From: Beggs, Tauren R - DNR
Sent: Tuesday, February 5, 2019 2:18 PM
To: Beggs, Tauren R - DNR
Subject: RE: Status Update Jagemann Plating - BRRTS #02-36-555544

Beggs talked to LaPlant on February 5, 2019. The two rounds of vapor sampling from SS-1 and SS-2 in the off-site building shows there is no vapor risk at this time.

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

Tauren R. Beggs
Phone: (920) 662-5178
Tauren.Beggs@wisconsin.gov

From: Nicole L. LaPlant <nlaplant@releeinc.com>
Sent: Tuesday, January 29, 2019 3:48 PM
To: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Subject: RE: Status Update Jagemann Plating - BRRTS #02-36-555544

Hi Tauren,

We complete the additional round of sub-slab vapor sampling from SS-1 and SS-2 on January 24, 2019. Attached are the tabulated results along with the respective lab reports and the locations. There were no detections of contaminants of concern in the vapor samples in excess of the VRSLs. We will inform Mr. Mike Jagemann and the tenant of the results. Let me know if there is a need to plan for subsequent round of vapor sampling in the future.

We had planned to complete the sub-slab vapor and groundwater sampling concurrently. However, due to the weather last week (snow storm on January 23rd), we had to postpone the groundwater sampling. It is tentatively scheduled for February 13th and 14th 2019. Please let me know if you have any questions.

Thank you,
Nicole

Nicole L. LaPlant - Robert E. Lee & Associates, Inc.
920-662-9641 nlaplant@releeinc.com

From: Beggs, Tauren R - DNR [mailto:Tauren.Beggs@wisconsin.gov]
Sent: Thursday, January 03, 2019 2:44 PM
To: Nicole L. LaPlant
Subject: RE: Status Update Jagemann Plating - BRRTS #02-36-555544

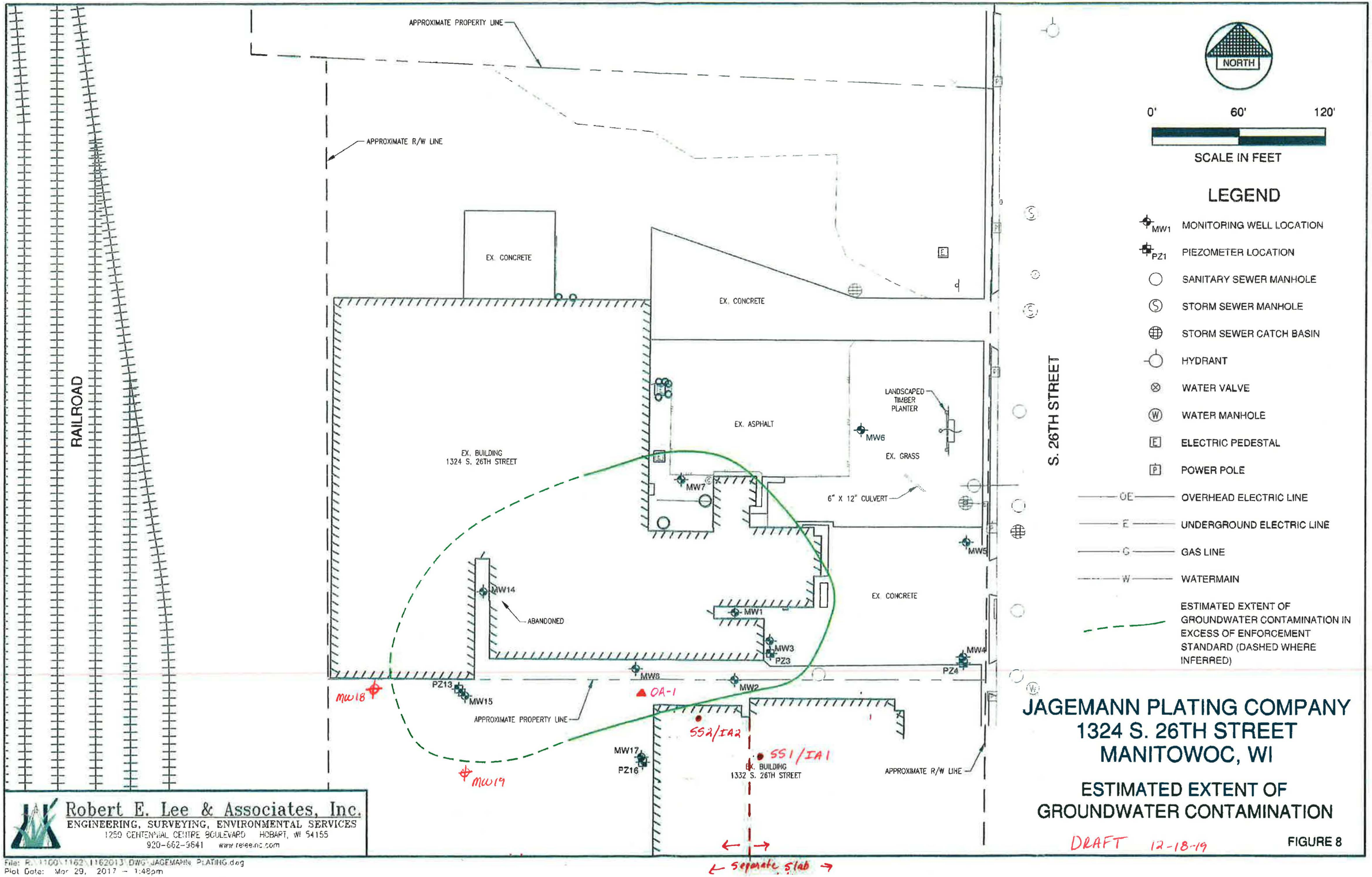
Hi Nicole,

As discussed on the phone, another round of sub-slab vapor samples needs to be collected from SS-1 and SS-2 during the heating season. No indoor air samples need to be collected.

Regards,

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Tauren R. Beggs
Phone: (920) 662-5178
Tauren.Beggs@wisconsin.gov



Robert E. Lee & Associates, Inc.
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File: R:\1100\1162\1162013\DWG\JAGEMANN PLATING.dwg
Plot Date: Mar 29, 2017 - 1:48pm

Table A.4.1 - Sub-slab Vapor Sampling Results - Large Commercial/Industrial
Jagemann Plating Co.

Sample ID	Sample Location	Date Collected	Relevant VOCs (µg/m^3)					
			1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl chloride
Residential Sub-Slab Vapor VRSL -- µg/m3			7,000	NE	NE	1,400	70	57
Small Commercial Sub-Slab Vapor VRSL -- µg/m3			930	NE	NE	1,400	70	57
Large Commercial/Industrial Sub-Slab VRSL -- µg/m^3			88,000	NE	NE	18,000	880	2,800
SS-1	Office Closet	8/21/2018	<0.46	<0.37	<0.48	<0.53	<0.43	<0.21
		1/24/2019	<0.50	<0.40	<0.52	<0.57	<0.47	<0.23
SS-2	Nelson Sign Cutting Room	8/21/2018	<0.49	<0.39	<0.51	2.5	2.5	<0.23
		1/24/2019	<0.50	<0.40	<0.52	1.1 J	<0.47	<0.23

Key:

NE - No screening level established

< - Not detected above laboratory detection limits

µg/m^3 - Micrograms per cubic meter

J - Estimated concentration at or above the laboratory Limit of Detection and Limit of Quantitation

22 - Vapor Risk Screening Level (VRSL) exceeded

Notes:

1.) Samples were collected in 6-liter summa canister over a 30-minute period and analyzed using the U.S. EPA TO-15 analytical method

2.) The Vapor Risk Screening Level (VRSL) was obtained from WDNR's *Quick Look-Up Table for Indoor Air Vapor Action Levels and Vapor Risk Screening Levels* , based on November 2017 U.S. EPA Regional Screening Level Tables

From: Nicole L. LaPlant <nlaplant@releeinc.com>
Sent: Tuesday, December 18, 2018 10:28 AM
To: Beggs, Tauren R - DNR
Subject: RE: Status Update Jagemann Plating - BRRTS #02-36-555544
Attachments: VI and Soil Tables_121718.pdf; August2018 vapor_IA lab report.pdf; August 2018 soil labreport.pdf; Sub slab and air sample locations_draft.pdf

Hi Tauren,

During August 2018, REL oversaw the installation of the two groundwater monitoring wells (MW18 and MW19) and completed the sub-slab/indoor air sampling in the 1332 S. 26th Street building at the locations we discussed. The tabulated soil results of soil samples collected during the well installation and the results of the vapor/indoor air sampling are attached along with the respective lab reports. There were no significant detections of VOCs and RCRA metals in the additional soil samples and no detections of contaminants of concern in the vapor or indoor air samples in excess of the VRSLs and VALs, respectively. Given the results of the vapor/indoor air samples, is there a need for a subsequent round of vapor/air sampling?

