Gray, Jane K - DNR

From: Kathryn Balachandran <kbalachandran@ksinghengineering.com>
Sent: Friday, December 13, 2024 11:19 AM
To: Gray, Jane K - DNR
Cc: Shane LaFave; que@scott-crawford.com; Robert Fedorchak; Pratap Singh; Angy Singh; Robert Reineke
Subject: RE: CWC East Block (02-41-263675) - Request for Information
Attachments: 20241213 - CWC-EB - Rd 3 Comm corrected passive sampler results.pdf; ATLSTDEDD_2411045R1.xls

Follow Up Flag: Follow up
Flag Status: Completed

Jane,

We'd like to submit a correction to our Round 3 Commissioning Report for CWC East Block. We found an issue with the chain of custody we prepared for passive sampling. We auto-filled the date of deployment on the COC, which indicates that we deployed the passive samplers on 10/18/24, then 10/19/24, 10/20/24, etc. As stated in our report, we deployed all samplers on the same date, 10/18/24. When we found this issue, we resubmitted the COC with the correct deployment dates and received the test results from Eurofins today. The results came back lower than what we reported, and we have attached the lab report, raw data file, and both COCs here for your review. Notably, the indoor air concentration level for the North Mechanical Room was 1.1 ug/m3 for the 14-day period, rather than 1.9 ug/m3. Please review and let us know if you have any questions or need any additional information.

Thank you,
~katie

Kathryn Balachandran, Ph.D.
Project Engineer | kbalachandran@ksinghengineering.com
608.467.2005 (p) | 262.821.1174 (f)
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From: Gray, Jane K - DNR <jane.gray@wisconsin.gov>
Sent: Wednesday, November 27, 2024 11:34 AM
To: Pratap Singh <psingh@ksinghengineering.com>
Cc: Robert Reineke <rreineke@ksinghengineering.com>; Kathryn Balachandran <kbalachandran@ksinghengineering.com>; Shane LaFave <Shane@roerscompanies.com>; que@scott-crawford.com; Robert Fedorchak <rfedorchak@patrioteng.com>; Walden, James E -DNR <jamese.walden@wisconsin.gov>; Mylotta, Pamela A - DNR <Pamela.Mylotta@wisconsin.gov>
Subject: RE: CWC East Block (02-41-263675) - Request for Information

Hi Dr. Singh – Thank you for providing this additional information and documentation. I will reach out should we have any further questions. Regarding the DNR's expedited review of the commissioning report (11/14) and plan (11/11), we can work to have a goal to provide an expedited review by 12/20.

Thanks, Jane

Jane Gray
she/her/hers
Phone: (414) 435-8021
jane.gray@wisconsin.gov

Our core values include professionalism, integrity, and customer service.
Please visit our survey to provide feedback on your experience interacting with any DNR employee.

From: Pratap Singh <psingh@ksinghengineering.com>
Sent: Friday, November 22, 2024 6:02 PM
To: Gray, Jane K - DNR <jane.gray@wisconsin.gov>
Cc: Robert Reineke <rreineke@ksinghengineering.com>; Kathryn Balachandran <kbalachandran@ksinghengineering.com>; Shane LaFave <Shane@roerscompanies.com>; que@scott-crawford.com; Robert Fedorchak <rfedorchak@patrioteng.com>; Walden, James E -DNR <jamese.walden@wisconsin.gov>; Mylotta, Pamela A - DNR <Pamela.Mylotta@wisconsin.gov>
Subject: RE: CWC East Block (02-41-263675) - Request for Information

Hi Jane,

Thank you for your email. Please see below and attached for the requested documentation and responses. We have also included a signature page for the submittal. We look forward to your feedback on the 4th Round Commissioning Plan. If WDNR can advance this review by 1-2 weeks, it would be greatly appreciated as there are logistical issues with the holidays and lab hours. Now that the weather has shifted, and snow is on the ground, we would like to conduct commissioning in mid-December 2024.

