State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name			DNR ID # (BRRTS #)
Former Western Metals Specialty Division			02-41-532149
Address	**City**	**State**	**ZIP Code**
1215 N. 62nd St.	Wauwatosa	WI	53213

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner			
Tosa Reef, LLC			
Address	**City**	**State**	**ZIP Code**
1200 N. Mayfair Road, Suite 410	Milwaukee	WI	53226
Contact Person		**Phone Number (include area code)**	
Mr. Mark Lake		(414) 777-1200	

Person or company that collected samples

The Sigma Group, Inc.

Sample Results (Results Attached)

Reason for Sampling: ○ Routine ◉ Other (define) additional off-site sub-slab sampling

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil? Yes	In Soil? No	In Groundwater? Yes	In Groundwater? No
Gasoline	○	○	○	○
Diesel or Fuel Oil	○	○	○	○
Solvents	◉	○	◉	○
Heavy Metals	○	○	○	○
Pesticides	○	○	○	○
Other: _____	○	○	○	○

This sampling event included sampling of a drinking water well.
○ Yes ◉ No

If yes, the sampled drinking water well had detectable contaminants.
○ Yes ○ No

Contaminants in Vapor	Yes	No
Indoor Air	◉	○
Sub-slab	◉	○
Exterior Soil Gas	○	○

Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a $700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

Company Name	Contact Person Last Name	First Name
The Sigma Group, Inc.	Meer	Stephen

Address	City	State	ZIP Code
1300 W. Canal St.	Milwaukee	WI	53233

Phone # (inc. area code)	Email
(414) 643-4124	smeer@thesigmagroup.com

Select which agency: (●) Natural Resources ( ) Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name	First Name	Phone # (inc. area code)
McIlheran	Adam	(414) 207-2179

Address	City	State	ZIP Code
1027 W. St. Paul Avenue	Milwaukee	WI	53233

Email

adam.mcilheran@wisconsin.gov

Gasoline Storage
Cleaning Room Dust Collector Dust Box
Furnace Cooling Tower
Melt Deck Dust Collector
Oil Storage Building (New Products)
103
104
106
304
105
Empty Drum Storage
Unpaved
Machinery/ Equipment Storage
SSR Air Compressor Discharge
Furnace Transformers on the roof (Drains into 101 Outfall).
Machinery/ Equipment Storage
Melted Iron Solids
PROPANE TANK
Diesel and Used Oil Storage Building
Spent Scrubber Solution Totes
East Dust Collector
406
405
Enclosed Storage Trailers
102
Metal Fines Recycling Storage (55 gallon drumss)
Lake Sand Storage Silos
Melted Iron Solids
303
6" Paved Parking Area
302
Shipping Area
Sand Cooler Discharge
402
401 10"
403 6"
404
Outfall 101:
Non-Contact Cooling:
Furnace Discharge
Air CompressorDischarge
Cooling Tower Discharge
Storm Water:
Melt Department, Cleaning Room and Office Area Roof Drains
101
Outfall 401:
Storm Water:
Foundry Yard and Parking Lot Drainage
Covered Dumpster Area
6"
407
408
501
Shell Core Machine Discharge
Green Sand Dust Collector
201
Pit
Grede SV-8
305' 24" REINF. CONRETE PIPE
Outfall 301:
Storm Water:
Core Storage, Maintenance and Bulk Stores Roof Drains
Outfall 501:
Storm Water:
Core Room and Shipping Roof Drains
301
Outfall 201:
Non-Contact Cooling:
U-180 Cooling Water
Storm Water:
Molding and Lockerroom Roof Drains
190'-30" REINF. CONCRETE PIPE
W. STATE STREET
150'-30" REINF. CONCRETE

(2-4') above water

R 57.3'

5' FROM CURB

63RD STREET

Down River

LEGEND:

- = Roof Inlet
- = Street Storm Inlet
- = Catch Basin
- = Out Fall
- = Potential SWPPP Sources Added in July 2005
- = Surface Drainage Pattern

REV.	DESCRIPTION	DATE
1	Updated as per SWPPP Plan	09/05

LIBERTY

DATE: 07/11/05

GREDE FOUNDRIES-LIBERTY PLANT

DRAWN BY: MJ | DWG #: 121-ME-0023-D-001

SCALE: NOT TO SCALE | PAGE: 1 OF 1

TITLE: LIBERTY'S PLANT STORM WATER SEWER LAYOUT DETAILS

Table 3
Groundwater Analytical Data
Former Western Metals - 1215 N. 62nd Street, Wauwatosa, WI
Sigma Project No. 14823

