

## MEMORANDUM

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DATE : April 15, 2023

TO : Shane LaFave / Roers Companies, LLC

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

SUBJECT : Weekly Progress Report for Week Ending 4/15/2023  
Community Within the Corridor - East Block

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

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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 4/15/2023. 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.

Three basic tasks were performed this week which are summarized below:

1. Task #1 – GC Testing by KSingh & Hartman

Hartman in association with KSingh continues to work on conducting gas chromatograph (GC) testing for measurement of TCE in various units of the East Block between the first and the third floors. 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. The findings of portable discrete testing for TCE are as follows:

- Floor 1 has the highest concentrations of TCE particularly in and around Units 1045 – 1052. The highest TCE was detected at 236 ug/m<sup>3</sup> and 135 ug/m<sup>3</sup> in Units 1045 and 1050.
- The concentrations are observed to reduce both vertically as we ascend floors, and horizontally as we move away from Units 1045 and 1050.
- TCE was detected at 43 ug/m<sup>3</sup> and 81 ug/m<sup>3</sup> in the Men's Locker Room (1053) and First Floor hallway respectively.
- The fitness center concentrations ranged from 28 ug/m<sup>3</sup> to 52 ug/m<sup>3</sup>.
- The North Mechanical Room concentrations ranged from 2.4 ug/m<sup>3</sup> to 15 ug/m<sup>3</sup>.
- Units 2045, 2056, and 2058 had TCE concentrations 3, 10 and 4 ug/m<sup>3</sup> respectively.
- Units 3037 and 3056 had TCE concentrations of 6 and 1 ug/m<sup>3</sup> respectively.
- The pillars/columns in units 1045 and 1050 had TCE concentrations ranging from 352 to 963 ug/m<sup>3</sup>. The concentrations persisted in columns on 2<sup>nd</sup> and 3<sup>rd</sup> floors but at lower levels.
- All four blowers are functioning properly and discharge from the blowers show source removal.

2. Task #2 – Additional Testing Using Summa Canisters

Five Summa Canister samples were taken from units 1045, 1050, 2056, and 3056 and from stairwell 2, level 2 on April 1, 2023. Test results are attached in Attachment B. Test results for TCE were 360 ug/m<sup>3</sup> and 620 ug/m<sup>3</sup> in units 1045 and 1050. The test result for unit 2056 was 66 ug/m<sup>3</sup>. The test result for TCE from Stairwell 2, Level 2 was 14.2 ug/m<sup>3</sup>. Similarly, the test result for unit 3056 was 2.6 ug/m<sup>3</sup>. These test results indicate an exponential decrease in the levels of TCE from 1<sup>st</sup> floor to 3<sup>rd</sup> floor.

3. Task #3 – Development of Emergency Corrective Action Plan

An emergency corrective action plan is being prepared and will be submitted to WDNR in the week beginning April 16, 2023.

4. Task #4 – Peer Review by NRPP-Certified Radon Expert

CWC retained Patriot Engineering and Environmental, Inc. from Indianapolis to provide peer review services for the project. A conference call was held on April 12, 2023. Patriot has reviewed the VMS system design, VMS pilot scale data, VMS commissioning data, and the issues log. Note Patriot did not have comments on the system design. During this meeting, the proposed plan of corrective action was discussed. The submitted corrective action plan will include input from Patriot.

5. Task #5 – VMS Operations and Troubleshooting

The following tasks were performed:

- Discrete sampling using portable GC was performed this week to monitor TCE concentrations in strategic units in the complex.
- A site visit was conducted early in the week with a representative of CWC to describe the operations of the VMS and the approach to sealing activities.
- All four blowers are functioning. Fliteway Technologies and KSingh are monitoring the operations of the VMS. Periodic removal of water from knockout tanks is conducted. Water is stored in 55-gallon drums temporarily and we are arranging for disposal of water pending test results.
- Storm water inflow into the building has been identified as an issue that needs to be resolved.
- KSingh staff continued to document the impacted areas for visible potential pathways for vapor to migrate into the various units. These visual observations included gaps between masonry walls and flooring, cracks and holes in the flooring and walls, open pipes and cracked wood columns. These areas of concern have been provided to CWC in order to implement sealing of the cracks. Sids Sealing is performing sealing services in coordination with CWC and KSingh. An Issues Log is attached for reference in Attachment C and includes progress/status toward resolving these issues.
- Because of widespread detection of TCE in wooden columns and bare brick walls, an option to seal the columns, and bare walls is being explored with Land Science.
- Areas accessible for water extraction were identified and will be included in the proposed corrective action plan.
- The west section of the VMS piping with low vacuum readings and elevated TCE readings was identified and a plan for isolating the piping section is in progress.
- Installation of Radon fans and their locations were recommended, and the plan is being evaluated by Patriot Engineering.

### **Action Items for Week of April 16 – 22, 2023**

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

1. Continue discrete sampling in the various impacted units
2. Assist CWC in gathering as built drawings for submittal to WDNR on 4/21/2023. Horner Plumbing is assisting in gathering as built drawings.
3. Continue working with CWC to address issues documented in the issues log
4. Conduct vacuum measurements at strategic locations within the buildings.
5. Send an Emergency Corrective Action Plan to WDNR with input from Patriot Engineering & Environmental, Inc.
6. Identify access areas in order to extract excess water.
7. CWC to assess storm water inflow into the building that is impacting the effectiveness of the blowers.
8. Identify and lineup contractors to perform construction services while WDNR is reviewing the proposed corrective action plan.

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 4/10/2023**

Sample ID	Sample Location	Sample Time	TCE ( $\mu\text{g}/\text{m}^3$ )	PCE ( $\mu\text{g}/\text{m}^3$ )	Comments
IA - 165	Unit 1045	13:14	38.9	ND	
IA - 166	Unit 1050	13:22	135	ND	
IA - 167	1st Floor Hallway Center	13:30	81.1	1.22	
IA - 168	Unit 1052	13:38	128	ND	
IA - 169	Unit 1039	13:46	11	ND	
IA - 170	Unit 2045	13:54	2.9	ND	
IA - 171	Unit 2056	14:02	9.6	ND	
IA - 172	Unit 2058	14:10	3.8	ND	
IA - 173	Unit 3037	14:18	5.13	ND	
IA - 174	Unit 3056	14:26	0.9	ND	
IA - 175	Stairwell 4	14:34	2.7	ND	
IA - 176	Men's Locker Room	14:42	122	ND	
IA - 177	SSD 1 - South 7.5 HP	14:50	26.7	56.4	
IA - 178	SSD 2 - South 10 HP	15:00	44.4	46.9	
IA - 179	SSD 3 - North 7.5 HP	15:20	3.3	1	
IA - 180	SSD 4 - North 10 HP	15:30	37	19.2	
Reporting Limit ( $\mu\text{g}/\text{m}^3$ ):			0.6	0.6	

**Table 2: Monitoring Results from 4/11/2023**

Sample ID	Sample Location	Sample Time	TCE ( $\mu\text{g}/\text{m}^3$ )	PCE ( $\mu\text{g}/\text{m}^3$ )	Comments
IA - 181	Unit 1014	8:30	ND	ND	
IA - 182	Unit 1026	8:38	ND	ND	
IA - 183	Unit 1052	8:46	103	ND	
IA - 184	Unit 1037	8:54	0.9	ND	
IA - 185	Unit 1039	9:02	11.4	ND	
IA - 186	Unit 1041	9:10	16.8	ND	
IA - 187	Unit 1042	9:18	16.2	ND	
IA - 188	Unit 1044	9:26	69.7	ND	
IA - 189	Unit 1051	9:34	22.8	ND	
IA - 190	SSD 1 - South 7.5 HP	9:53	26.2	5.7	
IA - 191	SSD 2 - South 10 HP	10:02	19.5	6.1	
IA - 192	SSD 3 - North 7.5 HP	10:18	3	ND	
IA - 193	SSD 4 - North 10 HP	10:26	38.7	1.3	
IA - 194	1st Floor Hallway Center	10:34	35	ND	
IA - 195	Stairwell 4	10:42	2.6	ND	
IA - 196	Unit 1050	11:20	114	ND	
IA - 197	Unit 1050 Pillar	11:28	963	ND	
IA - 198	Unit 1045	13:11	230	ND	
IA - 199	N Mechanical Room	13:40	6.26	0.97	
IA - 200	Fitness Center	13:50	49.6	ND	
IA - 201	N Mechanical Room	17:55	2.4	2.4	
IA - 202	Fitness Center	18:03	51.5	ND	
Reporting Limit ( $\mu\text{g}/\text{m}^3$ ):			0.6	0.6	

