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October 2, 2024

Leslie Dixon
327 E. Reservoir Condominium Association, Inc.
325-327 East Reservoir Avenue
Milwaukee, Wisconsin 53233

Subject: Site Investigation Sampling Results
BRRS #02-41-594249

Dear Ms. Dixon:

In accordance with Wisconsin Department of Natural Resources (WDNR) regulation NR 716.14, Terracon Consultants, Inc. (Terracon) is providing the results of environmental samples collected from your property located at 325-327 East Reservoir Avenue, Milwaukee, Wisconsin. The samples were collected between August 27 and September 5, 2024. The sampling activities are part of a site investigation being performed on behalf of 327 E. Reservoir Condominium Association, Inc. Based on historical site investigations, the contaminants of concern for the investigation are metals, volatile organic compounds (VOCs) including the solvent tetrachloroethene (PCE) and its degradation compounds, polycyclic aromatic hydrocarbons (PAHs), and per- and polyfluoroalkyl substances (PFAS).

Sampling Results

On August 27 and August 28, 2024, Terracon collected three groundwater samples from monitoring wells MW-1 through MW-3 and two confirmation soil samples from the locations of previous borings P-2 and P-3. Prior to groundwater sample collection, static water level measurements were recorded. Groundwater samples were collected using low-flow sample methods and were submitted for laboratory analysis of PAHs and PFAS. Soil sample P-2 (2) was collected using a hand auger and submitted for laboratory analysis of select VOCs to confirm the presence of shallow trichloroethene (TCE) above the soil to groundwater pathway residual contaminant level (RCL). Soil sample P-3 (2) was collected using a hand auger and submitted for laboratory analysis of PAHs, total chromium, and total lead to confirm the presence of several shallow RCLs exceedances.

The groundwater elevations are summarized on the attached Table 1, and the analytical results of the groundwater and soil samples are summarized and compared to WDNR standards on the attached Tables 2 through 6. The laboratory reports are also attached.

The PAH compounds benzo(a)pyrene, benzo(b)fluoranthene, and chrysene were detected above enforcement standards (ESs) in the groundwater sample collected from monitoring well MW-1. Benzo(b)fluoranthene and chrysene were detected above their preventative action limits (PALs), and the PFAS compound PFOA was detected above its proposed PAL in the groundwater sample from monitoring well MW-2. In the groundwater sample from

monitoring well MW-3, PFHxS was detected above the proposed ES and PFOA was detected above the proposed PAL.

In soil sample P-2 (2), the analyzed VOCs were not detected above the analytical limit of detection (LOD). In soil sample P-3 (2), chrysene was detected above the soil to groundwater pathway residual contaminant level (RCL); benzo(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and ideno(1,2,3-cd)pyrene were detected above their direct contact non-industrial RCLs; benzo(a)pyrene and total lead were detected above their direct contact industrial RCLs, and total chromium was detected above the statewide background threshold value (BTV) but below the applicable RCLs.

Terracon returned to the site on September 5, 2024, to advance 5 soil borings designated P-3 through P-7 for the purpose of delineating soil impacts. The soil boring locations are depicted on the attached Figure 1. Terracon notes that boring P-3 was repeated immediately adjacent to former soil boring P-3/ monitoring well MW-3. At boring location P-3, soil samples were collected at 0.5, 4, 6, and 10 feet below ground surface (bgs). At boring locations P-4 through P-7, soil samples were collected at 0.5, 2, 4, 6, and 10 feet bgs. The soil samples were submitted for laboratory analysis of PAHs, total chromium, and total lead.

As listed in Table 5, soil samples collected from various depths in borings P-3 through P-7 contained one or more PAHs above an applicable RCL, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and naphthalene. The highest PAH concentrations were detected within 4 feet of the ground surface.

As listed in Table 6, lead was detected in several soil samples at concentrations exceeding the soil to groundwater RCL, and in samples P-3 (0.5), P-3 (2), P-5 (2), P-7 (0.5), and P-7 (6) at concentrations above a direct contact RCL. Chromium was also detected in several samples above the BTV, but well below the applicable RCLs.

We appreciate your assistance with this matter. If you have any questions or concerns, please contact us at (414) 423-0255 or by email at Rachel.Slonac@terracon.com.

Sincerely,
Terracon Consultants, Inc.



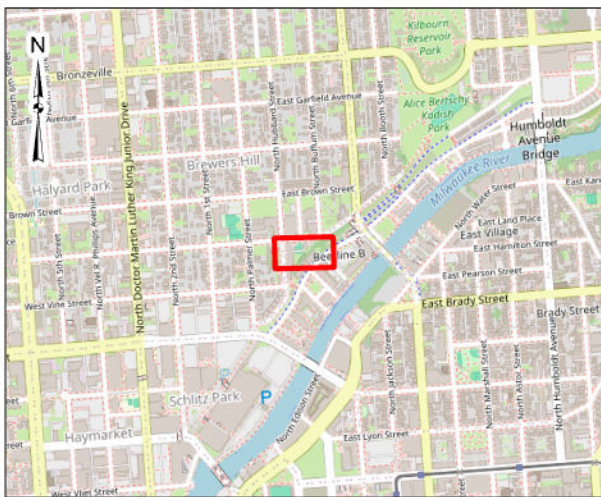
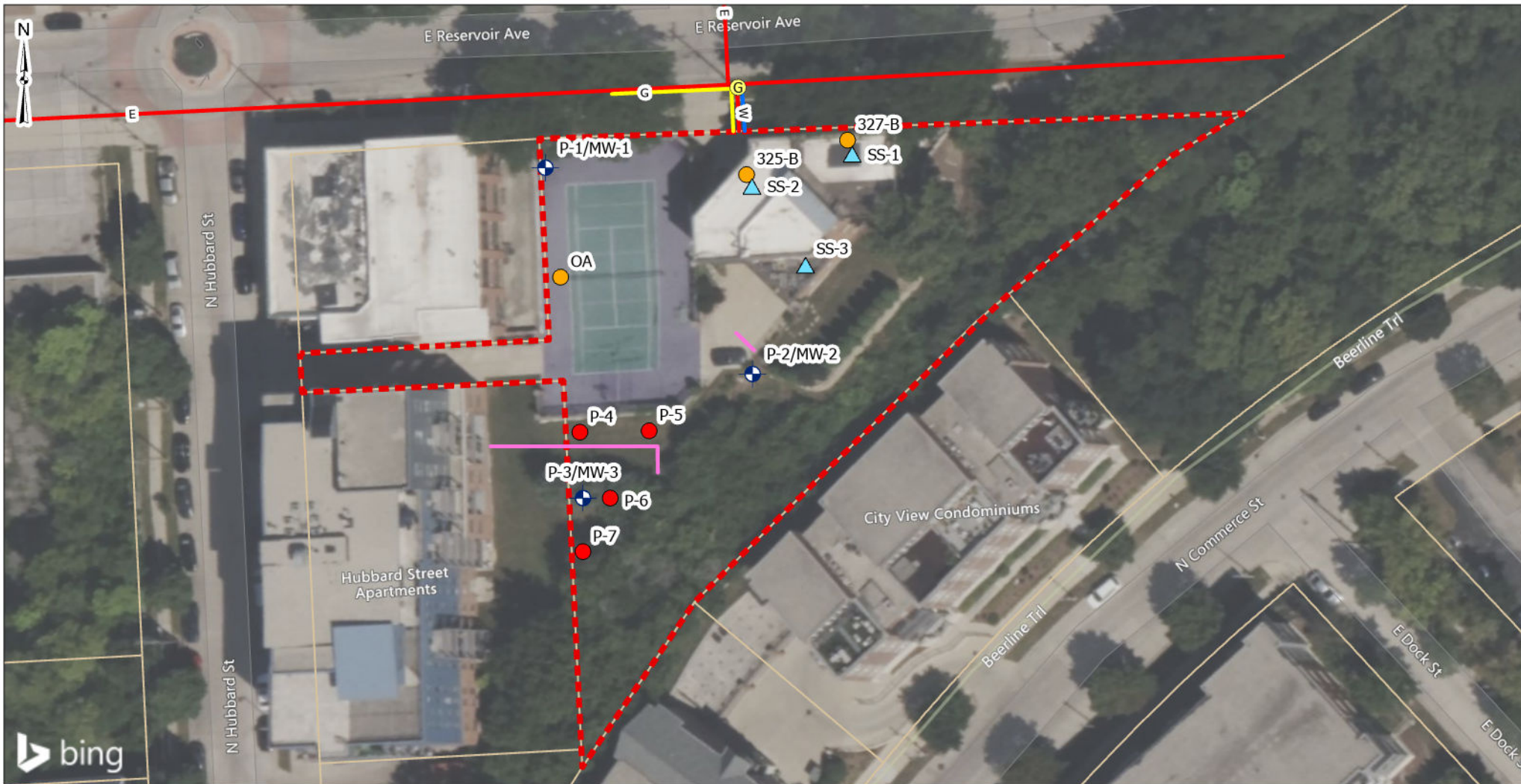
Rachel Slonac
Field Geologist



Brian Kappen, P.G.
Senior Geologist

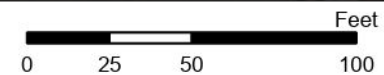
Copy: Linda Michalets, Wisconsin Department of Natural Resources
Sain Loya

Attachments: Figure 1 – Sample Location Map
Table 1 – Groundwater Elevations
Table 2 – Groundwater Analytical Results Summary – Metals and VOCs
Table 3 – Groundwater Analytical Results Summary – PAHs and PFAS
Table 4 – Soil Analytical Results Summary – VOCs
Table 5 – Soil Analytical Results Summary – PAHs
Table 6 – Soil Analytical Results Summary – Metals
Laboratory Analytical Reports



LEGEND

- APPROXIMATE SITE BOUNDARY
- MILWAUKEE COUNTY TAX PARCELS
- SOIL BORING/MONITORING WELL
- ▲ VAPOR MONITORING POINT
- AIR SAMPLE LOCATION
- SOIL BORINGS
- GAS
- WATER
- OVERHEAD/UNDERGROUND ELECTRIC
- UNKNOWN UTILITY
- GAS SHUT-OFF



DATA SOURCES:
ESRI - BING HYBRID BASEMAPS
MILWAUKEE COUNTY

Project No.:
58247140
Date:
Sep 2024
Drawn By:
JLM
Reviewed By:
BJK

Terracon
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PH. 414-423-0255 terracon.com

SITE DIAGRAM

BARREL PLATING SERVICES FMR
325-327 EAST RESERVOIR AVE
MILWAUKEE, MILWAUKEE CO., WI

FIGURE

1

Table 1
Groundwater Elevations

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Measured Location	Date	Depth to Groundwater*	Reference Elevation	Groundwater Elevation	Screened Interval	Ground Surface Elevation
MW-1	7/10/2024	21.10	649.42	628.32	619.20 - 634.20	649.80
	8/27/2024	21.82	649.42	627.60	619.20 - 634.20	649.80
MW-2	7/10/2024	20.37	648.68	628.31	619.15 - 634.15	649.18
	8/27/2024	20.98	648.68	627.70	619.15 - 634.15	649.18
MW-3	7/10/2024	13.60	640.62	627.02	613.92 - 628.92	641.20
	8/27/2024	14.29	640.62	626.33	613.92 - 628.92	641.20

*Depth to ground water is measured from the top of the monitoring well riser pipe.