During September, we also have completed the well development on the two newly installed wells and completed a well inventory on the existing wells. The findings of the well inventory indicated we needed to repair monitoring well MW2 prior to completing groundwater sampling at the Site. During October, the repairs to MW2 were completed.

We are scheduled to collect a round of groundwater samples on January 3, 2019. We will be sampling the two new wells MW18 and MW19; and existing wells/piezometers MW1, MW2, MW3, PZ3, MW4, PZ3, MW5, MW7, MW8, PZ13, MW14, MW15, PZ16, and MW17 for VOCs and RCRA metals. Given to cold temperatures, we plan to purge and sample the wells with a disposable bailer.

If you have any questions or comments regarding this update, please let me know. All of this information will be documented in our next Supplemental Site Investigation Report which will be prepared after the April 2019 groundwater sampling event.

Thank you,
Nicole

Nicole L. LaPlant - Robert E. Lee & Associates, Inc.
920-662-9641 nlaplant@releeinc.com

From: Beggs, Tauren R - DNR [mailto:Tauren.Beggs@wisconsin.gov]
Sent: Friday, August 17, 2018 1:16 PM
To: Nicole L. LaPlant
Cc: Cody Applekamp
Subject: RE: Jagemann Plating - BRRTS #02-36-555544

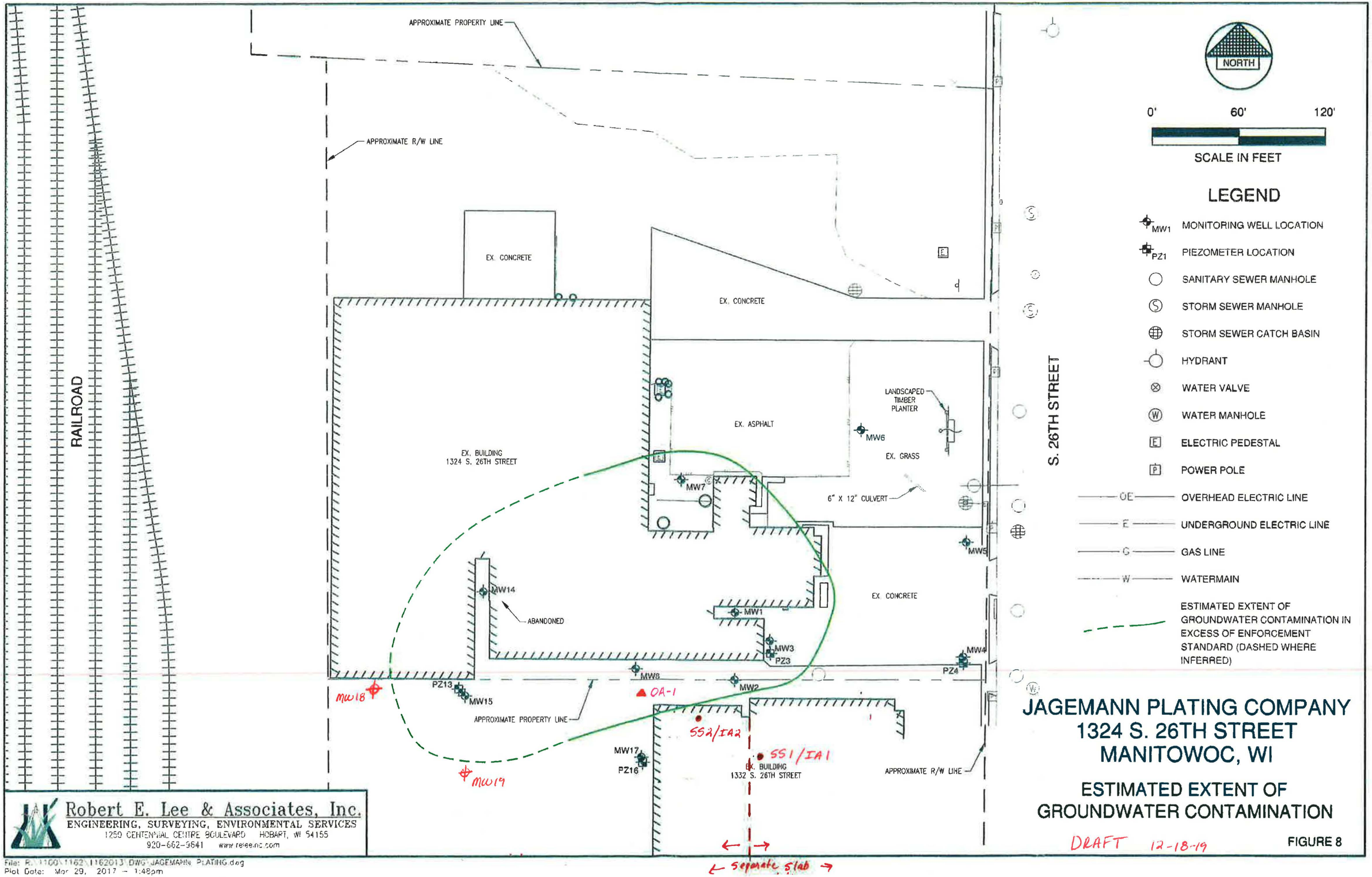
Hi Nicole,

I concur with the B and C locations for the initial sub-slab evaluation of the building.

Regards,

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Tauren R. Beggs
Phone: (920) 662-5178
Tauren.Beggs@wisconsin.gov



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File: R:\1100\1162\1162013\DWG\JAGEMANN PLATING.dwg
Plot Date: Mar 29, 2017 - 1:48pm

Table A.2.b - Soil Analytical Results
Jagemann Plating Co.

Boring Sample ID	B-1	B-2	B-3	B-3*	B-4	B-4*	B-5	B-6	B-7	B-8	PZ-4	Industrial	Non-Industrial	Groundwater
Depth	0 - 4'	0 - 4'	0 - 4'	6 - 8'	0 - 4'	6 - 8'	0 - 4'	0 - 4'	0 - 4'	0 - 4'	2 - 4'	Direct Contact	Direct Contact	Pathway
Date	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	5/3/2011	RCL	RCL	RCL
VOCs (µg/kg)														
Benzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	7,070	1,490	5.1
Bromobenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	679,000	342,000	---
Bromochloromethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	976,000	232,000	---
Bromodichloromethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,830	418	0.3
Bromoform	< 25.9	< 25.9	< 25.9	< 25.9	< 25.9	< 259	< 25.9	< 25.9	< 25.9	< 25.9	< 25.9	113,000	25,400	2.3
Bromomethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	46,000	10,300	5.1
n-Butylbenzene	< 40.4	< 40.4	< 40.4	< 40.4	< 40.4	< 404	< 40.4	< 40.4	< 40.4	< 40.4	< 40.4	108,000	108,000	---
sec-Butylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	145,000	145,000	---
tert-Butylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	183,000	183,000	---
Carbon Tetrachloride	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	4,030	916	3.9
Chlorobenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	761,000	370,000	---
Chloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	---	---	226.6
Chloroform	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,980	454	3.3
Chloromethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	669,000	159	15.5
2-Chlorotoluene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	907,000	907,000	---
4-Chlorotoluene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	253,000	253,000	---
1,2-Dibromo-3-chloropropane	< 82.3	< 82.3	< 82.3	< 82.3	< 82.3	< 823	< 82.3	< 82.3	< 82.3	< 82.3	< 82.3	93	8	0.2
Dibromochloromethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	3,890	8,280	32
EDB (1,2-Dibromoethane)	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	221	50	0.0282
Dibromomethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	151,000	36,600	---
1,2-Dichlorobenzene	< 44.4	< 44.4	< 44.4	< 44.4	< 44.4	< 444	< 44.4	< 44.4	< 44.4	< 44.4	< 44.4	376,000	376,000	1,168
1,3-Dichlorobenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	297,000	297,000	1,152.80
1,4-Dichlorobenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	16,400	3,740	144
Dichlorodifluoromethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	530,000	126,000	3,088
1,1-Dichloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	22,200	5,060	483.4
1,2-Dichloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	2,870	652	2.8
1,1-Dichloroethene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,190,000	320,000	5
cis-1,2-Dichloroethene	***387***	***7,590***	< 25	***7,510***	***955***	***31,600***	***137***	33.9 J	< 25	***79.7***	< 25.0	2,340,000	156,000	41.2
trans-1,2-Dichloroethene	< 25	***794***	< 25	***339***	45.2 J	***592 J***	42.3 J	< 25	< 25	< 25	< 25.0	1,190,000	1,560,000	62.6
1,2-Dichloropropane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,780	406	3.3
1,3-Dichloropropane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,490,000	1,490,000	---
2,2-Dichloropropane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	191,000	191,000	---
1,1-Dichloropropene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	---	---	---
cis-1,3-Dichloropropene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,220,000	1,210,000	0.3
trans-1,3-Dichloropropene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,570,000	1,510,000	(combined)
Diisopropyl Ether	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	2,260,000	2,260,000	---
Ethylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	35,400	8,020	1,570
Hexachloro-1,3-butadiene	< 26.4	< 26.4	< 26.4	< 26.4	< 26.4	< 264	< 26.4	< 26.4	< 26.4	< 26.4	< 26.4	7,190	1,630	---
Isopropylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	268,000	268,000	---
p-Isopropyltoluene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	162,000	162,000	---
Methylene Chloride	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	1,150,000	61,800	2.6
Methyl-tert-butyl ether	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	282,000	63,800	27
Naphthalene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	24,100	5,520	658.2
n-Propylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	---	---	---
Styrene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	867,000	867,000	220
1,1,1,2-Tetrachloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	12,300	2,780	53.4
1,1,2,2-Tetrachloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	3,600	810	0.2
Tetrachloroethene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	***115***	< 25.0	145,000	33,000	4.5
Toluene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	818,000	818,000	1,107.20
1,2,3-Trichlorobenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	934,000	62,600	---
1,2,4-Trichlorobenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	113,000	24,000	408
1,1,1-Trichloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	640,000	640,000	140.2
1,1,2-Trichloroethane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	7,010	1,590	3.2
Trichloroethene	***1,470***	***2,290***	***128***	***89.4***	***5,550***	***527 J***	***255***	***278***	< 25	***1,380***	< 25.0	8,410	1,300	3.6
Trichlorofluoromethene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	---	---	---
1,2,3-Trichloropropane	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	109	5	51.9
1,2,4-Trimethylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	219,000	219,000	1,382
1,3,5-Trimethylbenzene	< 25	< 25	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25.0	182,000	182,000	(combined)
Vinyl chloride	< 25	***828***	***953***	***1,480***	***212***	***1,140***	***1,320***	< 25	< 25	< 25	< 25.0	2,080	67	0.1
Xylenes	< 75	< 75	< 75	< 75	< 75	< 750	< 75	< 75	< 75	< 75	< 75.0	260,000	260,000	3,960

