Pfeiffer, Jane K - DNR

From: Robert Reineke <rreineke@ksinghengineering.com>

Sent: Thursday, December 1, 2022 6:23 PM **To:** Pfeiffer, Jane K - DNR; Shane LaFave

Cc: Hedman, Curtis J - DHS; Mylotta, Pamela A - DNR; Que El-Amin; Pratap Singh

Subject: RE: Community Within the Corridor West Block (02/41-587376) - Immediate Action

Required

Attachments: Summa Canister Results Figure.pdf; Report - Summas.pdf; COC5041691.pdf

CAUTION: This email originated from outside the organization.

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Hello Jane,

Thank you for contacting us.

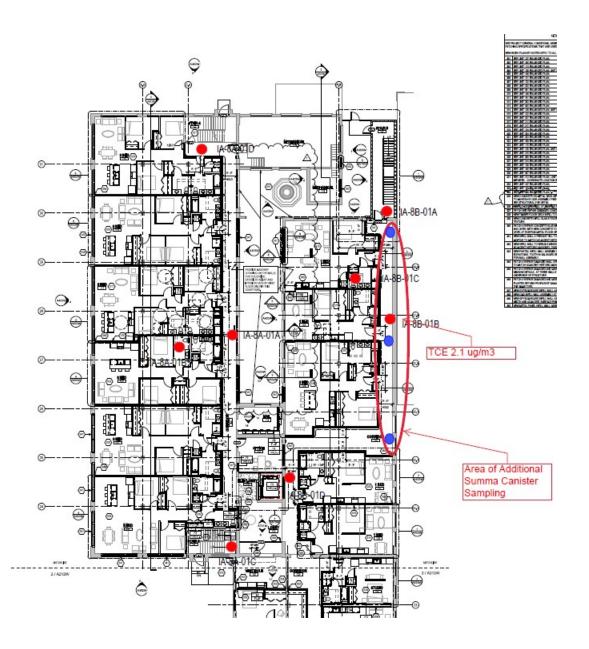
At this point, we do not concur with the DNR that TCE exceeds VALs as we performed additional sampling after the Commissioning Report was submitted. Some background:

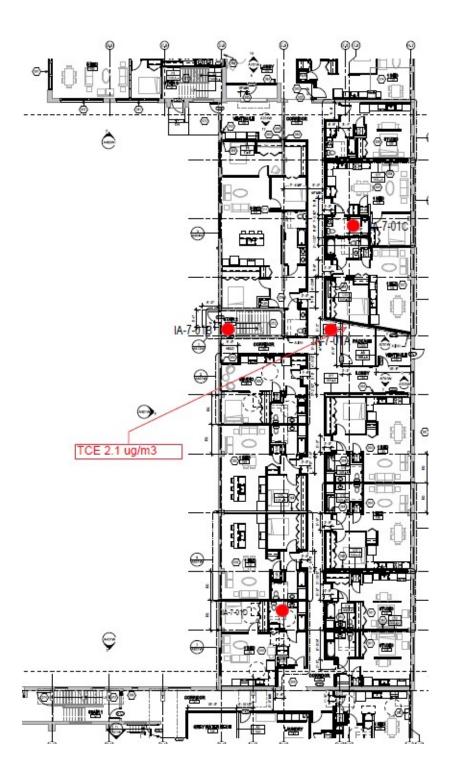
The second round of commissioning was performed using Passive Samplers in September 2022.

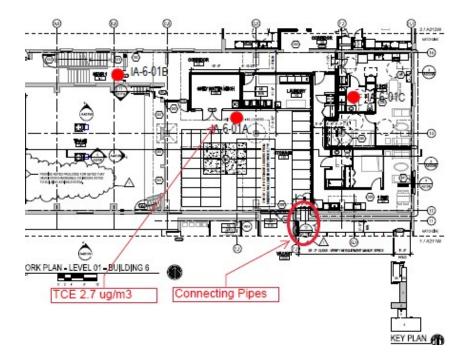
Three results were reported exceeding the VAL for TCE.

The sample IA-6-01A (Storage Room # 142) where a concentration of 2.7 ug/m3 was detected, Hallway sample IA-7-01A where a concentration of 2.1 ug/m3 was detected, and Hallway sample IA-8B-01B where a concentration of 2.1 ug/m3 was detected.

Locations of the Air Samples are shown below.



