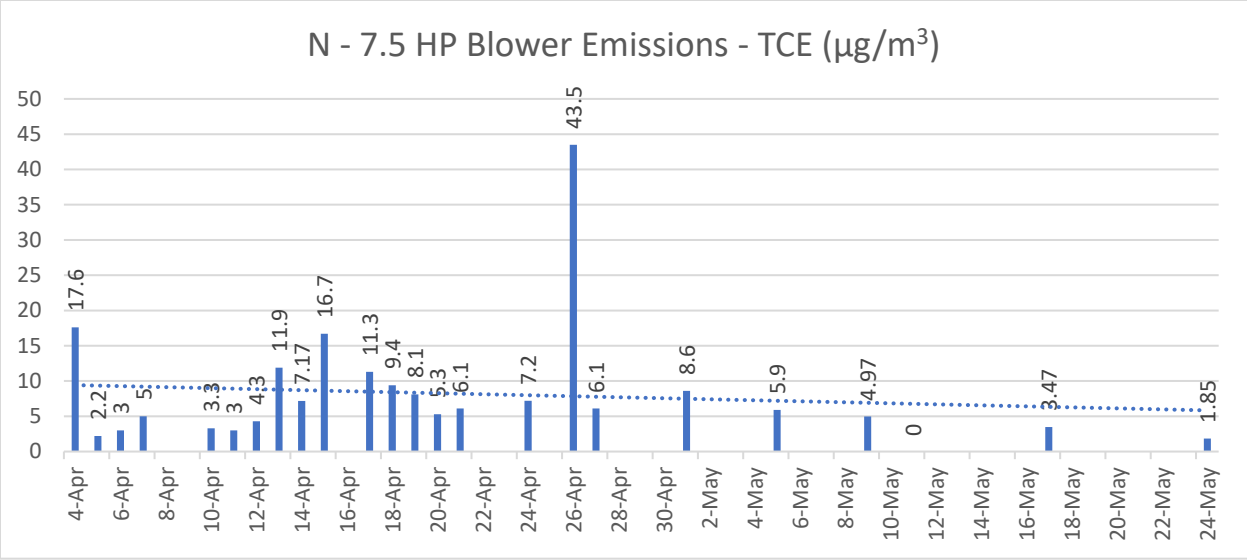

Unit 1050 - TCE (µg/m3)
800
700
600
500
400
300
200
100
0
160
137
143
110
348
280
108
135
114
706
145
60
118
142
149
110
77.8
131
138
152
113
71.7
199
231
194
186
95.5
174
67.5
297
80.2
75.7
228
77.9
103
90.7
90.9
88.5
147
170
30-Mar
1-Apr
3-Apr
5-Apr
7-Apr
9-Apr
11-Apr
13-Apr
15-Apr
17-Apr
19-Apr
21-Apr
23-Apr
25-Apr
27-Apr
29-Apr
1-May
3-May
5-May
7-May
9-May
11-May
13-May
15-May
17-May
19-May
21-May
23-May
25-May

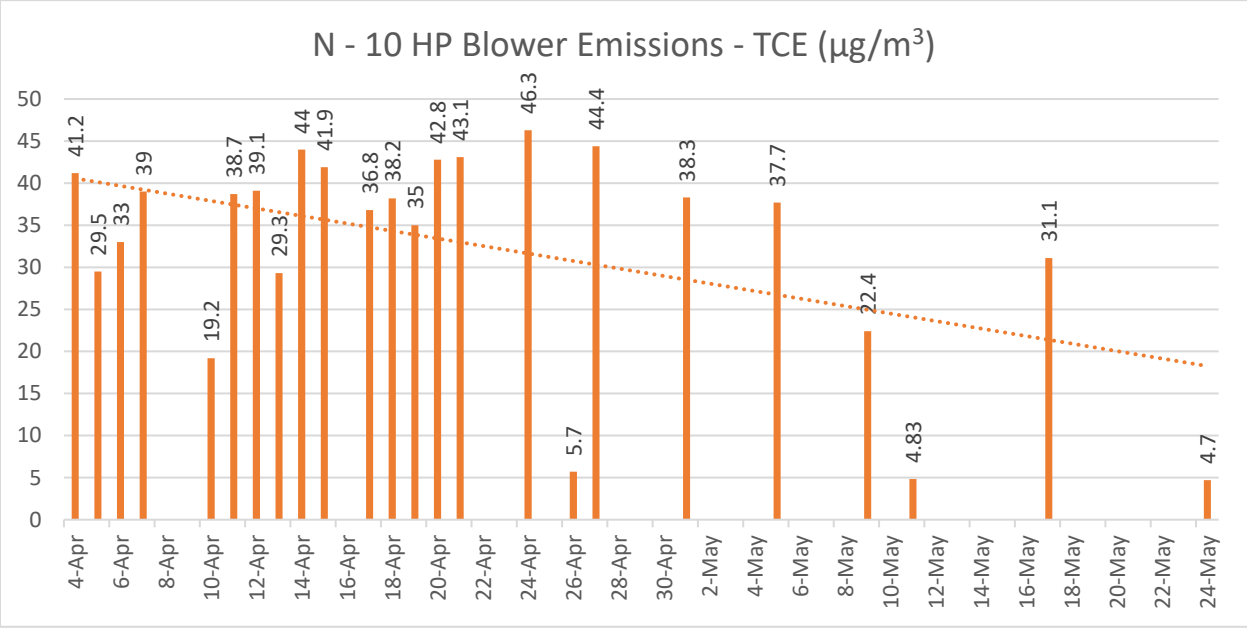

Unit 1052 - TCE (µg/m3)
400
350
300
250
200
150
100
50
0
72.5
88.7
96.6
95.7
128
103
88.6
51.4
38.4
70.5
57.2
70.3
72
20.2
73.6
62.6
340
76
70.7
55.7
4-Apr
6-Apr
8-Apr
10-Apr
12-Apr
14-Apr
16-Apr
18-Apr
20-Apr
22-Apr
24-Apr
26-Apr
28-Apr
30-Apr
2-May
4-May
6-May
8-May
10-May
12-May
14-May
16-May