Key:

µg/kg	- Micrograms per kilogram
RCL	- Residual Contaminant Level per Chapter NR 720, Wis. Adm. Code
NE	- Not Established by Chapter NR 720, Wis. Adm. Code
J	- Detected between the Limit of Detection (LOD) and the Limit of Quantitation (LOQ)
---	- Not Analyzed
*	- Cumulative Direct Contact Exceeded for Multiple Contaminants at Sample Location
VOC	- Volatile Organic Compounds
W	- Sample Collected Across Soil-to-Groundwater Interface
1,600	- Non-Industrial Direct Contact Residual Contaminant Level (RCL) Exceeded
7,070	- Industrial Direct Contact Residual Contaminant Level (RCL) Exceeded
5.1	- Groundwater Pathway RCL Exceeded

Table A.2.b - Soil Analytical Results
Jagemann Plating Co.

Boring Sample ID	MW-5	MW-6	B-9	B-10	B-11	B-12	B-13	B-16	B-18	B-19	Industrial	Non-Industrial	Groundwater
Depth	2 - 4'	2 - 4'	2.5 - 4.5'	2.5 - 4.5'	2.5 - 4.5'	2 - 4'	2.5 - 4.5'	2.5 - 4.5'	2.5 - 4.5'	5 - 7'	Direct Contact	Direct Contact	Pathway
Date	5/3/2011	5/3/2011	5/7/2013	5/7/2013	5/7/2013	6/5/2013	11/8/2016	11/8/2016	8/15/2018	8/15/2018	RCL	RCL	RCL
VOCs (µg/kg)													
Benzene	< 25.0	< 25.0	< 9.2	< 9.2	< 9.2	<9.2	< 16	< 16	<30	<30	7,070	1,490	5.1
Bromobenzene	< 25.0	< 25.0	< 13	< 13	< 13	<13	< 39	< 39	<25	<25	679,000	342,000	---
Bromochloromethane	< 25.0	< 25.0	---	---	---	---	---	---	---	---	976,000	232,000	---
Bromodichloromethane	< 25.0	< 25.0	< 27	< 27	< 27	<27	< 15	< 15	<29	<29	1,830	418	0.3
Bromoform	< 25.9	< 25.9	< 30	< 30	< 30	<30	< 23	< 23	<26	<26	113,000	25,400	2.3
Bromomethane	< 25.0	< 25.0	---	---	---	---	---	---	---	---	46,000	10,300	5.1
n-Butylbenzene	< 40.4	< 40.4	< 26	< 26	< 26	<26	2,720	< 86	<40	<40	108,000	108,000	---
sec-Butylbenzene	< 25.0	< 25.0	< 41	< 41	< 41	<41	1,340	< 36	<33	<33	145,000	145,000	---
tert-Butylbenzene	< 25.0	< 25.0	< 20	< 20	< 20	<20	< 35	< 35	<26	<26	183,000	183,000	---
Carbon Tetrachloride	< 25.0	< 25.0	< 25	< 25	< 25	<25	< 21	< 21	<16	<16	4,030	916	3.9
Chlorobenzene	< 25.0	< 25.0	< 16	< 16	< 16	<16	< 39	< 390	<13	<13	761,000	370,000	---
Chloroethane	< 25.0	< 25.0	< 42	< 42	< 42	<42	< 45	< 45	<91	<91	---	---	226.6
Chloroform	< 25.0	< 25.0	< 49	< 49	< 49	<49	< 26	< 26	<35	<35	1,980	454	3.3
Chloromethane	< 25.0	< 25.0	< 181	< 181	< 181	<181	< 250	< 250	<76	<76	669,000	159	15.5
2-Chlorotoluene	< 25.0	< 25.0	< 16	< 16	< 16	<16	< 29	< 29	<15	<15	907,000	907,000	---
4-Chlorotoluene	< 25.0	< 25.0	< 14	< 14	< 14	<14	< 32	< 32	<18	<18	253,000	253,000	---
1,2-Dibromo-3-chloropropane	< 82.3	< 82.3	< 48	< 48	< 48	<48	< 78	< 78	<58	<58	93	8	0.2
Dibromochloromethane	< 25.0	< 25.0	< 14	< 14	< 14	<14	< 31	< 31	<25	<25	3,890	8,280	32
EDB (1,2-Dibromoethane)	< 25.0	< 25.0	< 20	< 20	< 20	<20	< 35	< 35	<23	<23	221	50	0.0282
Dibromomethane	< 25.0	< 25.0	---	---	---	---	---	---	---	---	151,000	36,600	---
1,2-Dichlorobenzene	< 44.4	< 44.4	< 38	< 38	< 38	<38	< 39	< 39	<28	<28	376,000	376,000	1,168
1,3-Dichlorobenzene	< 25.0	< 25.0	< 30	< 30	< 30	<30	< 30	< 30	<37	<37	297,000	297,000	1,152.80
1,4-Dichlorobenzene	< 25.0	< 25.0	< 33	< 33	< 33	<33	< 30	< 30	<37	<37	16,400	3,740	144
Dichlorodifluoromethane	< 25.0	< 25.0	< 57	< 57	< 57	<57	< 43	< 43	<48	<48	530,000	126,000	3,088.00
1,1-Dichloroethane	< 25.0	< 25.0	< 19	< 19	< 19	<19	< 25	< 25	<34	<34	22,200	5,060	483.4
1,2-Dichloroethane	< 25.0	< 25.0	< 36	< 36	< 36	<36	< 30	< 30	<38	<38	2,870	652	2.8
1,1-Dichloroethene	< 25.0	< 25.0	< 21	< 21	< 21	<21	< 29	< 29	<22	<22	1,190,000	320,000	5
cis-1,2-Dichloroethene	< 25.0	< 25.0	< 24	< 24	40 J	***400***	< 94	< 21	<32	<32	2,340,000	156,000	41.2
trans-1,2-Dichloroethene	< 25.0	< 25.0	< 29	< 29	< 29	<29	43 J	< 24	<28	<28	1,190,000	1,560,000	62.6
1,2-Dichloropropane	< 25.0	< 25.0	< 9.5	< 9.5	< 9.5	<9.5	< 25	< 25	<35	<35	1,780	406	3.3
1,3-Dichloropropane	< 25.0	< 25.0	< 21	< 21	< 21	<21	< 31	< 31	<25	<25	1,490,000	1,490,000	---
2,2-Dichloropropane	< 25.0	< 25.0	< 46	< 46	< 46	<46	< 100	< 100	---	---	191,000	191,000	---
1,1-Dichloropropene	< 25.0	< 25.0	---	---	---	---	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	< 25.0	< 25.0	---	---	---	---	---	---	<39	<39	1,220,000	1,210,000	0.3
trans-1,3-Dichloropropene	< 25.0	< 25.0	---	---	---	---	---	---	<22	<22	1,570,000	1,510,000	(combined)
Diisopropyl Ether	< 25.0	< 25.0	< 11	< 11	< 11	<11	< 12	< 12	<10	<10	2,260,000	2,260,000	---
Ethylbenzene	< 25.0	< 25.0	< 10	< 10	< 10	<10	46 J	< 27	<35	<35	35,400	8,020	1,570
Hexachloro-1,3-butadiene	< 26.4	< 26.4	< 95	< 95	< 95	<95	< 110	< 110	<85	<85	7,190	1,630	---
Isopropylbenzene	< 25.0	< 25.0	< 25	< 25	< 25	<25	197	< 37	<34	<34	268,000	268,000	---
p-Isopropyltoluene	< 25.0	< 25.0	< 31	< 31	< 31	77 J	1,000	< 56	<29	<29	162,000	162,000	---
Methylene Chloride	< 25.0	< 25.0	< 57	< 57	< 57	<57	<220	< 220	<150	<150	1,150,000	61,800	2.6
Methyl-tert-butyl ether	< 25.0	< 25.0	< 30	< 30	< 30	<30	< 25	< 25	<50	<50	282,000	63,800	27
Naphthalene	< 25.0	< 25.0	< 114	< 114	< 114	<114	510	< 87	<94	<94	24,100	5,520	658.2
n-Propylbenzene	< 25.0	< 25.0	< 24	< 24	< 24	<24	620	< 35	<33	<33	---	---	---
Styrene	< 25.0	< 25.0	---	---	---	---	---	---	---	---	867,000	867,000	220
1,1,1,2-Tetrachloroethane	< 25.0	< 25.0	< 23	< 23	< 23	<23	< 29	< 29	<28	<28	12,300	2,780	53.4
1,1,2,2-Tetrachloroethane	< 25.0	< 25.0	< 12	< 12	< 12	<12	< 13	< 13	<28	<28	3,600	810	0.2
Tetrachloroethene	< 25.0	< 25.0	< 49	< 49	< 49	<49	< 54	< 54	<32	<32	145,000	33,000	4.5
Toluene	< 25.0	< 25.0	< 20	< 20	< 20	29 J	< 13	< 31	<32	<32	818,000	818,000	1,107.20
1,2,3-Trichlorobenzene	< 25.0	< 25.0	< 129	< 129	< 129	<129	< 120	< 120	<66	<66	934,000	62,600	---
1,2,4-Trichlorobenzene	< 25.0	< 25.0	< 79	< 79	< 79	<79	< 85	< 85	<64	<64	113,000	24,000	408
1,1,1-Trichloroethane	< 25.0	< 25.0	< 38	< 38	< 38	<38	< 40	< 40	<30	<30	640,000	640,000	140.2
1,1,2-Trichloroethane	< 25.0	< 25.0	< 23	< 23	< 23	<23	< 33	< 33	<33	<33	7,010	1,590	3.2
Trichloroethene	< 25.0	< 25.0	< 28	< 28	***94***	***580***	***105 J***	< 42	<41	<41	8,410	1,300	3.6
Trichlorofluoromethene	< 25.0	< 25.0	< 86	< 86	< 86	<86	< 60	< 60	<41	<41	---	---	---
1,2,3-Trichloropropane	< 25.0	< 25.0	---	---	---	---	---	---	---	---	109	5	51.9
1,2,4-Trimethylbenzene	< 25.0	< 25.0	< 26	< 26	29 J	<26	***4,200***	< 78	<25	<25	219,000	219,000	1,382.00
1,3,5-Trimethylbenzene	< 25.0	< 25.0	< 26	< 26	< 26	<26	***2,710***	< 89	<32	<32	182,000	182,000	(combined)
Vinyl chloride	< 25.0	< 25.0	< 21	< 21	< 21	***190***	***54***	< 10	<19	<19	2,080	67	0.1
Xylenes	< 75.0	< 75.0	< 99	< 99	< 99	<99	241 J	< 99	<116	<116	260,000	260,000	3,960