Thank you, and have a nice weekend,

Pratap N. Singh, Ph.D., PE
Principal Engineer | psingh@ksinghengineering.com
262.821.1171, ext. 105 (p) | 414.313.4718 (cell)
www.ksinghengineering.com

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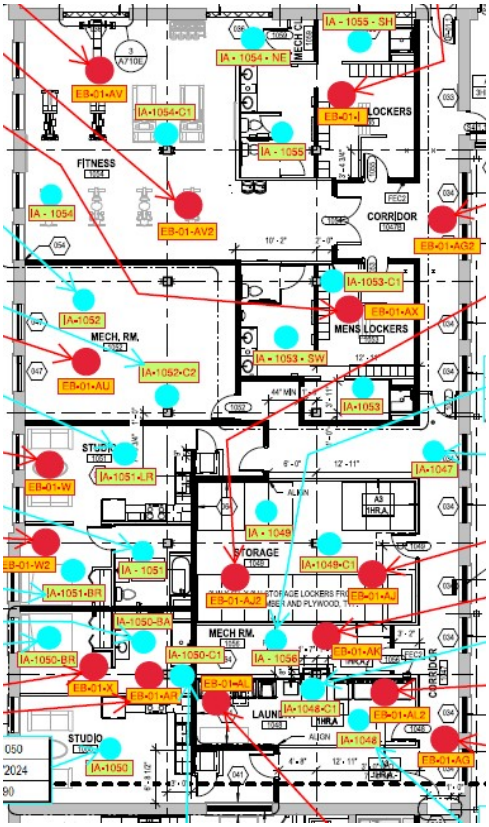
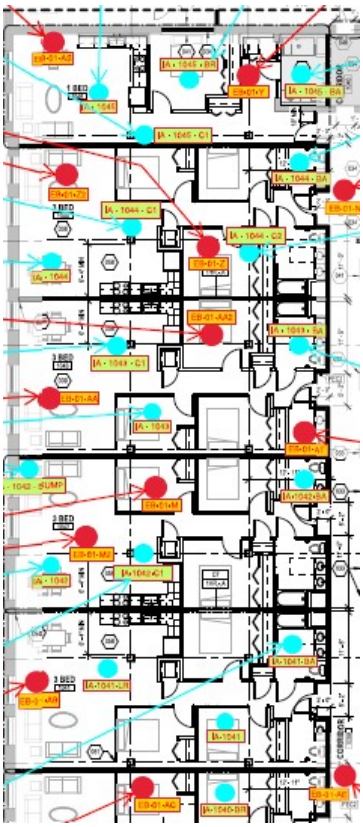
From: Gray, Jane K - DNR <jane.gray@wisconsin.gov>
Sent: Wednesday, November 20, 2024 4:04 PM

To: Pratap Singh <psingh@ksinghengineering.com>
Cc: Angy Singh <angy.singh@ksinghengineering.com>; Robert Fedorchak <rfedorchak@patrioteng.com>; Kathryn Balachandran <kbalachandran@ksinghengineering.com>; Shane LaFave <Shane@roerscompanies.com>; Que El-Amin <que@scott-crawford.com>; Walden, James E -DNR <jamese.walden@wisconsin.gov>; Mylotta, Pamela A - DNR <Pamela.Mylotta@wisconsin.gov>
Subject: CWC East Block (02-41-263675) - Request for Information

Good afternoon Dr. Singh – On 11/11/24 the DNR received the proposed plan for the next commissioning event (winter) for the subject site and on 11/14/24 the DNR received the commissioning report with a fee documenting the fall commissioning event at the subject site. As outlined in the DNR's 05/30/24 letter (attached), we request the following information as we continue our technical review of the reports:

- Provide the raw excel files for the comprehensive indoor air data collected to date (both GC and passive sampler data points). This can be emailed to me directly.
    - The raw Excel file for GC testing was provided to WDNR along with the Report on 11/11/2024 via the Remediation and Redevelopment Program's online document submission portal. For your convenience, we are resubmitting this information via email. In addition, we have attached the raw Excel files provided by Eurofins Air Toxics as a supplement to the lab report provided in the 3rd Round Commissioning Report.
- Discuss why the fan vacuum measurements were not collected, as was requested in the 05/30/24 letter. If these were collected, provide these in an updated Table 5 or other table.
    - An updated version of Report Table 5, showing blower vacuum measurements, is included as an attachment to this email.
- Discuss whether any building conditions were manipulated during the passive indoor air sampling events. If so, provide an updated Table 4 highlighting these, as requested in the 05/30/24 letter. If not, indicate why building conditions were not manipulated during the passive sampling events.
    - Manipulations to building conditions—including turning on fans in kitchens and bedrooms, flushing toilets, opening and closing doors, and running elevators—were performed during discrete indoor air sampling for both Round 3A and Round 3B and are documented in Table 3 of the Report.
    - During the passive sampling periods for Round 3A and Round 3B, KSingh personnel were onsite periodically to ensure the samplers were intact. As such, the doors to the units and rooms were opened and closed periodically during each 14-day period. Please note that the HVAC was fully operational during the commissioning events which indicates significant air exchange throughout this period.
- Discuss whether the GC samples were collected to assess any specific preferential pathways. If so, provide an updated Table 2 providing this information, as requested in the 05/30/24 letter. If not, discuss why specific preferential pathways were not targeted.
    - At the request of WDNR in the May 30th letter, KSingh modified the commissioning plan to move passive sampler and GC test locations from the 2nd and 3rd floor to the 1st floor areas of highest concern. For instance, in Unit 1050 which is a studio apartment, there were 4 GC tests and 2 passive samplers. The GC tests included the bathroom, a column, and a test near the wall. There is a high concentration of testing that took place in critical units (example shown below from the 3rd Commissioning Report):





- Further, as documented in Table 3 of the Report, GC samples were collected in bathrooms and showers and at columns, sumps, and elevators, all of which present potential preferential pathways for vapor intrusion. GC samples taken from locations presenting preferential pathways have the following sample ID suffixes:
  - -BA ..... bathroom
  - -SH ..... shower
  - -C1, C2 ..... column
  - -SUMP ..... sump
  - -EL ..... elevator
- Please note that significant sealing efforts and building screening took place prior to Round 3 of Commissioning. As a result, especially in the critical units, there are not nearly as many preferential pathways as there once were. This will be further detailed in the Remedial Action Documentation Report to be submitted soon. We have attached photos of 1054 Fitness Room to give WDNR an idea of the sealing that has taken place. For example, below are before and after pictures of 1054 Fitness Room. It was determined that the brick walls were still a concern, and CWC took extensive measures to have vapor barrier placed throughout the corridor and to have the walls sealed. Please note that the pictures below are progress photos only:

→ →

→

- In our opinion, the level of indoor air quality testing performed during Round 3 is unprecedented, and certainly indicative of the environmental restoration achieved by CWC.

- Provide a figure displaying both the PFE information and the VMS layout with relevant piping, valves, vacuum measurements and discharge points, as requested in the 05/30/24 letter.
  - The requested figure is included as an attachment to this memorandum.

This information can be provided as a standalone submittal to the DNR's RR electronic submittal portal or can be emailed directly to me. Please do not hesitate to reach out if you have any questions concerning this request. To help support the DNR's expedited review of these reports, please provide this requested information as soon as feasible, but by 12/02/24 at the latest. Thank you for your continued work at this site.

Best, Jane

Jane Gray
she/her/hers
Hydrogeologist Program Coordinator - Remediation and Redevelopment Program
West Central Region
Wisconsin Department of Natural Resources
Phone: (414) 435-8021
jane.gray@wisconsin.gov

dnr.wi.gov
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Table 4. Passive Air Sampling Locations and Results - Level 1 - REVISED
Commissioning Round 3
Community Within the Corridor - East Block

