KSingh | Engineers Scientists Consultants

MEMORANDUM

DATE	:	July 1, 2023
TO	:	Shane LaFave / Roers Companies, LLC
FROM	:	Pratap Singh, Ph.D., PE / KSingh
SUBJECT	:	Weekly Progress Report for Week Ending 07/01/2023 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 07/01/2023. 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.

Note that in the month of June, significant improvements have been made toward depressurization throughout the building, and reduction of TCE concentrations both inside the residential units as well as beneath the concrete slab. The three primary goals of acceptable indoor air quality standards, effective depressurization, and sub-slab TCE detections have shown dramatic improvements based on the corrective actions implemented in June 2023.

There are isolated areas which will require additional remediation. Efforts moving forward will focus on these areas and will include source removal, Biochar application, and supplemental fan installation. With the proposed improvements, we are confident that the Vapor Mitigation System's performance will be protective of public health and the environment.

Please see below for the tasks that were performed this week:

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. Attachment A is comprised of Figure 1 for reference of Unit locations and blowers, with the test results of TCE shown in Tables 1 to 5.

   A comprehensive data table of Indoor Air Monitoring Data for TCE is provided in Table 7 (Attachment C). Note that highlighted cell values in green indicate levels that are **lower** than the vapor risk screening levels for **residential** facilities. Graphs showing comprehensive data can be found in Attachment D. The findings of portable continuous and discrete testing for TCE are as follows:

- TCE detections ranged from 1.06 µg/m^3 to 3.21 µg/m^3 in Unit 1045 with an average of 2.68 µg/m^3.
- TCE detections ranged from 0.6 µg/m^3 to 2.54 µg/m^3 in Unit 1050 with an average of 1.38 µg/m^3.
- Continuous monitoring continues in Units 1045 and 1050 which are displayed in Attachment D in Figure 3. The continuous monitoring data shows a direct correlation with the barometric pressure and ambient temperature with the values of TCE.
- The increase in temperatures appeared to have aided the volatilization of TCE leading to higher ambient and sub-slab concentrations.
- TCE detections in Unit 1045 appear to have stabilized at ~2.5 µg/m^3 which requires additional corrective action implementation. See #1 of Action Items on Page 2 for further description of actions to be taken.
- TCE detections in Unit 1050 have fluctuated and this Unit will be assessed for further action given this week's data.
- Overall, there was a **significant decline** in the indoor air concentrations in all the residential and utility units on the 1st floor of buildings 1B-W, 1B-SW, and 1B-S. Almost **all units comply to the Vapor Action Levels (VAL) set forth by WDNR.**

2. Task #2 – Sub-Slab TCE Concentration Distribution

   Weekly readings of sub-slab vapor concentrations were recorded from the vapor pin installations to evaluate the magnitude and variation of sub-slab vapor contamination in the soil. Results include:

   - Sub-slab vapor concentrations taken from various locations saw a decline in the levels after installation of the Obar Fans in the 1B-NW Garage and 1B-S.
   - The majority of the areas on the first-floor exhibit lower values than the Vapor Risk Screening Level (VRSL) set forth by WDNR.
   - The values of sub-slab TCE can be observed in Appendix D (Table 8). A major hotspot can be observed in the areas between Units 1043 – 1050, extending the Laundry and Storage Room which will require additional response action.
   - In addition to this, the area outside the Electrical Room (1058) towards the southern part of the Gym has also demonstrated higher values likely due to volatilization.
   - The south-west section of the garage has high value of sub-slab TCE coupled with no vacuum making it another area of concern.

3. Task #3 – VMS Operations

   All seven blowers continue to function properly and the addition of Blowers 5, 6, and 7 have provided consistent indoor air quality results since their installation.

4. Task #4 – Depressurization

   The results of vacuum measurements are shown in Table 6 in Attachment B. Please note the following:

   - All the units and common areas in the East Block have demonstrated sufficient vacuum (> 0.01) except for Stairwell 4, SW Garage, and the N Mechanical Room as of June 30th.

- Figure 9 in Attachment E shows the correlation between sub-slab vapor TCE values and the corresponding vacuum levels at all the vapor pin installations. An improved positive correlation coefficient indicates that presence of higher vacuum would result in lower sub-slab TCE levels giving evidence of the efficient functioning of the VMS system (vacuum readings and sub-slab TCE levels are inversely proportional).

Action Items for Week of July 2, 2023 – July 8, 2023
KSingh plans to perform the following tasks in the upcoming week:

1. Complete work plan for additional remediation in Units 1043, 1044,1045, Shared Laundry Room, Storage Room and SW Garage in Building 1B, and North Mechanical Room in Building 2A, and potentially Unit 1050. The plan will include a combination of source removal, Biochar application, and supplemental radon fan installation to be submitted to WDNR on July 7, 2023.
2. Measure and mark area to be excavated in specified units.
3. Explore additional sealing of wooden columns given most recent data.
4. Continue discrete sampling in various units and common areas and add results to comprehensive data table.
5. Continue continuous sampling of Units 1045 and 1050.
6. Conduct vacuum measurements at strategic locations within the buildings daily.
7. Continue to measure sub-slab TCE concentrations on a weekly basis to evaluate the performance of the VMS.