ND Indicates Not Detected at listed reporting level

**Table 3: Monitoring Results from 4/12/2023**

Sample ID	Sample Location	Sample Time	TCE ( $\mu\text{g}/\text{m}^3$ )	PCE ( $\mu\text{g}/\text{m}^3$ )	Comments
IA – 203	Fitness Center	9:32	43.7	ND	
IA – 204	N Mechanical Room	9:41	2.4	1.3	
IA – 205	Unit 1052 - Open Pipe	9:50	88.6	ND	
IA – 206	Unit 1052 - Water Pipe	9:59	54.2	ND	
IA – 207	Unit 1045 - Pillar	10:08	352	1.4	
IA – 208	Unit 1050 - Pillar	10:17	706	2.1	
IA – 209	Unit 1044 - Pillar	10:26	92	0.7	
IA – 210	Bldg 1B - East Corridor	10:35	1.4	ND	
IA – 211	Unit 1011 - Conference Room	10:44	4.4	ND	
IA – 212	Unit 1039 - Pillar	10:53	8	ND	
IA – 213	Unit 1040 - Pillar	11:02	14.5	ND	
IA – 214	Unit 1041 - Pillar	11:11	14.4	ND	
IA – 215	Unit 1042 - Pillar	11:20	15.2	ND	
IA – 216	SSD 1 – South 7.5 HP	11:29	28	3.7	
IA – 217	SSD 2 – South 10 HP	11:38	19	3.7	
IA – 218	SSD 3 – North 7.5 HP	11:47	4.3	ND	
IA – 219	SSD 4 – North 10 HP	11:56	39.1	0.8	
IA – 220	Unit 1043	12:05	24	ND	
IA – 221	Unit 1044	12:14	84.5	ND	
IA – 222	Unit 1051	12:23	45.3	ND	
IA – 223	Men's Locker Room (1053)	12:32	428	0.63	
Reporting Limit ( $\mu\text{g}/\text{m}^3$ ):			0.6	0.6	
ND Indicates Not Detected at listed reporting level					

**Table 4: Monitoring Results from 4/13/2023**

Sample ID	Sample Location	Sample Time	TCE ( $\mu\text{g}/\text{m}^3$ )	PCE ( $\mu\text{g}/\text{m}^3$ )	Comments
10 ppbv			9.9 ppbv		
IA – 224	Unit 1045	12:03	236.6	ND	
IA – 225	Unit 1050	12:11	145.2	ND	
IA – 226	Unit 1052	12:19	51.4	ND	
IA – 227	Men's Locker Room - 1053	12:27	28.9	ND	
IA – 228	Fitness Center	12:35	46	ND	
IA – 229	N Mechanical Room	12:43	5.9	ND	
IA – 230	Unit 1039 - Pillar	12:51	12.3	ND	
IA – 231	Stairwell 4	13:07	11.3	ND	
IA – 232	1st Floor Hallway	13:15	42.7	ND	
IA – 233	SSD 1 – South 7.5 HP	13:44	28	3.4	
IA – 234	SSD 2 – South 10 HP	13:53	47.7	3.7	
IA – 235	SSD 3 – North 7.5 HP	14:17	11.9	ND	
IA – 236	SSD 4 – North 10 HP	14:25	29.3	0.6	
IA – 237	Unit 2045 - Pillar	14:33	3.7	ND	
IA – 238	Unit 2056 - Pillar	14:41	3.4	ND	
IA – 239	Unit 2039 - Pillar	14:49	2.5	ND	
IA – 240	2nd Floor Hallway	14:57	3	ND	
IA – 241	Unit 3045	15:05	2.7	ND	
IA – 242	Unit 3056	15:13	2.4	ND	
IA – 243	3rd Floor Hallway	15:21	3.3	ND	
Reporting Limit ( $\mu\text{g}/\text{m}^3$ ):			0.6	0.6	
ND Indicates Not Detected at listed reporting level					

**Table 5: Monitoring Results from 4/14/2023**

Sample ID	Sample Location	Sample Time	TCE ( $\mu\text{g}/\text{m}^3$ )	PCE ( $\mu\text{g}/\text{m}^3$ )	Comments
10 ppbv			9.9 ppbv		
IA – 244	Unit 1045	8:20	151.5	ND	
IA – 245	Unit 1050	8:28	60	ND	
IA – 246	Unit 1052	8:36	38.4	ND	
IA – 247	Fitness Center	8:44	28.1	ND	
IA – 248	1st Floor Hallway	8:55	63.3	ND	
IA – 249	SSD 3 – North 7.5 HP	9:09	7.17	ND	
IA – 250	SSD 4 – North 10 HP	9:55	44	0.86	
IA – 251	SSD 1 – South 7.5 HP	10:02	30.3	2.7	
IA – 252	SSD 2 – South 10 HP	10:22	29.3	3.3	
IA – 253	N Mechanical Room	10:30	14.8	ND	
IA – 254	Unit 2039 - Pillar	10:38	2.5	ND	
IA – 255	2nd Floor Hallway	10:48	3.6	ND	
IA – 256	Unit 2045 - Pillar	10:56	5.2	ND	
IA – 257	Unit 2056 - Pillar	11:04	6.6	ND	
IA – 258	Unit 3039 - Pillar	11:12	1.8	ND	
IA – 259	3rd Floor Hallway	11:20	2	ND	
IA – 260	Unit 3045 - Pillar	11:28	2.7	ND	
IA – 261	Unit 3056 - Pillar	11:36	2.4	ND	
Reporting Limit ( $\mu\text{g}/\text{m}^3$ )			0.6	0.6	
ND Indicates Not Detected at listed reporting level					

Attachment B  
Summa Canister Laboratory Report



# Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

ROBERT REINEKE  
K SINGH & ASSOCIATES  
3636 N. 124TH STREET  
MILWAUKEE, WI 53222

Report Date 10-Apr-23

Project Name CWC-EAST BLOCK  
Project # 40441B

Invoice # E42233

Lab Code 5042233A  
Sample ID ROOM 1050  
Sample Matrix Air  
Sample Date 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	46	ug/m3	0.299	0.95	1	TO-15		4/7/2023	CJR	1
Benzene	1.02	ug/m3	0.136	0.433	1	TO-15		4/7/2023	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		4/7/2023	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		4/7/2023	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		4/7/2023	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		4/7/2023	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		4/7/2023	CJR	1
Carbon Disulfide	0.56	ug/m3	0.138	0.44	1	TO-15		4/7/2023	CJR	1
Carbon Tetrachloride	0.57 "J"	ug/m3	0.307	0.978	1	TO-15		4/7/2023	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		4/7/2023	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		4/7/2023	CJR	1
Chloroform	0.68 "J"	ug/m3	0.3	0.953	1	TO-15		4/7/2023	CJR	1
Chloromethane	1.28 "J"	ug/m3	0.831	2.64	1	TO-15		4/7/2023	CJR	1
Cyclohexane	0.96	ug/m3	0.212	0.674	1	TO-15		4/7/2023	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		4/7/2023	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		4/7/2023	CJR	1
Dichlorodifluoromethane	2.52	ug/m3	0.263	0.836	1	TO-15		4/7/2023	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		4/7/2023	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		4/7/2023	CJR	1
trans-1,2-Dichloroethene	0.67 "J"	ug/m3	0.231	0.734	1	TO-15		4/7/2023	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		4/7/2023	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		4/7/2023	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		4/7/2023	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		4/7/2023	CJR	1