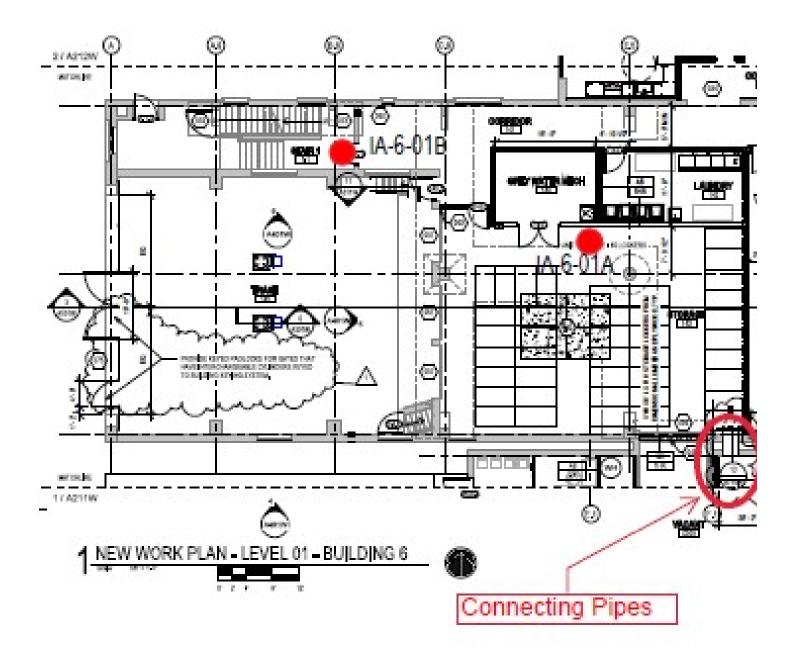


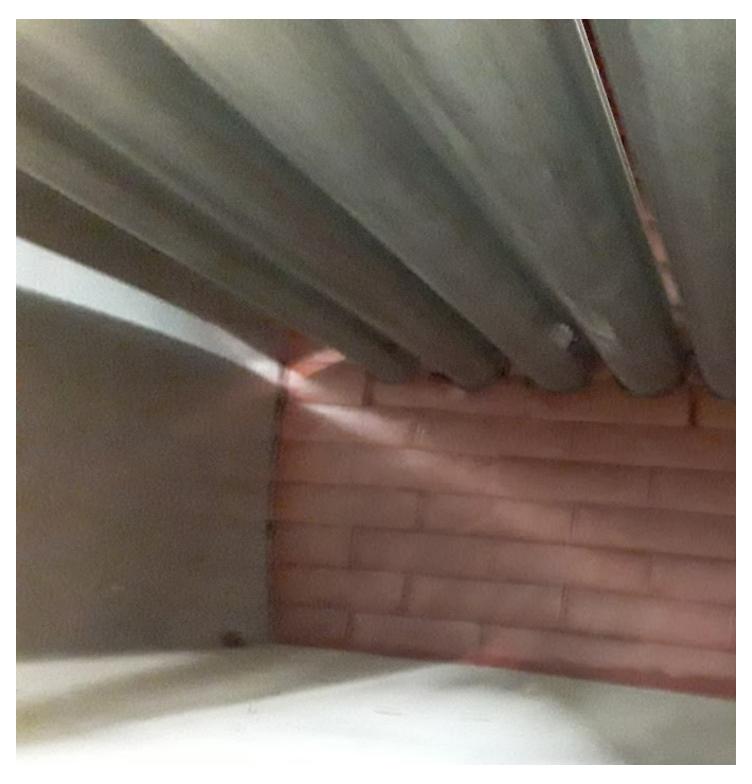


Results were submitted to WDNR in a status report dated November 1, 2022. However, outside air had a TCE concentration of 0.29 ug/m3. Additional air sampling, consisting of 3 Summa Canister, was performed in the Hallway, samples collected at south end (IA-1-WB), middle (IA-2-WB), and north end (IA-3-WB), near IA-8B-01B on November 2, 2022. The Summa canisters collected on November 2, 2022 were all less than 0.237 ug/m3 for TCE demonstrating compliance with VALs. Please see the lab report and a figure showing the location of sampling and results attached.

We believe that Buildings 7 and 6 will all show a similar decrease for TCE in indoor air and comply with VALs. We commenced with our 3rd round of commissioning sampling on November 30, 2022 as scheduled. We request that WDNR consider the Summa results and the 3rd round of commissioning results before concluding that indoor air is impacted with TCE.

Nevertheless, when passive sampling was performed, an inspection was performed for potential routes of entry. The storage room appears to be the potential entry point into the building. Inspecting the storage room, there is a small tunnel containing 7 pipes connecting two Buildings 4 and 5. Given that the basement of building 6 did not exceed VALs nor did 2nd floor samples, this is likely the source of the TCE as the vapor mitigation system is not operating in Building 4 and 5 yet. See a photo of the connection below.





There appear to be gaps in the fire bricks. Our understanding is that the fire bricks expand when heated sealing those gaps. We are reviewing whether the fire code allows for sealing between the bricks or whether it would affect the fire rating. If the fire code allows, we will take steps to seal the brick gaps as soon as possible.

In regards to WDNR's request to notify the tenants, we request an extension of the deadline until after a) the DNR has considered the Summa canister test results, and b) the DNR has had an opportunity to consider the third round of passive air sampling test results. With the Summa canister and background air data contradicting the passive air sampler test results, we believe that further evaluation of the data is needed and that notifying the tenants now will just create a panic that may not be based on continuing environmental conditions.

We propose the following action and schedules.

- 1. Passive air sampling will be completed on December 7, 2022 and shipped overnight to the lab for analysis.
- 2. We anticipate receiving results on December 22, 2022 by end of day. Within 24 hours of receipt we will analyze the data and report results to WDNR.
- 3. If TCE exceedances are reported, Community within the Corridor will notify the tenants via email within 3 working days of the WDNR being notified.
- 4. In the interim period between passive air sampling and the receipt of results, arrangements will be made for activated carbon air purifiers to be brought on site to remove TCE from indoor air. The activated carbon air purifiers will be deployed if the air results indicate TCE in air greater than VALs.
- 5. Arrangements will also be made in the interim period between passive air sampling and the receipt of results for the rental of a portable gas chromatograph/electron capture detector GC/ECD unit. If there are no VAL exceedances for TCE, a real time investigation will not be beneficial. If VAL exceedances are detected, then the GC/ECD unit investigation will be performed. The GC/ECD investigation will be performed prior to activating any interim measure such as installation of activated carbon air purifying units, and following activation of the units to determine their performance. We will update the WDNR on the availability of such units and the potential schedule for such an investigation.

We appreciate WDNR's involvement with this project. Please let us know if you would like to discuss this plan of action further.

Robert Reineke, PE

Principal Engineer | rreineke@ksinghengineering.com 262.821.1171, ext. 111 (p) | 262.424.5191 (cell) www.ksinghengineering.com





From: Pfeiffer, Jane K - DNR <jane.pfeiffer@wisconsin.gov>

Sent: Tuesday, November 29, 2022 3:59 PM

To: Shane LaFave <shane@roerscompanies.com>; Robert Reineke <rreineke@ksinghengineering.com>

Cc: Hedman, Curtis J - DHS < Curtis.Hedman@dhs.wisconsin.gov>; Mylotta, Pamela A - DNR < Pamela.Mylotta@wisconsin.gov>; Que El-Amin < que@scott-crawford.com>; Pratap Singh

<psingh@ksinghengineering.com>

Subject: Community Within the Corridor West Block (02/41-587376) - Immediate Action Required

Importance: High

Greetings Shane and Robert,

I just called and left voicemails for each of you concerning the subject site. The Department of Natural Resources (DNR) reviewed the second round of vapor mitigation system (VMS) commissioning data, collected in September 2022 and received on November 11 and 23, 2022, without a DNR review fee. The data was submitted on behalf of Community Within the Corridor Limited Partnership by K. Singh & Associated, Inc. The results show that trichloroethylene (TCE) was found at concentrations that equal or exceed its applicable vapor action level (VAL) of 2.1 micrograms per cubic meter (μ g/m³) at three separate locations. The DNR understands that these three locations are located in communal spaces/hallways, not within any residential units.