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

- Attachment A: Summary of Monitoring Results by Date
    - Tables 1-5 – Indoor Air Monitoring Results by Date
- Attachment B/Table 6: Comprehensive Vacuum Measurements (inches H_2O)
- Attachment C/Table 7: Comprehensive Data Table – Indoor Air
- Attachment D/Table 8: Comprehensive Data Table – Sub-Slab Vapor TCE
- Attachment E: Figures 3-9 of TCE Levels through July 1, 2023

Attachment A
Monitoring Results by Date

Attachment A
Monitoring Results by Date
On-site EPA Method TO-14 Data

Instrument: SRI 8610 Gas Chromatograph with ECD

Operator: KSingh

Table 1: Indoor Air Monitoring Results from 06/26/2023

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)
IA - 927	1053	14:08	0.47	ND
IA - 928	1052	14:15	0.35	ND
IA - 929	1049	14:23	1.03	ND
IA - 930	1048	14:31	0	ND
IA - 931	1044	14:38	1.67	ND
IA - 932	1042	14:45	0.24	ND
IA - 933	1040	14:53	0.24	ND
IA - 934	1039	15:01	0.19	ND
IA - 935	1037	15:08	0	ND
IA - 936	1035	15:16	0	ND
IA - 937	Basketball 1	15:24	0.2	ND
IA - 938	1054	15:32	0.49	ND
IA - 939	Stairwell 4	15:39	0.2	ND
IA - 940	N Mechanical Room	15:47	2.86	ND
Reporting Limit (µg/m3)			0.6	0.6
ND Indicates Not Detected at listed reporting level				

Table 2: Indoor Air Monitoring Results from 06/27/2023

All samples from cracks in wooden columns in the respective units

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)
IA - 941	1045	12:15	22.7	ND
IA - 942	1050	12:25	4.24	ND
IA - 943	1042	12:34	ND	ND
IA - 944	1049	12:43	0.79	ND
IA - 945	1006	13:00	ND	ND
IA - 946	1025	13:07	ND	ND
IA - 947	2014	13:16	ND	ND
IA - 948	2045	13:27	ND	ND
IA - 949	2039	13:40	ND	ND
IA - 950	3039	13:49	ND	ND
IA - 951	3045	13:59	ND	ND
IA - 952	3014	14:07	ND	3.47
IA - 953	1044	14:15	2.53	ND
Reporting Limit (µg/m3)			0.6	0.6
ND Indicates Not Detected at listed reporting level				

Table 3: Sub-Slab Monitoring Results from 06/28/2023

File ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)
IA - 512	SSD 1	13:59	18.66	1.87
IA - 524	SSD 2	14:16	17.62	1.95
IA - 525	SSD 5	14:23	400.4	1.54
IA - 526	SSD 6	14:31	25.7	4.6
IA - 527	1053 VRSL	14:39	20.35	ND
IA - 528	Basketball 1 VRSL	14:47	120.15	11
IA - 529	SSD 7	14:55	11.7	0.66
IA - 530	1043 VRSL	15:04	134	240
Reporting Limit (µg/m3)			0.6	0.6
ND Indicates Not Detected at listed reporting level				

Table 4: Sub-Slab Monitoring Results from 06/29/2023

All samples from sub-surface taken from the vapor pins

Sample ID	Sample Location	Sample Time	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)
IA - 962	1055	13:15	13.5	ND
IA - 963	1054	13:25	0.483	ND
IA - 964	1053	13:35	55.7	ND
IA - 965	Oppo. 1054	13:49	46.9	ND
IA - 966	Stairwell 4	13:59	27.4	ND
IA - 967	1052	14:06	14.9	ND
IA - 968	1051	14:27	22.7	ND
IA - 969	1049	14:36	1.76	ND
IA - 970	1048	14:47	561	1.59
IA - 971	1050	14:57	265	ND
IA - 972	Out 1050	15:05	64.1	ND
IA - 973	1045	15:13	253	6.37
IA - 974	Out 1044	15:25	419	52.6
IA - 975	1043	15:33	7.92	16
IA - 976	1042	15:42	2.67	ND
IA - 977	1041	15:52	4.48	ND
IA - 978	1040	16:01	3.22	ND
IA - 979	Out 1040	16:10	3.1	ND

IA - 980	1039	16:21	15.2	ND
IA - 981	1037	16:31	11.04	3.29
IA - 982	1036	16:41	2.85	3.88
Reporting Limit (µg/m3)			0.6	0.6
ND Indicates Not Detected at listed reporting level				

Table 5: Sub-Slab Monitoring Results from 06/30/2023

All samples from sub-surface taken from the vapor pins				
Sample ID	Sample Location	Sample Time	TCE (µg/m^3)	PCE (µg/m^3)
IA - 983	1035	10:27	0.534	ND
IA - 984	Out 1035	10:36	73.2	2.52
IA - 985	1058 E	10:45	87	3.99
IA - 986	1058 W	10:55	ND	ND
IA - 987	1026	11:15	7.39	ND
IA - 988	1025	11:27	1.01	ND
IA - 989	1014	11:35	21.2	2.28
IA - 990	1011	11:44	1.5	0.771
IA - 991	SE Lobby	11:52	ND	ND
IA - 992	BB 1	13:10	25.1	12.1
IA - 993	BB 2	13:19	286	11.8
IA - 994	BB 3	14:46	0.733	1.21
IA - 995	BB 4	14:53	0.569	3.51
IA - 996	BB 5	15:02	27.5	4.05
IA - 997	NE Garage	15:27	9.87	ND
IA - 998	NW Garage	15:35	12.7	ND
IA - 999	N Mech Room	15:44	27.07	1.43
IA - 1000	SW Garage	15:52	300	0.831
IA - 1001	SE Garage	15:59	1.24	ND
IA - 1003	WB 102 Lobby	16:23	ND	ND
IA - 1004	WB 117 Mech Room	16:40	ND	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)