Key:

mg/kg	- Milligrams per kilogram
RCL	- Residual Contaminant Level per Chapter NR 720, Wis. Adm. Code
NE	- Not Established by Chapter NR 720, Wis. Adm. Code
J	- Detected between the Limit of Detection (LOD) and the Limit of Quantitation (LOQ)
---	- Not Analyzed
*	- Cumulative Direct Contact Exceeded for Multiple Contaminants at Sample Location
VOC	- Volatile Organic Compounds
W	- Sample Collected Across Soil-to-Groundwater Interface
1.6	- Non-Industrial Direct Contact Residual Contaminant Level (RCL) Exceeded
7.07	- Industrial Direct Contact Residual Contaminant Level (RCL) Exceeded
0.0051	- Groundwater Pathway RCL Exceeded

Table A.2.a - Soil Analytical Results
Jagemann Plating Co.

Boring Sample ID	B-1	B-2	B-3	B-3*	B-4	B-4*	B-5	B-6	B-7	B-8	Industrial Direct Contact RCL	Groundwater Pathway RCL	Non-Industrial Direct Contact RCL	Background Concentration
Depth	0 - 4'	0 - 4'	0 - 4'	6 - 8'	0 - 4'	6 - 8'	0 - 4'	0 - 4'	0 - 4'	0 - 4'				
Date	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010	9/21/2010				
Metals (mg/kg)														
Arsenic	***3.2*** BTV	***2.1*** BTV	***2.8*** BTV	***4.3*** BTV	***2.6*** BTV	***2.8*** BTV	***3.1*** BTV	***2.8*** BTV	***2.2*** BTV	***5.4*** BTV	3	0.584	0.677	8
Barium	83.4	73.7	48.3	99.1	53.3	102	79.3	35	24.3	65	100,000	164.8	15,300	364
Cadmium	0.45 J	1.1	3.9	0.48 J	0.39 J	0.55	0.71	***0.98*** BTV	***0.86*** BTV	***1.3***	985	0.752	71.1	1
Chromium, Total	29.2	21.1	17.6	25.5	49.9	27.5	33.1	20.6	8.5	19.2	---	360,000	---	---
Hexavalent Chromium	< 0.062	< 0.033	< 0.028	< 0.049	< 0.037	< 0.049	< 0.062	< 0.046	< 0.048	< 0.040	6.36	---	0.301	---
Lead	9.2	10.6	8.2	7.4	6.8	6.4	15	13.9	8.5	23.8	800	27	400	52
Mercury	0.017	0.027	0.019	0.021	0.022	0.019	0.04	0.042	0.014	0.047	3.13	0.208	3.13	---
Selenium	0.42 J	***0.65 J***	0.28 J	0.39 J	0.26 J	0.22 J	0.37 J	0.42 J	0.42 J	***0.85 J***	5,840	0.52	391	---
Silver	< 0.054	0.076 J	< 0.046	< 0.053	< 0.050	< 0.048	< 0.051	< 0.047	0.044 J	0.060 J	5,840	0.8491	391	---

Boring Sample ID	PZ-4	MW-5	MW-6	B-9	B-10	B-11	B-12	B-13	B-16	B-18	B-19	Industrial Direct Contact RCL	Groundwater Pathway RCL	Non-Industrial Direct Contact RCL	Background Concentration
Depth	2 - 4'	2 - 4'	2 - 4'	2.5 - 4.5'	2.5 - 4.5'	2.5 - 4.5'	2 - 4'	2.5 - 4.5'	2.5 - 4.5'	2.5 - 4.5'	5 - 7'				
Date	5/3/2011	5/3/2011	5/3/2011	5/7/2013	5/7/2013	5/7/2013	6/5/2013	11/8/2016	11/8/2016	8/15/2018	8/15/2018				
Metals (mg/kg)															
Arsenic	***4.6*** BTV	***2.4*** BTV	***3.6*** BTV	1.18 J	< 0.72	< 0.72	***1.20 J*** BTV	<0.67	<0.67	<0.33	***1.49*** BTV	3	0.584	0.677	8
Barium	99.8	66.1	74.4	60	63.3	54.4	54.8	84.3	74.6	89.9	90.2	100,000	164.8	15,300	364
Cadmium	0.20 J	0.17 J	0.33 J	<0.08	< 0.08	< 0.08	***135***	*239*	<0.8	0.706	***1.13***	985	0.752	71.1	1
Chromium, Total	30.6	23	21.4	25.9	24.1	36.1	22.6	324	22.8	31.6	37.4	---	360,000	---	---
Hexavalent Chromium	---	---	---	---	---	---	---	---	---	---	---	6.36	---	0.301	---
Lead	7.2	6.6	20.4	9.74	5.89	8.43	10.8	*220*	2.21	7.86	9.27	800	27	400	52
Mercury	0.024	0.014	0.043	0.048	0.037	0.029	0.0695	0.0729	0.0265 J	0.040 J	<0.019	3.13	0.208	3.13	---
Selenium	< 0.18	0.24 J	0.46 J	< 0.7	< 0.7	< 0.7	***1.78 J***	***1.07 J***	<0.55	***0.827 J***	<0.52	5,840	0.52	391	---
Silver	0.11 J	0.11 J	0.090 J	< 0.34	< 0.34	< 0.34	<0.34	<0.44	<0.44	<0.57	<0.57	5840	0.8491	391	---