Project Name CWC-EAST BLOCK  
Project # 40441B

Invoice # E42233

Lab Code 5042233A  
Sample ID ROOM 1050  
Sample Matrix Air  
Sample Date 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		4/7/2023	CJR	1
Ethanol	109	ug/m3	1.52	4.82	10	TO-15		4/7/2023	CJR	1
Ethyl Acetate	0.90	ug/m3	0.176	0.559	1	TO-15		4/7/2023	CJR	1
Ethylbenzene	1.17	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
4-Ethyltoluene	0.34 "J"	ug/m3	0.214	0.681	1	TO-15		4/7/2023	CJR	1
Heptane	1.72	ug/m3	0.265	0.845	1	TO-15		4/7/2023	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		4/7/2023	CJR	1
Hexane	3.7	ug/m3	0.235	0.748	1	TO-15		4/7/2023	CJR	1
2-Hexanone	0.78	ug/m3	0.222	0.707	1	TO-15		4/7/2023	CJR	1
Isopropyl Alcohol	8.9	ug/m3	0.109	0.347	1	TO-15		4/7/2023	CJR	1
Methyl ethyl ketone (MEK)	11	ug/m3	0.178	0.567	1	TO-15		4/7/2023	CJR	1
Methyl isobutyl ketone (MIBK)	1.84	ug/m3	0.168	0.536	1	TO-15		4/7/2023	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		4/7/2023	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		4/7/2023	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		4/7/2023	CJR	1
Naphthalene	0.78 "J"	ug/m3	0.675	2.15	1	TO-15		4/7/2023	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		4/7/2023	CJR	1
Styrene	0.89	ug/m3	0.181	0.577	1	TO-15		4/7/2023	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		4/7/2023	CJR	1
Tetrachloroethene	0.81 "J"	ug/m3	0.278	0.884	1	TO-15		4/7/2023	CJR	1
Tetrahydrofuran	3.7	ug/m3	0.131	0.417	1	TO-15		4/7/2023	CJR	1
Toluene	3.9	ug/m3	0.184	0.585	1	TO-15		4/7/2023	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		4/7/2023	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		4/7/2023	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		4/7/2023	CJR	1
Trichloroethene (TCE)	360	ug/m3	2.37	7.54	10	TO-15		4/7/2023	CJR	1
Trichlorofluoromethane	1.57	ug/m3	0.337	1.07	1	TO-15		4/7/2023	CJR	1
Trichlorotrifluoroethane	0.54 "J"	ug/m3	0.402	1.28	1	TO-15		4/7/2023	CJR	1
1,2,4-Trimethylbenzene	1.47	ug/m3	0.283	0.899	1	TO-15		4/7/2023	CJR	1
1,3,5-Trimethylbenzene	0.44 "J"	ug/m3	0.232	0.739	1	TO-15		4/7/2023	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		4/7/2023	CJR	1
m&p-Xylene	4.6	ug/m3	0.377	1.2	1	TO-15		4/7/2023	CJR	1
o-Xylene	1.91	ug/m3	0.218	0.695	1	TO-15		4/7/2023	CJR	1

Project Name CWC-EAST BLOCK  
 Project # 40441B

Invoice # E42233

Lab Code 5042233B  
 Sample ID ROOM 1045  
 Sample Matrix Air  
 Sample Date 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	55	ug/m3	0.299	0.95	1	TO-15		4/7/2023	CJR	1
Benzene	0.99	ug/m3	0.136	0.433	1	TO-15		4/7/2023	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		4/7/2023	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		4/7/2023	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		4/7/2023	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		4/7/2023	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		4/7/2023	CJR	1
Carbon Disulfide	0.37 "J"	ug/m3	0.138	0.44	1	TO-15		4/7/2023	CJR	1
Carbon Tetrachloride	0.57 "J"	ug/m3	0.307	0.978	1	TO-15		4/7/2023	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		4/7/2023	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		4/7/2023	CJR	1
Chloroform	1.36	ug/m3	0.3	0.953	1	TO-15		4/7/2023	CJR	1
Chloromethane	1.24 "J"	ug/m3	0.831	2.64	1	TO-15		4/7/2023	CJR	1
Cyclohexane	0.275 "J"	ug/m3	0.212	0.674	1	TO-15		4/7/2023	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		4/7/2023	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		4/7/2023	CJR	1
Dichlorodifluoromethane	2.62	ug/m3	0.263	0.836	1	TO-15		4/7/2023	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		4/7/2023	CJR	1
cis-1,2-Dichloroethene	0.198 "J"	ug/m3	0.197	0.626	1	TO-15		4/7/2023	CJR	1
trans-1,2-Dichloroethene	0.87	ug/m3	0.231	0.734	1	TO-15		4/7/2023	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		4/7/2023	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		4/7/2023	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		4/7/2023	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		4/7/2023	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		4/7/2023	CJR	1
Ethanol	91	ug/m3	1.52	4.82	10	TO-15		4/7/2023	CJR	1
Ethyl Acetate	4.7	ug/m3	0.176	0.559	1	TO-15		4/7/2023	CJR	1
Ethylbenzene	1.39	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
4-Ethyltoluene	0.39 "J"	ug/m3	0.214	0.681	1	TO-15		4/7/2023	CJR	1
Heptane	0.94	ug/m3	0.265	0.845	1	TO-15		4/7/2023	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		4/7/2023	CJR	1
Hexane	3.3	ug/m3	0.235	0.748	1	TO-15		4/7/2023	CJR	1
2-Hexanone	0.41 "J"	ug/m3	0.222	0.707	1	TO-15		4/7/2023	CJR	1
Isopropyl Alcohol	10	ug/m3	0.109	0.347	1	TO-15		4/7/2023	CJR	1
Methyl ethyl ketone (MEK)	20.5	ug/m3	0.178	0.567	1	TO-15		4/7/2023	CJR	1
Methyl isobutyl ketone (MIBK)	1.88	ug/m3	0.168	0.536	1	TO-15		4/7/2023	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		4/7/2023	CJR	1
Methylene chloride	41	ug/m3	0.159	0.506	1	TO-15		4/7/2023	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		4/7/2023	CJR	1
Naphthalene	0.78 "J"	ug/m3	0.675	2.15	1	TO-15		4/7/2023	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		4/7/2023	CJR	1
Styrene	0.64	ug/m3	0.181	0.577	1	TO-15		4/7/2023	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		4/7/2023	CJR	1
Tetrachloroethene	1.49	ug/m3	0.278	0.884	1	TO-15		4/7/2023	CJR	1
Tetrahydrofuran	6.0	ug/m3	0.131	0.417	1	TO-15		4/7/2023	CJR	1

**Project Name** CWC-EAST BLOCK  
**Project #** 40441B

**Invoice #** E42233

**Lab Code** 5042233B  
**Sample ID** ROOM 1045  
**Sample Matrix** Air  
**Sample Date** 4/1/2023

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
Toluene	2.52	ug/m3	0.184	0.585	1	TO-15		4/7/2023	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		4/7/2023	CJR	1
1,1,1-Trichloroethane	0.38 "J"	ug/m3	0.249	0.793	1	TO-15		4/7/2023	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		4/7/2023	CJR	1
Trichloroethene (TCE)	620	ug/m3	2.37	7.54	10	TO-15		4/7/2023	CJR	1
Trichlorofluoromethane	1.69	ug/m3	0.337	1.07	1	TO-15		4/7/2023	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		4/7/2023	CJR	1
1,2,4-Trimethylbenzene	1.72	ug/m3	0.283	0.899	1	TO-15		4/7/2023	CJR	1
1,3,5-Trimethylbenzene	0.49 "J"	ug/m3	0.232	0.739	1	TO-15		4/7/2023	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		4/7/2023	CJR	1
m&p-Xylene	5.7	ug/m3	0.377	1.2	1	TO-15		4/7/2023	CJR	1
o-Xylene	2.82	ug/m3	0.218	0.695	1	TO-15		4/7/2023	CJR	1