Well Location:		MW-32								G SUMP	MW-33													MW-34	NR 140 ES	NR 140 PAL
Date:		4/23/14	12/14/15	12/14/16	7/25/17	12/11/17	7/30/18	2/14/22	3/15/23	2/15/24	4/23/14	12/14/15	12/14/16	7/25/17	12/11/17	7/30/18	12/11/18	7/17/19	3/25/21	2/14/22	9/19/22	3/14/23	5/1/14		
Water Elevation* (feet MSL):		627.91	627.79	627.06	627.60	626.82	627.21	626.72	628.10		9/18/01	627.89	627.07	627.69		627.34	627.76	627.77	627.98	626.77	632.52	628.29	628.95		
PVOCs & Detected VOCs																									
Benzene	µg/L	<0.24	<1.0	<0.30	<0.17	<0.42	<0.22	<0.30	<0.30	<0.3	<0.24	<1.0	<0.30	<0.17	<0.42	<0.22	***1.16***	<0.22	<0.38	<0.30	<0.30	<0.30	<0.24	5	0.5
Ethylbenzene	µg/L	<0.55	<1.0	<0.40	<0.2	<0.29	<0.26	<0.33	<0.33	<0.33	<0.55	<1.0	<0.40	<0.2	<0.29	<0.26	2.43	<0.26	<0.37	<0.33	<0.33	<0.33	<0.55	700	140
Methyl-tert-butyl-ether	µg/L	<0.23	<1.0	<0.12	<0.82	<0.21	<0.28	<1.1	<0. 47	<0.47	0.4 J	<1.0	<0.12	<0.82	<0.21	<0.28	0.38 J	0.48 J	0.87 J	<1.1	1.6 J	1.27 J	<0.23	60	12
Toluene	µg/L	<0.69	<1.0	<0.37	<0.67	<0.32	<0.19	<0.29	< 0.33	<0.33	<0.69	<1.0	<0.37	<0.67	<0.32	<0.19	6.6	<0.19	<0.42	<0.29	<0.29	< 0.33	<0.69	800	160
1,2,4-Trimethylbenzene	µg/L	<2.2	<1.0	<0.37	<1.14	<0.11	<0.8	<0.45	< 0.35	<0.35	<2.2	<1.0	<0.37	<1.14	<0.11	<0.8	14.9	<0.8	<0.35	<0.45	<0.45	< 0.35	<2.2	NS	NS
1,3,5-Trimethylbenzene	µg/L	<1.4	<1.0	<0.29	<0.91	<0.15	<0.63	<0.36	< 0.41	<0.41	<1.4	<1.0	<0.29	<0.91	<0.15	<0.63	3.9	<0.63	<0.38	<0.36	<0.36	< 0.41	<1.4	NS	NS
Total Trimethylbenzene	µg/L	<3.6	<2.0	<0.66	<2.05	<0.26	<1.43	<0.81	< 0.76	<0.76	<3.6	<2.0	<0.66	<2.05	<0.26	<1.43	18.8	<1.43	<0.73	<0.81	<0.81	< 0.76	<3.6	480	96
Xylenes, Total	µg/L	<1.32	<3.0	<1.3	<1.95	<0.74	<0.72	<1.05	<1.01	<1.01	<1.32	<3.0	<1.3	<1.95	<0.74	<0.72	14.2	<0.72	<1.21	<1.05	<1.05	<1.01	<1.32	2,000	400
Acetone	µg/L	DNA	NA	<0.92	DNA	<0.47	DNA	NA	NA	NA	DNA	NA	<0.92	DNA	1.1 J	DNA	DNA	NA	NA	NA	NA	NA	DNA	9000	1800
2-Butanone	µg/L	DNA	NA	<0.58	DNA	<0.47	DNA	NA	NA	NA	DNA	NA	<0.58	DNA	<0.47	DNA	DNA	NA	NA	NA	NA	NA	DNA	4000	800
Chloroethane	µg/L	<0.63	<1.0	<0.29	<0.5	<0.68	<0.61	NA	< 0.62	<0.62	<0.63	<1.0	<0.29	<0.5	<0.68	<0.61	<0.61	<0.61	<0.78	NA	<1.4	< 0.62	<0.63	400	80
Chloroform	µg/L	<0.28	<1.0	<0.26	<0.96	<0.46	<0.26	<1.2	< 0.33	<0.33	<0.28	<1.0	<0.26	<0.96	<0.46	<0.26	<0.26	<0.26	<0.4	<1.2	<1.2	< 0.33	<0.28	6	0.6
Chloromethane	µg/L	<0.81	<1.0	<0.17	<1.3	<0.68	<0.54	<1.6	< 0.74	<0.74	<0.81	<1.0	<0.17	<1.3	<0.68	<0.54	<0.54	<0.54	<0.84	<1.6	<1.6	< 0.74	<0.81	30	3
1,2-Dichloroethane	µg/L	<0.41	<1.0	<0.17	<0.45	<0.11	<0.25	<0.29	< 0.43	<0.43	<0.41	<1.0	<0.17	<0.45	<0.11	<0.25	<0.25	<0.25	<0.44	<0.29	<0.29	< 0.43	<0.41	5	0.5
1,1-Dichloroethane	µg/L	0.42 J	<1.0	<0.31	<0.42	<0.48	<0.36	<0.30	< 0.43	<0.43	<0.3	<1.0	<0.31	<0.42	<0.48	<0.36	<0.36	<0.36	<0.48	<0.30	<0.30	< 0.43	1.03	850	85
1,1-Dichloroethene	µg/L	<0.4	<1.0	<0.28	<0.46	<0.36	<0.42	<0.58	< 0.43	<0.43	<0.4	<1.0	<0.28	<0.46	<0.36	<0.42	<0.42	<0.42	<0.55	<0.58	<0.58	< 0.43	<0.4	7	0.7
cis-1,2-Dichloroethene	µg/L	3.8	5.1	4.1	4.2	3.5	4.6	3.2	2.8	3.4	***27.5***	***35***	***48***	***47***	***71***	***56***	***51***	***31.5***	***19.8***	***36***	***20.3***	***24.1***	***21.8***	70	7
trans-1,2-Dichloroethene	µg/L	0.35 J	<1.0	<0.28	0.57 J	<0.48	0.56 J	<0.53	< 0.5	<0.5	3.5	4.4	6.6	5.7	11	7.4	7.0	4.5	2.68	4.7	2.8	4.1	2.4	100	20
Naphthalene	µg/L	<1.7	<5.0	<0.18	<2.17	<0.14	<2.1	<1.1	< 0.47	<1.4	<1.7	<5.0	<0.18	<2.17	<0.14	<2.1	7.7	<2.1	<1.4	<1.1	<1.1	< 0.47	<1.7	100	10