Key:

mg/kg	- Milligrams per kilogram
RCL	- Residual Contaminant Level per Chapter NR 720, Wis. Adm. Code
NE	- Not Established by Chapter NR 720, Wis. Adm. Code
J	- Detected between the laboratory Limit of Detection (LOD) and the Limit of Quantitation (LOQ)
---	- Not Analyzed
BTV	- Concentration is below the background threshold value, thus is not considered an exceedance of the groundwater pathway RCL
VOC	- Volatile Organic Compounds
*	- Soil sample collected at or below water table interface (saturated)
400	- Non-Industrial Direct Contact Residual Contaminant Level (RCL) Exceeded
800	- Industrial Direct Contact Residual Contaminant Level (RCL) Exceeded
27	- Groundwater Pathway RCL Exceeded

Table A.4.1 - Sub-slab Vapor Sampling Results - Large Commercial/Industrial
Jagemann Plating Co.

Sample ID	Sample Location	Date Collected	Relevant VOCs (µg/m^3)					
			1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl chloride
Vapor Risk Screening Level (VRSL) -- µg/m^3			88,000	NE	NE	18,000	880	2,800
SS-1	Office Closet	8/21/2018	<0.46	<0.37	<0.48	<0.53	<0.43	<0.21
SS-2	Nelson Sign Cutting Room	8/21/2018	<0.49	<0.39	<0.51	2.5	2.5	<0.23

Key:

NE - No screening level established
< - Not detected above laboratory detection limits
µg/m^3 - Micrograms per cubic meter
J - Estimated concentration at or above the laboratory Limit of Detection and Limit of Quantitation
22 - Vapor Risk Screening Level (VRSL) exceeded

Notes:

1.) Samples were collected in 6-liter summa canister over a 30-minute period and analyzed using the U.S. EPA TO-15 analytical method
2.) The Vapor Risk Screening Level (VRSL) was obtained from WDNR's *Quick Look-Up Table for Indoor Air Vapor Action Levels and Vapor Risk Screening Levels*, based on November 2017 U.S. EPA Regional Screening Level Tables

Table A.4.2 - Ambient Air Analytical Results Summary - Large Commercial/Industrial
Jagemann Plating Co.

Sample ID	Sample Type	Sample Location	Date Collected	Relevant VOCs ($\mu g/m^3$)					
				1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Indoor Air Vapor Action Level (VAL) -- $\mu g/m^3$				880	NE	NE	180	8.8	28
IA-1	Indoor Air	Office Closet	8/21/2018	<0.42	<0.34	<0.44	<0.49	<0.40	<0.20
IA-2	Indoor Air	Nelson Sign Cutting Room	8/21/2018	<0.50	<0.40	<0.52	<0.57	<0.47	<0.23
OA-1	Outdoor Air	Outdoor Background (Upwind)	8/21/2018	<0.42	<0.34	<0.44	<0.49	<0.40	<0.20

Key:

NE - Not established

< - Not detected above laboratory detection limits

$\mu g/m^3$ - Micrograms per cubic meter

J - Estimated concentration at or above the laboratory Limit of Detection and Limit of Quantitation

11 - Vapor Action Level (VAL) exceeded

Notes:

1.) Samples were collected in 6-liter summa canister over an 8-hour period and analyzed using the U.S. EPA TO-15 analytical method

2.) The Vapor Action Level (VAL) was obtained from WDNR's *Quick Look-Up Table for Indoor Air Vapor Action Levels and Vapor Risk Screening Levels*, based on November 2017 U.S. EPA Regional Screening Level Tables

Synergy Environmental Lab, INC

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

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HOBART. WI 54155

Report Date *04-Sep-18*

Project Name JAGEMAN PLATING CO., **Invoice #** E35091
Project # 1162-013

Lab Code 5035091A
Sample ID B-18 2.5-4.5'
Sample Matrix Soil
Sample Date 8/15/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	82.2	%			1	5021		8/16/2018	NJC	I
Inorganic										
Metals										
Arsenic, Total	< 0.33	mg/Kg	0.33	1.09	1	6010B		8/27/2018	CWT	I
Barium, Total	89.9	mg/Kg	0.21	0.7	1	6010B		8/27/2018	CWT	I
Cadmium, Total	0.706	mg/Kg	0.08	0.25	1	6010B		8/27/2018	CWT	I
Chromium, Total	31.6	mg/Kg	0.08	0.26	1	6010B		8/27/2018	CWT	I
Lead, Total	7.86	mg/Kg	0.17	0.58	1	6010B		8/27/2018	CWT	I
Mercury, Total	0.040 "J"	mg/kg	0.019	0.064	1	7471		8/29/2018	CWT	I
Selenium, Total	0.827 "J"	mg/Kg	0.52	1.73	1	6010B		8/27/2018	CWT	I
Silver, Total	< 0.57	mg/Kg	0.57	1.89	1	6010B		8/27/2018	CWT	I
Organic										
VOC's										
Benzene	< 0.03	mg/kg	0.03	0.096	1	8260B		8/22/2018	CJR	I
Bromobenzene	< 0.025	mg/kg	0.025	0.081	1	8260B		8/22/2018	CJR	I
Bromodichloromethane	< 0.074	mg/kg	0.074	0.24	1	8260B		8/22/2018	CJR	I
Bromoform	< 0.029	mg/kg	0.029	0.092	1	8260B		8/22/2018	CJR	I
tert-Butylbenzene	< 0.026	mg/kg	0.026	0.084	1	8260B		8/22/2018	CJR	I
sec-Butylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		8/22/2018	CJR	I
n-Butylbenzene	< 0.04	mg/kg	0.04	0.13	1	8260B		8/22/2018	CJR	I
Carbon Tetrachloride	< 0.016	mg/kg	0.016	0.053	1	8260B		8/22/2018	CJR	I
Chlorobenzene	< 0.013	mg/kg	0.013	0.04	1	8260B		8/22/2018	CJR	I
Chloroethane	< 0.091	mg/kg	0.091	0.29	1	8260B		8/22/2018	CJR	I
Chloroform	< 0.035	mg/kg	0.035	0.11	1	8260B		8/22/2018	CJR	I
Chloromethane	< 0.076	mg/kg	0.076	0.24	1	8260B		8/22/2018	CJR	I