TCE poses a short-term (i.e., acute) health risk to certain populations when identified in indoor air at concentrations exceeding its VAL. More specifically, TCE presents an acute risk of fetal heart malformation that may occur when a

pregnant mother is exposed to TCE vapors in the first trimester of pregnancy, as indicated in Section 3.4.1 of DNR's Vapor Intrusion guidance, *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*, RR-800. Given that the Community Within the Corridor West Block consists of several adjoined, multi-level apartment buildings that include 1-3 bedroom units, it is likely that women of child-bearing years are present within the site buildings. Attached is a letter, dated March 25, 2021, from the Department of Health Services (DHS) to the DNR that presents additional information on acute health risks and recommended timeframes for follow-up actions that are required in Code to address threats to health. More specifically, DHS indicates that a VMS should be installed within two weeks and that women in the above-described sensitive demographic should be consulted about these TCE health risks in order for them to make informed decisions about whether to stay within the dwelling, given the TCE identified greater than its residential VAL at select locations. This notification of the data and health risk to the tenants by the responsible party (RP) is also required in Wis. Admin. Code §§ NR 714 & NR 716.14.

Considering the above-information, the following actions are required, per Wis. Admin. Code:

- 1. Wis. Admin. Code § NR 716.01 states that the purpose of site investigation is to determine the nature, degree and extent of contamination and to define the sources of contamination. Additional investigation of indoor air contamination is required to determine the source of the indoor air contamination along with its degree and extent. This investigation should occur as soon as possible. The DNR strongly suggests the additional investigation into the source of the TCE in indoor air be performed by continuous monitoring technology using a portable gas chromatograph/electron capture detector GC/ECD unit. This methodology allows for real-time data to be collected and close to 160 samples can be collected in a day. The primary goal is to quickly identify the source of the TCE and modify the VMS, if necessary, to assure it is protective of human health from the environmental contamination. Present your plan and a schedule to accomplish this additional investigation to the DNR by Thursday, December 1, 2022. The quick timeframe is due to the potential for acute risk. Attached is a document about the GC/ECD methodology and listed below is a contact person that can answer questions concerning this methodology:
 - a. Vapor Safe® The World Leader in Real Time Chemical Vapor and Monitoring Solutions
 - b. Mark Kram, Ph.D., CGWP
 Groundswell Technologies, LLC
 7127 Hollister Ave., Suite 25A-108
 Goleta, CA 93117 USA
 805-899-8142 (office)
 805-844-6854 (cell)
 mark.kram@groundswelltech.com
 www.groundswelltech.com
- 2. Per Wis. Admin. Code § NR 714.07, the responsible party (RP) shall conduct necessary notification activities considering the threats to public health, safety or welfare. This notification must include the following:
 - a. A description of the contamination;
 - b. The response actions that are planned or underway;
 - c. Phone numbers and addresses of persons to contact regarding the information. Contacts should include a representative for the RP and should also include myself as the DNR Project Manager and Curtis Hedman (cc'd on this email, (609) 287-4152, Curtis.Hedman@dhs.wisconsin.gov) as the Environmental Health contact with DHS.

Wis. Admin. Code § NR 716.14 requires the RP to report all sampling results to the occupants of the property. Due to the amount of data and the number of occupants, a summary of the data is recommended with contact information for tenants to obtain more details.

Wis. Admin. Code § NR 714.07 includes additional details on different methods of notifying that may be used. The DNR recommends that letters and/or leaflets be distributed to each of the tenants that are presently

occupying the building to ensure all occupants receive the notification. DNR and DHS are also able to assist with an informational meeting with your tenants following tenant notification, if desired.

Each of these Wis. Admin. Codes (NR 714.07 & NR 716.14) must be reviewed and implemented as you prepare and present your notifications for and to the occupants of the property. DNR strongly recommends DHS's, *TCE in Indoor Air*, fact sheet (document here) be included with your notifications along with DNR's guidance document, *What is Vapor Intrusion?*, RR-892. **Notifications to all occupants should be sent by Tuesday, December 6, 2022.** Copies of the notifications and attachments must be submitted to the DNR.

Please do not hesitate to reach out should you have any questions concerning the information presented in this email.

Thank you, Jane

We are committed to service excellence.

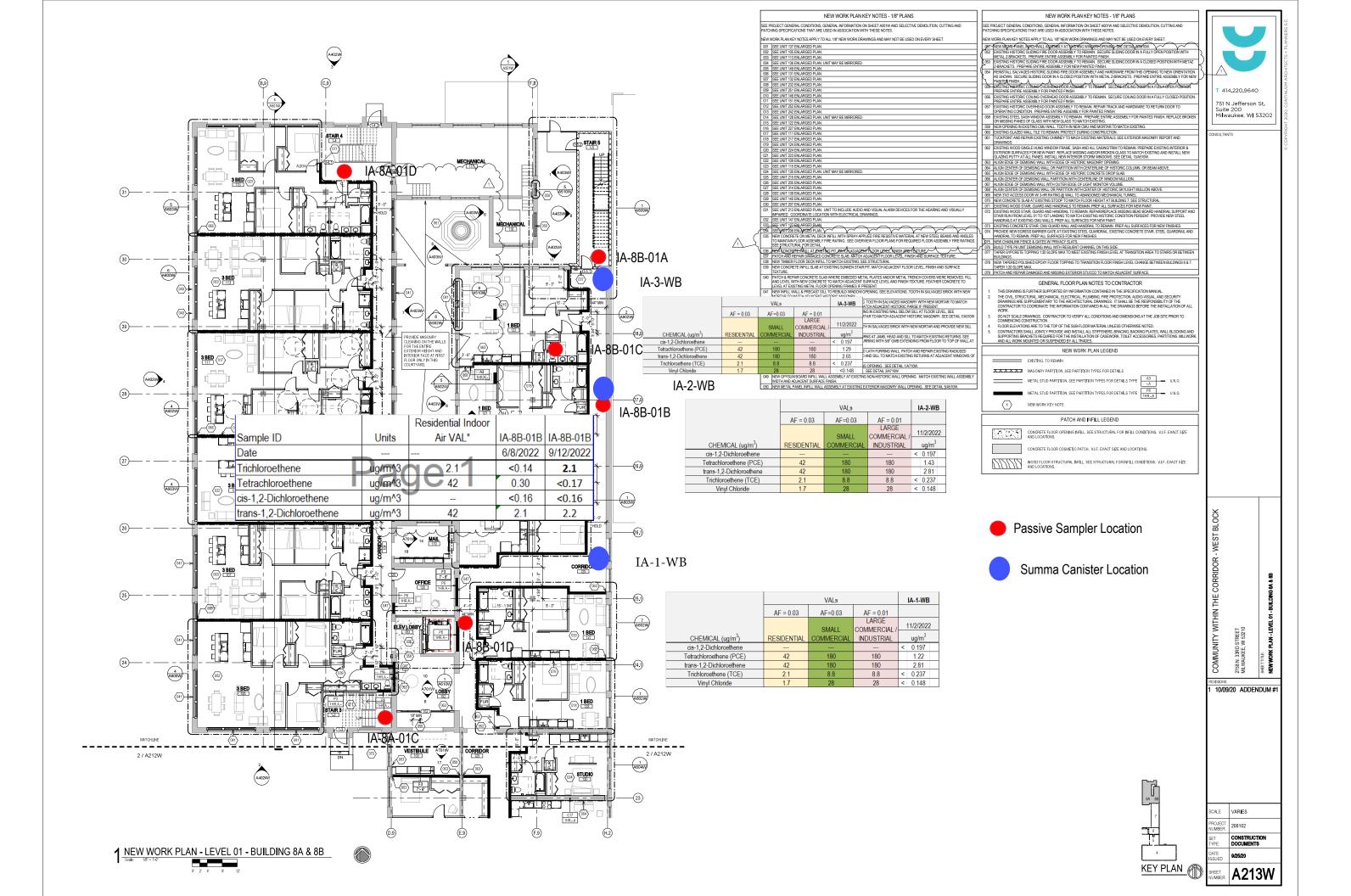
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Jane K. Pfeiffer