Note	Obar @ 75%				
Date	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun
Time	14:00	14:26	15:00	13:00	10:15
Location					
1055	-0.374	-0.372	-0.374	-0.371	-0.37
1054	-0.777	-0.776	-777	-0.765	-0.77
1053	-0.419	-0.41	-0.416	-0.423	-0.422
Oppo. 1054	-0.249	-0.238	-0.243	-0.054	-0.245
Stairwell 4	-0.005	-0.006	-0.006	-0.004	-0.003
1052	-0.761	-0.746	-0.763	-0.773	-0.765
1051	-0.186	-0.179	-0.181	-0.137	-0.17
1049	-0.189	-0.182	-0.184	-0.058	-0.183
1048	-0.088	-0.074	-0.086	-0.089	-0.085
1050	-0.099	-0.087	-0.094	-0.029	-0.086
Out 1050	-0.128	-0.11	-0.111	-0.112	-0.11
1045	-0.051	-0.053	-0.53	-0.021	-0.053
Out 1044	-0.133	-0.121	-0.126	-0.13	-0.129
1043	-0.027	-0.043	-0.033	-0.042	-0.039
1042	-0.029	-0.031	-0.031	-0.033	-0.032
1041	-0.149	-0.079	-0.116	-0.05	-0.075
1040	-0.046	-0.046	-0.048	-0.029	-0.051
Out 1040	-0.061	-0.081	-0.088	-0.072	-0.078
1039	-0.018	-0.018	-0.019	-0.006	-0.016
1037	-0.067	-0.054	-0.076	-0.08	-0.079
1036	-0.188	-0.199	-0.196	-0.2	-0.192
1035	-0.122	-0.101	-0.126	-0.111	-0.117
Out 1035	-0.04	-0.043	-0.04	-0.036	-0.038
1058 E	-0.079	-0.076	-0.077	-0.081	-0.073
1058 W	-0.117	-0.097	-0.119	-0.101	-0.099
1026	-0.136	-0.12	-0.133	-0.125	-0.139
1025	-0.066	-0.067	-0.064	-0.059	-0.076
1014	-0.218	-0.217	-0.218	-0.223	-0.222

1011	-0.059	-0.052	-0.055	-0.061	-0.064
SE Lobby	-0.562	-0.575	-0.566	-0.572	-0.577
BB 1	-0.024	-0.023	-0.024	-0.019	-0.023
BB 2	-0.015	-0.019	-0.016	-0.015	-0.02
BB 3	-0.057	-0.049	-0.048	-0.049	-0.048
BB 4	-0.022	-0.011	-0.024	-0.021	-0.024
BB 5	-0.029	-0.036	-0.026	-0.024	-0.032
SW Garage	0	0	0	0	0
SE Garage	-0.024	-0.037	-0.031	-0.029	-0.032
NW Garage	-0.019	-0.029	-0.022	-0.025	-0.035
NE Garage	-1.489	-1.553	-1.519	-1.544	-1.539
N Mech Room	0	0	0	0	0
Red highlighted cells indicate values below the desired level on -0.01 in H_2O					

Attachment C
Comprehensive Data Table – Indoor Air

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	15-Apr	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-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	106	181	147	8.5	22.4	7.4	7.8		4.7	17.7	2.7
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																		4.5				2.9
2nd Floor Stairwell 4		0																			12.4			
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																		11.2			
Basket Ball Court	0.3																				12			
Basket Ball Court 2	0																					7.5	6.3	
Basket Ball Court 3																								
Basket Ball Court 4																								
Elevator	0																							
Fitness Center										49.6	43.7		28.1							29.3				
Front Lobby		0																			4			
NW Garage	0.6																							
N Garage	0																					0		
SE Garage	0.8																							7.7
Hallway Outside 3021			0																					
Hallway Outside 3035			0																					
Hallway Outside 3065			0.7																					
N Mechanical Room										6.26	2.4	5.9	14.8	7	7.3	7.2	5.3	7.9		10	7	7.2	7.8	4.5
Men's Locker Room						60.7	123		122		428	82.9				161	131		23.7	28.3				
Women's Locker Room																								
Powerhouse																						0.7	3.2	
Unit 1002 - Postboxes																								
Unit 1006	0.3	0															4.3			1.4				
SSD Vent Pipe #1 - S - 7.5 HP			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	
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	57.8	20.5	21.1	19.8	21.4	20.9	20.7		20.6	28.5	
SSD Vent Pipe #3 - N - 7.5 HP					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	
SSD Vent Pipe #4 - N - 10 HP					41.2	29.5	33	39	37	38.7	39.1	29.3	44	41.9	36.8	38.2	35	42.8	43.1	46.3		5.7	44.4	
SW Garage																	11.3	21					20.3	
Stairwell 4	1.6					2.2			2.7	2.6				14.4			7							
Stairwell 6																								
Stairwell 7																								
Unit 1011																								
Unit 1014										0														
Unit 1025	0							0.96									3.6						4.8	
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										3.4			
Unit 1040	10.3			12.7							14.5					21.2	22.6							
Unit 1041	11.6							19.9		16.8	14.4													
Unit 1042	11.4									16.2	15.2											12.6		9.3
Unit 1043	17.6					21.6	31.3				24													
Unit 1044	56					77	95			69.7	84.5					85.8		45.6		53.3				
Unit 1045	350		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
Unit 1048																								
Unit 1049																								
Unit 1050	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
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			70.5			57.2	70.3		72		20.2
Unit 1056					24.8																	44		
Unit 1057																								
Unit 1058																								
Unit 1079																								
Unit 2014																								
Unit 2015																								
Unit 2016		0																						
Unit 2017		0																						
Unit 2022		0																						
Unit 2025		0																						
Unit 2036		0																			0			
Unit 2037		0																						
Unit 2039		0										2.5	2.5											
Unit 2040		0						0													0			
Unit 2042		0																						
Unit 2043	0.4	0																						
Unit 2044		0																						
Unit 2045	23	18				8		9	2.9			3.7	5.2											
Unit 2049																								
Unit 2056	60	52				42.2	24.7	49.2	9.6			3.4	6.6								1.5			
Unit 2057		4.7																						
Unit 2058	3.8	4.2				8.5			3.8															
Unit 2059	0.3	0																						
Unit 2061		0																						
Unit 2062		0																						
Unit 2064	0					1																		
Unit 2077	0					1.6																		
Unit 2111		0																						
Unit 3014																								