*Reference elevation was measured from top of well casing (North rim)

*Well surveying performed 7/10/2024 by Terracon

*Benchmark (BM) was a gas shut-off with an approximate elevation of 655 ft.

Table 2
Groundwater Analytical Results Summary - Metals and VOCs
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Date	Metals ^a (mg/L)			VOCs ^b (µg/L)				
		Cadmium ^c	Chromium	Lead ^c	Tetrachloroethene ^c	Trichloroethene ^c	Benzene	Naphthalene ^c	Toluene ^c
NR 140 WAC, PAL ¹		0.5	10	1.5	0.5	0.5	0.5	10	160
NR 140 WAC, ES ²		5	100	15	5	5	5	100	800
MW-1	7/10/2024	<1.3	2.9 J	<6.4	<0.41	<0.32	0.47 J	<1.9	<0.29
MW-2	7/10/2024	<1.3	<2.5	<6.4	<0.41	<0.32	<0.30	<1.9	<0.29
MW-3	7/10/2024	<1.3	<2.5	<6.4	<0.41	<0.32	<0.30	<1.9	<0.29

Notes:
J = Estimated concentration between the laboratory method detection limit and reporting limit
mg/L = Milligrams per Liter
µg/L = Micrograms per Liter
VOC = Volatile Organic Compounds
¹ NR 140, Wisconsin Administrative Code (WAC), Preventative Action Limit (PAL), Register, March 2023
² NR 140, WAC, Enforcement Standard (ES), Register, March 2023
^a Metals analyzed by US EPA method 7470
^b VOCs analyzed by US EPA method 8260
^c Although the compound was not detected above the laboratory method detection limit, results are included in this table for information purposes.

XX.XX	Exceeds NR 140 PAL
XX.XX	Exceeds NR 140 ES
NE	No established standard

Table 3
Groundwater Analytical Results Summary - PAHs and PFAS
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Date	PAHs ^a (µg/L)																		PFAS ^b (ng/L)									
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Ideno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	PFBS	PFHxA	PFBA	PFPeA	PFPeS	PFHpA	PFHxS	PFOS	PFOA	
NR 140 WAC, PAL ¹		NE	NE	600	NE	0.02	0.02	NE	NE	0.02	NE	80	80	NE	NE	NE	10	NE	50	90,000	30,000	2,000	NE	NE	NE	4	2	2	
NR 140 WAC, ES ²		NE	NE	3,000	NE	0.2	0.2	NE	NE	0.2	NE	400	400	NE	NE	NE	100	NE	250	450,000	150,000	10,000	NE	NE	NE	40	20	20	
MW-1	7/10/2024	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9 J	24.3	<1.4	<0.92	<1.3	<1.2	<1.2	<2.6	1.6 J	
	8/27/2024	2.0	0.034 J	1.6	1.4	0.99	1.2	0.52	0.51	1.5	0.12	4.8	2.0	0.45	0.54	0.22	0.30	7.3	4.3	NA	NA	NA	NA	NA	NA	<1.2	NA	1.6 J	
MW-2	7/10/2024	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4	8.1	<0.28	<0.19	<0.26	3.0	<0.24	1.3 J	4.0	
	8/27/2024	2.5	<0.014	0.45	0.041 J	0.018 J	0.020 J	<0.025	<0.024	0.040 J	<0.019	0.56	1.4	<0.017	0.71	0.45	1.1	2.6	0.49	NA	NA	NA	NA	NA	NA	<1.2	NA	4.8 J	
MW-3	7/10/2024	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.2	13.9	8.4	9.3	2.0 J	4.7	61.5	1.8 J	17.7	
	8/27/2024	0.025 J	<0.014	<0.021	0.017 J	<0.014	0.013 J	<0.026	<0.025	<0.014	<0.020	<0.029	<0.026	<0.017	<0.020	<0.015	0.023 J	<0.029	0.030 J	NA	NA	NA	NA	NA	NA	57.9	NA	16.7	

Notes:
J = Estimated concentration between the laboratory method detection limit and reporting limit
NA = Not analyzed
µg/L = Micrograms per Liter
ng/L = Nanograms per Liter
PAH = Polycyclic Aromatic Hydrocarbon
PFAS = Per- and Polyfluoroalkyl Substances
¹ NR 140, Wisconsin Administrative Code (WAC), Preventative Action Limit (PAL), Register, March 2023
² NR 140, WAC, Enforcement Standard (ES), Register, March 2023
^a PAHs analyzed by US EPA method 8270
^b PFAS analyzed by US EPA method 537M. The standards listed for PFAS compounds are preliminary criteria developed by the Wisconsin Department of Health. They are not enforceable at this time

XX.XX	Exceeds NR 140 PAL
XX.XX	Exceeds NR 140 ES
NE	No established standard

Table 4
Soil Analytical Test Results Summary Table - VOCs
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Depth (feet)	Matrix (Fill or Native Soil)	Saturated / Unsaturated	Sample Date	PID (ppmv)	VOCs (µg/kg)																		TCLP (mg/L)		
						Tetrachloroethene ^a	Trichloroethene (TCE)	Benzene	Chlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethane	Ethylbenzene	Methylene Chloride	Naphthalene	Toluene	1,1,1-Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m&p- Xylene	o-Xylene	Vinyl Chloride	TCLP TCE
Direct Contact Industrial RCL ¹						33,000	8,410	7,070	761,000	16,400	376,000	22,200	156,000	1,560,000	22,200	35,400	1,150,000	24,100	818,000	640,000	219,000	182,000	778,000	434,000	2,080	--
Direct Contact Non-Industrial RCL ²						14,500	1,300	1,600	370,000	3,740	376,000	5,060	156,000	1,560,000	5,060	8,020	61,800	5,520	818,000	640,000	219,000	182,000	778,000	434,000	67	--
Soil to Groundwater Pathway RCL ³						4.5	3.6	5.1	--	72	584	242	1.4	1.4	242	785	2.6	658	1,107	70	1,379		3,960		0.069	--
TCLP Regulatory Limit ⁴						--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	
P-1 (2)	2	Fill	Unsaturated	7/2/2024	1	<28.0	<27.0	<17.2	<8.6	<19.8	<22.3	<18.5	<15.4	<15.8	<18.5	<17.2	<20.0	<30.3	<18.2	<18.5	<21.5	<23.2	<30.4	<21.6	<14.6	NA
P-1 (19)	19	Fill	Unsaturated	7/2/2024	2	<31.7	<30.6	<19.5	<9.8	<22.4	<25.3	<20.9	<17.5	<17.9	<20.9	<19.5	<22.7	206 J	<20.6	<20.9	<67.4	<26.3	<34.5	<24.5	<16.5	NA
P-2 (2)	2	Fill	Unsaturated	8/29/2024	<1	<24.5	<23.7	NA	NA	NA	NA	<21.0	<13.5	<13.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.8	NA	
P-2 (3)	3	Fill	Unsaturated	7/1/2024	<1	<23.7	67.2	<14.5	<7.3	<16.7	<18.9	<20.3	<13.4	<13.4	<15.6	<14.5	<17.0	<25.7	<15.4	<15.6	<18.2	<19.7	<25.8	<18.3	<12.3	NA
P-2 (18)	18	Fill	Unsaturated	7/1/2024	<1	<28.3	<27.3	<17.4	<8.7	<20.0	<22.6	<24.2	<15.6	<16.0	<18.7	<17.4	<20.3	133 J	<18.4	<18.7	<21.8	<23.5	<30.8	<21.9	<14.8	NA
P-3 (2)	2	Fill	Unsaturated	7/1/2024	<1	<31.0	<29.9	<19.0	<9.6	<21.9	<24.8	<26.6	<17.1	<17.5	<20.5	<19.0	<22.2	<33.7	<20.2	<20.5	<23.8	<25.8	<33.8	<24.0	<16.2	NA
P-3 (16)	16	Fill	Unsaturated	7/1/2024	<1	<24.5	<23.7	54.4	<7.6	<17.3	<19.6	<21.0	<13.5	<13.8	<16.2	<15.1	<17.6	<26.6	18.6 J	<16.2	<18.9	<20.4	<26.7	<19.0	<12.8	NA

Notes:

Results expressed in micrograms per kilogram (µg/kg)
J = Estimated concentration between the laboratory method detection limit and reporting limit
NA = Not analyzed
PID = Photo-Ionization Detector
ppmv = parts per million by volume
RCL = Residual Contaminant Level
TCLP = Toxicity Characteristic Leaching Procedure, test Method 1311 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846
VOCs = Volatile Organic Compounds

¹ Industrial RCLs for Direct Contact (March 2017) per Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator PUB-RR-890, dated January 2014 (WDNR spreadsheet input parameters updated December 2018).
² Non-Industrial RCLs for Direct Contact (March 2017) per Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator PUB-RR-890, dated January 2014 (WDNR spreadsheet input parameters updated December 2018).
³ Protection of Groundwater RCLs (March 2017) per Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator PUB-RR-890, dated January 2014 (WDNR spreadsheet input parameters updated December 2018).
⁴ TCLP regulatory limits per 40 CFR 268.40
^a Although tetrachloroethene was not detected above the laboratory method detection limit, results are included in this table for information purposes.

XX.XX	Brown and bold = Exceeds Industrial Direct Contact RCL
<u>XX.XX</u>	Underlined and pink = Exceeds Non-Industrial Direct Contact RCL
<i>XX.XX</i>	Italicized and blue = Exceeds Soil to Groundwater Pathway RCL
XX.XX	Red and bold = Exceeds TCLP Regulatory value if established