Project Name CWC-EAST BLOCK  
 Project # 40441B

Invoice # E42233

Lab Code 5042233C  
 Sample ID ROOM 3056  
 Sample Matrix Air  
 Sample Date 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	26.8	ug/m3	0.299	0.95	1	TO-15		4/7/2023	CJR	1
Benzene	0.73	ug/m3	0.136	0.433	1	TO-15		4/7/2023	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		4/7/2023	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		4/7/2023	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		4/7/2023	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		4/7/2023	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		4/7/2023	CJR	1
Carbon Disulfide	0.249 "J"	ug/m3	0.138	0.44	1	TO-15		4/7/2023	CJR	1
Carbon Tetrachloride	0.57 "J"	ug/m3	0.307	0.978	1	TO-15		4/7/2023	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		4/7/2023	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		4/7/2023	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		4/7/2023	CJR	1
Chloromethane	1.32 "J"	ug/m3	0.831	2.64	1	TO-15		4/7/2023	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		4/7/2023	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		4/7/2023	CJR	1
1,4-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		4/7/2023	CJR	1
Dichlorodifluoromethane	2.52	ug/m3	0.263	0.836	1	TO-15		4/7/2023	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		4/7/2023	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		4/7/2023	CJR	1
trans-1,2-Dichloroethene	0.238 "J"	ug/m3	0.231	0.734	1	TO-15		4/7/2023	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		4/7/2023	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		4/7/2023	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		4/7/2023	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		4/7/2023	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		4/7/2023	CJR	1
Ethanol	90	ug/m3	0.152	0.482	1	TO-15		4/7/2023	CJR	10
Ethyl Acetate	0.97	ug/m3	0.176	0.559	1	TO-15		4/7/2023	CJR	1
Ethylbenzene	0.48 "J"	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
4-Ethyltoluene	< 0.214	ug/m3	0.214	0.681	1	TO-15		4/7/2023	CJR	1
Heptane	0.45 "J"	ug/m3	0.265	0.845	1	TO-15		4/7/2023	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		4/7/2023	CJR	1
Hexane	2.85	ug/m3	0.235	0.748	1	TO-15		4/7/2023	CJR	1
2-Hexanone	0.49 "J"	ug/m3	0.222	0.707	1	TO-15		4/7/2023	CJR	1
Isopropyl Alcohol	8.9	ug/m3	0.109	0.347	1	TO-15		4/7/2023	CJR	1
Methyl ethyl ketone (MEK)	11.1	ug/m3	0.178	0.567	1	TO-15		4/7/2023	CJR	1
Methyl isobutyl ketone (MIBK)	0.45 "J"	ug/m3	0.168	0.536	1	TO-15		4/7/2023	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		4/7/2023	CJR	1
Methylene chloride	68	ug/m3	0.159	0.506	1	TO-15		4/7/2023	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		4/7/2023	CJR	1
Naphthalene	1.2 "J"	ug/m3	0.675	2.15	1	TO-15		4/7/2023	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		4/7/2023	CJR	1
Styrene	0.34 "J"	ug/m3	0.181	0.577	1	TO-15		4/7/2023	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		4/7/2023	CJR	1
Tetrachloroethene	< 0.278	ug/m3	0.278	0.884	1	TO-15		4/7/2023	CJR	1
Tetrahydrofuran	1.8	ug/m3	0.131	0.417	1	TO-15		4/7/2023	CJR	1

**Project Name** CWC-EAST BLOCK  
**Project #** 40441B

**Invoice #** E42233

**Lab Code** 5042233C  
**Sample ID** ROOM 3056  
**Sample Matrix** Air  
**Sample Date** 4/1/2023

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
Toluene	3.05	ug/m3	0.184	0.585	1	TO-15		4/7/2023	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		4/7/2023	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		4/7/2023	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		4/7/2023	CJR	1
Trichloroethene (TCE)	2.68	ug/m3	0.237	0.754	1	TO-15		4/7/2023	CJR	1
Trichlorofluoromethane	1.63	ug/m3	0.337	1.07	1	TO-15		4/7/2023	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		4/7/2023	CJR	1
1,2,4-Trimethylbenzene	0.69 "J"	ug/m3	0.283	0.899	1	TO-15		4/7/2023	CJR	1
1,3,5-Trimethylbenzene	< 0.232	ug/m3	0.232	0.739	1	TO-15		4/7/2023	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		4/7/2023	CJR	1
m&p-Xylene	1.34	ug/m3	0.377	1.2	1	TO-15		4/7/2023	CJR	1
o-Xylene	0.61 "J"	ug/m3	0.218	0.695	1	TO-15		4/7/2023	CJR	1

**Project Name** CWC-EAST BLOCK  
**Project #** 40441B

**Invoice #** E42233

**Lab Code** 5042233D  
**Sample ID** ROOM 2056  
**Sample Matrix** Air  
**Sample Date** 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	61	ug/m3	0.299	0.95	1	TO-15		4/7/2023	CJR	1
Benzene	0.83	ug/m3	0.136	0.433	1	TO-15		4/7/2023	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		4/7/2023	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		4/7/2023	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		4/7/2023	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		4/7/2023	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		4/7/2023	CJR	1
Carbon Disulfide	0.44 "J"	ug/m3	0.138	0.44	1	TO-15		4/7/2023	CJR	1
Carbon Tetrachloride	0.69 "J"	ug/m3	0.307	0.978	1	TO-15		4/7/2023	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		4/7/2023	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		4/7/2023	CJR	1
Chloroform	< 0.3	ug/m3	0.3	0.953	1	TO-15		4/7/2023	CJR	1
Chloromethane	1.75 "J"	ug/m3	0.831	2.64	1	TO-15		4/7/2023	CJR	1
Cyclohexane	0.38 "J"	ug/m3	0.212	0.674	1	TO-15		4/7/2023	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		4/7/2023	CJR	1
1,4-Dichlorobenzene	0.36 "J"	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		4/7/2023	CJR	1
Dichlorodifluoromethane	2.62	ug/m3	0.263	0.836	1	TO-15		4/7/2023	CJR	1
1,2-Dichloroethane	0.36 "J"	ug/m3	0.24	0.763	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		4/7/2023	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		4/7/2023	CJR	1
trans-1,2-Dichloroethene	0.59 "J"	ug/m3	0.231	0.734	1	TO-15		4/7/2023	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		4/7/2023	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		4/7/2023	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		4/7/2023	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		4/7/2023	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		4/7/2023	CJR	1
Ethanol	550	ug/m3	0.152	0.482	1	TO-15		4/7/2023	CJR	10
Ethyl Acetate	11.1	ug/m3	0.176	0.559	1	TO-15		4/7/2023	CJR	1
Ethylbenzene	1.13	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
4-Ethyltoluene	0.44 "J"	ug/m3	0.214	0.681	1	TO-15		4/7/2023	CJR	1
Heptane	0.94	ug/m3	0.265	0.845	1	TO-15		4/7/2023	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		4/7/2023	CJR	1
Hexane	2.08	ug/m3	0.235	0.748	1	TO-15		4/7/2023	CJR	1
2-Hexanone	0.45 "J"	ug/m3	0.222	0.707	1	TO-15		4/7/2023	CJR	1
Isopropyl Alcohol	34	ug/m3	0.109	0.347	1	TO-15		4/7/2023	CJR	1
Methyl ethyl ketone (MEK)	36	ug/m3	0.178	0.567	1	TO-15		4/7/2023	CJR	1
Methyl isobutyl ketone (MIBK)	1.06	ug/m3	0.168	0.536	1	TO-15		4/7/2023	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		4/7/2023	CJR	1
Methylene chloride	57	ug/m3	0.159	0.506	1	TO-15		4/7/2023	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		4/7/2023	CJR	1
Naphthalene	1.31 "J"	ug/m3	0.675	2.15	1	TO-15		4/7/2023	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		4/7/2023	CJR	1
Styrene	1.15	ug/m3	0.181	0.577	1	TO-15		4/7/2023	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		4/7/2023	CJR	1
Tetrachloroethene	0.41 "J"	ug/m3	0.278	0.884	1	TO-15		4/7/2023	CJR	1
Tetrahydrofuran	17	ug/m3	0.131	0.417	1	TO-15		4/7/2023	CJR	1

**Project Name** CWC-EAST BLOCK  
**Project #** 40441B

**Invoice #** E42233

**Lab Code** 5042233D  
**Sample ID** ROOM 2056  
**Sample Matrix** Air  
**Sample Date** 4/1/2023

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
Toluene	5.0	ug/m3	0.184	0.585	1	TO-15		4/7/2023	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		4/7/2023	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		4/7/2023	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		4/7/2023	CJR	1
Trichloroethene (TCE)	66	ug/m3	0.237	0.754	1	TO-15		4/7/2023	CJR	1
Trichlorofluoromethane	1.46	ug/m3	0.337	1.07	1	TO-15		4/7/2023	CJR	1
Trichlorotrifluoroethane	0.69 "J"	ug/m3	0.402	1.28	1	TO-15		4/7/2023	CJR	1
1,2,4-Trimethylbenzene	2.21	ug/m3	0.283	0.899	1	TO-15		4/7/2023	CJR	1
1,3,5-Trimethylbenzene	0.54 "J"	ug/m3	0.232	0.739	1	TO-15		4/7/2023	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		4/7/2023	CJR	1
m&p-Xylene	4.5	ug/m3	0.377	1.2	1	TO-15		4/7/2023	CJR	1
o-Xylene	1.86	ug/m3	0.218	0.695	1	TO-15		4/7/2023	CJR	1