1st Round Commissioning			*GC Testing*	*GC Testing*	*2nd Round Commissioning*			*3rd Round Commissioning*									
February 2023			*April 2023*	*August 2023*	*March 2024*			*August–September 2024 (3A) and October –November 2024 (3B)*									
Sample ID	Sample Location	TCE Reading ($\mu g/m^3$)	TCE Reading ($\mu g/m^3$)	TCE Reading ($\mu g/m^3$)	Sample ID	Sample Location	TCE Reading ($\mu g/m^3$)	Sample ID	Sample Location	TCE Reading ($\mu g/m^3$)	REVISED TCE Reading ($\mu g/m^3$)	PCE Reading ($\mu g/m^3$)	REVISED PCE Reading ($\mu g/m^3$)	*cis* -DCE Reading ($\mu g/m^3$)	REVISED *cis* -DCE Reading ($\mu g/m^3$)	*trans* -DCE Reading ($\mu g/m^3$)	REVISED *trans* -DCE Reading ($\mu g/m^3$)
Residential Indoor Air Vapor Action Levels* (ug/m^3)		2.1	2.1	2.1	Residential Indoor Air Vapor Action Levels* (ug/m^3)		2.1	Residential Indoor Air Vapor Action Levels* (ug/m^3)		2.1	2.1	42	42	42	42	42	42
EB-01-B	N Mech Room	4.9	14.8	9.9	EB-01-A	N Mech Room	1.2	EB-01-A	N Mech Room	1.9	1.1	0.17	0.094	0.22	0.12	ND	ND
EB-01-C	Stair 8	0.21			EB-01-B	Stair 8	0.22	EB-01-B	Stair 8	0.22		ND		ND		0.36	
EB-01-D	Elevator 3	0.32			EB-01-C	Elevator 3	0.55	EB-01-C	Elevator 3	0.61	0.39	0.13	0.086	ND	ND	ND	ND
EB-01-E	NW Garage	0.13	0.60	< 0.6	EB-01-D	NW Garage	0.26	EB-01-D	NW Garage - Center	0.23		ND		ND		0.17	
								EB-01-AN	NW Garage - West	0.24		ND		ND		0.21	
								EB-01-B2	NW Garage - Spot 50	0.24		ND		ND		ND	
EB-01-F	E Garage	0.25	0.80	< 0.6	EB-01-E	E Garage	0.15										
					EB-01-F	Elevator 1	0.62	EB-01-F	Elevator 1	0.22		ND		ND		ND	
EB-01-G	Skywalk	0.82															
EB-01-H	SW Garage	1.1	21	< 0.6	EB-01-G	SW Garage	0.34	EB-01-G	SW Garage E	0.24		ND		ND		ND	
								EB-01-AM	SW Garage W	0.25		ND		ND		ND	
EB-01-I	Elevator 2	0.23			EB-01-H	Elevator 2	< 0.14	EB-01-H	Elevator 2	0.18		ND		ND		ND	
EB-01-J	1053	0.13	428		EB-01-I	1053	0.62	EB-01-AX	1053 Men's Lockers	0.23	0.21	ND	ND	ND	ND	ND	ND
EB-01-K	Gym	0.13	7.5	3.76	EB-01-J	Gym	0.25	EB-01-J	Gym	0.18		ND		ND		ND	
								EB-01-AP	Gym North Center	0.17		ND		ND		ND	
								EB-01-K	Gym South	0.18		ND		ND		ND	
EB-01-L	SE Gym	0.13			EB-01-K	SE Gym	0.30	EB-01-AQ	SE Gym	0.15		ND		ND		ND	
EB-01-M	Stair 6	0.13		< 0.6	EB-01-L	Stair 6	< 0.14	EB-01-L	Stair 6	0.12		ND		ND		0.98	
EB-01-N	1042	15	16.2	< 0.6	EB-01-M	1042	0.19	EB-01-M	1042 North Bathroom	0.40		0.13		ND		0.38	
								EB-01-M2	1042 Living Room	0.34		0.11		ND		0.28	
EB-01-O	1046	11			EB-01-N	1046	0.45										
EB-01-P	1039	8.2	11.4	< 0.6	EB-01-O	1039	< 0.14	EB-01-O	1039 SW Bedroom	0.14		ND		ND		ND	
EB-01-Q	1036	0.96	< 0.6	< 0.6	EB-01-P	1036	0.32										
EB-01-R	1027A	0.41			EB-01-Q	1027A	0.52	EB-01-Q	1027A Corridor	0.19		ND		ND		ND	
					EB-01-R	1001	0.78	EB-01-R	1001 Lobby A	0.47		0.12		ND		ND	
EB-01-S	1014	0.14	< 0.6	< 0.6													
EB-01-T	Stair 1	0.20			EB-01-S	Stair 1	< 0.14	EB-01-S	Stair 1	0.10		ND		ND		0.38	