Sample Location	1-May	2-May	3-May	4-May	5-May	8-May	9-May	10-May	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	5-Jun	7-Jun	8-Jun	9-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	23-Jun	26-Jun
1045 Entry Floor Hole																																		
1045 North Wall																																		
1045 Wood Column																																		
1050 South Wall Hole																																		
1st Floor Hallway Center		14	9	3.5	2.3		3.49							21.2	3.48	5.39				2.38	3.6								0.24					
1st Floor Hallway North																																		
1st Floor Hallway South									0.947	1.92	1.96		0														0.4							
2081 Hallway																																		
2nd Floor Corridor North																																		
2nd Floor Corridor South																																		
2nd Floor Hallway Center								4.69			4.2									2.74							0.42							
2nd Floor Hallway North																																		
2nd Floor Hallway South																																		
Stairwell 2								4.15																										
2nd Floor Stairwell 4						7.19																												
2nd Floor Stairwell 8																																		
3rd Floor Corridor																																		
3rd Floor Hallway Center											1.7									1.71								0.47						
3rd Floor Hallway South																																		
3rd Floor Stairwell 2				2.35																														
Stairwell 3								3.9																			0.1		0.23					
3rd Floor Stairwell 4																																		
Basket Ball Court														1.84			8.96										2.65							0.2
Basket Ball Court 2		2.2		3	2.3	0.624			1.02					1.53			0																	
Basket Ball Court 3														1.56			0.536												0.24					
Basket Ball Court 4														0.816			0.734																	
Elevator																																		
Fitness Center								29				33.8	21	21	24.5	16.6		42.5	15.1		24.2		16.1	4.2		0.4			0.29	0.55				0.49
Front Lobby																																		
NW Garage													14			0.62												0.85	0					
N Garage										1.78			0.607		0	0.63		0.776											0.27					
SE Garage																6.6		0.6											0.23					
Hallway Outside 3021																																		
Hallway Outside 3035																																		
Hallway Outside 3065																																		
N Mechanical Room	13.7	11.5			10.1	10.9	11.8		6.89		10.7						0.737						1.5					7.7	3.4				2.2	2.86
Men's Locker Room	58	31.6					53.3				52.3	7.62							21.7							0.5				0.2			0.56	0.47
Women's Locker Room					45														25.8							0.4				0.5				
Powerhouse																																		
Unit 1002 - Postboxes																					0													
Unit 1006	2.97							2.4			1.7						0.737				0								0.21					
SSD Vent Pipe #1 - S - 7.5 HP	26.1	27.9			25.7		26.2		21.9				27.01		26.7			7.04				19.6						21.7						
SSD Vent Pipe #2 - S - 10 HP	1.2				20		15.7		18.7				18.2		19.3			11.1				33.8						18.4						
SSD Vent Pipe #3 - N - 7.5 HP	8.6				5.9		4.97		0				3.47		3.41			1.85				4.8												
SSD Vent Pipe #4 - N - 10 HP	38.3				37.7		22.4		4.83				31.1		21.9			4.7				20.2												
SW Garage	25.2			26.1		23.6	25.5		21.4				0.683	1.15	0	7.84													0.3				0.33	
Stairwell 4		12								6			9.03											3			0.34		0.24				0.33	0.2
Stairwell 6																																		
Stairwell 7																																		
Unit 1011								2.61	0																									
Unit 1014																					0						0.21						0	
Unit 1025																	1.1	0		0	0						0.31							
Unit 1026								1.67	0	0											0.7													
Unit 1035																					1.1						0.22						0.28	0.1
Unit 1036								1.37									4.59			2.37	1.2				6.9		0.26						0.3	
Unit 1037																						3.7					0.46						0.35	0.1
Unit 1039			1.4									5.18				6.06			1.19			8.1				0.7	0.3						0.27	0.19
Unit 1040								11.2	7.37			7.25							5.29			11.5				0.6								0.24
Unit 1041				13								7.07							9.13			10.9					0.51							
Unit 1042	15.5					11.9	13.1			8.22	13.6	6.61	0.53		1.42	5.16		3.88	10.1		5.3			4	19.2	0.8								0.24
Unit 1043												117							12.2			11.7					0.53			0.32			0.47	
Unit 1044												37.6							29.3			37.8		65.2	11.7	1.7				1.85			3.2	1.67
Unit 1045	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		103	26	23.3		14.4	2.4	5.26	3.84	3.33	2.99	2.88	2.57		
Unit 1048										86.2							45.7						121	19.8	13.5	0.33				0.43			0.72	0.1
Unit 1049					142			159		96.9							66.1		21.4			30.3	21.8	23.6		1.2				0.58			2.5	1.03
Unit 1050	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		116	78.4	60.4	27.3	10.3	3.4	3.05	2.28	1.95	2.12	2.17	1.62		
Unit 1051												52.7						39.8	18.2				16.9				0.76			0.38				
Unit 1052	73.6	62.6	340		76		70.7					55.7					32		16.8			21.1	14.5			0.23				0.36				0.35
Unit 1056																							14.6											
Unit 1057																					0													
Unit 1058																	1.46			0									0.21				0.34	
Unit 1079											152																							
Unit 2014			48.8							0																		0.35						
Unit 2015								0.77																										
Unit 2016																																		
Unit 2017																																		
Unit 2022																																		
Unit 2025																																		
Unit 2036																																		
Unit 2037																																		
Unit 2039								0.77																										
Unit 2040																																		
Unit 2042				2.5																														
Unit 2043																																		
Unit 2044																																		
Unit 2045			19.1			1.36					0.99			1.97		2.99				11.8							0.52							
Unit 2049										1.07																								
Unit 2056											1.11			5.89		11.5				66.4							1							
Unit 2057						1.24			0.64																									
Unit 2058				2.9																														
Unit 2059																																		
Unit 2061																																		
Unit 2062																																		
Unit 2064						1.78																												
Unit 2077				1.7		0.838																												
Unit 2111																		0																
Unit 3014																												0.35						