Hydrogeologist - Remediation & Redevelopment Program Wisconsin Department of Natural Resources Phone: (414) 435-8021

jane.pfeiffer@wisconsin.gov





Synergy Environmental Lab, LLC.

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 11-Nov-22

Project Name CWC WEST BLOCK Invoice # E41691

Project # 40443A

Lab Code 5041691A Sample ID IA-1-WB Sample Matrix Air

-	Result	Unit	LOD I	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
Air Samples										
Acetone	159	ug/m3	0.299	0.95	1	TO-15		11/9/2022	CJR	10
Benzene	2.59	ug/m3	0.136	0.433	1	TO-15		11/9/2022	CJR	1
Benzyl Chloride	< 0.209	ug/m3	0.209	0.665	1	TO-15		11/9/2022	CJR	1
Bromodichloromethane	< 0.374	ug/m3	0.374	1.19	1	TO-15		11/9/2022	CJR	1
Bromoform	< 0.414	ug/m3	0.414	1.32	1	TO-15		11/9/2022	CJR	1
Bromomethane	< 0.2	ug/m3	0.2	0.637	1	TO-15		11/9/2022	CJR	1
1,3-Butadiene	0.91	ug/m3	0.143	0.454	1	TO-15		11/9/2022	CJR	1
Carbon Disulfide	1.24	ug/m3	0.138	0.44	1	TO-15		11/9/2022	CJR	1
Carbon Tetrachloride	3.3	ug/m3	0.307	0.978	1	TO-15		11/9/2022	CJR	1
Chlorobenzene	< 0.251	ug/m3	0.251	0.798	1	TO-15		11/9/2022	CJR	1
Chloroethane	< 0.159	ug/m3	0.159	0.507	1	TO-15		11/9/2022	CJR	1
Chloroform	0.58 "J"	ug/m3	0.3	0.953	1	TO-15		11/9/2022	CJR	1
Chloromethane	2.83	ug/m3	0.831	2.64	1	TO-15		11/9/2022	CJR	1
Cyclohexane	2.99	ug/m3	0.212	0.674	1	TO-15		11/9/2022	CJR	1
Dibromochloromethane	< 0.376	ug/m3	0.376	1.2	1	TO-15		11/9/2022	CJR	1
1,4-Dichlorobenzene	0.48 "J"	ug/m3	0.302	0.96	1	TO-15		11/9/2022	CJR	1
1,3-Dichlorobenzene	< 0.302	ug/m3	0.302	0.96	1	TO-15		11/9/2022	CJR	1
1,2-Dichlorobenzene	< 0.235	ug/m3	0.235	0.749	1	TO-15		11/9/2022	CJR	1
Dichlorodifluoromethane	2.92	ug/m3	0.263	0.836	1	TO-15		11/9/2022	CJR	1
1,2-Dichloroethane	< 0.24	ug/m3	0.24	0.763	1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethane	< 0.187	ug/m3	0.187	0.596	1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethene	< 0.21	ug/m3	0.21	0.668	1	TO-15		11/9/2022	CJR	1
cis-1,2-Dichloroethene	< 0.197	ug/m3	0.197	0.626	1	TO-15		11/9/2022	CJR	1
trans-1,2-Dichloroethene	2.81	ug/m3	0.231	0.734	1	TO-15		11/9/2022	CJR	1
1,2-Dichloropropane	< 0.28	ug/m3	0.28	0.89	1	TO-15		11/9/2022	CJR	1