Project Name CWC-EAST BLOCK  
 Project # 40441B

Invoice # E42233

Lab Code 5042233E  
 Sample ID STAIR 2, LEVEL 2  
 Sample Matrix Air  
 Sample Date 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	34	ug/m3	0.299	0.95	1	TO-15		4/7/2023	CJR	1
Benzene	0.83	ug/m3	0.136	0.433	1	TO-15		4/7/2023	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		4/7/2023	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		4/7/2023	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		4/7/2023	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		4/7/2023	CJR	1
1,3-Butadiene	< 0.143	ug/m3	0.143	0.454	1	TO-15		4/7/2023	CJR	1
Carbon Disulfide	0.34 "J"	ug/m3	0.138	0.44	1	TO-15		4/7/2023	CJR	1
Carbon Tetrachloride	0.76 "J"	ug/m3	0.307	0.978	1	TO-15		4/7/2023	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		4/7/2023	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		4/7/2023	CJR	1
Chloroform	0.39 "J"	ug/m3	0.3	0.953	1	TO-15		4/7/2023	CJR	1
Chloromethane	1.2 "J"	ug/m3	0.831	2.64	1	TO-15		4/7/2023	CJR	1
Cyclohexane	< 0.212	ug/m3	0.212	0.674	1	TO-15		4/7/2023	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		4/7/2023	CJR	1
1,4-Dichlorobenzene	0.78 "J"	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		4/7/2023	CJR	1
Dichlorodifluoromethane	2.72	ug/m3	0.263	0.836	1	TO-15		4/7/2023	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		4/7/2023	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		4/7/2023	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		4/7/2023	CJR	1
trans-1,2-Dichloroethene	5.3	ug/m3	0.231	0.734	1	TO-15		4/7/2023	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		4/7/2023	CJR	1
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		4/7/2023	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		4/7/2023	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		4/7/2023	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		4/7/2023	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		4/7/2023	CJR	1
Ethanol	101	ug/m3	0.152	0.482	1	TO-15		4/7/2023	CJR	10
Ethyl Acetate	1.84	ug/m3	0.176	0.559	1	TO-15		4/7/2023	CJR	1
Ethylbenzene	1.65	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
4-Ethyltoluene	0.59 "J"	ug/m3	0.214	0.681	1	TO-15		4/7/2023	CJR	1
Heptane	1.02	ug/m3	0.265	0.845	1	TO-15		4/7/2023	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		4/7/2023	CJR	1
Hexane	2.93	ug/m3	0.235	0.748	1	TO-15		4/7/2023	CJR	1
2-Hexanone	0.57 "J"	ug/m3	0.222	0.707	1	TO-15		4/7/2023	CJR	1
Isopropyl Alcohol	20.6	ug/m3	0.109	0.347	1	TO-15		4/7/2023	CJR	1
Methyl ethyl ketone (MEK)	25.8	ug/m3	0.178	0.567	1	TO-15		4/7/2023	CJR	1
Methyl isobutyl ketone (MIBK)	0.86	ug/m3	0.168	0.536	1	TO-15		4/7/2023	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		4/7/2023	CJR	1
Methylene chloride	46	ug/m3	0.159	0.506	1	TO-15		4/7/2023	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		4/7/2023	CJR	1
Naphthalene	0.84 "J"	ug/m3	0.675	2.15	1	TO-15		4/7/2023	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		4/7/2023	CJR	1
Styrene	0.68	ug/m3	0.181	0.577	1	TO-15		4/7/2023	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		4/7/2023	CJR	1
Tetrachloroethene	0.75 "J"	ug/m3	0.278	0.884	1	TO-15		4/7/2023	CJR	1
Tetrahydrofuran	1.89	ug/m3	0.131	0.417	1	TO-15		4/7/2023	CJR	1

**Project Name** CWC-EAST BLOCK  
**Project #** 40441B

**Invoice #** E42233

**Lab Code** 5042233E  
**Sample ID** STAIR 2, LEVEL 2  
**Sample Matrix** Air  
**Sample Date** 4/1/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Toluene	3.05	ug/m3	0.184	0.585	1	TO-15		4/7/2023	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		4/7/2023	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		4/7/2023	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		4/7/2023	CJR	1
Trichloroethene (TCE)	14.2	ug/m3	0.237	0.754	1	TO-15		4/7/2023	CJR	1
Trichlorofluoromethane	1.52	ug/m3	0.337	1.07	1	TO-15		4/7/2023	CJR	1
Trichlorotrifluoroethane	0.61 "J"	ug/m3	0.402	1.28	1	TO-15		4/7/2023	CJR	1
1,2,4-Trimethylbenzene	2.75	ug/m3	0.283	0.899	1	TO-15		4/7/2023	CJR	1
1,3,5-Trimethylbenzene	0.83	ug/m3	0.232	0.739	1	TO-15		4/7/2023	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		4/7/2023	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		4/7/2023	CJR	1
m&p-Xylene	6.2	ug/m3	0.377	1.2	1	TO-15		4/7/2023	CJR	1
o-Xylene	2.51	ug/m3	0.218	0.695	1	TO-15		4/7/2023	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

**Code**      **Comment**

- 1      Laboratory QC within limits.
- 10      Linear range of calibration curve exceeded.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

**Authorized Signature**



**Environmental Lab, LLC**

www.synergy-lab.net  
1990 Prospect Ct. • Appleton, WI 54914  
920-830-2455 • mrsynergy@wi.twcabc.com

**Sample Handling Request**  
Rush Analysis Date Required: \_\_\_\_\_  
(Rushes accepted only with prior authorization)  
Normal Turn Around

Lab I.D. # \_\_\_\_\_  
QUOTE #: 40441B  
Project #: 40441B  
Sampler: (signature) *MT*

Project (Name / Location): CWC - East Block

**Analysis Requested**

**Other Analysis**

Reports To: Robert Reineke  
Company: K. Singh & A  
Address: 3636 N 124th Street  
City State Zip: Wauwatosa, WI 53222  
Phone: (262) 821-1171 EXT 111  
Email: Reineke@KSinghengineering.com

Invoice To: Kamale Singh  
Company: K. Singh & Associates Inc.  
Address: 3636 N 124th Street  
City State Zip: Wauwatosa, WI 53222  
Phone: (262) 821-1171  
Email: AP@KSinghengineering.com

Lab I.D.	Sample I.D.	Collection Date	Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	PID/ FID
504233A	Room 1050	4/11/23	7:39 AM	N	1	A		
	Room 1045	4/11/23	7:44 PM	N	1	A		
	Room 3056	4/11/23	8:02 PM	N	1	A		
	Room 2056	4/11/23	7:55 PM	N	1	A		
	Stair 2, Level 2	4/11/23	7:58 AM	N	1	A		

Comments/Special Instructions (\*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

Sample Integrity - To be completed by receiving lab.  
Method of Shipment: CS  
Temp. of Temp. Blank: \_\_\_\_\_ °C On Ice:   
Cooler seal intact upon receipt:  Yes  No

Relinquished By: (sign) *[Signature]* Time: 4:02 Date: 4/6  
Received In Laboratory By: *[Signature]* Time: 7:30 Date: 4/7/23

Attachment C  
Issues Log

**MEMORANDUM**

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DATE : April 7, 2023, rev. April 15, 2023

TO : Shane LaFave / Roers Companies, LLC  
Que El-Amin / Scott Crawford, Inc.

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

SUBJECT : Inspections Log of Impacted Units  
Community Within the Corridor – East Block

COPY TO : Project # 40441B

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KSingh conducted visual observations of all rooms with concentrations of Trichloroethylene (TCE) greater than Vapor Action Levels and documented areas of concern after construction. The primary focus of this memo is the Southwest units in the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> floors along with obvious deficiencies in the Southeast corner of the complex as well as additional general observations throughout the facility.

Attached as a part of this submittal is an issues log as well as corresponding photographs and descriptions of the areas of concern.