Ist Floor Hallway - TCE (µg/m3)
200
150
100
50
0
-50
17.7
64
25
81.1
35
42.7
63.3
106
181
147
8.5
22.4
7.4
7.8
4.7
17.7
2.7
40.3
14
9
3.5
2.3
3.49
0.947
1.92
1.96
0
21.2
3.48
5.39
2.38
5-Apr
7-Apr
9-Apr
11-Apr
13-Apr
15-Apr
17-Apr
19-Apr
21-Apr
23-Apr
25-Apr
27-Apr
29-Apr
1-May
3-May
5-May
7-May
9-May
11-May
13-May
15-May
17-May
19-May
21-May
23-May
25-May


S - 7.5 HP Blower Emissions - TCE (µg/m³)
40
35
30
25
20
15
10
5
0
13
22
24.5
22
24.8
24
26.7
26.2
28
28
30.3
31.4
34.6
28.2
36.4
33.1
35.2
32
31.4
28.6
26.1
27.9
25.7
26.2
21.9
27.01
7.04
1-Apr
3-Apr
5-Apr
7-Apr
9-Apr
11-Apr
13-Apr
15-Apr
17-Apr
19-Apr
21-Apr
23-Apr
25-Apr
27-Apr
29-Apr
1-May
3-May
5-May
7-May
9-May
11-May
13-May
15-May
17-May
19-May
21-May
23-May


S - 10 HP Blower Emissions - TCE (µg/m³)
70
60
50
40
30
20
10
0
30
21.9
16.4
18.7
17.2
44.4
19.5
19
47.7
29.3
57.8
20.5
21.1
19.8
21.4
20.9
20.7
20.6
28.5
1.2
20
15.7
18.7
18.2
11.1
3-Apr
5-Apr
7-Apr
9-Apr
11-Apr
13-Apr
15-Apr
17-Apr
19-Apr
21-Apr
23-Apr
25-Apr
27-Apr
29-Apr
1-May
3-May
5-May
7-May
9-May
11-May
13-May
15-May
17-May
19-May
21-May
23-May


N - 7.5 HP Blower Emissions - TCE (µg/m³)
50
45
40
35
30
25
20
15
10
5
0
17.6
2.2
3
5
3.3
3
4.3
11.9
7.17
16.7
11.3
9.4
8.1
5.3
6.1
7.2
43.5
6.1
8.6
5.9
4.97
0
3.47
1.85
4-Apr
6-Apr
8-Apr
10-Apr
12-Apr
14-Apr
16-Apr
18-Apr
20-Apr
22-Apr
24-Apr
26-Apr
28-Apr
30-Apr
2-May
4-May
6-May
8-May
10-May
12-May
14-May
16-May
18-May
20-May
22-May
24-May


N - 10 HP Blower Emissions - TCE (µg/m³)
50
45
40
35
30
25
20
15
10
5
0
41.2
29.5
33
39
19.2
38.7
39.1
29.3
44
41.9
36.8
38.2
35
42.8
43.1
46.3
5.7
44.4
38.3
37.7
22.4
4.83
31.1
4.7
4-Apr
6-Apr
8-Apr
10-Apr
12-Apr
14-Apr
16-Apr
18-Apr
20-Apr
22-Apr
24-Apr
26-Apr
28-Apr
30-Apr
2-May
4-May
6-May
8-May
10-May
12-May
14-May
16-May
18-May
20-May
22-May
24-May

Attachment E
Relevant Photos

May 30, 2023 - Drain Tile and Inspection Port Ready for Vapor Barrier and Concrete at Building 1B-NE Elevator Pit Sump

May 30, 2023 - Hole Cored for Piping in Fitness Room

May 30, 2023 - Sump in Unit 1042

May 31, 2023 - Installed Discharge Plumbing to Overhead Storm Piping - Elevator Sump - Bldg 2A

May 31, 2023 - Concrete Sealed Sump in Building 2A

May 31, 2023 - Installed Vapor Pin in Fitness Room

June 1, 2023 - Vapor Barrier Around Inspection Port in Unit 1025

June 1, 2023 - Rebar Installed Under Mechanical Room Cut

June 1, 2023 - Concrete Sealing in Fitness Room

June 1, 2023 - Concrete Sealing of Floor in Fitness Room

June 1, 2023 - Power House / Mechanical Room Vent Line Above Roof Line

June 2, 2023 - Power House Sealed Vapor Extraction Point

June 2, 2023 - Fitness Room Restored

June 2, 2023 - Completed Piping Hookup to Outlet Pipe

June 2, 2023 - OBAR Fan Hooked Up to Outlet Piping

June 2, 2023 - OBAR Fan

June 2, 2023 - Temporary Redirection of Downspout Discharge