Proiect # 40443A

Lab Code5041691ASample IDIA-1-WBSample MatrixAirSample Date11/2/2022

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
trans-1,3-Dichloropropene	< 0.198	ug/m3	0.198	0.63	1	TO-15		11/9/2022	CJR	1
cis-1,3-Dichloropropene	< 0.234	ug/m3	0.234	0.745	1	TO-15		11/9/2022	CJR	1
1,2-Dichlorotetrafluoroethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		11/9/2022	CJR	1
1,4-Dioxane	< 0.157	ug/m3	0.157	0.5	1	TO-15		11/9/2022	CJR	1
EDB (1,2-Dibromoethane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		11/9/2022	CJR	1
Ethanol	640	ug/m3	0.152	0.482	1	TO-15		11/9/2022	CJR	10
Ethyl Acetate	3.2	ug/m3	0.176	0.559	1	TO-15		11/9/2022	CJR	1
Ethylbenzene	3.3	ug/m3	0.203	0.645	1	TO-15		11/9/2022	CJR	1
4-Ethyltoluene	1.67	ug/m3	0.214	0.681	1	TO-15		11/9/2022	CJR	1
Heptane	3.5	ug/m3	0.265	0.845	1	TO-15		11/9/2022	CJR	1
Hexachlorobutadiene	< 0.489	ug/m3	0.489	1.56	1	TO-15		11/9/2022	CJR	1
Hexane	10.9	ug/m3	0.235	0.748	1	TO-15		11/9/2022	CJR	1
2-Hexanone	2.7	ug/m3	0.222	0.707	1	TO-15		11/9/2022	CJR	1
Isopropyl Alcohol	14.7	ug/m3	0.109	0.347	1	TO-15		11/9/2022	CJR	1
Methyl ethyl ketone (MEK)	37	ug/m3	0.178	0.567	1	TO-15		11/9/2022	CJR	1
Methyl isobutyl ketone (MIBK)	2.33	ug/m3	0.168	0.536	1	TO-15		11/9/2022	CJR	1
Methyl Methacrylate	< 0.217	ug/m3	0.217	0.69	1	TO-15		11/9/2022	CJR	1
Methylene chloride	< 15	ug/m3	0.159	0.506	1	TO-15		11/9/2022	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		11/9/2022	CJR	1
Naphthalene	1.78 "J"	ug/m3	0.675	2.15	1	TO-15		11/9/2022	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		11/9/2022	CJR	1
Styrene	1.66	ug/m3	0.181	0.577	1	TO-15		11/9/2022	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		11/9/2022	CJR	1
Tetrachloroethene	1.22	ug/m3	0.278	0.884	1	TO-15		11/9/2022	CJR	1
Tetrahydrofuran	14.5	ug/m3	0.131	0.417	1	TO-15		11/9/2022	CJR	1
Toluene	13.5	ug/m3	0.184	0.585	1	TO-15		11/9/2022	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		11/9/2022	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		11/9/2022	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		11/9/2022	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		11/9/2022	CJR	1
Trichlorofluoromethane	1.57	ug/m3	0.337	1.07	1	TO-15		11/9/2022	CJR	1
Trichlorotrifluoroethane	0.77 "J"	ug/m3	0.402	1.28	1	TO-15		11/9/2022	CJR	1
1,2,4-Trimethylbenzene	5.7	ug/m3	0.283	0.899	1	TO-15		11/9/2022	CJR	1
1,3,5-Trimethylbenzene	1.77	ug/m3	0.232	0.739	1	TO-15		11/9/2022	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		11/9/2022	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		11/9/2022	CJR	1
m&p-Xylene	12.1	ug/m3	0.377	1.2	1	TO-15		11/9/2022	CJR	1
o-Xylene	5.1	ug/m3	0.218	0.695	1	TO-15		11/9/2022	CJR	1

Proiect # 40443A

Lab Code5041691BSample IDIA-2-WBSample MatrixAir

Sample Date	11/2/2022	Dogult	TIm:4	LOD	1.00	D:I	Mathad	Errt Doto	Dun Data	Amalwat	Codo
		Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic											
Air Samples											
Acetone		101	ug/m3	0.299	0.95	5 1	TO-15		11/9/2022	CJR	10
Benzene		2.84	ug/m3	0.136	0.433	1	TO-15		11/9/2022	CJR	1
Benzyl Chloride		< 0.209	ug/m3	0.209	0.665	1	TO-15		11/9/2022	CJR	1
Bromodichloromethar	ne	< 0.374	ug/m3	0.374	1.19	1	TO-15		11/9/2022	CJR	1
Bromoform		< 0.414	ug/m3	0.414	1.32	2 1	TO-15		11/9/2022	CJR	1
Bromomethane		< 0.2	ug/m3	0.2	0.637	1	TO-15		11/9/2022	CJR	1
1,3-Butadiene		0.91	ug/m3	0.143	0.454	1	TO-15		11/9/2022	CJR	1
Carbon Disulfide		0.44 "J"	ug/m3	0.138	0.44	1	TO-15		11/9/2022	CJR	1
Carbon Tetrachloride		3.9	ug/m3	0.307	0.978	3 1	TO-15		11/9/2022	CJR	1
Chlorobenzene		< 0.251	ug/m3	0.251	0.798	3 1	TO-15		11/9/2022	CJR	1
Chloroethane		< 0.159	ug/m3	0.159	0.507	1	TO-15		11/9/2022	CJR	1
Chloroform		0.78 "J"	ug/m3	0.3	0.953	1	TO-15		11/9/2022	CJR	1
Chloromethane		1.94 "J"	ug/m3	0.831	2.64	1	TO-15		11/9/2022	CJR	1
Cyclohexane		3.3	ug/m3	0.212	0.674	1	TO-15		11/9/2022	CJR	1
Dibromochloromethan	ne	< 0.376	ug/m3	0.376	1.2	2 1	TO-15		11/9/2022	CJR	1
1,4-Dichlorobenzene		0.42 "J"	ug/m3	0.302	0.96	5 1	TO-15		11/9/2022	CJR	1
1,3-Dichlorobenzene		< 0.302	ug/m3	0.302	0.96	5 1	TO-15		11/9/2022	CJR	1
1,2-Dichlorobenzene		< 0.235	ug/m3	0.235	0.749	1	TO-15		11/9/2022	CJR	1
Dichlorodifluorometh	ane	3.2	ug/m3	0.263	0.836	5 1	TO-15		11/9/2022	CJR	1
1,2-Dichloroethane		< 0.24	ug/m3	0.24	0.763	1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethane		< 0.187	ug/m3	0.187	0.596	5 1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethene		< 0.21	ug/m3	0.21	0.668	3 1	TO-15		11/9/2022	CJR	1
cis-1,2-Dichloroethene	e	< 0.197	ug/m3	0.197	0.626	5 1	TO-15		11/9/2022	CJR	1
trans-1,2-Dichloroethe	ene	2.81	ug/m3	0.231	0.734	1	TO-15		11/9/2022	CJR	1
1,2-Dichloropropane		< 0.28	ug/m3	0.28	0.89	1	TO-15		11/9/2022	CJR	1
trans-1,3-Dichloropro	pene	< 0.198	ug/m3	0.198	0.63	3 1	TO-15		11/9/2022	CJR	1
cis-1,3-Dichloroprope		< 0.234	ug/m3	0.234	0.745	1	TO-15		11/9/2022	CJR	1
1,2-Dichlorotetrafluor	roethane	< 0.446	ug/m3	0.446	1.42	2 1	TO-15		11/9/2022	CJR	1
1,4-Dioxane		< 0.157	ug/m3	0.157	0.5	5 1	TO-15		11/9/2022	CJR	1
EDB (1,2-Dibromoeth	nane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		11/9/2022	CJR	1
Ethanol		710	ug/m3	0.152		. 1			11/9/2022	CJR	10
Ethyl Acetate		2.63	ug/m3	0.176					11/9/2022	CJR	1
Ethylbenzene		3.12	ug/m3	0.203					11/9/2022	CJR	1
4-Ethyltoluene		1.47	ug/m3	0.214					11/9/2022	CJR	1
Heptane		3.4	ug/m3	0.265		1			11/9/2022	CJR	1
Hexachlorobutadiene		< 0.489	ug/m3	0.489					11/9/2022	CJR	1
Hexane		7.7	ug/m3	0.235					11/9/2022	CJR	1
2-Hexanone		< 0.222	Ü	0.222					11/9/2022	CJR	1
Isopropyl Alcohol		21.1	ug/m3	0.109					11/9/2022	CJR	1
Methyl ethyl ketone (I		22.3	ug/m3	0.178					11/9/2022	CJR	1
Methyl isobutyl keton	e (MIBK)	1.02	ug/m3	0.168					11/9/2022	CJR	1
Methyl Methacrylate		< 0.217	_	0.217					11/9/2022	CJR	1
Methylene chloride		< 15	ug/m3	0.159					11/9/2022	CJR	1
Methyl tert-butyl ether	r (MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		11/9/2022	CJR	1