Tetrachloroethene	µg/L	<0.33	<1.0	<0.27	<0.48	<0.28	<0.38	<0.41	< 1.5	<0.47	<0.33	<1.0	<0.27	<0.48	<0.28	<0.38	<0.38	<0.38	<0.54	<0.41	<0.41	< 1.5	***0.55 J***	5	0.5
1,1,1-Trichloroethane	µg/L	<0.33	<1.0	<0.36	0.53 J	<0.33	<0.33	<0.30	< 0.33	<0.33	<0.33	<1.0	<0.36	<0.35	<0.33	<0.33	<0.33	<0.33	<0.41	<0.30	<0.30	< 0.33	9.5	200	40
1,1,2-Trichloroethane	µg/L	<0.34	<1.0	<0.40	<0.65	<0.22	<0.42	<0.34	< 0.42	<0.42	<0.34	<1.0	<0.4	<0.65	<0.22	<0.42	<0.42	<0.42	<0.48	<0.34	<0.34	< 0.42	<0.34	5	0.5
Trichloroethene (TCE)	µg/L	**9.8**	**21**	**20**	**21.7**	**20**	**22.9**	**22.4**	**20.6**	**8.2**	<0.33	<1.0	<0.3	<0.45	0.33	<0.3	<0.3	<0.3	<0.47	<0.32	<0.32	< 0.38	**42**	5	0.5
Vinyl Chloride	µg/L	<0.18	<1.0	<0.20	<0.19	<0.53	<0.2	<0.17	<1.5	<0.15	**0.26 J**	<1.0	**1.4**	**1.97**	**1.9**	**1.16**	**0.45 J**	**0.32 J**	<0.17	**0.20 J**	<0.17	<1.5	<0.18	0.2	0.02
PAHs																									
Acenaphthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Acenaphthylene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Anthracene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,000	600
Benzo(a)anthracene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Benzo(a)pyrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	0.02
Benzo(b)fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	0.02
Benzo(ghi)perylene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Benzo(k)fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Chrysene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	0.02
Dibenzo(a,h)anthracene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	80
Fluorene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	80
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
1-Methylnaphthalene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Naphthalene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	10
Phenanthrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Pyrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250	50
Dissolved Metals																									
Arsenic	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	1
Barium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2000	400
Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	10
Hexavalent Chromium	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Notes:
1. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
2. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
3. NS = no standard NA = Not Analyzed
4. µg/L = micrograms per liter (equivalent to parts per billion, ppb)
5. Laboratory flags: "J" = Analyte detected between Limit of Detection and Limit of Quantitation.
6. Trip blank results: 7/1/13: All VOCs reported below laboratory detection limits.
   12/14/16: Chloroform 1.3 µg/L; All other VOCs reported below laboratory detection limits.
   07/25/17: All VOCs reported below laboratory detection limits.
7. Equipment blank results: 7/1/13: All VOCs reported below laboratory detection limits.
   12/15/16: Acetone 17 µg/L, Chloroform 2.1 µg/L; All other VOCs reported below laboratory detection limits.
   07/25/17: All VOCs reported below laboratory detection limits.
8. Exceedances: **BOLD** = Concentration exceeds NR 140 ES
   ITALICS = Concentration exceeds NR 140 PAL
9. Special notes: * = monitoring well screen submerged below water table
   ** = not a statistically valid PAL exceedance per NR 140.14(3)(c)