Table 5
Soil Analytical Results Summary - PAHs
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Depth (feet)	Fill/ Native	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
Direct Contact Industrial RCL ¹				45,200,000		100,000,000	20,800	2,110	21,100	NE	211,000	2,110,000	2,110	30,100,000	30,100,000	21,100	72,700	3,010,000	24,100	NE	22,600,000
Direct Contact Non-Industrial RCL ²				3,590,000		17,900,000	1,140	115	1,150	NE	11,500	115,000	115	2,390,000	2,390,000	1,150	17,600	239,000	5,520	NE	1,790,000
Soil to Groundwater Pathway RCL ³				NE		196,949	NE	470	478	NE	NE	144	NE	88,878	14,830	NE	NE	NE	658	NE	54,546
P-1 (2)	2	Fill	7/2/2024	<2.6	<2.6	<2.5	7.1 J	8.1 J	13.1 J	10.0 J	5.6 J	9.3 J	<2.8	13.5 J	<2.4	<4.2	<3.0	<3.0	3.0 J	6.6 J	10.8 J
P-1 (19)	19	Fill	7/2/2024	996 J	<277	3,910	3,430	4,540	5,130	3,960	2,250	4,590	563 J	12,800	1,700 J	2,730	<321	417 J	1,230 J	10,400	10,500
P-2 (3)	3	Fill	7/1/2024	4.7 J	<2.3	15.4 J	52.1	66.1	77.2	54.1	34.5	61.5	11.4 J	118	3.0 J	39.0	6.9 J	8.9 J	10.0 J	59.4	106
P-2 (18)	18	Fill	7/1/2024	178 J	<25.9	543	859	1,060	1,150	784	530	1,030	125 J	2,310	220	558	36.3 J	53.3 J	142 J	1,740	2,030
P-3 (0.5)	0.5	Fill	9/5/2024	429 J	244 J	1,470 J	4,370	4,270	5,460	2,400	2,580	4,960	676 J	10,400	481 J	1,940	<270	<270	376 J	7,000	9,630
P-3 (2)	2	Fill	7/1/2024	312 J	<98.6	1,100	1,260	1,300	1,590	1,010	919	1,830	126 J	4,260	270 J	728 J	<114	<114	145 J	3,340	3,720
P-3 (2)	2	Fill	8/29/2024	484	150 J	1,560	3,770	3,850	4,620	2,730	2,040	4,250	680	10,400	529	2,160	190 J	174 J	245 J	7,550	7,650
P-3 (4)	4	Fill	9/5/2024	62.6 J	26.5 J	184	450	501	604	265	280	500	67.0 J	1,110	56.8 J	215	58.9 J	76.6 J	88.2 J	763	950
P-3 (6)	6	Fill	9/5/2024	<2.5	<2.4	4.1 J	12.2 J	11.6 J	14.3 J	9.7 J	6.5 J	15.6 J	<2.6	27.1	<2.3	6.1 J	<2.8	<2.8	3.5 J	21.1	22.0
P-3 (10)	10	Fill	9/5/2024	10.2 J	3.1 J	32.9	81.8	91.1	102	68.1	42.8	81.0	10.5 J	202	7.2 J	49.4	12.9 J	18.8 J	46.7	94.2	170
P-3 (16)	16	Fill	7/1/2024	3.4 J	<2.4	12.1 J	26.8	38.7	42.5	30.0	19.5	33.2	5.1 J	61.6	4.0 J	21.8	3.2 J	4.8 J	7.9 J	34.7	51.2
P-4 (0.5)	0.5	Fill	9/5/2024	24.6 J	<19.0	99.6 J	507	573	741	442	302	518	105 J	1,040	24.6 J	340	29.2 J	39.7 J	49.3 J	411	841
P-4 (2)	2	Fill	9/5/2024	61.2 J	<46.2	218 J	856	962	1,050	727	498	779	154 J	1,900	<43.9	552	55.1 J	71.3 J	132 J	876	1,670
P-4 (4)	4	Fill	9/5/2024	<197	<191	815 J	2,900	3,050	3,200	2,340	1,550	2,480	456 J	6,070	<182	1,770	<222	<222	659 J	2,660	6,220
P-4 (6)	6	Fill	9/5/2024	19.4 J	17.0 J	61.0 J	265	297	350	208	130	260	44.9 J	612	15.4 J	159	45.5 J	58.6 J	117	290	529
P-4 (10)	10	Fill	9/5/2024	<10.5	<10.2	37.8 J	158	175	202	126	95.1	159	25.8 J	332	<9.7	97.6	27.9 J	37.7 J	67.7 J	152	298
P-5 (0.5)	0.5	Fill	9/5/2024	80.8 J	<45.4	263 J	1,210	1,300	1,690	933	704	1,220	244 J	2,520	85.9 J	740	55.8 J	74.3 J	162 J	966	1,970
P-5 (2)	2	Fill	9/5/2024	54.4 J	<23.5	130 J	551	606	697	453	282	479	97.2 J	1,240	38.5 J	346	<27.2	29.6 J	64.3 J	611	1,070
P-5 (4)	4	Fill	9/5/2024	7.4 J	5.0 J	19.8 J	126	148	184	122	72.7	123	25.1	271	4.5 J	91.3	10.8 J	14.2 J	21.5	96.3	248
P-5 (6)	6	Fill	9/5/2024	<2.4	<2.3	2.8 J	13.3 J	12.6 J	16.7 J	9.9 J	6.3 J	13.9 J	<2.6	25.9	<2.6	6.5 J	<2.7	<2.7	<1.8	8.8 J	19.5
P-5 (10)	10	Fill	9/5/2024	<99.8	<97.0	451 J	922	813	837	550 J	357 J	666 J	<106	2,500	224 J	392 J	<112	<113	119 J	2,090	2,300
P-6 (0.5)	0.5	Fill	9/5/2024	467 J	<232	1150 J	3,450	3,170	3,400	2,050	1,640 J	3,020	497 J	7,560	451 J	1,560 J	<269	<269	408 J	5,120	7,450
P-6 (2)	2	Fill	9/5/2024	145 J	<47.0	224 J	770	789	835	547	395	630	118 J	1,910	95.4 J	424	<54.5	<54.5	89.4 J	1,200	1,790
P-6 (4)	4	Fill	9/5/2024	6.6 J	4.3 J	23.0	125	170	219	147	77.9	141	27.1	247	5.5 J	109	11.4 J	14.6 J	28.9	103	235
P-6 (6)	6	Fill	9/5/2024	5.9 J	3.0 J	28.9	121	144	168	112	68.6	130	21.8	252	5.8 J	84.0	5.3 J	7.1 J	18.8 J	105	226
P-6 (10)	10	Fill	9/5/2024	3.1 J	<2.6	8.4 J	26.2	29.2	34.2	19.4 J	13.1 J	27.3	4.1 J	54.9	3.5 J	15.8 J	3.6 J	6.0 J	16.7 J	31.1	50.4

Table 5
Soil Analytical Results Summary - PAHs
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Depth (feet)	Fill/ Native	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
Direct Contact Industrial RCL ¹				45,200,000		100,000,000	20,800	2,110	21,100	NE	211,000	2,110,000	2,110	30,100,000	30,100,000	21,100	72,700	3,010,000	24,100	NE	22,600,000
Direct Contact Non-Industrial RCL ²				3,590,000		17,900,000	1,140	115	1,150	NE	11,500	115,000	115	2,390,000	2,390,000	1,150	17,600	239,000	5,520	NE	1,790,000
Soil to Groundwater Pathway RCL ³				NE		196,949	NE	470	478	NE	NE	144	NE	88,878	14,830	NE	NE	NE	658	NE	54,546
P-7 (0.5)	0.5	Fill	9/5/2024	97.3 J	68.3 J	296 J	1,090	<u>1,200</u>	<u>1,380</u>	845	614	<i>1,070</i>	<u>204 J</u>	2,540	106 J	665	57.7 J	63.4 J	100 J	1,400	2,090
P-7 (2)	2	Fill	9/5/2024	<122	<119	582 J	<u>1,480</u>	<u>1,380</u>	<u>1,510</u>	1,020	688 J	<i>1,220</i>	<u>215 J</u>	3,560	<113	785 J	<138	<138	141 J	2,110	3,310
P-7 (4)	4	Fill	9/5/2024	36.6 J	<18.3	84.8 J	415	<u>501</u>	<i>578</i>	355	256	<i>411</i>	79.7 J	894	27.9 J	279	51.9 J	65.4 J	79.3 J	437	821
P-7 (6)	6	Fill	9/5/2024	10.8 J	9.6 J	29.4	125	<u>130</u>	172	85.2	60.9	141	21.8	303	10.7 J	70.2	12.1 J	16.4 J	17.1 J	161	236
P-7 (10)	10	Fill	9/5/2024	14. 9 J	8.2 J	45.4	126	<u>133</u>	147	85.0	62.7	120	18.7 J	315	14.2 J	67.0	12.8 J	16.9 J	41.8	208	253

Notes:

Results expressed in micrograms per kilogram (µg/kg)
J = Estimated concentration between the laboratory method detection limit and reporting limit
ppmv = Parts per million by volume
PAHs = Polycyclic aromatic hydrocarbons, analyzed by US EPA method 8270E by SIM
RCL = Residual contaminant level

¹ Industrial RCLs for Direct Contact per WDNR PUB-RR-890, dated January 2014 (WDNR spreadsheet input parameters updated December 2018).
² Non-Industrial RCLs for Direct Contact per WDNR PUB-RR-890, dated January 2014 (WDNR spreadsheet input parameters updated December 2018).
³ Protection of Groundwater RCLs per WDNR PUB-RR-890, dated January 2014 (WDNR spreadsheet input parameters updated December 2018).

XX.XX	Bold and brown = Exceeds Industrial Direct Contact RCL
<u>XX.XX</u>	Underlined and pink = Exceeds Non-Industrial Direct Contact RCL
<i>XX.XX</i>	Italicized and blue = Exceeds Soil to Groundwater Pathway RCL
NE	No established standard

Table 6
Soil Analytical Results Summary - Metals
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Depth (Feet)	Fill/ Native	Sample Date	Metals (mg/kg)													TCLP (mg/L)		
				Arsenic	Barium	Total Cadmium	Total Chromium ^s	Copper	Total Lead	Nickel	Selenium	Silver	Zinc	Mercury	Total Cyanide	Reactive Cyanide	TCLP Cadmium	TCLP Chromium	TCLP Lead
Direct Contact Industrial RCL ¹				3	100,000	985	100,000	46,700	800	22,500	5,840	5,840	100,000	3.13	--	--	--	--	--
Direct Contact Non-Industrial RCL ²				1	15,300	71	100,000	3,130	400	1,550	391	391	23,500	3.13	--	--	--	--	--
Soil to Groundwater Pathway RCL ³				0.584	164.8	0.752	360,000	91.6	27	13.0612	0.52	0.8491	--	0.208	--	--	--	--	--
Statewide Background Threshold Value ⁴				8	364	1	44	35	52	31	--	--	150	--	--	--	--	--	--
TCLP Regulatory Limit ⁵				--	--	--	--	--	--	--	--	--	--	--	--	--	1	5	5
P-1 (2)	2	Fill	7/2/2024	NA	NA	<0.16	16.4	NA	11.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-1 (19)	19	Fill	7/2/2024	NA	NA	0.26 J	14.4	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0059
P-2 (3)	3	Fill	7/1/2024	NA	NA	0.33 J	17.0	NA	41.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-2 (18)	18	Fill	7/1/2024	NA	NA	0.18 J	22.7	NA	71.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3 (0.5)	0.5	Fill	9/5/2024	NA	NA	NA	868	NA	2,170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3 (2)	2	Fill	7/1/2024	NA	NA	0.35 J	247	NA	622	NA	NA	NA	NA	NA	NA	NA	NA	0.25	0.027
P-3 (2)	2	Fill	8/28/2024	NA	NA	NA	346	NA	892	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3 (4)	4	Fill	9/5/2024	NA	NA	NA	25.6	NA	16.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3 (6)	6	Fill	9/5/2024	NA	NA	NA	20.5	NA	29.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3 (10)	10	Fill	9/5/2024	NA	NA	NA	15.7	NA	29.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3 (16)	16	Fill	7/1/2024	NA	NA	<0.14	13.8	NA	22.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4 (0.5)	0.5	Fill	9/5/2024	NA	NA	NA	23.7	NA	78.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4 (2)	2	Fill	9/5/2025	NA	NA	NA	38.6	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4 (4)	4	Fill	9/5/2024	NA	NA	NA	20.9	NA	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4 (6)	6	Fill	9/5/2024	NA	NA	NA	27.5	NA	86.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4 (10)	10	Fill	9/5/2024	NA	NA	NA	14.4	NA	99.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-5 (0.5)	0.5	Fill	9/5/2024	NA	NA	NA	20.0	NA	74.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-5 (2)	2	Fill	9/5/2025	NA	NA	NA	28.1	NA	860	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-5 (4)	4	Fill	9/5/2024	NA	NA	NA	20.9	NA	56.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-5 (6)	6	Fill	9/5/2024	NA	NA	NA	11.1	NA	24.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-5 (10)	10	Fill	9/5/2024	NA	NA	NA	19.1	NA	31.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6 (0.5)	0.5	Fill	9/5/2024	NA	NA	NA	72.9	NA	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6 (2)	2	Fill	9/5/2025	NA	NA	NA	22.5	NA	103	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6 (4)	4	Fill	9/5/2024	NA	NA	NA	22.1	NA	19.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6 (6)	6	Fill	9/5/2024	NA	NA	NA	15.4	NA	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6 (10)	10	Fill	9/5/2024	NA	NA	NA	13.1	NA	77.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 6
Soil Analytical Results Summary - Metals
Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