Invoice # E41691

Project Name CWC WEST BLOCK

Proiect # 40443A

Lab Code 5041691B Sample ID IA-2-WB Sample Matrix Air Sample Date 11/2/2022

Sample Date	11/2/2022

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Naphthalene	1.94 "J"	ug/m3	0.675	2.15	1	TO-15		11/9/2022	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		11/9/2022	CJR	1
Styrene	1.53	ug/m3	0.181	0.577	1	TO-15		11/9/2022	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		11/9/2022	CJR	1
Tetrachloroethene	1.43	ug/m3	0.278	0.884	1	TO-15		11/9/2022	CJR	1
Tetrahydrofuran	15.7	ug/m3	0.131	0.417	1	TO-15		11/9/2022	CJR	1
Toluene	14.2	ug/m3	0.184	0.585	1	TO-15		11/9/2022	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		11/9/2022	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		11/9/2022	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		11/9/2022	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		11/9/2022	CJR	1
Trichlorofluoromethane	1.85	ug/m3	0.337	1.07	1	TO-15		11/9/2022	CJR	1
Trichlorotrifluoroethane	0.84 "J"	ug/m3	0.402	1.28	1	TO-15		11/9/2022	CJR	1
1,2,4-Trimethylbenzene	5.4	ug/m3	0.283	0.899	1	TO-15		11/9/2022	CJR	1
1,3,5-Trimethylbenzene	1.62	ug/m3	0.232	0.739	1	TO-15		11/9/2022	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		11/9/2022	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		11/9/2022	CJR	1
m&p-Xylene	12.2	ug/m3	0.377	1.2	1	TO-15		11/9/2022	CJR	1
o-Xylene	4.7	ug/m3	0.218	0.695	1	TO-15		11/9/2022	CJR	1

Proiect # 40443A

Lab Code5041691CSample IDIA-3-WBSample MatrixAir

Sample Date	11/2/2022	Dogul4	I Init	LOD	1.00	D:I	Mathad	Ext Data	Dun Data	Amalwat	Codo
		Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic											
Air Samples											
Acetone		84	ug/m3	0.299	0.95	1	TO-15		11/9/2022	CJR	1
Benzene		2.75	ug/m3	0.136	0.433	1	TO-15		11/9/2022	CJR	1
Benzyl Chloride		< 0.209	ug/m3	0.209	0.665	1	TO-15		11/9/2022	CJR	1
Bromodichloromethan	ie	< 0.374	ug/m3	0.374	1.19	1	TO-15		11/9/2022	CJR	1
Bromoform		< 0.414	ug/m3	0.414	1.32	1	TO-15		11/9/2022	CJR	1
Bromomethane		< 0.2	ug/m3	0.2	0.637	1	TO-15		11/9/2022	CJR	1
1,3-Butadiene		0.84	ug/m3	0.143	0.454	. 1	TO-15		11/9/2022	CJR	1
Carbon Disulfide		0.96	ug/m3	0.138	0.44	. 1	TO-15		11/9/2022	CJR	1
Carbon Tetrachloride		3.4	ug/m3	0.307	0.978	1	TO-15		11/9/2022	CJR	1
Chlorobenzene		< 0.251	ug/m3	0.251	0.798	1	TO-15		11/9/2022	CJR	1
Chloroethane		< 0.159	ug/m3	0.159	0.507	1	TO-15		11/9/2022	CJR	1
Chloroform		0.58 "J"	ug/m3	0.3	0.953	1	TO-15		11/9/2022	CJR	1
Chloromethane		1.82 "J"	ug/m3	0.831	2.64	- 1	TO-15		11/9/2022	CJR	1
Cyclohexane		3.1	ug/m3	0.212	0.674	. 1	TO-15		11/9/2022	CJR	1
Dibromochloromethan	ne	< 0.376	ug/m3	0.376	1.2	. 1	TO-15		11/9/2022	CJR	1
1,4-Dichlorobenzene		0.36 "J"	ug/m3	0.302	0.96	1	TO-15		11/9/2022	CJR	1
1,3-Dichlorobenzene		< 0.302	ug/m3	0.302	0.96	1	TO-15		11/9/2022	CJR	1
1,2-Dichlorobenzene		< 0.235	ug/m3	0.235	0.749	1	TO-15		11/9/2022	CJR	1
Dichlorodifluorometha	ane	2.92	ug/m3	0.263	0.836	1	TO-15		11/9/2022	CJR	1
1,2-Dichloroethane		< 0.24	ug/m3	0.24	0.763	1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethane		< 0.187	ug/m3	0.187	0.596	1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethene		< 0.21	ug/m3	0.21	0.668	1	TO-15		11/9/2022	CJR	1
cis-1,2-Dichloroethene	•	< 0.197	ug/m3	0.197	0.626	1	TO-15		11/9/2022	CJR	1
trans-1,2-Dichloroethe	ene	2.65	ug/m3	0.231	0.734	. 1	TO-15		11/9/2022	CJR	1
1,2-Dichloropropane		< 0.28	ug/m3	0.28	0.89	1	TO-15		11/9/2022	CJR	1
trans-1,3-Dichloroprop	•	< 0.198	ug/m3	0.198	0.63	1	TO-15		11/9/2022	CJR	1
cis-1,3-Dichloroproper		< 0.234	ug/m3	0.234	0.745	1	TO-15		11/9/2022	CJR	1
1,2-Dichlorotetrafluor	oethane	< 0.446	ug/m3	0.446	1.42	1	TO-15		11/9/2022	CJR	1
1,4-Dioxane		< 0.157	ug/m3	0.157	0.5	1	TO-15		11/9/2022	CJR	1
EDB (1,2-Dibromoeth	iane)	< 0.342	ug/m3	0.342	1.09	1	TO-15		11/9/2022	CJR	1
Ethanol		640	ug/m3	0.152		1			11/9/2022	CJR	10
Ethyl Acetate		2.45	ug/m3	0.176					11/9/2022	CJR	1
Ethylbenzene		2.86	ug/m3	0.203					11/9/2022	CJR	1
4-Ethyltoluene		1.42	ug/m3	0.214					11/9/2022	CJR	1
Heptane		3.4	ug/m3	0.265		1	TO-15		11/9/2022	CJR	1
Hexachlorobutadiene		< 0.489	ug/m3	0.489					11/9/2022	CJR	1
Hexane		6.7	ug/m3	0.235					11/9/2022	CJR	1
2-Hexanone		0.65 "J"	ug/m3	0.222					11/9/2022	CJR	1
Isopropyl Alcohol		16	ug/m3	0.109			TO-15		11/9/2022	CJR	1
Methyl ethyl ketone (M		20.7	ug/m3	0.178					11/9/2022	CJR	1
Methyl isobutyl keton	e (MIBK)	0.98	ug/m3	0.168					11/9/2022	CJR	1
Methyl Methacrylate		< 0.217	ug/m3	0.217					11/9/2022	CJR	1
Methylene chloride		< 15	ug/m3	0.159					11/9/2022	CJR	1
Methyl tert-butyl ether	(MTBE)	< 0.16	ug/m3	0.16	0.509	1	TO-15		11/9/2022	CJR	1