Table 4
Subslab Vapor Analytical Results
Grede Foundry
6432 W. State Street, Wauwatosa, WI
Project Reference #14823

Sample Point:		**Grede SV-1**	**Grede SV-1R**								**Grede SV-2**	**Grede SV-3**	**Grede SV-4**	**Grede SV-5**	**Grede SV-6**	**Grede SV-7**	**Grede SV-8**	Screening Level for Residential Sub-slab Vapor to Indoor Air Pathway[3]	Screening Level for Small Commercial Sub-slab Vapor to Indoor Air Pathway[4]	Screening Level for Large Commercial/Industrial Sub-slab Vapor to Indoor Air Pathway[2]
VOCs (Detects Only)	Unit	1-hour		0.5-hour	0.5-hour	0.5-hour	0.5-hour	0.5-hour		12 day	0.5-hour	0.5-hour	0.5-hour	0.5-hour	0.5-hour	0.5-hour	7 day			
		sub-slab		sub-slab	sub-slab	sub-slab	sub-slab	sub-slab		passive	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	passive			
		sample		sample	sample	sample	sample	sample		sub-slab	sample	sample	sample	sample	sample	sample	sub-slab			
		Collection Date		Collection Date						Collection Date										
		09/26/13		03/14/19	10/22/19	03/10/20	05/08/20	03/09/22		2/23/23-3/7/23	03/18/14	03/18/14	03/18/14	03/18/14	03/09/22	03/09/22	2/15/24-2/22/24			
cis-1,2-Dichloroethene	µg/m^3	<11.3	SVE System Start 09/2017	<0.35	<0.39	<0.30	<0.18	<0.197	SVE System Stopped 12/2022	16	<1.1	<1.2	<1.1	<1.1	<0.197	<0.197	<11	1,400	5,800	18,000
trans-1,2-Dichloroethene	µg/m^3	<11.3		<0.46	<0.48	<0.40	<0.26	<0.231		<36	<1.1	<1.2	<1.1	<1.1	<0.231	<0.231	<35	1,400	5,800	18,000
1,1-Dichloroethene	µg/m^3	NA		<0.44	<0.38	<0.38	<0.19	<0.21		NA	<1.1	<1.2	<1.1	<1.1	<0.21	<0.21	NA	7,000	29,000	88,000
1,1-Dichloroethane	µg/m^3	NA		<0.36	<0.50	<0.31	<0.18	<0.187		NA	<1.1	<1.2	<1.1	<1.1	<0.187	<0.187	NA	590	2,600	7,700
Tetrachloroethene	µg/m^3	<9.6		3.6	20.9	961	19.4	0.81 J		<7.6	31.4	80.8	18.2	7.7	1.15	2.78	<3.8	1,400	5,800	18,000
1,1,1-Trichloroethane	µg/m^3	NA		5.0	9.1	8.9	8.6	2.56		<19	1.7	36.6	14.1	<1.5	72	20.9	<16	170,000	730,000	2,200,000
Trichloroethene	µg/m^3	{[**911**]}		[**773**]	{[**935**]}	{[**930**]}	{[**1280**]}	**115**		**100**	<0.74	[**323**]	1.8	<0.76	7.4	**150**	**72**	70	290	880
Vinyl chloride	µg/m^3	<3.6		<0.20	<0.22	<0.18	<0.15	<0.148		<96	<0.35	<0.39	<0.36	<0.36	<0.148	<0.15	<200	56	930	2,800

Notes

1. µg/m^3 = micrograms per cubic meter
2. Vapor Risk Screening Level based on Vapor Action Levels (VALs) described in WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018), which in turn references EPA Region 3 Risk-Based Concentrations for industrial air (Regional Screening Level Master Table - May 2023 [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm]), and WDNR August 2023 "Indoor Air Vapor Action Levels for Various VOCs Quick Look-Up Table". Vapor Risk Screening Level adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication PUB-RR-800; VAL is not adjusted for non-carcinogens (i.e., harzard index = 1). Furthermore, Vapor Risk Screening Level has been adjusted with an **Attenuation Factor of 0.01** for the subslab to ambient air pathway as provided in WDNR publication PUB-RR-800 for a **large commercial/industrial** building and deep soil gas samples.

3. Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab / soil gas vapor to ambient air pathway in a **residential building**. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and residential air in August 2023 "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels". VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab / soil gas vapor to ambient air pathway in a **small commercial building**. VALs for small commercial building indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and small commercial air in August 2023 "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels". VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Exceedances:
- **BOLD** = Concentration exceeds Residential VRSL
- [ ] = Concentration exceeds Small Commercial VRSL
- { } = Concentration exceeds Large Commercial / Industrial VRSL

Data entered / updated by: kal Date: 3/27/2023
Data checked by: SRM Date: 3/27/2023

Table 5
Indoor Air Analytical Data
Grede Foundry Office - 6432 W. State St., Wauwatosa, WI
Sigma Project No. 14823

Sample Type:		**Indoor Air Samples**			VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		Pit Headspace (sealed)	Basement	1st Floor			
Sample Date(s):		2/22/24-2/29/24	2/22/24-2/29/24	2/22/24-2/29/24			
Sampling/Analysis Method:		Radiello 130/TO-17	Radiello 130/TO-17	Radiello 130/TO-17			
Sample Duration:		7 days	7 days	7 days			
VOCs							
cis-1,2-Dichloroethene	µg/m^3	22 C	<0.16	<0.16	42	180	180
trans-1,2-Dichloroethene	µg/m^3	4.3 C	<0.33	<0.33	42	180	180
Tetrachloroethene (PCE)	µg/m^3	9.1	0.73	0.38	42	180	180
1,1,1-Trichloroethane	µg/m^3	4.0	<0.16	<0.16	5,200	22,000	22,000
Trichloroethene (TCE)	µg/m^3	{[**100**]}	0.17	<0.14	2.1	8.8	8.8

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: C = Estimated concentration due to calculated sampling rate.