Sample ID	Sample Depth (Feet)	Fill/ Native	Sample Date	Metals (mg/kg)													TCLP (mg/L)		
				Arsenic	Barium	Total Cadmium	Total Chromium ⁵	Copper	Total Lead	Nickel	Selenium	Silver	Zinc	Mercury	Total Cyanide	Reactive Cyanide	TCLP Cadmium	TCLP Chromium	TCLP Lead
Direct Contact Industrial RCL ¹				3	100,000	985	100,000	46,700	800	22,500	5,840	5,840	100,000	3.13	--	--	--	--	--
Direct Contact Non-Industrial RCL ²				1	15,300	71	100,000	3,130	400	1,550	391	391	23,500	3.13	--	--	--	--	--
Soil to Groundwater Pathway RCL ³				0.584	164.8	0.752	360,000	91.6	27	13.0612	0.52	0.8491	--	0.208	--	--	--	--	--
Statewide Background Threshold Value ⁴				8	364	1	44	35	52	31	--	--	150	--	--	--	--	--	--
TCLP Regulatory Limit ⁵				--	--	--	--	--	--	--	--	--	--	--	--	--	1	5	5
P-7 (0.5)	0.5	Fill	9/5/2024	NA	NA	NA	57.0	NA	457	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-7 (2)	2	Fill	9/5/2025	NA	NA	NA	45.5	NA	235	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-7 (4)	4	Fill	9/5/2024	NA	NA	NA	44.0	NA	84.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-7 (6)	6	Fill	9/5/2024	NA	NA	NA	75.2	NA	2,380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-7 (10)	10	Fill	9/5/2024	NA	NA	NA	13.8	NA	39.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Results expressed in units of milligrams per kilogram (mg/kg)

J = Estimated concentration between the laboratory method detection limit and reporting limit

S = Matrix spike outside of acceptable control limits

E = Estimated concentration due to matrix interferences

B = Analyte detected in trip blank

NA = Not analyzed or Not Available

RCL = Residual contaminant level

TCLP = Toxicity Characteristic Leaching Procedure, test Method 1311 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846

¹ Industrial RCLs for Direct Contact per WDNR PUB-RR-890, WDNR spreadsheet input parameters updated December 2018.

² Non-Industrial RCLs for Direct Contact per WDNR PUB-RR-890, WDNR spreadsheet input parameters updated December 2018.

³ Protection of Groundwater RCLs per WDNR PUB-RR-890, WDNR spreadsheet input parameters updated December 2018.

⁴ Wisconsin Department of Natural Resources Statewide Background Threshold Value (BTV), July 2015

⁵ RCLs are for chromium (III) and BTV is for total chromium

XX.XX	Bold and brown = Exceeds Industrial Direct Contact RCL and Background Threshold Value, if established
<u>XX.XX</u>	Underlined and pink = Exceeds Non-Industrial Direct Contact RCL and Background Threshold Value, if established
<i>XX.XX</i>	Italicized and blue = Exceeds Soil to Groundwater Pathway RCL and Background Threshold Value, if established
XX.XX	Bold only = Exceeds BTV
XX.XX	Bold and red = Exceeds TCLP regulatory value, if established



September 03, 2024

Blaine Schroyer
Terracon, Inc. - Franklin
4900 S Pennsylvania Ave Ste100
Cudahy, WI 53110

RE: Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

Dear Blaine Schroyer:

Enclosed are the analytical results for sample(s) received by the laboratory on August 29, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

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

Sincerely,

A handwritten signature in black ink that reads "Dan Milewsky".

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-21-8

Virginia VELAP Certification ID: 11873

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-21-00008

Federal Fish & Wildlife Permit #: 51774A

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SAMPLE SUMMARY

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40283309001	P-2 (2')	Solid	08/27/24 12:31	08/29/24 09:00
40283309002	P-3 (2')	Solid	08/28/24 15:23	08/29/24 09:00
40283309003	MEOH BLANK	Solid	08/27/24 00:00	08/29/24 09:00

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SAMPLE ANALYTE COUNT

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40283309001	P-2 (2')	EPA 8260	ALD	9	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40283309002	P-3 (2')	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	NMK	1	PASI-G
40283309003	MEOH BLANK	EPA 8260	ALD	9	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283309001	P-2 (2')					
ASTM D2974-87	Percent Moisture	11.7	%	0.10	08/29/24 17:15	
40283309002	P-3 (2')					
EPA 6010D	Chromium	346	mg/kg	22.7	09/03/24 14:17	P6,R1
EPA 6010D	Lead	892	mg/kg	45.3	09/03/24 14:17	P6,R1
EPA 8270E by SIM	Acenaphthene	484	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Acenaphthylene	150J	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Anthracene	1560	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Benzo(a)anthracene	3770	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Benzo(a)pyrene	3850	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Benzo(b)fluoranthene	4620	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Benzo(g,h,i)perylene	2730	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Benzo(k)fluoranthene	2040	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Chrysene	4250	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Dibenz(a,h)anthracene	680	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Fluoranthene	10400	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Fluorene	529	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	2160	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	1-Methylnaphthalene	190J	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	2-Methylnaphthalene	174J	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Naphthalene	245J	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Phenanthrene	7550	ug/kg	379	09/03/24 12:17	
EPA 8270E by SIM	Pyrene	7650	ug/kg	379	09/03/24 12:17	
ASTM D2974-87	Percent Moisture	11.8	%	0.10	08/29/24 17:15	

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

Method: EPA 6010D
Description: 6010D MET ICP
Client: Terracon, Inc. - Milwaukee
Date: September 03, 2024

General Information:

1 sample was analyzed for EPA 6010D by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 483256

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40283309002

R1: RPD value was outside control limits.

- MS (Lab ID: 2766755)
 - Chromium
 - Lead
- MSD (Lab ID: 2766756)
 - Chromium
 - Lead

Additional Comments:

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

Method: EPA 8270E by SIM
Description: 8270E MSSV PAH by SIM
Client: Terracon, Inc. - Milwaukee
Date: September 03, 2024

General Information:

1 sample was analyzed for EPA 8270E by SIM by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

Method: EPA 8260
Description: 8260 MSV Med Level Normal List
Client: Terracon, Inc. - Milwaukee
Date: September 03, 2024

General Information:

2 samples were analyzed for EPA 8260 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 483310

1q: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from the analysis of the parent sample and MS that demonstrated similar interference).

- MSD (Lab ID: 2767059)
 - 1,2-Dichlorobenzene-d4 (S)
 - 4-Bromofluorobenzene (S)

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Method: EPA 8260

Description: 8260 MSV Med Level Normal List

Client: Terracon, Inc. - Milwaukee

Date: September 03, 2024

Analyte Comments:

QC Batch: 483310

2q: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from the analysis of the parent sample and MSD that demonstrated similar interference).

- MS (Lab ID: 2767058)
 - 1,2-Dichlorobenzene-d4 (S)
 - 4-Bromofluorobenzene (S)
 - Toluene-d8 (S)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Sample: P-2 (2') Lab ID: 40283309001 Collected: 08/27/24 12:31 Received: 08/29/24 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
1,1-Dichloroethene	<21.0	ug/kg	63.2	21.0	1	08/30/24 08:00	08/30/24 15:17	75-35-4	
cis-1,2-Dichloroethene	<13.5	ug/kg	63.2	13.5	1	08/30/24 08:00	08/30/24 15:17	156-59-2	
trans-1,2-Dichloroethene	<13.8	ug/kg	63.2	13.8	1	08/30/24 08:00	08/30/24 15:17	156-60-5	
Tetrachloroethene	<24.5	ug/kg	63.2	24.5	1	08/30/24 08:00	08/30/24 15:17	127-18-4	
Trichloroethene	<23.7	ug/kg	63.2	23.7	1	08/30/24 08:00	08/30/24 15:17	79-01-6	
Vinyl chloride	<12.8	ug/kg	63.2	12.8	1	08/30/24 08:00	08/30/24 15:17	75-01-4	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	137	%	67-144		1	08/30/24 08:00	08/30/24 15:17	2199-69-1	
4-Bromofluorobenzene (S)	116	%	72-142		1	08/30/24 08:00	08/30/24 15:17	460-00-4	
Toluene-d8 (S)	110	%	70-139		1	08/30/24 08:00	08/30/24 15:17	2037-26-5	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	11.7	%	0.10	0.10	1		08/29/24 17:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Sample: P-3 (2') Lab ID: 40283309002 Collected: 08/28/24 15:23 Received: 08/29/24 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	346	mg/kg	22.7	6.3	20	08/30/24 05:44	09/03/24 14:17	7440-47-3	P6,R1
Lead	892	mg/kg	45.3	13.6	20	08/30/24 05:44	09/03/24 14:17	7439-92-1	P6,R1
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	484	ug/kg	379	49.2	20	09/03/24 08:49	09/03/24 12:17	83-32-9	
Acenaphthylene	150J	ug/kg	379	47.8	20	09/03/24 08:49	09/03/24 12:17	208-96-8	
Anthracene	1560	ug/kg	379	47.0	20	09/03/24 08:49	09/03/24 12:17	120-12-7	
Benzo(a)anthracene	3770	ug/kg	379	49.0	20	09/03/24 08:49	09/03/24 12:17	56-55-3	
Benzo(a)pyrene	3850	ug/kg	379	43.1	20	09/03/24 08:49	09/03/24 12:17	50-32-8	
Benzo(b)fluoranthene	4620	ug/kg	379	52.6	20	09/03/24 08:49	09/03/24 12:17	205-99-2	
Benzo(g,h,i)perylene	2730	ug/kg	379	66.5	20	09/03/24 08:49	09/03/24 12:17	191-24-2	
Benzo(k)fluoranthene	2040	ug/kg	379	48.4	20	09/03/24 08:49	09/03/24 12:17	207-08-9	
Chrysene	4250	ug/kg	379	71.5	20	09/03/24 08:49	09/03/24 12:17	218-01-9	
Dibenz(a,h)anthracene	680	ug/kg	379	52.5	20	09/03/24 08:49	09/03/24 12:17	53-70-3	
Fluoranthene	10400	ug/kg	379	44.9	20	09/03/24 08:49	09/03/24 12:17	206-44-0	
Fluorene	529	ug/kg	379	45.4	20	09/03/24 08:49	09/03/24 12:17	86-73-7	
Indeno(1,2,3-cd)pyrene	2160	ug/kg	379	79.0	20	09/03/24 08:49	09/03/24 12:17	193-39-5	
1-Methylnaphthalene	190J	ug/kg	379	55.4	20	09/03/24 08:49	09/03/24 12:17	90-12-0	
2-Methylnaphthalene	174J	ug/kg	379	55.4	20	09/03/24 08:49	09/03/24 12:17	91-57-6	
Naphthalene	245J	ug/kg	379	36.9	20	09/03/24 08:49	09/03/24 12:17	91-20-3	
Phenanthrene	7550	ug/kg	379	43.4	20	09/03/24 08:49	09/03/24 12:17	85-01-8	
Pyrene	7650	ug/kg	379	55.7	20	09/03/24 08:49	09/03/24 12:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	89	%	39-120		20	09/03/24 08:49	09/03/24 12:17	321-60-8	
Terphenyl-d14 (S)	88	%	36-120		20	09/03/24 08:49	09/03/24 12:17	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	11.8	%	0.10	0.10	1		08/29/24 17:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Sample: MEOH BLANK Lab ID: 40283309003 Collected: 08/27/24 00:00 Received: 08/29/24 09:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
1,1-Dichloroethene	<16.6	ug/kg	50.0	16.6	1	08/30/24 08:00	08/30/24 14:57	75-35-4	
cis-1,2-Dichloroethene	<10.7	ug/kg	50.0	10.7	1	08/30/24 08:00	08/30/24 14:57	156-59-2	
trans-1,2-Dichloroethene	<10.9	ug/kg	50.0	10.9	1	08/30/24 08:00	08/30/24 14:57	156-60-5	
Tetrachloroethene	<19.4	ug/kg	50.0	19.4	1	08/30/24 08:00	08/30/24 14:57	127-18-4	
Trichloroethene	<18.7	ug/kg	50.0	18.7	1	08/30/24 08:00	08/30/24 14:57	79-01-6	
Vinyl chloride	<10.1	ug/kg	50.0	10.1	1	08/30/24 08:00	08/30/24 14:57	75-01-4	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	119	%	67-144		1	08/30/24 08:00	08/30/24 14:57	2199-69-1	
4-Bromofluorobenzene (S)	113	%	72-142		1	08/30/24 08:00	08/30/24 14:57	460-00-4	
Toluene-d8 (S)	96	%	70-139		1	08/30/24 08:00	08/30/24 14:57	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