Please note that this is not a comprehensive inspection of construction. KSingh noted the issues below during its walkthrough, but it is not conclusive. Once these items are resolved, KSingh can perform additional testing of air concentrations and continue to analyze and recommend solutions as needed.

Issues Log

Project No: 40441B  
 Project Site: CWC East Block  
 Firm: KSingh  
 Date: 4/7/2023, rev. 4/15/2023

Item No.	Location	Issue Description	To be Completed by	Photo Reference	Status	Notes
1	Unit 1039	Deterioration along masonry wall and concrete slab	CWC	Page 1, Photos 1 & 2	In Progress	
2	Unit 1040	Deterioration along masonry wall	CWC	Page 2, Photo 3	In Progress	
3	Unit 1041	Holes in wall by the edge of the baseboard in the bedroom	CWC	Page 3, Photo 4	In Progress	
4	Unit 1041	Deterioration along masonry wall	CWC	Page 3, Photo 5	In Progress	
5	Unit 1042	Deterioration along masonry wall and small gaps between slab and masonry wall	CWC	Page 4, Photos 6 & 7	In Progress	
6	Unit 1043	Gap above I-beam and masonry wall	CWC	Page 5, Photo 8	In Progress	
7	Unit 1044	Deterioration along masonry wall	CWC	Page 6, Photo 9	In Progress	
8	Unit 1045	Hole through slab, needs permanent solution	CWC	Page 7, Photo 10	In Progress	
9	Unit 1045	Hole between masonry wall and slab	CWC	Page 7, Photo 11	In Progress	
10	Unit 1045	Split wood beam	CWC	Page 8, Photo 12	In Progress	
11	Unit 1050	Large gaps along south wall	CWC	Page 9, Photos 13 & 14	In Progress	
12	Mechanical Room 1052	Open metal pipes sticking out of the ground	CWC	Page 10, Photo 15	Pending	
13	Men's Locker Room	Men's locker room wood post has a hole in the bottom left corner	CWC	Page 10, Photo 16	Pending	
14	Unit 2045	Gap between wood post and floor. Wood is split and porous	CWC	Page 11-12, Photos 17 -20	In Progress	
15	Unit 2057	Gap between wood post and floor. Wood is split and porous	CWC	Page 13, Photos 21 & 22	In Progress	
16	Unit 2057	Small gaps between floor and masonry wall	CWC	Page 14, Photo 23	In Progress	
17	Unit 3045	Gaps between masonry wall and floor	CWC	Page 15, Photo 24	In Progress	
18	Unit 3045	Gap between wood post and floor	CWC	Page 15, Photo 25	In Progress	
19	Unit 3056	Gap in the seal between wall and floor	CWC	Page 16, Photo 26	In Progress	
20	Unit 3056	Small gaps between floor and masonry wall	CWC	Page 16, Photo 27	In Progress	
21	Unit 3057	Gap between masonry wall and floor	CWC	Page 17, Photo 28	In Progress	
22	Unit 3058	Gaps between wood post and floor	CWC	Page 18, Photo 29	In Progress	
23	Unit 3058	Gap between baseboard and wall	CWC	Page 18, Photo 30	In Progress	

24	Southwest hallway	Southwest hallway has gaps and holes all along the masonry wall	CWC	Page 19, Photos 31 & 32	In Progress	
25	East wall outside of the community room	Water leaking in through floor	CWC	Page 20-21, Photos 33-35	In Progress	
26	Building 1B	Leaking saw cut near SDDS pipe end and various cracks in the flooring	CWC	Page 22, Photo 36 & 37	Pending	
27	Garage	Sump Crock needs to be sealed permanently	CWC	Page 23, Photo 37	Resolved	
28	North Mechanical Room	Sump Crock needs to be sealed permanently	CWC	Page 23, Photo 38	Resolved	
29	Powerhouse Roof	Need to confirm fan was installed and operating	KSingh	Page 24, Photo 39	Resolved	
30	North Mechanical Room	Determine if mechanical room radon fan is running (provide access to powerhouse)	CWC		Resolved	
31	North Mechanical Room	Determine if adequate vacuum is under North Mechanical Room	KSingh		Pending	
32	Mechanical Room 1052	Slab cut exposing subsurface in SW corner of room	CWC	Page 25, Photo 40	Pending	
33	North Mechanical Room	Uncapped pipe present along North wall	CWC	Page 25, Photo 41	Pending	
34	North Mechanical Room	Unlabeled pipe and manometer needs to be installed	CWC	Page 26, Photo 42	Pending	



Item No. 1 - Unit 1039

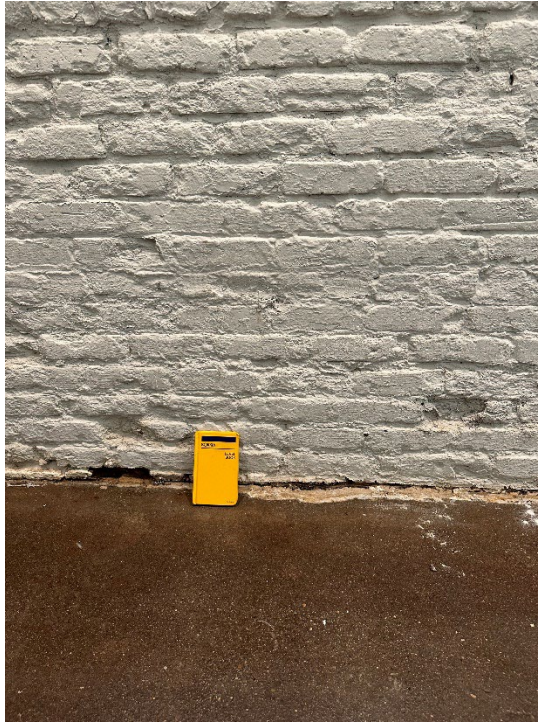


Photo 1 - Deterioration along masonry wall and concrete slab

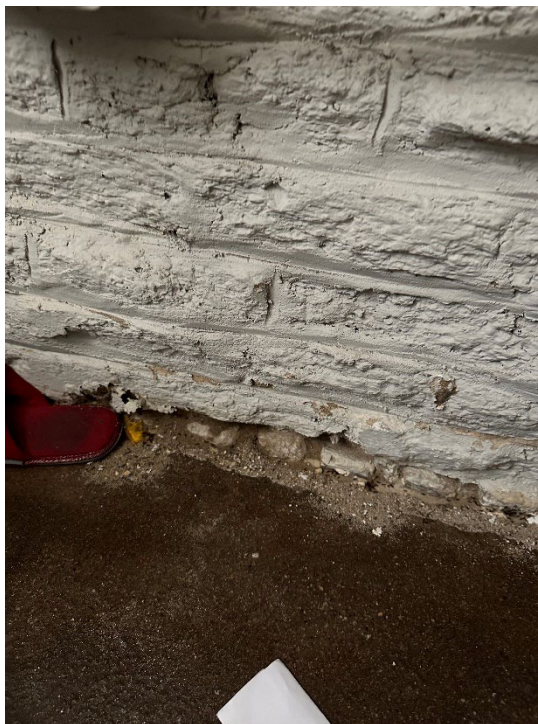


Photo 2 - Deterioration along masonry wall and concrete slab



Item No. 2 - Unit 1040



Photo 3 - Deterioration of masonry wall and gaps between the concrete slab and wall

Item No. 3 - Unit 1041

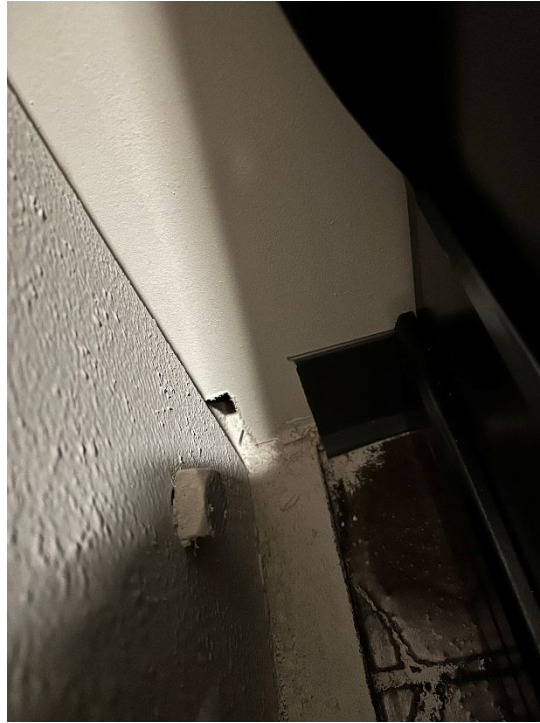


Photo 4 - Hole found by the edge of the baseboard in the bedroom

Item No. 4 - Unit 1041



Photo 5 - Deterioration of masonry wall

Item No. 5 – Unit 1042



Photo 6 - Deterioration along masonry wall and small gaps between the slab and wall