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								0.22						
Unit 3057		0																												0																						0.3						
Unit 3058			0																																																							
Unit 3059			0																																																							
Unit 3061			0																																																							
Unit 3062			0																																																							
Unit 3063																														0																												
Unit 3092																													1.67																													

Attachment D

Table 8: Comprehensive Data Table – Sub-Slab Vapor TCE

Green cells indicate the VRSL levels below the DNR limit of 70 ug/m3					
Location	**Location Ref.**	**Week of 6/3**	**Week of 6/17**	**Week of 6/24**	**Week of 7/1**
1055	Women's Locker Room		46.5	17.3	13.5
1054	Fitness Room	596	0.8	4.8	0.483
1053	Men's Locker Room		102.3	71.31	55.7
Oppo. 1054			58.9	55.6	46.9
Stairwell 4			252.5	6.3	27.4
1052	Mechanical Room		63.9	38.1	14.9
1051			47.3	32.4	22.7
1049	Storage Room	426	2.6	3.38	1.76
1048	Laundry Room	322	679	572	561
1050		1443	303.4	377	265
Out 1050		971	113.1	10.1	64.1
1045		750	271.6	206	253
Out 1044		456	380.5	364	419
1043			178.5	185	7.92
1042		11.8	15.93	10.4	2.67
1041			108.7	13.2	4.48
1040		1.6	11.7	16.1	3.22
1040 - out				21.3	3.1
1039		23.5	62.2	4.3	15.2
1037			240.4	4.3	11.04
1036			17.2	5.5	2.85
1035			0.8	7	0.534
1035 - out			87	55.4	73.2
1058 E	Electric Room		433.8	1.5	87
1058 W	Electric Room		73.3	6.99	0.1
1026			16.7	6.6	7.39

1025			2.2	2.1	1.01
1014			23.9	2.2	21.2
1011	Conference Room		17.5	1.6	1.5
SE Lobby	Near Exit	**328**	0.46	0.5	0.1
BB 1	SW of the Gym			73	25.1
BB 2	South part of the Gym		30.8	1.5	286
BB 3	SE part of the Gym		2.2	1.6	0.733
BB 4	N of the Gym		2.6	1.9	0.569
BB 5	Center of the Gym		58.9	1.9	27.5
SE Garage			10.3	1.6	1.24
SW Garage			227.4	63.7	300
NE Garage			24.8	2.8	9.87
NW Garage			141.5	4.7	12.7
N Mech Room			60.2	147	27.07