Invoice # E41691

Project Name CWC WEST BLOCK

Proiect # 40443A

Lab Code5041691CSample IDIA-3-WBSample MatrixAir

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Naphthalene	1.41 "J"	ug/m3	0.675	2.15	1	TO-15		11/9/2022	CJR	1
Propene	< 0.079	ug/m3	0.079	0.251	1	TO-15		11/9/2022	CJR	1
Styrene	1.49	ug/m3	0.181	0.577	1	TO-15		11/9/2022	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		11/9/2022	CJR	1
Tetrachloroethene	1.29	ug/m3	0.278	0.884	1	TO-15		11/9/2022	CJR	1
Tetrahydrofuran	14.4	ug/m3	0.131	0.417	1	TO-15		11/9/2022	CJR	1
Toluene	13.5	ug/m3	0.184	0.585	1	TO-15		11/9/2022	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		11/9/2022	CJR	1
1,1,1-Trichloroethane	< 0.249	ug/m3	0.249	0.793	1	TO-15		11/9/2022	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		11/9/2022	CJR	1
Trichloroethene (TCE)	< 0.237	ug/m3	0.237	0.754	1	TO-15		11/9/2022	CJR	1
Trichlorofluoromethane	1.63	ug/m3	0.337	1.07	1	TO-15		11/9/2022	CJR	1
Trichlorotrifluoroethane	0.77 "J"	ug/m3	0.402	1.28	1	TO-15		11/9/2022	CJR	1
1,2,4-Trimethylbenzene	5.1	ug/m3	0.283	0.899	1	TO-15		11/9/2022	CJR	1
1,3,5-Trimethylbenzene	1.47	ug/m3	0.232	0.739	1	TO-15		11/9/2022	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		11/9/2022	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		11/9/2022	CJR	1
m&p-Xylene	11.5	ug/m3	0.377	1.2	1	TO-15		11/9/2022	CJR	1
o-Xylene	4.7	ug/m3	0.218	0.695	1	TO-15		11/9/2022	CJR	1