Photo 7 – Deterioration along masonry wall and small gaps between the slab and wall



Item No. 6 – Unit 1043



Photo 8 – Gap above I-beam and masonry wall

Item No. 7 – Unit 1044

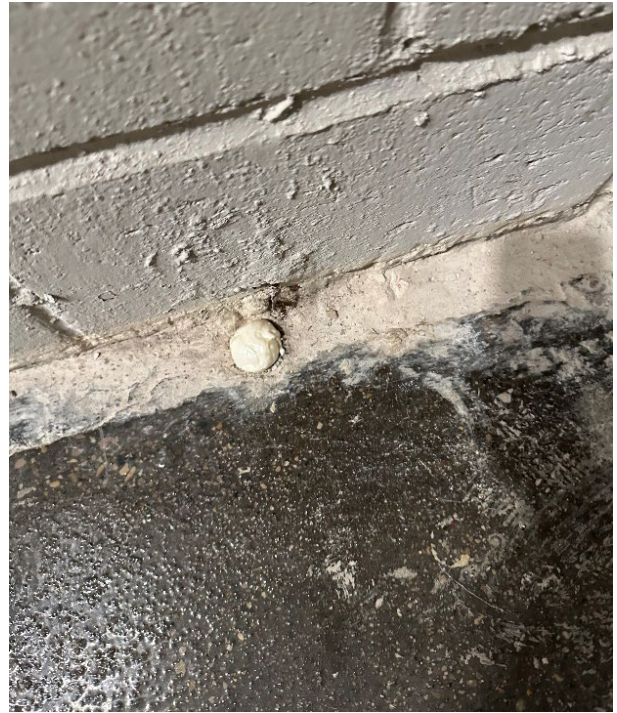


Photo 9 – Deterioration along masonry wall

Item No. 8 – Unit 1045



Photo 10 – Approx. 2 inch hole through slab (needs permanent fix)



Item No. 9 – Unit 1045



Photo 11 – Hole in masonry wall and slab



Item No. 10 – Unit 1045

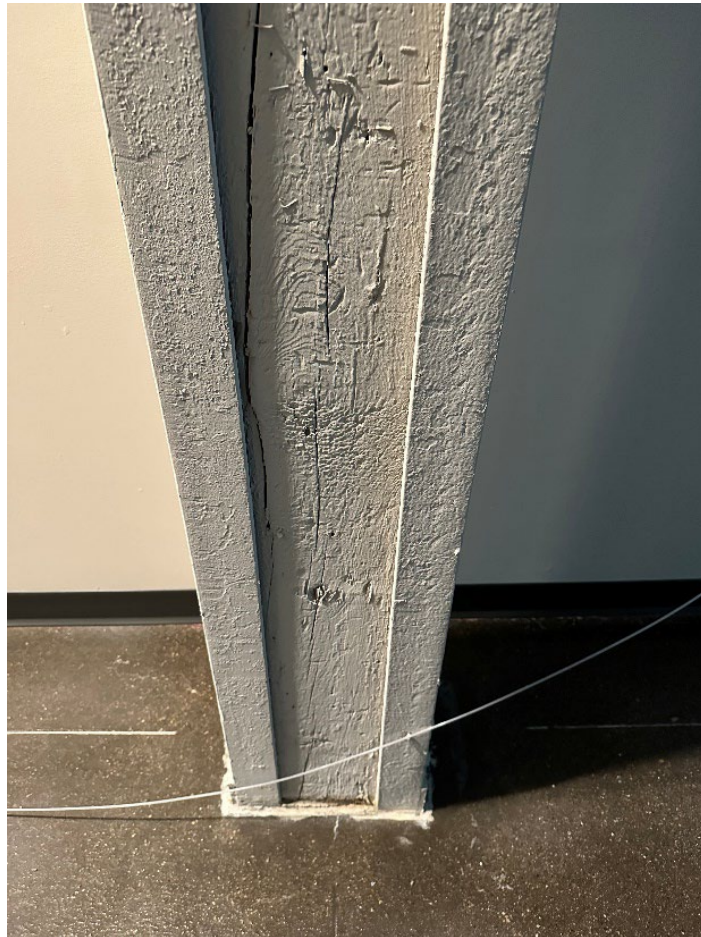


Photo 12 – Wood is very porous and should be sealed

Item No. 11 – Unit 1050

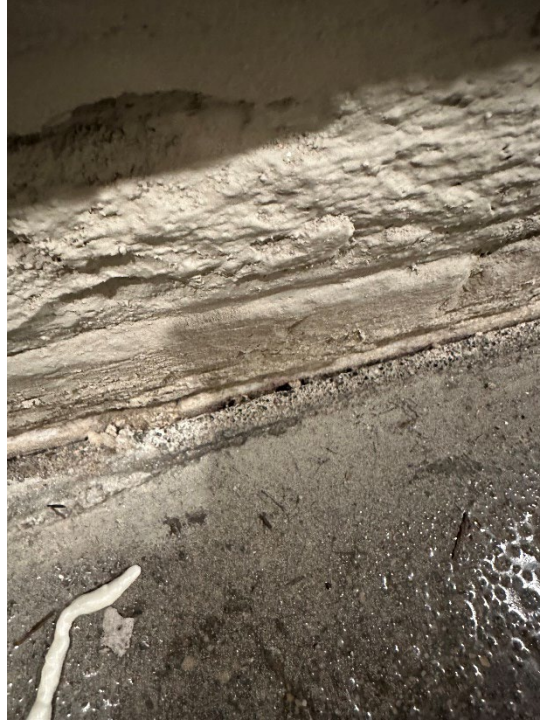


Photo 13 – Several gaps of 3+ inches all along the masonry wall and slab



Photo 14 - Gaps between all along the masonry wall and slab



Item No. 12 – Mechanical Room 1052

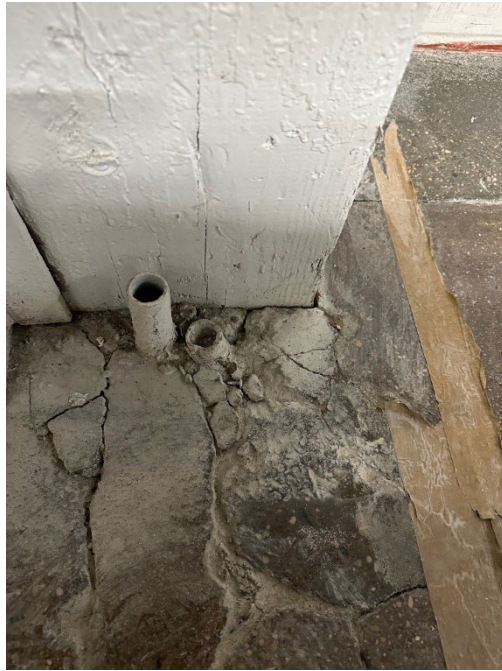


Photo 15 - Metal pipes sticking out of the ground and cracks in the slab

Item No. 13 – Men's Locker Room



Photo 16 - Hole in the bottom corner of wood post

Item No. 14 – Unit 2045

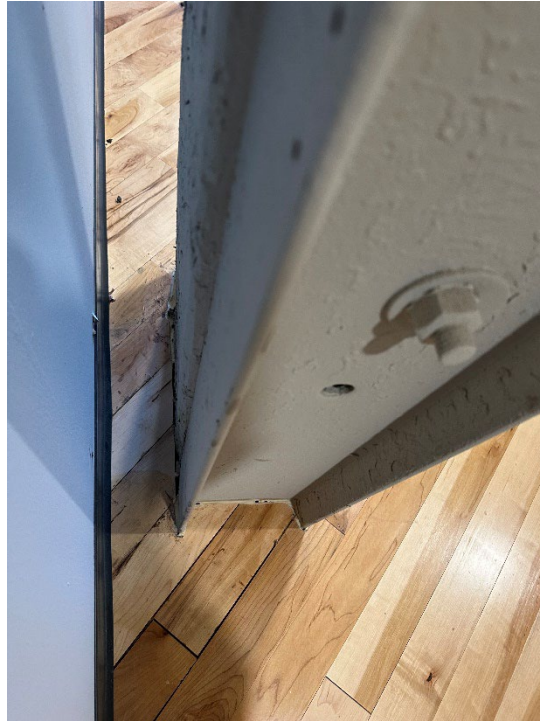


Photo 17 - Posts are not sealed all the way around and the wood beams are very porous



Photo 18 - Posts are not sealed all the way around and the wood beams are very porous

Item No. 14 – Unit 2045 (continued)



Photo 19 - Wood post is split and is not sealed all around



Photo 20 - Posts are not sealed all the way around and the wood beams are very porous



Item No. 15 – Unit 2057



Photo 21 - Gap between wood post and floor. Wood is split and porous



Photo 22 - Gaps between floor and the masonry wall. The wood post is porous and not sealed.