Attachment E
Figures of TCE Levels through July 1, 2023

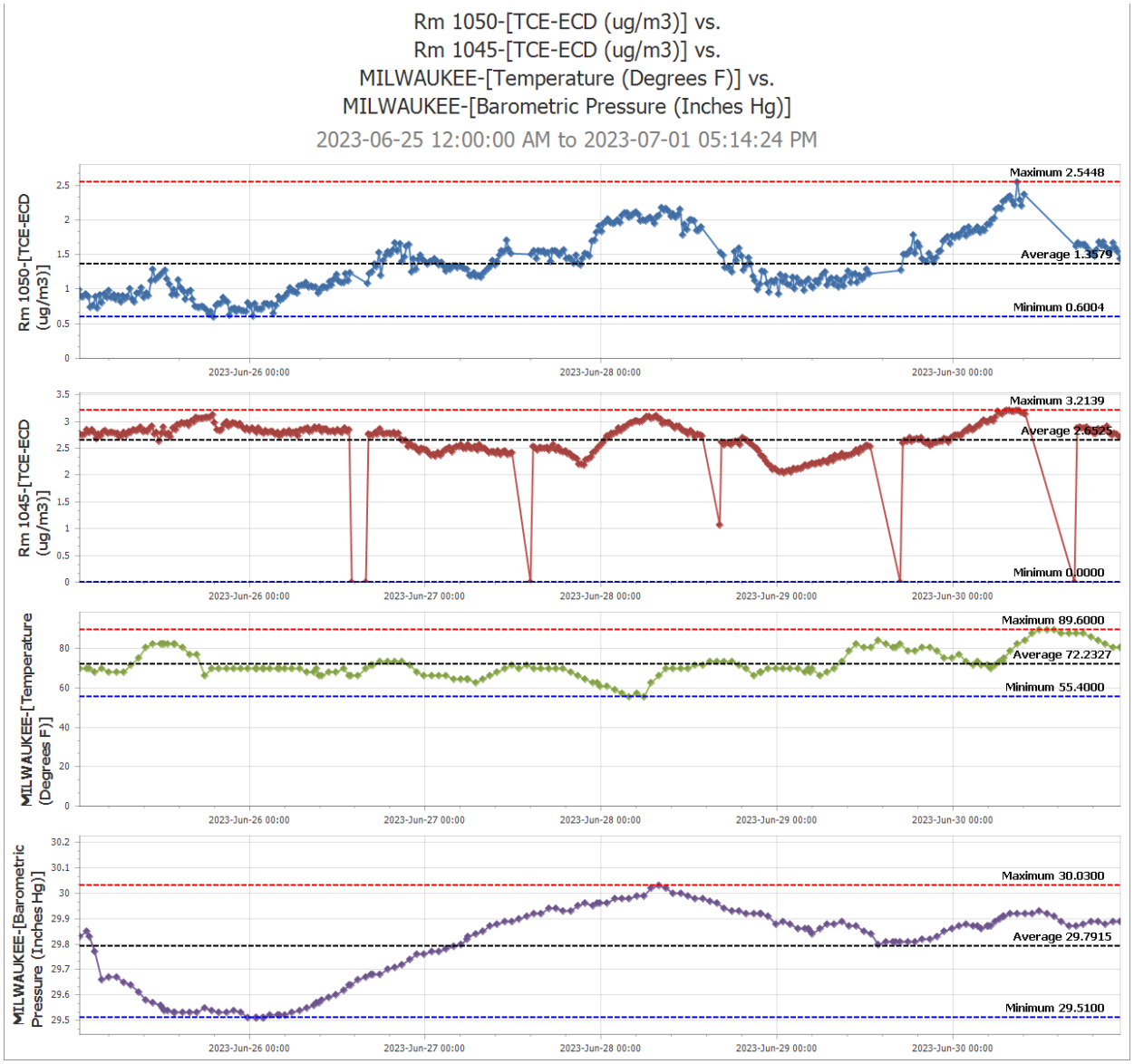

Figure 3 – Continuous Monitoring Data for Units 1045 and 1050 since June 18, 2023