Project Name JAGEMAN PLATING CO., **Invoice #** E35091
Project # 1162-013

Lab Code 5035091A
Sample ID B-18 2.5-4.5'
Sample Matrix Soil
Sample Date 8/15/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
2-Chlorotoluene	< 0.015	mg/kg	0.015	0.047	1	8260B		8/22/2018	CJR	1
4-Chlorotoluene	< 0.018	mg/kg	0.018	0.057	1	8260B		8/22/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 0.058	mg/kg	0.058	0.18	1	8260B		8/22/2018	CJR	1
Dibromochloromethane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/22/2018	CJR	1
1,4-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/22/2018	CJR	1
1,3-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/22/2018	CJR	1
1,2-Dichlorobenzene	< 0.028	mg/kg	0.028	0.088	1	8260B		8/22/2018	CJR	1
Dichlorodifluoromethane	< 0.048	mg/kg	0.048	0.15	1	8260B		8/22/2018	CJR	1
1,2-Dichloroethane	< 0.038	mg/kg	0.038	0.12	1	8260B		8/22/2018	CJR	1
1,1-Dichloroethane	< 0.034	mg/kg	0.034	0.11	1	8260B		8/22/2018	CJR	1
1,1-Dichloroethene	< 0.022	mg/kg	0.022	0.069	1	8260B		8/22/2018	CJR	1
cis-1,2-Dichloroethene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
trans-1,2-Dichloroethene	< 0.028	mg/kg	0.028	0.09	1	8260B		8/22/2018	CJR	1
1,2-Dichloropropane	< 0.035	mg/kg	0.035	0.11	1	8260B		8/22/2018	CJR	1
1,3-Dichloropropane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/22/2018	CJR	1
trans-1,3-Dichloropropene	< 0.022	mg/kg	0.022	0.068	1	8260B		8/22/2018	CJR	1
cis-1,3-Dichloropropene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/22/2018	CJR	1
Di-isopropyl ether	< 0.01	mg/kg	0.01	0.032	1	8260B		8/22/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.023	mg/kg	0.023	0.072	1	8260B		8/22/2018	CJR	1
Ethylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/22/2018	CJR	1
Hexachlorobutadiene	< 0.085	mg/kg	0.085	0.27	1	8260B		8/22/2018	CJR	1
Isopropylbenzene	< 0.034	mg/kg	0.034	0.11	1	8260B		8/22/2018	CJR	1
p-Isopropyltoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/22/2018	CJR	1
Methylene chloride	< 0.15	mg/kg	0.15	0.46	1	8260B		8/22/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.05	mg/kg	0.05	0.16	1	8260B		8/22/2018	CJR	1
Naphthalene	< 0.094	mg/kg	0.094	0.3	1	8260B		8/22/2018	CJR	1
n-Propylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		8/22/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.88	1	8260B		8/22/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.09	1	8260B		8/22/2018	CJR	1
Tetrachloroethene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
Toluene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
1,2,4-Trichlorobenzene	< 0.064	mg/kg	0.064	0.2	1	8260B		8/22/2018	CJR	1
1,2,3-Trichlorobenzene	< 0.066	mg/kg	0.066	0.21	1	8260B		8/22/2018	CJR	1
1,1,1-Trichloroethane	< 0.03	mg/kg	0.03	0.96	1	8260B		8/22/2018	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		8/22/2018	CJR	1
Trichloroethene (TCE)	< 0.041	mg/kg	0.041	0.13	1	8260B		8/22/2018	CJR	1
Trichlorofluoromethane	< 0.041	mg/kg	0.041	0.13	1	8260B		8/22/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.025	mg/kg	0.025	0.08	1	8260B		8/22/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
Vinyl Chloride	< 0.019	mg/kg	0.019	0.062	1	8260B		8/22/2018	CJR	1
m&p-Xylene	< 0.072	mg/kg	0.072	0.23	1	8260B		8/22/2018	CJR	1
o-Xylene	< 0.044	mg/kg	0.044	0.14	1	8260B		8/22/2018	CJR	1
SUR - Dibromofluoromethane	116	Rec %			1	8260B		8/22/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	95	Rec %			1	8260B		8/22/2018	CJR	1
SUR - 4-Bromofluorobenzene	106	Rec %			1	8260B		8/22/2018	CJR	1
SUR - Toluene-d8	96	Rec %			1	8260B		8/22/2018	CJR	1

Project Name JAGEMAN PLATING CO., **Invoice #** E35091
Project # 1162-013

Lab Code 5035091B
Sample ID B-19 5-7'
Sample Matrix Soil
Sample Date 8/15/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	71.6	%			1	5021		8/16/2018	NJC	I
Inorganic										
Metals										
Arsenic, Total	1.49	mg/Kg	0.33	1.09	1	6010B		8/27/2018	CWT	I
Barium, Total	90.2	mg/Kg	0.21	0.7	1	6010B		8/27/2018	CWT	I
Cadmium, Total	1.13	mg/Kg	0.08	0.25	1	6010B		8/27/2018	CWT	I
Chromium, Total	37.4	mg/Kg	0.08	0.26	1	6010B		8/27/2018	CWT	I
Lead, Total	9.27	mg/Kg	0.17	0.58	1	6010B		8/27/2018	CWT	I
Mercury, Total	< 0.019	mg/kg	0.019	0.064	1	7471		8/29/2018	CWT	I
Selenium, Total	< 0.52	mg/Kg	0.52	1.73	1	6010B		8/27/2018	CWT	I
Silver, Total	< 0.57	mg/Kg	0.57	1.89	1	6010B		8/27/2018	CWT	I
Organic										
VOC's										
Benzene	< 0.03	mg/kg	0.03	0.096	1	8260B		8/22/2018	CJR	I
Bromobenzene	< 0.025	mg/kg	0.025	0.081	1	8260B		8/22/2018	CJR	I
Bromodichloromethane	< 0.074	mg/kg	0.074	0.24	1	8260B		8/22/2018	CJR	I
Bromoform	< 0.029	mg/kg	0.029	0.092	1	8260B		8/22/2018	CJR	I
tert-Butylbenzene	< 0.026	mg/kg	0.026	0.084	1	8260B		8/22/2018	CJR	I
sec-Butylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		8/22/2018	CJR	I
n-Butylbenzene	< 0.04	mg/kg	0.04	0.13	1	8260B		8/22/2018	CJR	I
Carbon Tetrachloride	< 0.016	mg/kg	0.016	0.053	1	8260B		8/22/2018	CJR	I
Chlorobenzene	< 0.013	mg/kg	0.013	0.04	1	8260B		8/22/2018	CJR	I
Chloroethane	< 0.091	mg/kg	0.091	0.29	1	8260B		8/22/2018	CJR	I
Chloroform	< 0.035	mg/kg	0.035	0.11	1	8260B		8/22/2018	CJR	I
Chloromethane	< 0.076	mg/kg	0.076	0.24	1	8260B		8/22/2018	CJR	I
2-Chlorotoluene	< 0.015	mg/kg	0.015	0.047	1	8260B		8/22/2018	CJR	I
4-Chlorotoluene	< 0.018	mg/kg	0.018	0.057	1	8260B		8/22/2018	CJR	I
1,2-Dibromo-3-chloropropane	< 0.058	mg/kg	0.058	0.18	1	8260B		8/22/2018	CJR	I
Dibromochloromethane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/22/2018	CJR	I
1,4-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/22/2018	CJR	I
1,3-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/22/2018	CJR	I
1,2-Dichlorobenzene	< 0.028	mg/kg	0.028	0.088	1	8260B		8/22/2018	CJR	I
Dichlorodifluoromethane	< 0.048	mg/kg	0.048	0.15	1	8260B		8/22/2018	CJR	I
1,2-Dichloroethane	< 0.038	mg/kg	0.038	0.12	1	8260B		8/22/2018	CJR	I
1,1-Dichloroethane	< 0.034	mg/kg	0.034	0.11	1	8260B		8/22/2018	CJR	I
1,1-Dichloroethene	< 0.022	mg/kg	0.022	0.069	1	8260B		8/22/2018	CJR	I
cis-1,2-Dichloroethene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	I
trans-1,2-Dichloroethene	< 0.028	mg/kg	0.028	0.09	1	8260B		8/22/2018	CJR	I
1,2-Dichloropropane	< 0.035	mg/kg	0.035	0.11	1	8260B		8/22/2018	CJR	I
1,3-Dichloropropane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/22/2018	CJR	I
trans-1,3-Dichloropropene	< 0.022	mg/kg	0.022	0.068	1	8260B		8/22/2018	CJR	I
cis-1,3-Dichloropropene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/22/2018	CJR	I
Di-isopropyl ether	< 0.01	mg/kg	0.01	0.032	1	8260B		8/22/2018	CJR	I
EDB (1,2-Dibromoethane)	< 0.023	mg/kg	0.023	0.072	1	8260B		8/22/2018	CJR	I

Project Name JAGEMAN PLATING CO., **Invoice #** E35091
Project # 1162-013

Lab Code 5035091B
Sample ID B-19 5-7'
Sample Matrix Soil
Sample Date 8/15/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Ethylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/22/2018	CJR	1
Hexachlorobutadiene	< 0.085	mg/kg	0.085	0.27	1	8260B		8/22/2018	CJR	1
Isopropylbenzene	< 0.034	mg/kg	0.034	0.11	1	8260B		8/22/2018	CJR	1
p-Isopropyltoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/22/2018	CJR	1
Methylene chloride	< 0.15	mg/kg	0.15	0.46	1	8260B		8/22/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.05	mg/kg	0.05	0.16	1	8260B		8/22/2018	CJR	1
Naphthalene	< 0.094	mg/kg	0.094	0.3	1	8260B		8/22/2018	CJR	1
n-Propylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		8/22/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.88	1	8260B		8/22/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.09	1	8260B		8/22/2018	CJR	1
Tetrachloroethene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
Toluene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
1,2,4-Trichlorobenzene	< 0.064	mg/kg	0.064	0.2	1	8260B		8/22/2018	CJR	1
1,2,3-Trichlorobenzene	< 0.066	mg/kg	0.066	0.21	1	8260B		8/22/2018	CJR	1
1,1,1-Trichloroethane	< 0.03	mg/kg	0.03	0.96	1	8260B		8/22/2018	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		8/22/2018	CJR	1
Trichloroethene (TCE)	< 0.041	mg/kg	0.041	0.13	1	8260B		8/22/2018	CJR	1
Trichlorofluoromethane	< 0.041	mg/kg	0.041	0.13	1	8260B		8/22/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.025	mg/kg	0.025	0.08	1	8260B		8/22/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/22/2018	CJR	1
Vinyl Chloride	< 0.019	mg/kg	0.019	0.062	1	8260B		8/22/2018	CJR	1
m&p-Xylene	< 0.072	mg/kg	0.072	0.23	1	8260B		8/22/2018	CJR	1
o-Xylene	< 0.044	mg/kg	0.044	0.14	1	8260B		8/22/2018	CJR	1
SUR - Toluene-d8	97	Rec %			1	8260B		8/22/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	104	Rec %			1	8260B		8/22/2018	CJR	1
SUR - 4-Bromofluorobenzene	106	Rec %			1	8260B		8/22/2018	CJR	1
SUR - Dibromofluoromethane	110	Rec %			1	8260B		8/22/2018	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.