7. Exceedances: **BOLD** = concentration greater than residential Vapor Action Level
[ ] = concentration greater than small commercial Vapor Action Level
{ } = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: SRM Date: 3/18/2024
Data checked by: SRM Date: 3/18/2024

Synergy Environmental Lab, LLC.

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

STEVE MEER
THE SIGMA GROUP, INC.
1300 W. CANAL STREET
MILWAUKEE, WI 53233

Report Date *21-Feb-24*

Project Name 6432 W. STATE
Project # 14823

Invoice # E43575

Lab Code 5043575A
Sample ID G SUMP
Sample Matrix Water
Sample Date 2/15/2024

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.3	ug/l	0.3	1.25	1	8260b		2/20/2024	CJR	1
Bromobenzene	< 0.34	ug/l	0.34	1.4	1	8260b		2/20/2024	CJR	1
Bromodichloromethane	< 0.36	ug/l	0.36	1.47	1	8260b		2/20/2024	CJR	1
Bromoform	< 0.42	ug/l	0.42	1.72	1	8260b		2/20/2024	CJR	1
tert-Butylbenzene	< 0.37	ug/l	0.37	1.49	1	8260b		2/20/2024	CJR	1
sec-Butylbenzene	< 0.33	ug/l	0.33	1.34	1	8260b		2/20/2024	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.9	1	8260b		2/20/2024	CJR	1
Carbon Tetrachloride	< 0.34	ug/l	0.34	1.39	1	8260b		2/20/2024	CJR	1
Chlorobenzene	< 0.29	ug/l	0.29	1.19	1	8260b		2/20/2024	CJR	1
Chloroethane	< 0.62	ug/l	0.62	2.54	1	8260b		2/20/2024	CJR	1
Chloroform	< 0.33	ug/l	0.33	1.33	1	8260b		2/20/2024	CJR	1
Chloromethane	< 0.74	ug/l	0.74	3.03	1	8260b		2/20/2024	CJR	1
2-Chlorotoluene	< 0.34	ug/l	0.34	1.37	1	8260b		2/20/2024	CJR	1
4-Chlorotoluene	< 0.4	ug/l	0.4	1.63	1	8260b		2/20/2024	CJR	1
1,2-Dibromo-3-chloropropane	< 0.74	ug/l	0.74	3.01	1	8260b		2/20/2024	CJR	1
Dibromochloromethane	< 0.36	ug/l	0.36	1.46	1	8260b		2/20/2024	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	2.01	1	8260b		2/20/2024	CJR	1
1,3-Dichlorobenzene	< 0.35	ug/l	0.35	1.44	1	8260b		2/20/2024	CJR	1
1,2-Dichlorobenzene	< 0.4	ug/l	0.4	1.65	1	8260b		2/20/2024	CJR	1
Dichlorodifluoromethane	< 0.3	ug/l	0.3	1.23	1	8260b		2/20/2024	CJR	1
1,2-Dichloroethane	< 0.43	ug/l	0.43	1.75	1	8260b		2/20/2024	CJR	1
1,1-Dichloroethane	< 0.43	ug/l	0.43	1.74	1	8260b		2/20/2024	CJR	1
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260b		2/20/2024	CJR	1
cis-1,2-Dichloroethene	3.4	ug/l	0.32	1.29	1	8260b		2/20/2024	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260b		2/20/2024	CJR	1
1,2-Dichloropropane	< 0.39	ug/l	0.39	1.58	1	8260b		2/20/2024	CJR	1
1,3-Dichloropropane	< 0.38	ug/l	0.38	1.55	1	8260b		2/20/2024	CJR	1
trans-1,3-Dichloropropene	< 0.41	ug/l	0.41	1.67	1	8260b		2/20/2024	CJR	1
cis-1,3-Dichloropropene	< 0.41	ug/l	0.41	1.67	1	8260b		2/20/2024	CJR	1