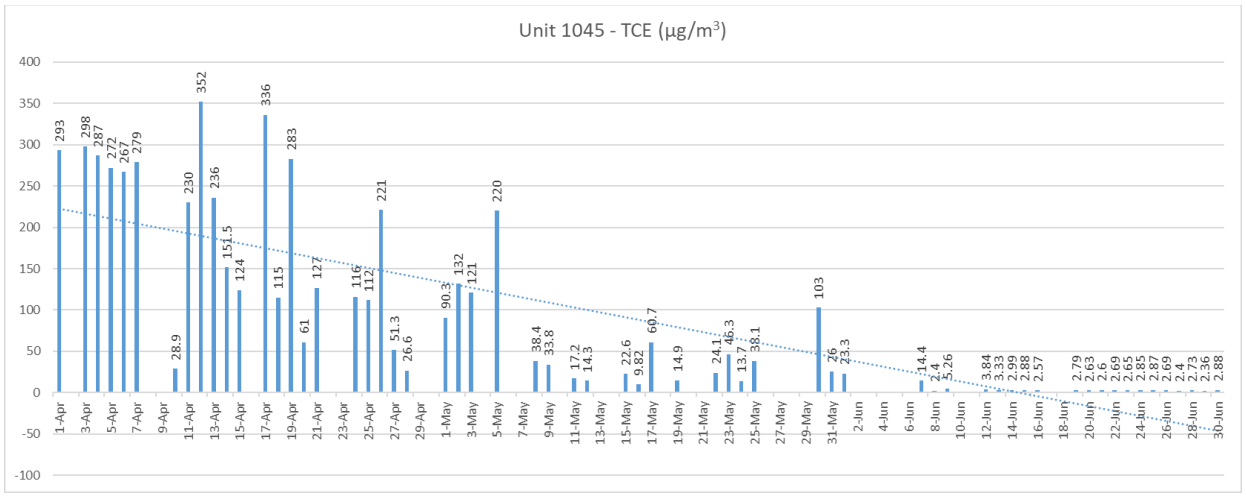

Figure 4 – YTD Data of TCE Concentration in Unit 1045

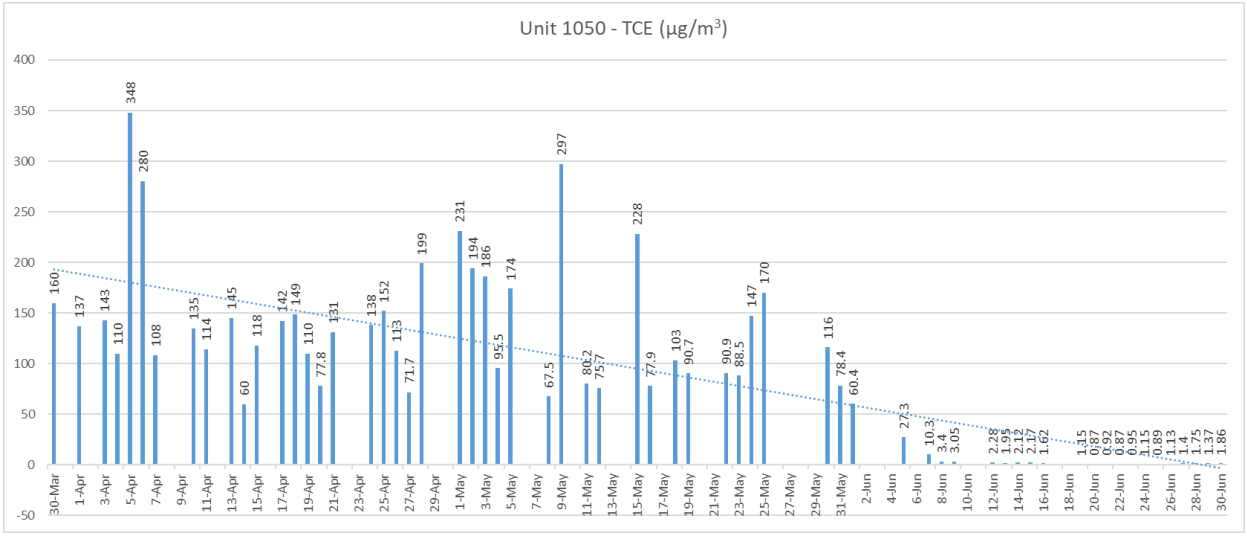

Figure 5 – YTD Data of TCE Concentration in Unit 1050

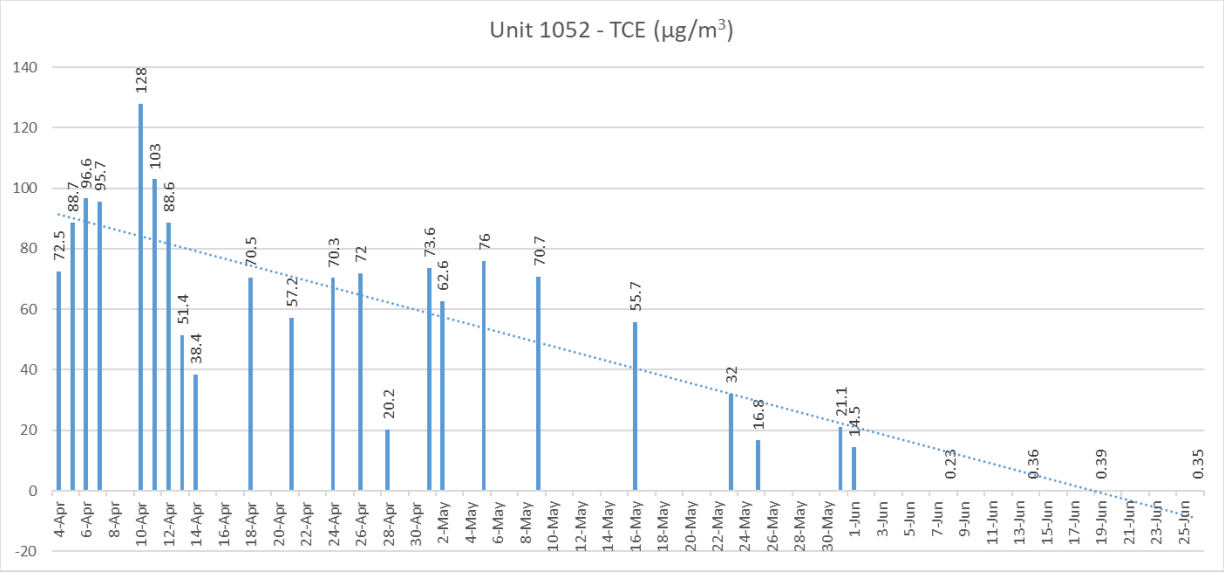

Figure 6 – YTD Data of TCE Concentration in Unit 1052