Proiect # 40443A

Lab Code5041691DSample IDEP-7Sample MatrixAir

Sample Date	11/2/2022	D 14		TT *4	LOD	T 00	D.I	N. (1 1	E 4 D 4	D D (A 1 4	G 1
		Result		Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic												
Air Samples												
Acetone		330		ug/m3	0.299	0.95	1	TO-15		11/9/2022	CJR	10
Benzene		3.6		ug/m3	0.136	0.433	1	TO-15		11/9/2022	CJR	1
Benzyl Chloride		< (0.209	ug/m3	0.209	0.665	1	TO-15		11/9/2022	CJR	1
Bromodichloromethan	ne	< (0.374	ug/m3	0.374	1.19	1	TO-15		11/9/2022	CJR	1
Bromoform		< (0.414	ug/m3	0.414	1.32	. 1	TO-15		11/9/2022	CJR	1
Bromomethane		< (0.2	ug/m3	0.2	0.637	1	TO-15		11/9/2022	CJR	1
1,3-Butadiene		< (0.143	ug/m3	0.143	0.454	. 1	TO-15		11/9/2022	CJR	1
Carbon Disulfide		5.9		ug/m3	0.138	0.44	- 1	TO-15		11/9/2022	CJR	1
Carbon Tetrachloride		5.2		ug/m3	0.307	0.978	1	TO-15		11/9/2022	CJR	1
Chlorobenzene		< (0.251	ug/m3	0.251	0.798	1	TO-15		11/9/2022	CJR	1
Chloroethane		< (0.159	ug/m3	0.159	0.507	1	TO-15		11/9/2022	CJR	1
Chloroform		2.68		ug/m3	0.3	0.953	1	TO-15		11/9/2022	CJR	1
Chloromethane		2.23 "J"		ug/m3	0.831	2.64	. 1	TO-15		11/9/2022	CJR	1
Cyclohexane		4.8		ug/m3	0.212	0.674	. 1	TO-15		11/9/2022	CJR	1
Dibromochloromethan	ne	< (0.376	ug/m3	0.376	1.2	. 1	TO-15		11/9/2022	CJR	1
1,4-Dichlorobenzene		0.54 "J"		ug/m3	0.302	0.96	5 1	TO-15		11/9/2022	CJR	1
1,3-Dichlorobenzene		< (0.302	ug/m3	0.302	0.96	5 1	TO-15		11/9/2022	CJR	1
1,2-Dichlorobenzene		< (0.235	ug/m3	0.235	0.749	1	TO-15		11/9/2022	CJR	1
Dichlorodifluorometh	ane	6.0		ug/m3	0.263	0.836	5 1	TO-15		11/9/2022	CJR	1
1,2-Dichloroethane		< (0.24	ug/m3	0.24	0.763	1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethane		< (0.187	ug/m3	0.187	0.596	5 1	TO-15		11/9/2022	CJR	1
1,1-Dichloroethene		< (0.21	ug/m3	0.21	0.668	1	TO-15		11/9/2022	CJR	1
cis-1,2-Dichloroethen	e	< (0.197	ug/m3	0.197	0.626	5 1	TO-15		11/9/2022	CJR	1
trans-1,2-Dichloroetho	ene	0.55 "J"		ug/m3	0.231	0.734	. 1	TO-15		11/9/2022	CJR	1
1,2-Dichloropropane		< (0.28	ug/m3	0.28	0.89	1	TO-15		11/9/2022	CJR	1
trans-1,3-Dichloropro	pene	< (0.198	ug/m3	0.198	0.63	1	TO-15		11/9/2022	CJR	1
cis-1,3-Dichloroprope	ne	< (0.234	ug/m3	0.234	0.745	1	TO-15		11/9/2022	CJR	1
1,2-Dichlorotetrafluor	oethane	< (0.446	ug/m3	0.446	1.42	. 1	TO-15		11/9/2022	CJR	1
1,4-Dioxane		4.8		ug/m3	0.157	0.5	1	TO-15		11/9/2022	CJR	1
EDB (1,2-Dibromoeth	nane)	< (0.342	ug/m3	0.342	1.09) 1	TO-15		11/9/2022	CJR	1
Ethanol		113		ug/m3	0.152	0.482	. 1	TO-15		11/9/2022	CJR	10
Ethyl Acetate		14		ug/m3	0.176					11/9/2022	CJR	1
Ethylbenzene		12.1		ug/m3	0.203					11/9/2022	CJR	1
4-Ethyltoluene		2.11		ug/m3	0.214	0.681	1	TO-15		11/9/2022	CJR	1
Heptane		21.3		ug/m3	0.265	0.845	1	TO-15		11/9/2022	CJR	1
Hexachlorobutadiene		< (0.489	ug/m3	0.489	1.56	5 1	TO-15		11/9/2022	CJR	1
Hexane		17.1		ug/m3	0.235					11/9/2022	CJR	1
2-Hexanone		10.1		ug/m3	0.222					11/9/2022	CJR	1
Isopropyl Alcohol		25.4		ug/m3	0.109			TO-15		11/9/2022	CJR	1
Methyl ethyl ketone (l		86		ug/m3	0.178					11/9/2022	CJR	1
Methyl isobutyl keton	e (MIBK)	8.3		ug/m3	0.168					11/9/2022	CJR	1
Methyl Methacrylate			0.217	ug/m3	0.217					11/9/2022	CJR	1
Methylene chloride		18.8		ug/m3	0.159					11/9/2022	CJR	1
Methyl tert-butyl ethe	r (MTBE)	< (0.16	ug/m3	0.16	0.509	1	TO-15		11/9/2022	CJR	1

Project Name CWC WEST BLOCK Invoice # E41691

Proiect # 40443A

Lab Code 5041691D Sample ID EP-7 Sample Matrix Air

Sample Date 11/2/2022

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Naphthalene	1.1 "J"	ug/m3	0.675	2.15	1	TO-15		11/9/2022	CJR	1
Propene	22.7	ug/m3	0.079	0.251	1	TO-15		11/9/2022	CJR	1
Styrene	34	ug/m3	0.181	0.577	1	TO-15		11/9/2022	CJR	1
1,1,2,2-Tetrachloroethane	< 0.325	ug/m3	0.325	1.03	1	TO-15		11/9/2022	CJR	1
Tetrachloroethene	3.8	ug/m3	0.278	0.884	1	TO-15		11/9/2022	CJR	1
Tetrahydrofuran	9.8	ug/m3	0.131	0.417	1	TO-15		11/9/2022	CJR	1
Toluene	32	ug/m3	0.184	0.585	1	TO-15		11/9/2022	CJR	1
1,2,4-Trichlorobenzene	< 0.657	ug/m3	0.657	2.09	1	TO-15		11/9/2022	CJR	1
1,1,1-Trichloroethane	0.54 "J"	ug/m3	0.249	0.793	1	TO-15		11/9/2022	CJR	1
1,1,2-Trichloroethane	< 0.258	ug/m3	0.258	0.822	1	TO-15		11/9/2022	CJR	1
Trichloroethene (TCE)	1.34	ug/m3	0.237	0.754	1	TO-15		11/9/2022	CJR	1
Trichlorofluoromethane	2.08	ug/m3	0.337	1.07	1	TO-15		11/9/2022	CJR	1
Trichlorotrifluoroethane	0.92 "J"	ug/m3	0.402	1.28	1	TO-15		11/9/2022	CJR	1
1,2,4-Trimethylbenzene	8.6	ug/m3	0.283	0.899	1	TO-15		11/9/2022	CJR	1
1,3,5-Trimethylbenzene	3.2	ug/m3	0.232	0.739	1	TO-15		11/9/2022	CJR	1
Vinyl acetate	< 0.203	ug/m3	0.203	0.645	1	TO-15		11/9/2022	CJR	1
Vinyl Chloride	< 0.148	ug/m3	0.148	0.472	1	TO-15		11/9/2022	CJR	1
m&p-Xylene	52	ug/m3	0.377	1.2	1	TO-15		11/9/2022	CJR	1
o-Xylene	20.1	ug/m3	0.218	0.695	1	TO-15		11/9/2022	CJR	1

[&]quot;J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

Michaelyllul

LOQ Limit of Quantitation

Code	Comment
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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

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Chain # 42224

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Sample Handling Request

Rush Analysis Date Required:
(Rushes accepted only with prior authorization)

Normal Turn Around

920-830-2455 • mrsynergy@wi.twcbc.com	1990 Prospect Ct. • Appleton, WI 54914	www.syriergy-lap.net
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GRO (Mod GRO Sep 95) LEAD		
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PCB PVOC (EPA 8021)		ues
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Soully B

Lab I.D.

Cremeber Linghe 262821 1171

Phone Email

City State Zip

Company

Reports To:

Project (Name / Location):

Sampler: (signature)

Project #: QUOTE #:

V Shhoh

Lab I.D. #

Address

Coolers	Ten	Met	Sample
Cooler seal intact upon receipt: X Yes	Temp. of Temp. Blank:	Method of Shipment: CS	Sample Integrity - To be completed by receiving lab.
X Yes No	°C On loe: X		sted by receiving lab.

Comments/Special Instructions

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