Project Name 6432 W. STATE **Invoice #** E43575
Project # 14823

Lab Code 5043575A
Sample ID G SUMP
Sample Matrix Water
Sample Date 2/15/2024

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.48	ug/l	0.48	1.96	1	8260b		2/20/2024	CJR	1
EDB (1,2-Dibromoethane)	< 0.39	ug/l	0.39	1.59	1	8260b		2/20/2024	CJR	1
Ethylbenzene	< 0.33	ug/l	0.33	1.37	1	8260b		2/20/2024	CJR	1
Hexachlorobutadiene	< 0.81	ug/l	0.81	3.44	1	8260b		2/20/2024	CJR	1
Isopropylbenzene	< 0.34	ug/l	0.34	1.38	1	8260b		2/20/2024	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.91	1	8260b		2/20/2024	CJR	1
Methylene chloride	< 0.79	ug/l	0.79	3.23	1	8260b		2/20/2024	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.91	1	8260b		2/20/2024	CJR	1
Naphthalene	< 1.4	ug/l	1.4	5.56	1	8260b		2/20/2024	CJR	1
n-Propylbenzene	< 0.39	ug/l	0.39	1.6	1	8260b		2/20/2024	CJR	1
1,1,2,2-Tetrachloroethane	< 0.43	ug/l	0.43	1.77	1	8260b		2/20/2024	CJR	1
1,1,1,2-Tetrachloroethane	< 0.55	ug/l	0.55	2.25	1	8260b		2/20/2024	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260b		2/20/2024	CJR	1
Toluene	< 0.33	ug/l	0.33	1.35	1	8260b		2/20/2024	CJR	1
1,2,4-Trichlorobenzene	< 0.63	ug/l	0.63	2.57	1	8260b		2/20/2024	CJR	1
1,2,3-Trichlorobenzene	< 1.4	ug/l	1.4	5.94	1	8260b		2/20/2024	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.34	1	8260b		2/20/2024	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.72	1	8260b		2/20/2024	CJR	1
Trichloroethene (TCE)	8.2	ug/l	0.38	1.55	1	8260b		2/20/2024	CJR	1
Trichlorofluoromethane	< 0.33	ug/l	0.33	1.35	1	8260b		2/20/2024	CJR	1
1,2,4-Trimethylbenzene	< 0.35	ug/l	0.35	1.44	1	8260b		2/20/2024	CJR	1
1,3,5-Trimethylbenzene	< 0.41	ug/l	0.41	1.66	1	8260b		2/20/2024	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260b		2/20/2024	CJR	1
m&p-Xylene	< 0.64	ug/l	0.64	2.63	1	8260b		2/20/2024	CJR	1
o-Xylene	< 0.37	ug/l	0.37	1.51	1	8260b		2/20/2024	CJR	1
SUR - Toluene-d8	99	REC %			1	8260b		2/20/2024	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260b		2/20/2024	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1	8260b		2/20/2024	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260b		2/20/2024	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.

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

CHAIN OF STODY RECORD

Synergy Environmental Lab, LLC

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

Chain # 53628
Page 1 of 1

Sample Handling Request
___ Rush Analysis Date Required: ___
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #
QUOTE #: standard
Project #: 14823
Sampler: (signature)
Project (Name / Location): 6432 W. State

Reports To:	Stephen Meer	Invoice To:	Sme
Company	The Sigma Group, Inc.	Company	
Address	1300 W. Canal St.	Address	
City State Zip	Milwaukee, WI 53233	City State Zip	
Phone	414-643-4200	Phone	
Email	smeer@thesigmagroup.com	Email	

Analysis Requested / Other Analysis

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	VOC AIR (TO - 15)	8-RCRA METALS							PID/ FID
5043575A	G SUMP	2/15/24	1:15	N	3	GW	HCl													X									

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: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	2/16/24	9:00 AM			

Received in Laboratory By: Time: 10:40 Date: 2/17/24

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3/11/2024
Mr. Steve Meer
The Sigma Group
1300 West Canal Street

Milwaukee WI 53233

Project Name: The Reef
Project #: 14823
Workorder #: 2402674

Dear Mr. Steve Meer

The following report includes the data for the above referenced project for sample(s) received on 2/27/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive S.E. WMS 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 #: 2402674

Work Order Summary

CLIENT:	Mr. Steve Meer The Sigma Group 1300 West Canal Street Milwaukee, WI 53233	**BILL TO:**	Mr. Steve Meer The Sigma Group 1300 West Canal Street Milwaukee, WI 53233
PHONE:	414-643-4200	**P.O. #**	
FAX:	414-643-4210	**PROJECT #**	14823 The Reef
DATE RECEIVED:	02/27/2024	**CONTACT:**	Jade White
DATE COMPLETED:	03/11/2024		

FRACTION #	NAME	TEST
01A	GSV-8	Passive S.E. WMS
02A	Lab Blank	Passive S.E. WMS
03A	CCV	Passive S.E. WMS
04A	LCS	Passive S.E. WMS
04AA	LCSD	Passive S.E. WMS

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 03/11/24

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

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

LABORATORY NARRATIVE
WMS Passive SE by Mod EPA TO-17
The Sigma Group
Workorder# 2402674

One WMS-VP sample was received on February 27, 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.

Please note that 1,1,2,2-Tetrachloroethane (1,1,2,2-PCA) can degrade into Trichloroethene (TCE) during storage on the charcoal-based sorbent used in the WMS device. Samples containing 1,1,2,2-PCA may yield reduced concentrations of 1,1,2,2-PCA and elevated concentrations of TCE.