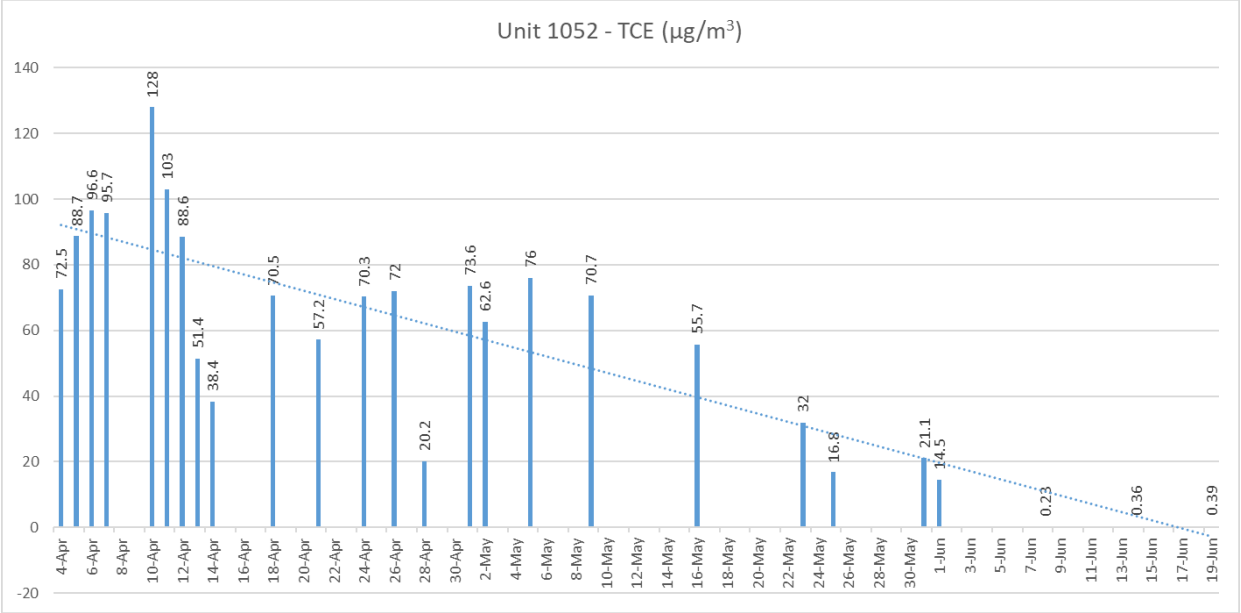

Figure 7 – YTD Data of TCE Concentration in 1st Floor Hallway

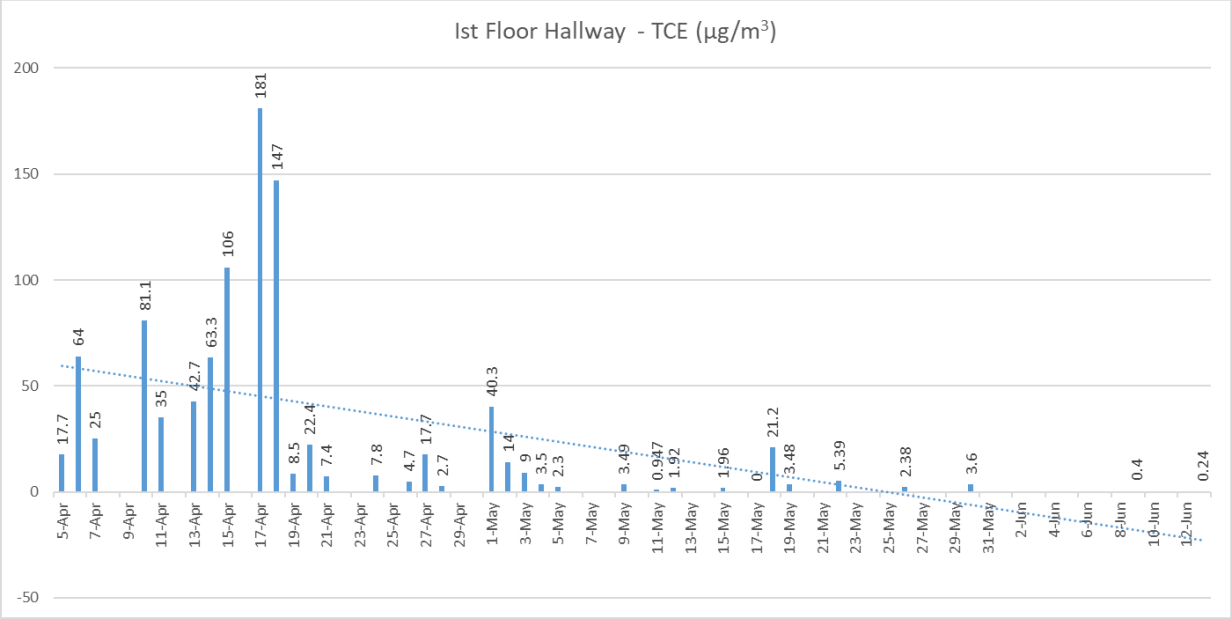

Figure 8 – YTD Data of TCE Concentration in 1st Floor Hallway

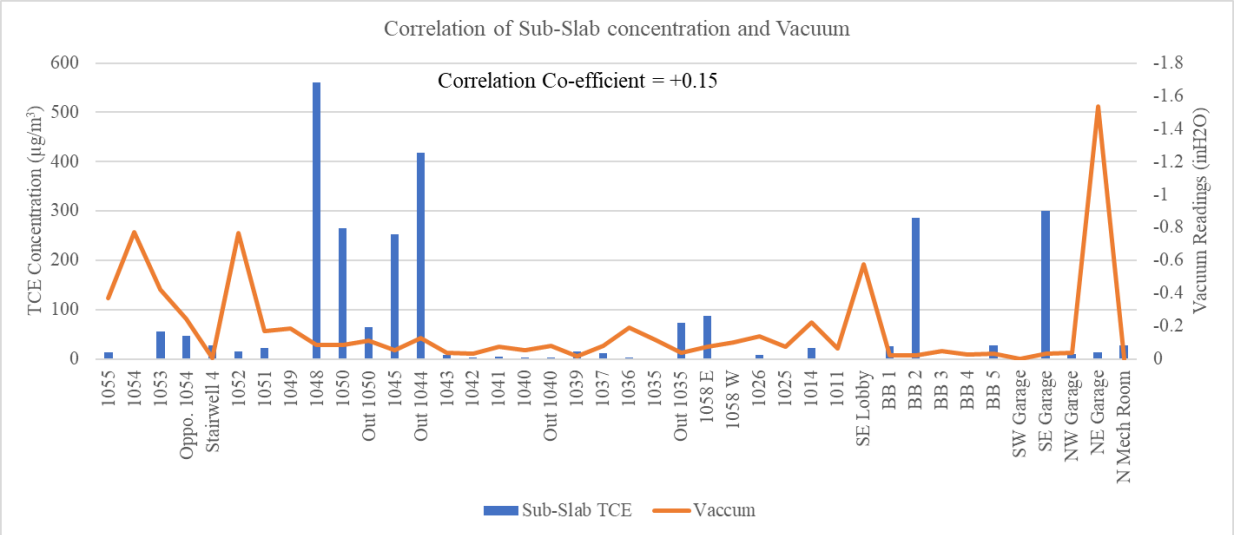

Figure 9 – Correlation of TCE Concentration with Vacuum Measurements