CWT denotes sub contract lab - Certification #445126660

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

Robert E. Lee & Associates, Inc.
Engineering, Surveying, Environmental Services
1250 Centennial Centre Blvd.
Hobart, WI 54155
920.662.9641 FAX 920.662.9141

To ensure the proper handling of samples, please see the back for instructions.

CHAIN OF CUSTODY RECORD

COC # 202147

Client: Jagemann Plating Co
Project Name: Jagemann Plating Co
Project Number: 1162-013 BID #:

Environmental Program:
☐ LUST ☐ SDWA ☐ WPDES ☐ RCRA ☐ OTHER ____

Requested Turnaround Time
☒ Normal (10-15 DAYS) ☐ Rush
Date Needed: ____
Rushes accepted only w/prior notification

*Preservation Code
N = Nitric Acid (red) O = Sodium Hydroxide
H = Hydrochloric Acid U = Unpreserved (white)
M = Methanol S = Sulfuric Acid (green)

Sampler: Cody Applekamp

Sample Type (Matrix)
DW = Drinking Water
GW = Groundwater
WW = Wastewater
Soil, Oil, Sludge, Air, Other:

Analyses Required:
(Note special detection limits or methods)

Sample Name	Date	Time	A/P	Comp	Grab	Sample Type	No. Of Containers	Filtered? (Y/N)	Preservation *(Code)	VOCs	RCRA metals	Laboratory Sample I.D.	Remarks:
B-18 (0.5-4.5')	8-15-18	0935	A/P			Soil	3	N	M	X	X	503509	A
B-19 (5-7')	↓	1125	A/P			↓	3	N	U	X	X		B
			A/P										
			A/P										
			A/P										
			A/P										
			A/P										
			A/P										
			A/P										
			A/P										
			A/P										
			A/P										

Report to: Nicole LaPlant
Company: Robert E. Lee & Associates
Address: 1250 Centennial Centre Blvd.
Hobart, WI 54155
Telephone: 920-662-9641

Invoice to: Nicole / Jacki
Company: Robert E. Lee & Associates
Address: 1250 Centennial Centre Blvd.
Hobart, WI 54155
Telephone: 920-662-9641

Relinquished By	Date	Time	Received By	Date	Time
1)	8-15-18	1600 A/P			A/P
2)		A/P			A/P
3)		A/P			A/P
Received by Lab		7:30	8-16-18		A = AM P = PM

Laboratory Receiving Notes
Temperature of Contents Ice °C
Custody Seal Intact ✓
Sample Condition ✓
Sample pH

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

August 30, 2018

Nicole LaPlant
Robert E. Lee & Associates
1250 Centennial Center Blvd.
Hobart, WI 54155

RE: Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Dear Nicole LaPlant:
Enclosed are the analytical results for sample(s) received by the laboratory on August 24, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kirsten Hogberg
kirsten.hogberg@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: Cody Applecamp, Robert E Lee & Associates
Bruce Meissner, Robert E. Lee & Associates

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

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SAMPLE SUMMARY

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10444812001	**OA-1**	Air	08/21/18 16:18	08/24/18 13:30
10444812002	**IA-1**	Air	08/21/18 15:57	08/24/18 13:30
10444812003	**IA-2**	Air	08/21/18 16:35	08/24/18 13:30
10444812004	**SS-1**	Air	08/22/18 12:29	08/24/18 13:30
10444812005	**SS-2**	Air	08/22/18 12:40	08/24/18 13:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10444812001	**OA-1**	TO-15	MJL	6
10444812002	**IA-1**	TO-15	MJL	6
10444812003	**IA-2**	TO-15	MJL	6
10444812004	**SS-1**	TO-15	MJL	6
10444812005	**SS-2**	TO-15	MJL	6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Sample: OA-1 **Lab ID: 10444812001** Collected: 08/21/18 16:18 Received: 08/24/18 13:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1-Dichloroethene	**<0.42**	ug/m3	1.2	0.42	1.55		08/25/18 19:20	75-35-4	
cis-1,2-Dichloroethene	**<0.34**	ug/m3	1.2	0.34	1.55		08/25/18 19:20	156-59-2	
trans-1,2-Dichloroethene	**<0.44**	ug/m3	1.2	0.44	1.55		08/25/18 19:20	156-60-5	
Tetrachloroethene	**<0.49**	ug/m3	1.1	0.49	1.55		08/25/18 19:20	127-18-4	
Trichloroethene	**<0.40**	ug/m3	0.85	0.40	1.55		08/25/18 19:20	79-01-6	
Vinyl chloride	**<0.20**	ug/m3	0.40	0.20	1.55		08/25/18 19:20	75-01-4	

Sample: IA-1 **Lab ID: 10444812002** Collected: 08/21/18 15:57 Received: 08/24/18 13:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1-Dichloroethene	**<0.42**	ug/m3	1.2	0.42	1.55		08/25/18 20:21	75-35-4	
cis-1,2-Dichloroethene	**<0.34**	ug/m3	1.2	0.34	1.55		08/25/18 20:21	156-59-2	
trans-1,2-Dichloroethene	**<0.44**	ug/m3	1.2	0.44	1.55		08/25/18 20:21	156-60-5	
Tetrachloroethene	**<0.49**	ug/m3	1.1	0.49	1.55		08/25/18 20:21	127-18-4	
Trichloroethene	**<0.40**	ug/m3	0.85	0.40	1.55		08/25/18 20:21	79-01-6	
Vinyl chloride	**<0.20**	ug/m3	0.40	0.20	1.55		08/25/18 20:21	75-01-4	

Sample: IA-2 **Lab ID: 10444812003** Collected: 08/21/18 16:35 Received: 08/24/18 13:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1-Dichloroethene	**<0.50**	ug/m3	1.5	0.50	1.83		08/25/18 20:52	75-35-4	
cis-1,2-Dichloroethene	**<0.40**	ug/m3	1.5	0.40	1.83		08/25/18 20:52	156-59-2	
trans-1,2-Dichloroethene	**<0.52**	ug/m3	1.5	0.52	1.83		08/25/18 20:52	156-60-5	
Tetrachloroethene	**<0.57**	ug/m3	1.3	0.57	1.83		08/25/18 20:52	127-18-4	
Trichloroethene	**<0.47**	ug/m3	1.0	0.47	1.83		08/25/18 20:52	79-01-6	
Vinyl chloride	**<0.23**	ug/m3	0.48	0.23	1.83		08/25/18 20:52	75-01-4	

Sample: SS-1 **Lab ID: 10444812004** Collected: 08/22/18 12:29 Received: 08/24/18 13:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1-Dichloroethene	**<0.46**	ug/m3	1.4	0.46	1.68		08/25/18 21:22	75-35-4	
cis-1,2-Dichloroethene	**<0.37**	ug/m3	1.4	0.37	1.68		08/25/18 21:22	156-59-2	
trans-1,2-Dichloroethene	**<0.48**	ug/m3	1.4	0.48	1.68		08/25/18 21:22	156-60-5	
Tetrachloroethene	**<0.53**	ug/m3	1.2	0.53	1.68		08/25/18 21:22	127-18-4	
Trichloroethene	**<0.43**	ug/m3	0.92	0.43	1.68		08/25/18 21:22	79-01-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Sample: SS-1 **Lab ID: 10444812004** Collected: 08/22/18 12:29 Received: 08/24/18 13:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Vinyl chloride	**<0.21**	ug/m3	0.44	0.21	1.68		08/25/18 21:22	75-01-4	