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

The Chain of Custody was missing method information. The laboratory proceeded with the analysis as

per the original contract or verbal agreement.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 10095 minutes was applied.

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
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: GSV-8

Lab ID#: 2402674-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.050	5.9	0.61	72

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Client Sample ID: GSV-8

Lab ID#: 2402674-01A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c030711sim**	**Date of Collection: 2/22/24 1:26:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 11:58 AM**
		Date of Extraction: 3/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Vinyl Chloride	0.20	200	Not Detected	Not Detected
trans-1,2-Dichloroethene	0.10	35	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.050	11	Not Detected	Not Detected
1,1,1-Trichloroethane	0.050	16	Not Detected	Not Detected
Trichloroethene	0.050	5.9	0.61	72
Tetrachloroethene	0.050	3.8	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10095 minutes.

Container Type: WMS-VP

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

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Client Sample ID: Lab Blank

Lab ID#: 2402674-02A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c030710sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 11:31 AM**
		Date of Extraction: 3/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Vinyl Chloride	0.20	200	Not Detected	Not Detected
trans-1,2-Dichloroethene	0.10	35	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.050	11	Not Detected	Not Detected
1,1,1-Trichloroethane	0.050	16	Not Detected	Not Detected
Trichloroethene	0.050	5.9	Not Detected	Not Detected
Tetrachloroethene	0.050	3.8	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10095 minutes.

Container Type: WMS-VP

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

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Client Sample ID: CCV

Lab ID#: 2402674-03A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c030707sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 10:09 AM**
		Date of Extraction: NA

Compound	**%Recovery**
Vinyl Chloride	76
trans-1,2-Dichloroethene	89
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	88
Trichloroethene	97
Tetrachloroethene	98

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	106	70-130

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Client Sample ID: LCS

Lab ID#: 2402674-04A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c030708sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 10:36 AM**
		Date of Extraction: 3/7/24

Compound	%Recovery	Method Limits
Vinyl Chloride	73	50-140
trans-1,2-Dichloroethene	89	70-130
cis-1,2-Dichloroethene	88	70-130
1,1,1-Trichloroethane	81	70-130
Trichloroethene	92	70-130
Tetrachloroethene	85	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

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Client Sample ID: LCSD

Lab ID#: 2402674-04AA

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c030709sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 11:03 AM**
		Date of Extraction: 3/7/24

Compound	%Recovery	Method Limits
Vinyl Chloride	69	50-140
trans-1,2-Dichloroethene	87	70-130
cis-1,2-Dichloroethene	88	70-130
1,1,1-Trichloroethane	82	70-130
Trichloroethene	93	70-130
Tetrachloroethene	85	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

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Passive Sorbent Chain of Custody

2402674

WO#

Case Seal #:

Company: The Sigma Group, Inc.
Project #: 14823
P.O. #:
Project Manager: Stephen Meer
Project Name: The Reer
Contact phone/email: smeer@thesigmagroup.com
Collected by: SPM

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other ( )

Reporting Units (circle): ppbv | µg/m3 | ppmv | mg/m3 | µg | ng

Turn Around Time: ☒ Normal ☐ Rush _____ Specify

Lab I.D.	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
OIA	GSV-8	AN-VP-23-036	2/15/24	13:11	2/22/24	13:26		X			PCE, TCE	
											cis-1,2-DCE,	
											trans-1,2-DCE,	
											vinyl chloride	
											1,1,1-TCA	

Relinquished by: (signature)	Date	Time	Received by: (signature)	Date	Time	Notes to Lab:
[signature]	2/22/24	2:39	[signature]	2/27/24	13:23	
Relinquished by: (signature)	Date	Time	Received by: (signature)	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples.

Lab Use Only

Shipper Name: UPS
Air Bill #:

Custody Seals Intact? Yes No None
Temperature (°C) N/A

Sample Condition Upon Receipt: (circle) Good SDR

Eurofins Air Toxics, Inc. 180 Blue Ravine Road, Suite B Folsom, CA 95630 (916) 985-1000 Fax (916) 351-8279

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3/18/2024
Mr. Steve Meer
The Sigma Group
1300 West Canal Street

Milwaukee WI 53233

Project Name: The Reef
Project #: 14823
Workorder #: 2403074

Dear Mr. Steve Meer

The following report includes the data for the above referenced project for sample(s) received on 3/5/2024 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 #: 2403074

Work Order Summary

CLIENT:	Mr. Steve Meer The Sigma Group 1300 West Canal Street Milwaukee, WI 53233	**BILL TO:**	Mr. Steve Meer The Sigma Group 1300 West Canal Street Milwaukee, WI 53233
PHONE:	414-643-4200	**P.O. #**	
FAX:	414-643-4210	**PROJECT #**	14823 The Reef
DATE RECEIVED:	03/05/2024	**CONTACT:**	Jade White
DATE COMPLETED:	03/18/2024		

FRACTION #	NAME	TEST
01A	Sump	Passive S.E. RAD130/SKC
02A	Basement	Passive S.E. RAD130/SKC
03A	1st Floor	Passive S.E. RAD130/SKC
04A	Lab Blank	Passive S.E. RAD130/SKC
05A	CCV	Passive S.E. RAD130/SKC
06A	LCS	Passive S.E. RAD130/SKC
06AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 03/18/24

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

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

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
The Sigma Group
Workorder# 2403074

Three Radiello 130 (Solvent) samples were received on March 05, 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

There were no receiving discrepancies.