QC Batch:	483256	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050B	Analysis Description:	6010D MET
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283309002

METHOD BLANK: 2766753 Matrix: Solid

Associated Lab Samples: 40283309002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	mg/kg	<0.28	1.0	09/03/24 14:00	
Lead	mg/kg	<0.60	2.0	09/03/24 14:00	

LABORATORY CONTROL SAMPLE: 2766754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	mg/kg	25	25.4	102	80-120	
Lead	mg/kg	25	26.4	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2766755 2766756

Parameter	Units	40283309002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/kg	346	28.2	28.3	894	215	1940	-461	75-125	122	20	P6,R1
Lead	mg/kg	892	28.2	28.3	6620	534	20300	-1260	75-125	170	20	P6,R1

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

QC Batch: 483310 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40283309001, 40283309003

METHOD BLANK: 2767056 Matrix: Solid

Associated Lab Samples: 40283309001, 40283309003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/kg	<16.6	50.0	08/30/24 10:49	
cis-1,2-Dichloroethene	ug/kg	<10.7	50.0	08/30/24 10:49	
Tetrachloroethene	ug/kg	<19.4	50.0	08/30/24 10:49	
trans-1,2-Dichloroethene	ug/kg	<10.9	50.0	08/30/24 10:49	
Trichloroethene	ug/kg	<18.7	50.0	08/30/24 10:49	
Vinyl chloride	ug/kg	<10.1	50.0	08/30/24 10:49	
1,2-Dichlorobenzene-d4 (S)	%	114	67-144	08/30/24 10:49	
4-Bromofluorobenzene (S)	%	106	72-142	08/30/24 10:49	
Toluene-d8 (S)	%	94	70-139	08/30/24 10:49	

LABORATORY CONTROL SAMPLE: 2767057

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/kg	2500	2460	98	77-122	
cis-1,2-Dichloroethene	ug/kg	2500	2520	101	70-130	
Tetrachloroethene	ug/kg	2500	2410	96	70-130	
trans-1,2-Dichloroethene	ug/kg	2500	2510	100	70-130	
Trichloroethene	ug/kg	2500	2660	106	70-130	
Vinyl chloride	ug/kg	2500	2310	92	59-120	
1,2-Dichlorobenzene-d4 (S)	%			113	67-144	
4-Bromofluorobenzene (S)	%			114	72-142	
Toluene-d8 (S)	%			96	70-139	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767058 2767059

Parameter	Units	40283284001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Conc.	% Rec	% Rec	% Rec	% Rec				
1,1-Dichloroethene	ug/kg	<30.7	1850	1850	1850	1380	1490	75	80	52-122	7	20			
cis-1,2-Dichloroethene	ug/kg	<19.8	1850	1850	1850	1820	1760	98	95	70-130	4	20			
Tetrachloroethene	ug/kg	<35.9	1850	1850	1850	1650	1640	89	89	70-130	1	20			
trans-1,2-Dichloroethene	ug/kg	<20.2	1850	1850	1850	1750	1740	94	94	70-130	1	20			
Trichloroethene	ug/kg	<34.6	1850	1850	1850	1730	1770	93	96	70-130	3	20			
Vinyl chloride	ug/kg	<18.7	1850	1850	1850	1620	1470	87	79	29-120	10	20			
1,2-Dichlorobenzene-d4 (S)	%							159	161	67-144					1q,2q
4-Bromofluorobenzene (S)	%							154	159	72-142					1q,2q
Toluene-d8 (S)	%							145	136	70-139					2q

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

QC Batch:	483355	Analysis Method:	EPA 8270E by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270E/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283309002

METHOD BLANK: 2767532 Matrix: Solid

Associated Lab Samples: 40283309002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	09/03/24 10:45	
2-Methylnaphthalene	ug/kg	<2.4	16.7	09/03/24 10:45	
Acenaphthene	ug/kg	<2.2	16.7	09/03/24 10:45	
Acenaphthylene	ug/kg	<2.1	16.7	09/03/24 10:45	
Anthracene	ug/kg	<2.1	16.7	09/03/24 10:45	
Benzo(a)anthracene	ug/kg	<2.2	16.7	09/03/24 10:45	
Benzo(a)pyrene	ug/kg	<1.9	16.7	09/03/24 10:45	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	09/03/24 10:45	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	09/03/24 10:45	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	09/03/24 10:45	
Chrysene	ug/kg	<3.1	16.7	09/03/24 10:45	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	09/03/24 10:45	
Fluoranthene	ug/kg	<2.0	16.7	09/03/24 10:45	
Fluorene	ug/kg	<2.0	16.7	09/03/24 10:45	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	09/03/24 10:45	
Naphthalene	ug/kg	<1.6	16.7	09/03/24 10:45	
Phenanthrene	ug/kg	<1.9	16.7	09/03/24 10:45	
Pyrene	ug/kg	<2.5	16.7	09/03/24 10:45	
2-Fluorobiphenyl (S)	%	90	39-120	09/03/24 10:45	
Terphenyl-d14 (S)	%	92	36-120	09/03/24 10:45	

LABORATORY CONTROL SAMPLE: 2767533

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	297	89	62-120	
2-Methylnaphthalene	ug/kg	333	300	90	61-120	
Acenaphthene	ug/kg	333	298	89	66-120	
Acenaphthylene	ug/kg	333	303	91	63-120	
Anthracene	ug/kg	333	311	93	72-120	
Benzo(a)anthracene	ug/kg	333	279	84	64-120	
Benzo(a)pyrene	ug/kg	333	331	99	76-120	
Benzo(b)fluoranthene	ug/kg	333	316	95	62-120	
Benzo(g,h,i)perylene	ug/kg	333	372	112	73-120	
Benzo(k)fluoranthene	ug/kg	333	328	98	69-120	
Chrysene	ug/kg	333	316	95	70-120	
Dibenz(a,h)anthracene	ug/kg	333	354	106	72-120	
Fluoranthene	ug/kg	333	327	98	71-120	
Fluorene	ug/kg	333	308	93	68-120	
Indeno(1,2,3-cd)pyrene	ug/kg	333	349	105	72-120	

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

LABORATORY CONTROL SAMPLE: 2767533

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	333	270	81	60-120	
Phenanthrene	ug/kg	333	311	93	66-120	
Pyrene	ug/kg	333	286	86	65-120	
2-Fluorobiphenyl (S)	%			92	39-120	
Terphenyl-d14 (S)	%			91	36-120	

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



QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

QC Batch:	483247	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples: 40283309001, 40283309002			

SAMPLE DUPLICATE: 2766704

Parameter	Units	40283264012 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.3	20.6	1	10	

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



QUALIFIERS

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283309

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 - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

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 - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

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.

ANALYTE QUALIFIERS

- | | |
|----|--|
| 1q | Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from the analysis of the parent sample and MS that demonstrated similar interference). |
| 2q | Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from the analysis of the parent sample and MSD that demonstrated similar interference). |
| P6 | Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level. |
| R1 | RPD value was outside control limits. |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283309

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40283309002	P-3 (2')	EPA 3050B	483256	EPA 6010D	483446
40283309002	P-3 (2')	EPA 3546	483355	EPA 8270E by SIM	483416
40283309001	P-2 (2')	EPA 5035/5030B	483310	EPA 8260	483315
40283309003	MEOH BLANK	EPA 5035/5030B	483310	EPA 8260	483315
40283309001	P-2 (2')	ASTM D2974-87	483247		
40283309002	P-3 (2')	ASTM D2974-87	483247		

REPORT OF LABORATORY ANALYSIS

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Client Name: Terracon

Sample Preservation Receipt Form

Project # 40283309

All containers needing preservation have been checked and noted below:

☐ Yes ☐ No ☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2					
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Sample Condition Upon Receipt Form (SCUR)

Client Name: Terracon

Project #:

WO#: 40283309

Courier: ☒ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Walco
☐ Client ☐ Pace Other: _____



Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used SR - 129 Type of Ice Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.5 / Corr: 0.5

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 08/29/24 / Initials: SKU

Labeled By Initials: GF

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☒ Yes ☐ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: <u>Pace Green Bag</u> , Pace IR, Non-Pace		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>SKU 08/29/24</u> <u>WKS</u>		
Trip Blank Present:	☒ Yes ☐ No ☐ N/A	13.
Trip Blank Custody Seals Present	☒ Yes ☐ No ☐ N/A	
Pace Trip Blank Lot # (if purchased): <u>B40830 IVB</u>		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log in

Page 2 of 2



September 16, 2024

Blaine Schroyer
Terracon, Inc. - Franklin
4900 S Pennsylvania Ave Ste100
Cudahy, WI 53110

RE: Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

Dear Blaine Schroyer:

Enclosed are the analytical results for sample(s) received by the laboratory on August 29, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay
- Pace Analytical Services - Minneapolis

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

Sincerely,

A handwritten signature in black ink that reads "Dan Milewsky".