					EB-01-T	Stair 2	< 0.14	EB-01-T	Stair 2	0.15		ND		ND		0.82	
EB-01-V	1012	0.32															
EB-01-W	Stair 4	0.81	14.4	< 0.6	EB-01-U	Stair 4	0.28	EB-01-U	Stair 4	0.26		ND		ND		1.3	
EB-01-X	Stair 3	3.2	0.60	< 0.6	EB-01-V	Stair 3	0.44	EB-01-V	Stair 3	0.14		ND		ND		0.28	
								EB-01-AU	1052 Mechanical	0.37		ND		ND		0.33	
EB-01-Y	1051	61	45.3	< 0.6	EB-01-W	1051	< 0.14	EB-01-W	1051 Living Room	0.41		ND		ND		0.22	
								EB-01-W2	1051 Bedroom	0.36		ND		ND		ND	
EB-01-Z	1050	400	706	2.4	EB-01-X	1050	0.30	EB-01-X	1050 Bedroom	0.38		ND		ND		0.26	
								EB-01-AR	1050 Bathroom	0.42		ND		ND		0.25	
EB-01-AA	1045	290	352	7.8	EB-01-Y	1045	0.43	EB-01-Y	1045	0.58		ND		ND		0.42	
					EB-01-AT	1045 Bedroom	0.52										
								EB-01-AS	1045 NW Wall	0.48		ND		ND		0.31	
EB-01-AB	1044	46	95	2.5	EB-01-Z	1044	0.60	EB-01-Z	1044 South Bedroom	0.57		0.13		ND		0.24	
								EB-01-Z2	1044 Living Room	0.53		0.12		ND		0.32	
								EB-01-N	Outside 1044 - Hallway	0.20		ND		ND		0.52	
EB-01-AC	1043	17	24	2.3	EB-01-AA	1043	0.48	EB-01-AA	1043 Living Room	0.48		0.2		ND		0.25	
								EB-01-AA2	1043 North Bedroom	0.62		0.25		ND		0.31	
								EB-01-AT	1043 Half Bath	0.43		0.18		ND		0.24	
EB-01-AD	1041	13	19.9	< 0.6	EB-01-AB	1041	< 0.14	EB-01-AB	1041 Living Room	0.26		ND		ND		0.26	
EB-01-AE	1040	11	22.6	< 0.6	EB-01-AC	1040	< 0.14	EB-01-AC	1040 North Bedroom	0.20		ND		ND		ND	
EB-01-AF	1037	3.2	2.0	< 0.6	EB-01-AD	1037	0.50	EB-01-AD	1037 NE Bedroom	0.26		ND		ND		0.24	
					EB-01-AE	1038	0.24	EB-01-AE	1038 Corridor	0.16		ND		ND		0.39	
								EB-01-P	1036 Dining Room	0.20		ND		ND		ND	
EB-01-AG	1035	0.70	< 0.6	< 0.6													
EB-01-AH	1026	5.0	< 0.6	< 0.6	EB-01-AF	1026	0.23	EB-01-AF	1026 NW Bedroom	0.16		ND		ND		ND	
EB-01-AI	1025	0.20	4.8	< 0.6													
					EB-01-AG	1047	0.42	EB-01-AG	1047 Corridor	0.22		ND		ND		0.51	
								EB-01-AG2	1047 Corridor 2	0.20		ND		ND		0.50	
					EB-01-AH	Stair 5	0.15	EB-01-AH	Stair 5	0.13		ND		ND		1.1	
					EB-01-AI	Stair 7	< 0.14	EB-01-AI	Stair 7	0.12		ND		ND		1.2	
					EB-01-AJ	1049	0.87	EB-01-AJ	1049 Storage East	0.23		0.084		ND		ND	
								EB-01-AJ2	1049 Storage West	0.23		0.087		ND		ND	
					EB-01-AK	1056	1.2	EB-01-AK	1056 Mechanical	0.43		ND		ND		0.41	
					EB-01-AL	1048	0.25	EB-01-AL	1048 Laundry West	0.30		ND		ND		0.24	
								EB-01-AL2	1048 Laundry East	0.34		ND		ND		0.32	
					EB-01-AM	SW Garage Wall	0.31										
					EB-01-AN	NW Garage Wall	0.24										
					EB-01-AO	Building 3A	< 0.14										
					EB-01-AP	Bball Court Center	0.38										
					EB-01-AQ	Bball Court SE	0.34										
					EB-01-AR	1050 N Wall	0.35										
					EB-01-AS	1043 Bathroom	0.49										
								EB-01-AV	1054 Fitness North	0.12	0.11	ND	ND	ND	ND	ND	ND
								EB-01-AV2	1054 Fitness South	0.13	0.10	ND	ND	ND	ND	ND	ND
								EB-01-I	1055 Women's Lockers	0.16	0.11	ND	ND	ND	ND	ND	ND
					OA-01-A	RAMP	< 0.14	OA-01-A	RAMP	0.078		ND		ND		ND	