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 10088 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.

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: Sump

Lab ID#: 2403074-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,1-Trichloroethane	0.10	0.16	2.5	4.0
Trichloroethene	0.10	0.14	74	100
Tetrachloroethene	0.10	0.17	5.4	9.1
cis-1,2-Dichloroethene	0.10	0.16	14 C	22 C
trans-1,2-Dichloroethene	0.20	0.33	2.6 C	4.3 C

Client Sample ID: Basement

Lab ID#: 2403074-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Trichloroethene	0.10	0.14	0.12	0.17
Tetrachloroethene	0.10	0.17	0.44	0.73

Client Sample ID: 1st Floor

Lab ID#: 2403074-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Tetrachloroethene	0.10	0.17	0.22	0.38

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Client Sample ID: Sump

Lab ID#: 2403074-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030712sim**	**Date of Collection: 2/29/24 1:42:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 12:23 PM**
		Date of Extraction: 3/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,1-Trichloroethane	0.10	0.16	2.5	4.0
Trichloroethene	0.10	0.14	74	100
Tetrachloroethene	0.10	0.17	5.4	9.1
cis-1,2-Dichloroethene	0.10	0.16	14 C	22 C
trans-1,2-Dichloroethene	0.20	0.33	2.6 C	4.3 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 10088 minutes.
Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

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Client Sample ID: Basement

Lab ID#: 2403074-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030713sim**	**Date of Collection: 2/29/24 1:36:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 12:51 PM**
		Date of Extraction: 3/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Trichloroethene	0.10	0.14	0.12	0.17
Tetrachloroethene	0.10	0.17	0.44	0.73
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 10064 minutes.
Container Type: Radiello 130 (Solvent)

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

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Client Sample ID: 1st Floor

Lab ID#: 2403074-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030714sim**	**Date of Collection: 2/29/24 1:24:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 01:19 PM**
		Date of Extraction: 3/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Trichloroethene	0.10	0.14	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	0.22	0.38
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 10038 minutes.
Container Type: Radiello 130 (Solvent)

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

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Client Sample ID: Lab Blank

Lab ID#: 2403074-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030705sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 09:10 AM**
		Date of Extraction: 3/7/24

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Trichloroethene	0.10	0.14	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 10088 minutes.
Container Type: Radiello 130 (Solvent)

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

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Client Sample ID: CCV

Lab ID#: 2403074-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030702sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 07:49 AM**
		Date of Extraction: NA

Compound	**%Recovery**
1,1,1-Trichloroethane	104
Trichloroethene	101
Tetrachloroethene	100
cis-1,2-Dichloroethene	98
trans-1,2-Dichloroethene	98

Container Type: NA - Not Applicable

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

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Client Sample ID: LCS

Lab ID#: 2403074-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030703sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 08:16 AM**
		Date of Extraction: 3/7/24

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	97	70-130
Trichloroethene	94	70-130
Tetrachloroethene	89	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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Client Sample ID: LCSD

Lab ID#: 2403074-06AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18030704sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/7/24 08:43 AM**
		Date of Extraction: 3/7/24

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	96	70-130
Trichloroethene	94	70-130
Tetrachloroethene	89	70-130
cis-1,2-Dichloroethene	89	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

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

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Passive Sorbent Chain of Custody

WO# 2403074

Case Seal #: _____

Company: The Sigma Group, Inc. Project #: 14823 P.O. #: _____

Project Manager: Steve Meer Project Name: The Reef

Contact phone/email: smeer@thesigmagroup.com Collected by: RJA

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other ( )

Reporting Units (circle): ppbv µg/m3 ppmv mg/m3 µg ng

Turn Around Time: ☒ Normal ☐ Rush _____ Specify

Lab I.D.	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	Sump	R1646	2/22/24	1334	2/29/24	1342	X				PCE, TCE,	
02A	Basement	R1647	↓	1352	↓	1336	X				cis-1,2-DCE,	
03A	1st Floor	R1648	↓	1406	↓	1324	X				trans-1,2-DCE	
											1,1,1-TCA,	

Relinquished by: (signature)	Date	Time	Received by: (signature)	Date	Time	Notes to Lab:
[signature]	2/29/24	15:00	[signature] Fedex	3/5/24	11:48	
Relinquished by: (signature)	Date	Time	Received by: (signature)	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples.

Lab Use Only

Shipper Name: Fedex UPS

Air Bill #: MD 3/5/24

Custody Seals Intact? Yes No None

Temperature (°C) N/A

Sample Condition Upon Receipt: (circle) Good SDR