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
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
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
GMP+ Certification #: GMP050884
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064
Missouri Certification #: 10100
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 (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary 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
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150

South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40283307001	MW-1	Water	08/27/24 11:21	08/29/24 09:00
40283307002	MW-2	Water	08/27/24 14:34	08/29/24 09:00
40283307003	MW-3	Water	08/28/24 13:07	08/29/24 09:00
40283307004	FRB-1	Water	08/28/24 13:32	08/29/24 09:00

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SAMPLE ANALYTE COUNT

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40283307001	MW-1	EPA 8270E by SIM	TPO	20	PASI-G
		ENV-SOP-MIN4-0178	MJL	27	PASI-M
40283307002	MW-2	EPA 8270E by SIM	TPO	20	PASI-G
		ENV-SOP-MIN4-0178	MJL	27	PASI-M
40283307003	MW-3	EPA 8270E by SIM	TPO	20	PASI-G
		ENV-SOP-MIN4-0178	MJL	27	PASI-M
40283307004	FRB-1	ENV-SOP-MIN4-0178	MJL	27	PASI-M

PASI-G = Pace Analytical Services - Green Bay

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283307001	MW-1					
EPA 8270E by SIM	Acenaphthene	2.0	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Acenaphthylene	0.034J	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Anthracene	1.6	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Benzo(a)anthracene	1.4	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Benzo(a)pyrene	0.99	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Benzo(b)fluoranthene	1.2	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Benzo(g,h,i)perylene	0.52	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Benzo(k)fluoranthene	0.51	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Chrysene	1.5	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Dibenz(a,h)anthracene	0.12	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Fluoranthene	4.8	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Fluorene	2.0	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	0.45	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	1-Methylnaphthalene	0.54	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	2-Methylnaphthalene	0.22	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Naphthalene	0.30	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Phenanthrene	7.3	ug/L	0.051	09/03/24 16:06	
EPA 8270E by SIM	Pyrene	4.3	ug/L	0.051	09/03/24 16:06	
ENV-SOP-MIN4-0178	PFOA	1.6J	ng/L	10.4	09/11/24 16:47	
40283307002	MW-2					
EPA 8270E by SIM	Acenaphthene	2.5	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Anthracene	0.45	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Benzo(a)anthracene	0.041J	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Benzo(a)pyrene	0.018J	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Benzo(b)fluoranthene	0.020J	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Chrysene	0.040J	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Fluoranthene	0.56	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Fluorene	1.4	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	1-Methylnaphthalene	0.71	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	2-Methylnaphthalene	0.45	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Naphthalene	1.1	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Phenanthrene	2.6	ug/L	0.054	09/03/24 16:25	
EPA 8270E by SIM	Pyrene	0.49	ug/L	0.054	09/03/24 16:25	
ENV-SOP-MIN4-0178	PFOA	4.8J	ng/L	10.4	09/11/24 16:54	
40283307003	MW-3					
EPA 8270E by SIM	Acenaphthene	0.025J	ug/L	0.056	09/03/24 16:43	
EPA 8270E by SIM	Benzo(a)anthracene	0.017J	ug/L	0.056	09/03/24 16:43	
EPA 8270E by SIM	Benzo(b)fluoranthene	0.013J	ug/L	0.056	09/03/24 16:43	
EPA 8270E by SIM	Naphthalene	0.023J	ug/L	0.056	09/03/24 16:43	
EPA 8270E by SIM	Pyrene	0.030J	ug/L	0.056	09/03/24 16:43	
ENV-SOP-MIN4-0178	PFHxS	57.9	ng/L	9.4	09/11/24 17:02	
ENV-SOP-MIN4-0178	PFOA	16.7	ng/L	10.3	09/11/24 17:02	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

Method: EPA 8270E by SIM
Description: 8270E MSSV PAH
Client: Terracon, Inc. - Milwaukee
Date: September 16, 2024

General Information:

3 samples were analyzed for EPA 8270E by SIM by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 483271

1q: This sample was sub-sampled from an AG1 for a 100 mL extraction.

- MS (Lab ID: 2766799)
 - Naphthalene
- MSD (Lab ID: 2766800)
 - Naphthalene

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Method: ENV-SOP-MIN4-0178

Description: WI ID NPW

Client: Terracon, Inc. - Milwaukee

Date: September 16, 2024

General Information:

4 samples were analyzed for ENV-SOP-MIN4-0178 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with ENV-SOP-MIN4-0178 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 966439

S0: Surrogate recovery outside laboratory control limits.

- BLANK (Lab ID: 5050336)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d7-NMeFOSE (S)
 - d9-NEtFOSE (S)
- LCS (Lab ID: 5050337)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d9-NEtFOSE (S)
- LCSD (Lab ID: 5050338)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
 - d7-NMeFOSE (S)
 - d9-NEtFOSE (S)
- MW-1 (Lab ID: 40283307001)
 - 13C2PFHxDA (S)
 - d3-NMeFOSA (S)
 - d5-NEtFOSA (S)
- MW-3 (Lab ID: 40283307003)
 - d3-NMeFOSA (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

Method: ENV-SOP-MIN4-0178
Description: WI ID NPW
Client: Terracon, Inc. - Milwaukee
Date: September 16, 2024

QC Batch: 966439

S0: Surrogate recovery outside laboratory control limits.

- d5-NEtFOSA (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

- MW-1 (Lab ID: 40283307001)
 - 13C26:2FTS (S)
 - 13C28:2FTS (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: MW-1 Lab ID: 40283307001 Collected: 08/27/24 11:21 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3510									
Pace Analytical Services - Green Bay									
Acenaphthene	2.0	ug/L	0.051	0.014	1	08/30/24 08:47	09/03/24 16:06	83-32-9	
Acenaphthylene	0.034J	ug/L	0.051	0.013	1	08/30/24 08:47	09/03/24 16:06	208-96-8	
Anthracene	1.6	ug/L	0.051	0.019	1	08/30/24 08:47	09/03/24 16:06	120-12-7	
Benzo(a)anthracene	1.4	ug/L	0.051	0.014	1	08/30/24 08:47	09/03/24 16:06	56-55-3	
Benzo(a)pyrene	0.99	ug/L	0.051	0.013	1	08/30/24 08:47	09/03/24 16:06	50-32-8	
Benzo(b)fluoranthene	1.2	ug/L	0.051	0.0093	1	08/30/24 08:47	09/03/24 16:06	205-99-2	
Benzo(g,h,i)perylene	0.52	ug/L	0.051	0.024	1	08/30/24 08:47	09/03/24 16:06	191-24-2	
Benzo(k)fluoranthene	0.51	ug/L	0.051	0.023	1	08/30/24 08:47	09/03/24 16:06	207-08-9	
Chrysene	1.5	ug/L	0.051	0.013	1	08/30/24 08:47	09/03/24 16:06	218-01-9	
Dibenz(a,h)anthracene	0.12	ug/L	0.051	0.018	1	08/30/24 08:47	09/03/24 16:06	53-70-3	
Fluoranthene	4.8	ug/L	0.051	0.027	1	08/30/24 08:47	09/03/24 16:06	206-44-0	
Fluorene	2.0	ug/L	0.051	0.024	1	08/30/24 08:47	09/03/24 16:06	86-73-7	
Indeno(1,2,3-cd)pyrene	0.45	ug/L	0.051	0.016	1	08/30/24 08:47	09/03/24 16:06	193-39-5	
1-Methylnaphthalene	0.54	ug/L	0.051	0.018	1	08/30/24 08:47	09/03/24 16:06	90-12-0	
2-Methylnaphthalene	0.22	ug/L	0.051	0.014	1	08/30/24 08:47	09/03/24 16:06	91-57-6	
Naphthalene	0.30	ug/L	0.051	0.020	1	08/30/24 08:47	09/03/24 16:06	91-20-3	
Phenanthrene	7.3	ug/L	0.051	0.026	1	08/30/24 08:47	09/03/24 16:06	85-01-8	
Pyrene	4.3	ug/L	0.051	0.023	1	08/30/24 08:47	09/03/24 16:06	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76	%	38-120		1	08/30/24 08:47	09/03/24 16:06	321-60-8	
Terphenyl-d14 (S)	90	%	47-121		1	08/30/24 08:47	09/03/24 16:06	1718-51-0	

WI ID NPW Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Pace Analytical Services - Minneapolis

PFHxS	<1.2	ng/L	9.4	1.2	1	09/09/24 14:43	09/11/24 16:47	355-46-4	
PFOA	1.6J	ng/L	10.4	1.4	1	09/09/24 14:43	09/11/24 16:47	335-67-1	
Surrogates									
13C4-PFBA (S)	47	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C5-PFPeA (S)	43	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C3-PFBS (S)	54	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C24:2FTS (S)	132	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C3HFPO-DA (S)	39	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C4-PFHpA (S)	61	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C3-PFHxS (S)	63	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C26:2FTS (S)	177	%	25-150		1	09/09/24 14:43	09/11/24 16:47		S3
13C8-PFOA (S)	60	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C8-PFOS (S)	70	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C9-PFNA (S)	67	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C6-PFDA (S)	77	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C28:2FTS (S)	212	%	25-150		1	09/09/24 14:43	09/11/24 16:47		S3
d3-MeFOSAA (S)	90	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C7-PFUDa (S)	79	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C8-PFOSA (S)	55	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
d5-EtFOSAA (S)	86	%	25-150		1	09/09/24 14:43	09/11/24 16:47		
13C2-PFDoA (S)	84	%	25-150		1	09/09/24 14:43	09/11/24 16:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: MW-1 Lab ID: 40283307001 Collected: 08/27/24 11:21 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Pace Analytical Services - Minneapolis									
Surrogates									
d3-NMeFOSA (S)	3	%.	10-150		1	09/09/24 14:43	09/11/24 16:47		S0
d7-NMeFOSE (S)	33	%.	10-150		1	09/09/24 14:43	09/11/24 16:47		
13C2-PFTA (S)	66	%.	25-150		1	09/09/24 14:43	09/11/24 16:47		
d9-NEtFOSE (S)	21	%.	10-150		1	09/09/24 14:43	09/11/24 16:47		
d5-NEtFOSA (S)	3	%.	10-150		1	09/09/24 14:43	09/11/24 16:47		S0
13C2PFHxDA (S)	23	%.	25-150		1	09/09/24 14:43	09/11/24 16:47		S0
13C5-PFHxA (S)	65	%.	25-150		1	09/09/24 14:43	09/11/24 16:47		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: MW-2 Lab ID: 40283307002 Collected: 08/27/24 14:34 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3510									
Pace Analytical Services - Green Bay									
Acenaphthene	2.5	ug/L	0.054	0.015	1	08/30/24 08:47	09/03/24 16:25	83-32-9	
Acenaphthylene	<0.014	ug/L	0.054	0.014	1	08/30/24 08:47	09/03/24 16:25	208-96-8	
Anthracene	0.45	ug/L	0.054	0.020	1	08/30/24 08:47	09/03/24 16:25	120-12-7	
Benzo(a)anthracene	0.041J	ug/L	0.054	0.015	1	08/30/24 08:47	09/03/24 16:25	56-55-3	
Benzo(a)pyrene	0.018J	ug/L	0.054	0.014	1	08/30/24 08:47	09/03/24 16:25	50-32-8	
Benzo(b)fluoranthene	0.020J	ug/L	0.054	0.0098	1	08/30/24 08:47	09/03/24 16:25	205-99-2	
Benzo(g,h,i)perylene	<0.025	ug/L	0.054	0.025	1	08/30/24 08:47	09/03/24 16:25	191-24-2	
Benzo(k)fluoranthene	<0.024	ug/L	0.054	0.024	1	08/30/24 08:47	09/03/24 16:25	207-08-9	
Chrysene	0.040J	ug/L	0.054	0.014	1	08/30/24 08:47	09/03/24 16:25	218-01-9	
Dibenz(a,h)anthracene	<0.019	ug/L	0.054	0.019	1	08/30/24 08:47	09/03/24 16:25	53-70-3	
Fluoranthene	0.56	ug/L	0.054	0.028	1	08/30/24 08:47	09/03/24 16:25	206-44-0	
Fluorene	1.4	ug/L	0.054	0.025	1	08/30/24 08:47	09/03/24 16:25	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.017	ug/L	0.054	0.017	1	08/30/24 08:47	09/03/24 16:25	193-39-5	
1-Methylnaphthalene	0.71	ug/L	0.054	0.019	1	08/30/24 08:47	09/03/24 16:25	90-12-0	
2-Methylnaphthalene	0.45	ug/L	0.054	0.015	1	08/30/24 08:47	09/03/24 16:25	91-57-6	
Naphthalene	1.1	ug/L	0.054	0.021	1	08/30/24 08:47	09/03/24 16:25	91-20-3	
Phenanthrene	2.6	ug/L	0.054	0.027	1	08/30/24 08:47	09/03/24 16:25	85-01-8	
Pyrene	0.49	ug/L	0.054	0.024	1	08/30/24 08:47	09/03/24 16:25	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	38-120		1	08/30/24 08:47	09/03/24 16:25	321-60-8	
Terphenyl-d14 (S)	80	%	47-121		1	08/30/24 08:47	09/03/24 16:25	1718-51-0	