NOTES:

*Per WDNR Guidance Document RR0136, "Wisconsin Vapor Quick Look-Up Table" (updated July 2024)

All samplers were deployed with the HVAC system operational

A reading of "< ##" or "ND" means the analyte was not detected above the Method Detection Limit (MDL).

denotes passive samplers affected by the COC error

KSingh | Engineers Scientists Consultants

CHAIN OF CUSTODY RECORD

Passive Sorbent

2411045

Sample Collector(s)	Title	Telephone # (incl. area code)	Report To
Katie Balachandran, Callulm Ovens	Staff Engineers	(262) 821-1171	Robert Reineke, Katie Balachandran
Property Owner	**Property Address**	**Telephone # (incl. area code)**	**KSingh Project #**
Community Within the Corridor, LLC	2748 N 32nd Street, Milwaukee, WI 53210	—	40441B (CWC-EB)

"ø" denotes number zero

Error: The "Date of Deployment" for all passive samplers was 10/18/2024

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hh:mm)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hh:mm)	Sample Matrix: Indoor / Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments
01A	TW54ø	EB-01-AJ	10/18/2024	12:16	11/1/2024	10:50	X				TCE, PCE, DCE	
02A	TW541	EB-01-AJ2	10/18/2024	12:19	11/1/2024	10:53	X				TCE, PCE, DCE	
03A	TW542	EB-01-AX	10/19/2024	12:27	11/1/2024	10:57	X				TCE, PCE, DCE	
04A	TW543	EB-01-AV	10/20/2024	12:36	11/1/2024	11:00	X				TCE, PCE, DCE	
05A	X0945	EB-01-AV2	10/21/2024	12:33	11/1/2024	11:03	X				TCE, PCE, DCE	
06A	X0946	EB-01-I	10/22/2024	12:39	11/1/2024	11:06	X				TCE, PCE, DCE	
07A	X0947	EB-01-C	10/23/2024	12:50	11/1/2024	11:12	X				TCE, PCE, DCE	
08A	X0948	EB-01-A	10/24/2024	14:00	11/1/2024	11:15	X				TCE, PCE, DCE	~~AP 11/4/24~~
										NA	~~INITIAL °C:~~ NA ~~°C:~~ ~~FINAL °C:~~	
											PROBE: NA TIME STORED: NA	
											~~CUSTODY SEAL?~~ ~~YES~~ ~~NO~~ (NONE)	
											CARRIER: Fedex	

Reporting Units: µg/m³

Turn Around Time: Friday, November 8, 2024

Invoice(s) To: Accounts Payable (ap@ksinghengineering.com)

Laboratory Name: Eurofins Air Toxics

I hereby certify that I received, properly, and disposed of the samples as noted below:

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time
K. M. Balachandran	01-NOV-2024	14:00	V.S. EATL	11/4/24	0949

Notes to Lab

Lab Use Only

Shipper Name	Custody Seals Intact?	Sample Condition Upon Receipt
FED-EX	None	Good

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2411045

CHAIN OF CUSTODY RECORD

Passive Sorbent

Sample Collector(s)	Title	Telephone # (incl. area code)	Report To
Katie Balachandran, Callulm Ovens	Staff Engineers	(262) 821-1171	Robert Reineke, Katie Balachandran
Property Owner	**Property Address**	**Telephone # (incl. area code)**	**KSingh Project #**
Community Within the Corridor, LLC	2748 N 32nd Street, Milwaukee, WI 53210	—	40441B (CWC-EB)