Item No. 16 – Unit 2057



Photo 23 – Small gaps between floor and masonry wall

Item No. 17 – Unit 3045

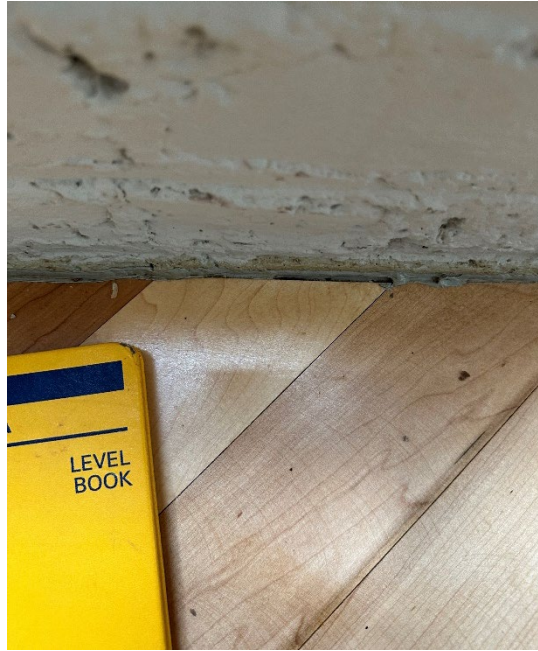


Photo 24 – Gaps between masonry wall and floor

Item No. 18 – Unit 3045



Photo 25 – Gaps between wood post and floor, post is not sealed all the way around

Item No. 19 – Unit 3056

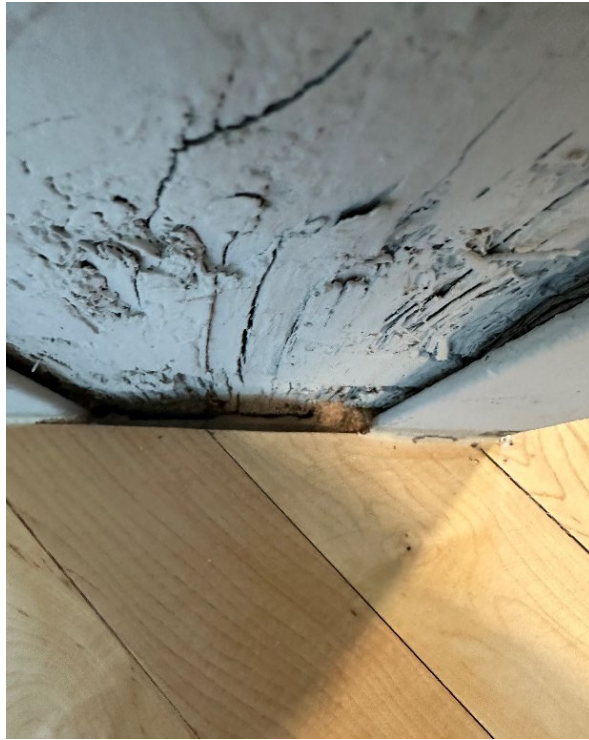


Photo 26 – Gap between wood post and floor

Item No. 20 – Unit 3056

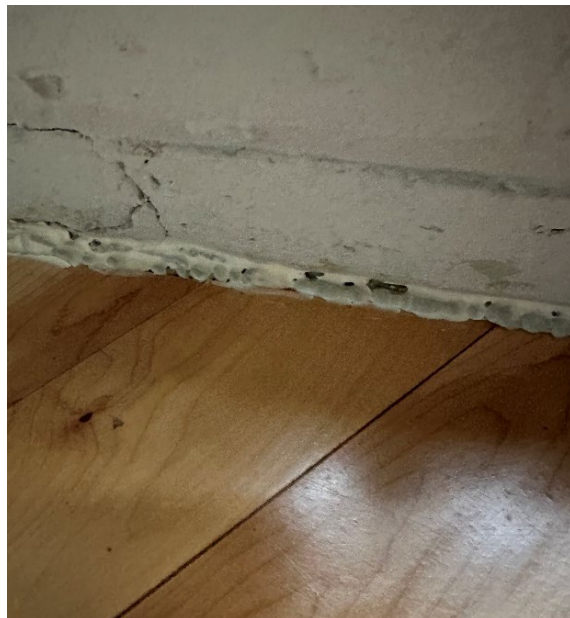


Photo 27 - Gap in the seal between wall and floor



Item No. 21 – Unit 3057



Photo 28 – Gaps between masonry wall and floor, cracks in the brick



Item No. 22 – Unit 3058



Photo 29 - Gaps between wood post and floor

Item No. 23 – Unit 3058



Photo 30 – Gap/hole between baseboard and wall

Item No. 24 – Southwest Hallway



Photo 31 - Southwest hallway has gaps and holes all along the wall.

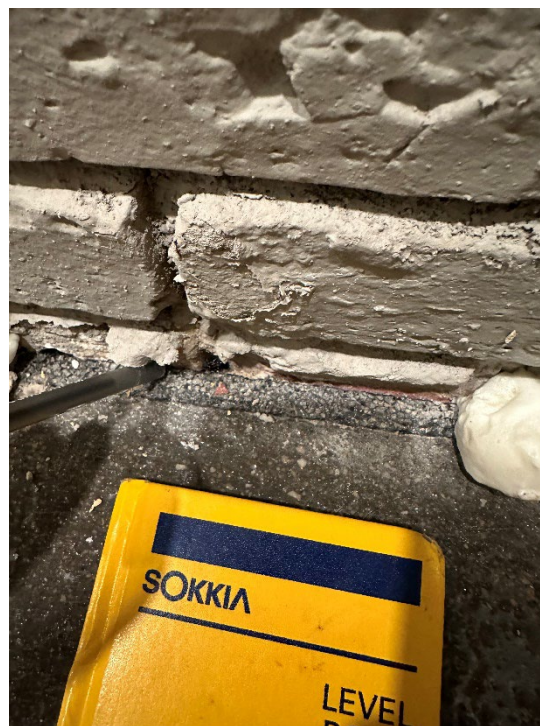


Photo 32 - Southwest hallway has gaps and holes all along the wall



Item No. 25 – East Wall Outside of the Community Room



Photo 33 - SE corner near offices shows water getting in



Photo 34 - A closer look at the wall and flooring



Photo 35 – Water intrusion at abandoned manhole



Item No. 26 – Building 1B



Photo 36 – Leaking Saw Cut near SDDS Pipe End



Photo 37 – Example of additional temporary fixes in the flooring

Item No. 27 – Garage



Photo 37 – Sump crock needs to be sealed permanently

Item No. 28 – North Mechanical Room



Photo 38 – Sump crock needs to be sealed permanently

Item No. 29 – Powerhouse Roof



Photo 39 – Fan outlet for North Mechanical Room and Powerhouse

Need to confirm fan was installed and is operating



Item No. 32 – Mechanical Room 1052



Photo 40 – Cut Slab that needs to be sealed

Item No. 33 – North Mechanical Room



Photo 41 – Missing Pipe Cap that needs to be capped



Item No. 34 – North Mechanical Room



Photo 42 – Hole that needs to be sealed