Sample: SS-2 **Lab ID: 10444812005** Collected: 08/22/18 12:40 Received: 08/24/18 13:30 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
1,1-Dichloroethene	**<0.49**	ug/m3	1.4	0.49	1.79		08/26/18 19:21	75-35-4	
cis-1,2-Dichloroethene	**<0.39**	ug/m3	1.4	0.39	1.79		08/26/18 19:21	156-59-2	
trans-1,2-Dichloroethene	**<0.51**	ug/m3	1.4	0.51	1.79		08/26/18 19:21	156-60-5	
Tetrachloroethene	**2.5**	ug/m3	1.2	0.56	1.79		08/26/18 19:21	127-18-4	
Trichloroethene	**2.5**	ug/m3	0.98	0.46	1.79		08/26/18 19:21	79-01-6	
Vinyl chloride	**<0.23**	ug/m3	0.47	0.23	1.79		08/26/18 19:21	75-01-4	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
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QUALITY CONTROL DATA

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

QC Batch: 559023 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10444812001, 10444812002, 10444812003, 10444812004

METHOD BLANK: 3035470 Matrix: Air
Associated Lab Samples: 10444812001, 10444812002, 10444812003, 10444812004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/m3	<0.14	0.40	08/25/18 16:22	
cis-1,2-Dichloroethene	ug/m3	<0.11	0.40	08/25/18 16:22	
Tetrachloroethene	ug/m3	<0.16	0.34	08/25/18 16:22	
trans-1,2-Dichloroethene	ug/m3	<0.14	0.40	08/25/18 16:22	
Trichloroethene	ug/m3	<0.13	0.27	08/25/18 16:22	
Vinyl chloride	ug/m3	<0.063	0.13	08/25/18 16:22	

LABORATORY CONTROL SAMPLE: 3035471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/m3	40.3	36.5	90	70-137	
cis-1,2-Dichloroethene	ug/m3	40.3	35.9	89	70-136	
Tetrachloroethene	ug/m3	68.9	66.5	96	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	35.7	89	70-132	
Trichloroethene	ug/m3	54.6	51.2	94	70-135	
Vinyl chloride	ug/m3	26	22.6	87	70-141	

SAMPLE DUPLICATE: 3035535

Parameter	Units	10444736001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	ND	<0.27		25	
cis-1,2-Dichloroethene	ug/m3	ND	<0.22		25	
Tetrachloroethene	ug/m3	ND	<0.31		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.28		25	
Trichloroethene	ug/m3	ND	<0.26		25	
Vinyl chloride	ug/m3	ND	<0.13		25	

SAMPLE DUPLICATE: 3035536

Parameter	Units	10444812001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	<0.42	<0.42		25	
cis-1,2-Dichloroethene	ug/m3	<0.34	<0.34		25	
Tetrachloroethene	ug/m3	<0.49	<0.49		25	
trans-1,2-Dichloroethene	ug/m3	<0.44	<0.44		25	
Trichloroethene	ug/m3	<0.40	<0.40		25	
Vinyl chloride	ug/m3	<0.20	<0.20		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

QC Batch: 559035 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10444812005

METHOD BLANK: 3035543 Matrix: Air
Associated Lab Samples: 10444812005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/m3	<0.27	0.81	08/26/18 11:07	
cis-1,2-Dichloroethene	ug/m3	<0.22	0.81	08/26/18 11:07	
Tetrachloroethene	ug/m3	<0.31	0.69	08/26/18 11:07	
trans-1,2-Dichloroethene	ug/m3	<0.28	0.81	08/26/18 11:07	
Trichloroethene	ug/m3	<0.26	0.55	08/26/18 11:07	
Vinyl chloride	ug/m3	<0.13	0.26	08/26/18 11:07	

LABORATORY CONTROL SAMPLE: 3035544

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/m3	40.3	40.8	101	70-137	
cis-1,2-Dichloroethene	ug/m3	40.3	38.9	97	70-136	
Tetrachloroethene	ug/m3	68.9	66.7	97	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	39.1	97	70-132	
Trichloroethene	ug/m3	54.6	52.5	96	70-135	
Vinyl chloride	ug/m3	26	25.6	99	70-141	

SAMPLE DUPLICATE: 3035871

Parameter	Units	10444824001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	7.5	7.4	2	25	
cis-1,2-Dichloroethene	ug/m3	23.7	24.1	2	25	
Tetrachloroethene	ug/m3	ND	<0.90		25	
trans-1,2-Dichloroethene	ug/m3	3.2	3.5	9	25	
Trichloroethene	ug/m3	25.1	26.8	7	25	
Vinyl chloride	ug/m3	ND	<0.36		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALIFIERS

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1162-013 Jagemann Plating Co
Pace Project No.: 10444812

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10444812001	**OA-1**	TO-15	559023		
10444812002	**IA-1**	TO-15	559023		
10444812003	**IA-2**	TO-15	559023		
10444812004	**SS-1**	TO-15	559023		
10444812005	**SS-2**	TO-15	559035		

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www.pacelabs.com

AIR: CHAIN-OF-CUSTODY

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

WO# : 10444812

10444812

36479

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Robert E. Lee & Associates	Report To: Nicole LaPlant	Attention: Nicole LaPlant / Jacki Erdman
Address: 1250 Centennial Center Blvd	Copy To:	Company Name: REL
		Address: Same
Email To: nlaplant@relenv.com	Purchase Order No.:	Pace Quote Reference:
Phone: 920 662 9641 Fax:	Project Name: Jagemann Plating Co	Pace Project Manager/Sales Rep.
Requested Due Date/TAT:	Project Number: 1162-013	Pace Profile #: 23223

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other

Location of Sampling by State: WI

Reporting Units: ug/m³ X mg/m³ PPBV PPMV Other

Report Level II III IV Other

Valid Media Codes: Tedlar Bag TB; 1 Liter Summa Can 1LC; 6 Liter Summa Can 6LC; Low Volume Puff LVP; High Volume Puff HVP; Other PM10

ITEM #	'Section D Required Client Information AIR SAMPLE ID (Sample IDs MUST BE UNIQUE)	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE - END/GRAB DATE	COMPOSITE - END/GRAB TIME	Canister Pressure (Initial Field - In Hg)	Canister Pressure (Final Field - In Hg)	Summa Can Number	Flow Control Number	Method: PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	TO-15 Short List (other)	Pace Lab ID
1	~~CA~~ IA-1	6LC		8-21-18	0855	8-21-18	1618	-27"	-4"	33161073								X			001
2	~~CA~~ IA-1	↓			0830	↓	1557	-27"	-4"	12151103								X			002
3	IA-2	↓		↓	0835	↓	1635	-32"	-10"	08540249								X			003
4	SS-1	↓		8-22-18	1158	8-22-18	1229	-30"	-7"	00741001								X			004
5	SS-2	↓		↓	1210	↓	1240	-30"	-9	07081757								X			005
6																					
7																					
8																					
9																					
10																					
11																					
12																					

See Comments

Comments: TO-15 COCs:
- 1,1 DCE ~~CA~~
- cis 1,2DCE
- trans 1,2DCE
- PCE
- TCE
- Vinyl chloride

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
REL	8-22-18	1600	[illegible]	8-24-18	1330

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
—	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cody Applekamp

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 8-22-18

ORIGINAL

Page 1 of 1

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 02May2018 Page 1 of 1
	Document No.: F-MN-A-106-rev.15	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: Robert E. Lee & Assoc.

Project #: WO#: 10444812

PM: CT1 Due Date: 08/31/18

CLIENT: RELEE

Courier: ☑ Fed Ex ☐ UPS ☐ Speedee ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 4545 9905 1229/1218

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Tin Can ☐ Other: **Temp Blank rec:** ☐ Yes ☑ No

Temp. (TO17 and TO13 samples only) (°C): X **Corrected Temp (°C):** X **Thermom. Used:** ☐ G87A9170600254 ☐ G87A9155100842

Temp should be above freezing to 6°C **Correction Factor:** X **Date & Initials of Person Examining Contents:** 8-24-18 AH

Type of ice Received ☐ Blue ☐ Wet ☑ None

			Comments:
Chain of Custody Present?	☑ Yes	☐ No	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No ☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	7.
Sufficient Volume?	☑ Yes	☐ No	8.
Correct Containers Used?	☑ Yes	☐ No	9.
-Pace Containers Used?	☑ Yes	☐ No	
Containers Intact?	☑ Yes	☐ No	10.
Media: (Air Can) Airbag Filter TDT Passive			11. Individually Certified Cans Y (N) (list which samples)
Is sufficient information available to reconcile samples to the COC?	☑ Yes	☐ No	12.

Samples Received: FFFT, 3 cans Pressure Gauge # 10AIR26

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
OA-1			-4	+5					
IA-1			-4	"					
IA-2			-8	"					
SS-1			-6	"					
SS-2			-7.5	"					

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Sara C. Mays **Date:** 08/24/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

image002.png