"ø" denotes number zero

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hh:mm)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hh:mm)	Sample Matrix: Indoor / Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments
01A	TW54ø	EB-01-AJ	10/18/2024	12:16	11/1/2024	10:50	X				TCE, PCE, DCE	
02A	TW541	EB-01-AJ2	10/18/2024	12:19	11/1/2024	10:53	X				TCE, PCE, DCE	
03A	TW542	EB-01-AX	10/18/2024	12:27	11/1/2024	10:57	X				TCE, PCE, DCE	
04A	TW543	EB-01-AV	10/18/2024	12:36	11/1/2024	11:00	X				TCE, PCE, DCE	
05A	X0945	EB-01-AV2	10/18/2024	12:33	11/1/2024	11:03	X				TCE, PCE. DCE	
06A	X0946	EB-01-I	10/18/2024	12:39	11/1/2024	11:06	X				TCE, PCE, DCE	
07A	X0947	EB-01-C	10/18/2024	12:50	11/1/2024	11:12	X				TCE, PCE, DCE	
08A	X0948	EB-01-A	10/18/2024	14:00	11/1/2024	11:15	X				TCE, PCE, DCE	
										NA		

Reporting Units: µg/m³

Turn Around Time: Friday, November 8, 2024

AD 11/4/24

~~INITIAL °C: NA~~ ~~OF:~~ ~~FINAL °C:~~

PROBE: NA TIME STORED: NA

~~CUSTODY SEAL?~~ YES NO (NONE)

~~CARRIER:~~ FedEx

Invoice(s) To: Accounts Payable (ap@ksinghengineering.com)

Laboratory Name: Eurofins Air Toxics

I hereby certify that I received, properly, and disposed of the samples as noted below:

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time
K. M. Balachandran	01-NOV-2024	14:00	V.S. EATL	11/4/24	0949

Notes to Lab

Lab Use Only

Shipper Name	Custody Seals Intact?	Sample Condition Upon Receipt
FED-EX	None	Good

Revised COC received 12/5/24

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12/12/2024
Mr. Robert Reineke
K Singh & Associates
3636 N 124th St

Wauwatosa WI 53222

Project Name:
Project #: 40441B (CWC-EB)
Workorder #: 2411045R1

Dear Mr. Robert Reineke

The following report includes the data for the above referenced project for sample(s) received on 11/4/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive S.E. RAD130/SKC are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Jade White

Project Manager

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WORK ORDER #: 2411045R1

Work Order Summary

CLIENT:	Mr. Robert Reineke K Singh & Associates 3636 N 124th St Wauwatosa, WI 53222	**BILL TO:**	Mr. Robert Reineke K Singh & Associates 3636 N 124th St Wauwatosa, WI 53222
PHONE:		**P.O. #**	
FAX:		**PROJECT #**	40441B (CWC-EB)
DATE RECEIVED:	11/04/2024	**CONTACT:**	Jade White
DATE COMPLETED:	11/08/2024		
DATE REISSUED:	12/12/2024		

FRACTION #	NAME	TEST
01A	EB-01-AJ	Passive S.E. RAD130/SKC
02A	EB-01-AJ2	Passive S.E. RAD130/SKC
03A	EB-01-AX	Passive S.E. RAD130/SKC
04A	EB-01-AV	Passive S.E. RAD130/SKC
05A	EB-01-AV2	Passive S.E. RAD130/SKC
06A	EB-01-I	Passive S.E. RAD130/SKC
07A	EB-01-C	Passive S.E. RAD130/SKC
08A	EB-01-A	Passive S.E. RAD130/SKC
09A	Lab Blank	Passive S.E. RAD130/SKC
10A	CCV	Passive S.E. RAD130/SKC
11A	LCS	Passive S.E. RAD130/SKC
11AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY:  DATE: 12/12/24

Technical Director

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP–02089, MN NELAP-2703122, NH NELAP–209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
K Singh & Associates
Workorder# 2411045R1

Eight Radiello 130 (Solvent) samples were received on November 04, 2024. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

A revised Chain of Custody (COC) was provided by the client on 12/5/24.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 20074 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

The workorder was reissued on 12/12/2024 to quantify the results for all samples using the updated sampling durations derived from the corrected deployment date from the revised chain of custody (COC) provided by the client on 12/5/2024.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: EB-01-AJ

Lab ID#: 2411045R1-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.32	0.23
Tetrachloroethene	0.10	0.084	0.10	0.084

Client Sample ID: EB-01-AJ2

Lab ID#: 2411045R1-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.32	0.23
Tetrachloroethene	0.10	0.084	0.10	0.087

Client Sample ID: EB-01-AX

Lab ID#: 2411045R1-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.29	0.21

Client Sample ID: EB-01-AV

Lab ID#: 2411045R1-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.15	0.11

Client Sample ID: EB-01-AV2

Lab ID#: 2411045R1-05A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.14	0.10