WI ID NPW Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178

Pace Analytical Services - Minneapolis

PFHxS	<1.2	ng/L	9.4	1.2	1	09/09/24 14:43	09/11/24 16:54	355-46-4	
PFOA	4.8J	ng/L	10.4	1.4	1	09/09/24 14:43	09/11/24 16:54	335-67-1	
Surrogates									
13C4-PFBA (S)	57	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C5-PFPeA (S)	46	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C3-PFBS (S)	57	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C24:2FTS (S)	89	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C3HFPO-DA (S)	51	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C4-PFHpA (S)	67	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C3-PFHxS (S)	68	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C26:2FTS (S)	125	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C8-PFOA (S)	67	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C8-PFOS (S)	72	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C9-PFNA (S)	74	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C6-PFDA (S)	80	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C28:2FTS (S)	111	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
d3-MeFOSAA (S)	78	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C7-PFUDa (S)	75	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C8-PFOSA (S)	60	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
d5-EtFOSAA (S)	77	%	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C2-PFDoA (S)	79	%	25-150		1	09/09/24 14:43	09/11/24 16:54		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: MW-2 Lab ID: 40283307002 Collected: 08/27/24 14:34 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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WI ID NPW

Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178
Pace Analytical Services - Minneapolis

Surrogates

d3-NMeFOSA (S)	15	%.	10-150		1	09/09/24 14:43	09/11/24 16:54		
d7-NMeFOSE (S)	58	%.	10-150		1	09/09/24 14:43	09/11/24 16:54		
13C2-PFTA (S)	72	%.	25-150		1	09/09/24 14:43	09/11/24 16:54		
d9-NEtFOSE (S)	51	%.	10-150		1	09/09/24 14:43	09/11/24 16:54		
d5-NEtFOSA (S)	12	%.	10-150		1	09/09/24 14:43	09/11/24 16:54		
13C2PFHxDA (S)	73	%.	25-150		1	09/09/24 14:43	09/11/24 16:54		
13C5-PFHxA (S)	69	%.	25-150		1	09/09/24 14:43	09/11/24 16:54		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: MW-3 Lab ID: 40283307003 Collected: 08/28/24 13:07 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270E MSSV PAH									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3510									
Pace Analytical Services - Green Bay									
Acenaphthene	0.025J	ug/L	0.056	0.015	1	08/30/24 08:47	09/03/24 16:43	83-32-9	
Acenaphthylene	<0.014	ug/L	0.056	0.014	1	08/30/24 08:47	09/03/24 16:43	208-96-8	
Anthracene	<0.021	ug/L	0.056	0.021	1	08/30/24 08:47	09/03/24 16:43	120-12-7	
Benzo(a)anthracene	0.017J	ug/L	0.056	0.015	1	08/30/24 08:47	09/03/24 16:43	56-55-3	
Benzo(a)pyrene	<0.014	ug/L	0.056	0.014	1	08/30/24 08:47	09/03/24 16:43	50-32-8	
Benzo(b)fluoranthene	0.013J	ug/L	0.056	0.010	1	08/30/24 08:47	09/03/24 16:43	205-99-2	
Benzo(g,h,i)perylene	<0.026	ug/L	0.056	0.026	1	08/30/24 08:47	09/03/24 16:43	191-24-2	
Benzo(k)fluoranthene	<0.025	ug/L	0.056	0.025	1	08/30/24 08:47	09/03/24 16:43	207-08-9	
Chrysene	<0.014	ug/L	0.056	0.014	1	08/30/24 08:47	09/03/24 16:43	218-01-9	
Dibenz(a,h)anthracene	<0.020	ug/L	0.056	0.020	1	08/30/24 08:47	09/03/24 16:43	53-70-3	
Fluoranthene	<0.029	ug/L	0.056	0.029	1	08/30/24 08:47	09/03/24 16:43	206-44-0	
Fluorene	<0.026	ug/L	0.056	0.026	1	08/30/24 08:47	09/03/24 16:43	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.017	ug/L	0.056	0.017	1	08/30/24 08:47	09/03/24 16:43	193-39-5	
1-Methylnaphthalene	<0.020	ug/L	0.056	0.020	1	08/30/24 08:47	09/03/24 16:43	90-12-0	
2-Methylnaphthalene	<0.015	ug/L	0.056	0.015	1	08/30/24 08:47	09/03/24 16:43	91-57-6	
Naphthalene	0.023J	ug/L	0.056	0.022	1	08/30/24 08:47	09/03/24 16:43	91-20-3	
Phenanthrene	<0.029	ug/L	0.056	0.029	1	08/30/24 08:47	09/03/24 16:43	85-01-8	
Pyrene	0.030J	ug/L	0.056	0.025	1	08/30/24 08:47	09/03/24 16:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	38-120		1	08/30/24 08:47	09/03/24 16:43	321-60-8	
Terphenyl-d14 (S)	80	%	47-121		1	08/30/24 08:47	09/03/24 16:43	1718-51-0	
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Pace Analytical Services - Minneapolis									
PFHxS	57.9	ng/L	9.4	1.2	1	09/09/24 14:43	09/11/24 17:02	355-46-4	
PFOA	16.7	ng/L	10.3	1.4	1	09/09/24 14:43	09/11/24 17:02	335-67-1	
Surrogates									
13C4-PFBA (S)	67	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C5-PFPeA (S)	54	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C3-PFBS (S)	64	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C24:2FTS (S)	49	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C3HFPO-DA (S)	70	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C4-PFHpA (S)	76	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C3-PFHxS (S)	76	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C26:2FTS (S)	61	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C8-PFOA (S)	75	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C8-PFOS (S)	77	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C9-PFNA (S)	79	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C6-PFDA (S)	80	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C28:2FTS (S)	61	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
d3-MeFOSAA (S)	64	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C7-PFUdA (S)	75	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C8-PFOSA (S)	36	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
d5-EtFOSAA (S)	60	%	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C2-PFDoA (S)	70	%	25-150		1	09/09/24 14:43	09/11/24 17:02		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: MW-3 Lab ID: 40283307003 Collected: 08/28/24 13:07 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Pace Analytical Services - Minneapolis									
Surrogates									
d3-NMeFOSA (S)	1	%.	10-150		1	09/09/24 14:43	09/11/24 17:02		S0
d7-NMeFOSE (S)	16	%.	10-150		1	09/09/24 14:43	09/11/24 17:02		
13C2-PFTA (S)	58	%.	25-150		1	09/09/24 14:43	09/11/24 17:02		
d9-NEtFOSE (S)	14	%.	10-150		1	09/09/24 14:43	09/11/24 17:02		
d5-NEtFOSA (S)	1	%.	10-150		1	09/09/24 14:43	09/11/24 17:02		S0
13C2PFHxDA (S)	34	%.	25-150		1	09/09/24 14:43	09/11/24 17:02		
13C5-PFHxA (S)	75	%.	25-150		1	09/09/24 14:43	09/11/24 17:02		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

Sample: FRB-1 Lab ID: 40283307004 Collected: 08/28/24 13:32 Received: 08/29/24 09:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WI ID NPW									
Analytical Method: ENV-SOP-MIN4-0178 Preparation Method: ENV-SOP-MIN4-0178									
Pace Analytical Services - Minneapolis									
PFHxS	<0.23	ng/L	1.8	0.23	1	09/09/24 14:43	09/11/24 17:09	355-46-4	
PFOA	<0.26	ng/L	2.0	0.26	1	09/09/24 14:43	09/11/24 17:09	335-67-1	
Surrogates									
13C4-PFBA (S)	78	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C5-PFPeA (S)	76	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C3-PFBS (S)	81	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C24:2FTS (S)	38	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C3HFPO-DA (S)	82	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C4-PFHpA (S)	77	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C3-PFHxS (S)	78	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C26:2FTS (S)	46	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C8-PFOA (S)	76	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C8-PFOS (S)	77	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C9-PFNA (S)	82	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C6-PFDA (S)	83	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C28:2FTS (S)	117	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
d3-MeFOSAA (S)	58	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C7-PFUDa (S)	74	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C8-PFOSA (S)	71	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
d5-EtFOSAA (S)	65	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C2-PFDoA (S)	74	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
d3-NMeFOSA (S)	28	%.	10-150		1	09/09/24 14:43	09/11/24 17:09		
d7-NMeFOSE (S)	73	%.	10-150		1	09/09/24 14:43	09/11/24 17:09		
13C2-PFTA (S)	71	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
d9-NEtFOSE (S)	65	%.	10-150		1	09/09/24 14:43	09/11/24 17:09		
d5-NEtFOSA (S)	23	%.	10-150		1	09/09/24 14:43	09/11/24 17:09		
13C2PFHxDA (S)	63	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		
13C5-PFHxA (S)	81	%.	25-150		1	09/09/24 14:43	09/11/24 17:09		

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

QC Batch: 483271 Analysis Method: EPA 8270E by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270E Water PAH
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40283307001, 40283307002, 40283307003