Client Sample ID: EB-01-I

Lab ID#: 2411045R1-06A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: EB-01-I

Lab ID#: 2411045R1-06A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.16	0.11

Client Sample ID: EB-01-C

Lab ID#: 2411045R1-07A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.54	0.39
Tetrachloroethene	0.10	0.084	0.10	0.086

Client Sample ID: EB-01-A

Lab ID#: 2411045R1-08A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	1.5	1.1
Tetrachloroethene	0.10	0.085	0.11	0.094
cis-1,2-Dichloroethene	0.10	0.080	0.15 C	0.12 C

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Client Sample ID: EB-01-AJ

Lab ID#: 2411045R1-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110706sim**	**Date of Collection: 11/1/24 10:50:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 11:57 AM**
		Date of Extraction: 11/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.32	0.23
Tetrachloroethene	0.10	0.084	0.10	0.084
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20074 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: EB-01-AJ2

Lab ID#: 2411045R1-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110707sim**	**Date of Collection: 11/1/24 10:53:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 12:26 PM**	
		Date of Extraction: 11/7/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.32	0.23
Tetrachloroethene	0.10	0.084	0.10	0.087
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20074 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: EB-01-AX

Lab ID#: 2411045R1-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110708sim**	**Date of Collection: 11/1/24 10:57:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 12:54 PM**
		Date of Extraction: 11/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.29	0.21
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20070 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: EB-01-AV

Lab ID#: 2411045R1-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110709sim**	**Date of Collection: 11/1/24 11:00:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 01:22 PM**	
		Date of Extraction: 11/7/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.15	0.11
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20064 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: EB-01-AV2

Lab ID#: 2411045R1-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110710sim**	**Date of Collection: 11/1/24 11:03:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 01:50 PM**	
		Date of Extraction: 11/7/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.14	0.10
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20070minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: EB-01-I

Lab ID#: 2411045R1-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110711sim**	**Date of Collection: 11/1/24 11:06:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 02:19 PM**
		Date of Extraction: 11/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.16	0.11
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20067 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: EB-01-C

Lab ID#: 2411045R1-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110712sim**	**Date of Collection: 11/1/24 11:12:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 02:47 PM**
		Date of Extraction: 11/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	0.54	0.39
Tetrachloroethene	0.10	0.084	0.10	0.086
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20062 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: EB-01-A

Lab ID#: 2411045R1-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110713sim**	**Date of Collection: 11/1/24 11:15:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 03:16 PM**
		Date of Extraction: 11/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	1.5	1.1
Tetrachloroethene	0.10	0.085	0.11	0.094
cis-1,2-Dichloroethene	0.10	0.080	0.15 C	0.12 C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 19995 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2411045R1-09A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110705sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 11:29 AM**	
		Date of Extraction: 11/7/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.072	Not Detected	Not Detected
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.080	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.17	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20074 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: CCV

Lab ID#: 2411045R1-10A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110702sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 10:05 AM**
		Date of Extraction: NA

Compound	%Recovery
Trichloroethene	104
Tetrachloroethene	109
cis-1,2-Dichloroethene	98
trans-1,2-Dichloroethene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

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Client Sample ID: LCS

Lab ID#: 2411045R1-11A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110703sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 10:33 AM**	
		Date of Extraction: 11/7/24	

Compound	%Recovery	Method Limits
Trichloroethene	100	70-130
Tetrachloroethene	102	70-130
cis-1,2-Dichloroethene	92	70-130
trans-1,2-Dichloroethene	94	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: LCSD

Lab ID#: 2411045R1-11AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18110704sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/7/24 11:01 AM**	
		Date of Extraction: 11/7/24	

Compound	%Recovery	Method Limits
Trichloroethene	99	70-130
Tetrachloroethene	102	70-130
cis-1,2-Dichloroethene	90	70-130
trans-1,2-Dichloroethene	93	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Method : Passive SE GC/MS (Sh)-c/t-1,2-DCE, PCE & TCE

CAS Number	Compound	Rpt. Limit (ug)
79-01-6	**Trichloroethene**	**0.10**
127-18-4	Tetrachloroethene	0.10
156-59-2	**cis-1,2-Dichloroethene**	**0.10**
156-60-5	**trans-1,2-Dichloroethene**	**0.20**

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130