METHOD BLANK: 2766789 Matrix: Water
Associated Lab Samples: 40283307001, 40283307002, 40283307003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.018	0.050	09/03/24 09:38	
2-Methylnaphthalene	ug/L	<0.014	0.050	09/03/24 09:38	
Acenaphthene	ug/L	<0.014	0.050	09/03/24 09:38	
Acenaphthylene	ug/L	<0.013	0.050	09/03/24 09:38	
Anthracene	ug/L	<0.018	0.050	09/03/24 09:38	
Benzo(a)anthracene	ug/L	<0.014	0.050	09/03/24 09:38	
Benzo(a)pyrene	ug/L	<0.013	0.050	09/03/24 09:38	
Benzo(b)fluoranthene	ug/L	<0.0091	0.050	09/03/24 09:38	
Benzo(g,h,i)perylene	ug/L	<0.023	0.050	09/03/24 09:38	
Benzo(k)fluoranthene	ug/L	<0.022	0.050	09/03/24 09:38	
Chrysene	ug/L	<0.013	0.050	09/03/24 09:38	
Dibenz(a,h)anthracene	ug/L	<0.018	0.050	09/03/24 09:38	
Fluoranthene	ug/L	<0.026	0.050	09/03/24 09:38	
Fluorene	ug/L	<0.024	0.050	09/03/24 09:38	
Indeno(1,2,3-cd)pyrene	ug/L	<0.016	0.050	09/03/24 09:38	
Naphthalene	ug/L	<0.020	0.050	09/03/24 09:38	
Phenanthrene	ug/L	<0.026	0.050	09/03/24 09:38	
Pyrene	ug/L	<0.023	0.050	09/03/24 09:38	
2-Fluorobiphenyl (S)	%	73	38-120	09/03/24 09:38	
Terphenyl-d14 (S)	%	86	47-121	09/03/24 09:38	

LABORATORY CONTROL SAMPLE: 2766790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	2	1.5	76	57-120	
2-Methylnaphthalene	ug/L	2	1.5	76	55-120	
Acenaphthene	ug/L	2	1.6	81	60-120	
Acenaphthylene	ug/L	2	1.6	82	58-120	
Anthracene	ug/L	2	1.7	84	58-120	
Benzo(a)anthracene	ug/L	2	1.8	88	51-120	
Benzo(a)pyrene	ug/L	2	1.8	88	59-120	
Benzo(b)fluoranthene	ug/L	2	1.8	88	52-120	
Benzo(g,h,i)perylene	ug/L	2	1.8	88	62-120	
Benzo(k)fluoranthene	ug/L	2	1.8	89	59-120	
Chrysene	ug/L	2	1.7	87	55-125	
Dibenz(a,h)anthracene	ug/L	2	1.7	85	60-120	
Fluoranthene	ug/L	2	1.8	88	62-120	
Fluorene	ug/L	2	1.7	83	61-120	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.8	90	62-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

LABORATORY CONTROL SAMPLE: 2766790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	2	1.5	76	55-120	
Phenanthrene	ug/L	2	1.7	85	55-120	
Pyrene	ug/L	2	1.7	87	53-120	
2-Fluorobiphenyl (S)	%			79	38-120	
Terphenyl-d14 (S)	%			90	47-121	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2766799 2766800

Parameter	Units	40283240002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/L	<0.000018 mg/L	2	2	1.5	1.4	74	68	32-120	9	25	
2-Methylnaphthalene	ug/L	0.000020J mg/L	2	2	1.5	1.4	74	68	37-120	8	22	
Acenaphthene	ug/L	0.000015J mg/L	2	2	1.6	1.4	78	71	52-120	9	20	
Acenaphthylene	ug/L	<0.000013 mg/L	2	2	1.6	1.4	78	72	49-120	8	20	
Anthracene	ug/L	<0.000018 mg/L	2	2	1.7	1.6	84	78	45-120	7	25	
Benzo(a)anthracene	ug/L	<0.000014 mg/L	2	2	1.7	1.6	83	79	31-120	6	25	
Benzo(a)pyrene	ug/L	<0.000013 mg/L	2	2	1.6	1.4	79	72	38-120	10	24	
Benzo(b)fluoranthene	ug/L	<0.000009 1 mg/L	2	2	1.6	1.5	79	75	36-120	5	24	
Benzo(g,h,i)perylene	ug/L	<0.000023 mg/L	2	2	1.5	1.5	75	73	43-120	3	23	
Benzo(k)fluoranthene	ug/L	<0.000022 mg/L	2	2	1.6	1.5	78	77	46-120	2	21	
Chrysene	ug/L	<0.000013 mg/L	2	2	1.7	1.6	83	81	39-143	3	23	
Dibenz(a,h)anthracene	ug/L	<0.000018 mg/L	2	2	1.5	1.4	74	72	32-125	3	22	
Fluoranthene	ug/L	<0.000026 mg/L	2	2	1.8	1.7	88	82	56-120	7	21	
Fluorene	ug/L	<0.000024 mg/L	2	2	1.7	1.5	82	74	45-120	10	20	
Indeno(1,2,3-cd)pyrene	ug/L	<0.000016 mg/L	2	2	1.5	1.4	74	71	42-120	3	23	
Naphthalene	ug/L	0.000021J mg/L	2	2	1.5	1.4	73	68	50-120	8	23	1q
Phenanthrene	ug/L	0.000027J mg/L	2	2	1.7	1.6	84	78	47-120	7	21	
Pyrene	ug/L	<0.000023 mg/L	2	2	1.8	1.7	89	82	47-120	8	23	
2-Fluorobiphenyl (S)	%						76	69	38-120			
Terphenyl-d14 (S)	%						84	78	47-121			

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

QC Batch: 966439 Analysis Method: ENV-SOP-MIN4-0178
QC Batch Method: ENV-SOP-MIN4-0178 Analysis Description: WI ID NPW
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 40283307001, 40283307002, 40283307003, 40283307004

METHOD BLANK: 5050336 Matrix: Water
Associated Lab Samples: 40283307001, 40283307002, 40283307003, 40283307004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PFHxS	ng/L	<0.24	1.8	09/11/24 14:16	
PFOA	ng/L	<0.27	2.0	09/11/24 14:16	
13C2-PFDoA (S)	%	76	25-150	09/11/24 14:16	
13C2-PFTA (S)	%	73	25-150	09/11/24 14:16	
13C24:2FTS (S)	%	47	25-150	09/11/24 14:16	
13C26:2FTS (S)	%	55	25-150	09/11/24 14:16	
13C28:2FTS (S)	%	55	25-150	09/11/24 14:16	
13C2PFHxDA (S)	%	51	25-150	09/11/24 14:16	
13C3-PFBS (S)	%	81	25-150	09/11/24 14:16	
13C3-PFHxS (S)	%	80	25-150	09/11/24 14:16	
13C3HFPO-DA (S)	%	85	25-150	09/11/24 14:16	
13C4-PFBA (S)	%	80	25-150	09/11/24 14:16	
13C4-PFHpA (S)	%	78	25-150	09/11/24 14:16	
13C5-PFHxA (S)	%	80	25-150	09/11/24 14:16	
13C5-PFPeA (S)	%	79	25-150	09/11/24 14:16	
13C6-PFDA (S)	%	78	25-150	09/11/24 14:16	
13C7-PFUDa (S)	%	70	25-150	09/11/24 14:16	
13C8-PFOA (S)	%	79	25-150	09/11/24 14:16	
13C8-PFOS (S)	%	75	25-150	09/11/24 14:16	
13C8-PFOSA (S)	%	49	25-150	09/11/24 14:16	
13C9-PFNA (S)	%	83	25-150	09/11/24 14:16	
d3-MeFOSAA (S)	%	67	25-150	09/11/24 14:16	
d3-NMeFOSA (S)	%	0	20-150	09/11/24 14:16	S0
d5-EtFOSAA (S)	%	67	25-150	09/11/24 14:16	
d5-NEtFOSA (S)	%	0	20-150	09/11/24 14:16	S0
d7-NMeFOSE (S)	%	8	20-150	09/11/24 14:16	S0
d9-NEtFOSE (S)	%	5	20-150	09/11/24 14:16	S0

LABORATORY CONTROL SAMPLE & LCSD: 5050337

		5050338								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFHxS	ng/L	3.7	4.4	4.3	121	115	50-150	3	30	
PFOA	ng/L	4	4.9	4.6	122	114	50-150	5	30	
13C2-PFDoA (S)	%				81	78	25-150			
13C2-PFTA (S)	%				78	76	25-150			
13C24:2FTS (S)	%				50	47	25-150			
13C26:2FTS (S)	%				58	61	25-150			
13C28:2FTS (S)	%				57	53	25-150			
13C2PFHxDA (S)	%				60	63	25-150			

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283307

LABORATORY CONTROL SAMPLE & LCSD: 5050337		5050338								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
13C3-PFBS (S)	%.				87	85	25-150			
13C3-PFHxS (S)	%.				83	82	25-150			
13C3HFPO-DA (S)	%.				87	86	25-150			
13C4-PFBA (S)	%.				85	83	25-150			
13C4-PFHpA (S)	%.				83	82	25-150			
13C5-PFHxA (S)	%.				84	83	25-150			
13C5-PFPeA (S)	%.				84	81	25-150			
13C6-PFDA (S)	%.				84	82	25-150			
13C7-PFUdA (S)	%.				77	75	25-150			
13C8-PFOA (S)	%.				85	84	25-150			
13C8-PFOS (S)	%.				80	78	25-150			
13C8-PFOSA (S)	%.				59	52	25-150			
13C9-PFNA (S)	%.				86	81	25-150			
d3-MeFOSAA (S)	%.				69	66	25-150			
d3-NMeFOSA (S)	%.				1	0	20-150			S0
d5-EtFOSAA (S)	%.				70	67	25-150			
d5-NEtFOSA (S)	%.				1	0	20-150			S0
d7-NMeFOSE (S)	%.				24	12	20-150			S0
d9-NEtFOSE (S)	%.				18	9	20-150			S0

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QUALIFIERS

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

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 - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

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 - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

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.

ANALYTE QUALIFIERS

1q	This sample was sub-sampled from an AG1 for a 100 mL extraction.
S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283307

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40283307001	MW-1	EPA 3510	483271	EPA 8270E by SIM	483296
40283307002	MW-2	EPA 3510	483271	EPA 8270E by SIM	483296
40283307003	MW-3	EPA 3510	483271	EPA 8270E by SIM	483296
40283307001	MW-1	ENV-SOP-MIN4-0178	966439	ENV-SOP-MIN4-0178	967767
40283307002	MW-2	ENV-SOP-MIN4-0178	966439	ENV-SOP-MIN4-0178	967767
40283307003	MW-3	ENV-SOP-MIN4-0178	966439	ENV-SOP-MIN4-0178	967767
40283307004	FRB-1	ENV-SOP-MIN4-0178	966439	ENV-SOP-MIN4-0178	967767

REPORT OF LABORATORY ANALYSIS

Effective Date: 8/16/2022

Client Name:

Terracon

Sample Preservation Receipt Form

Project #

40283307

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☐ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed.Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2						
001					2412				2412																								2.5 / 5
002					2412				2412																								2.5 / 5
003					2412				2412																								2.5 / 5
004					2412				2412																								2.5 / 5
005																																	2.5 / 5
006																																	2.5 / 5
007																																	2.5 / 5
008																																	2.5 / 5
009																																	2.5 / 5
010																																	2.5 / 5
011																																	2.5 / 5
012																																	2.5 / 5
013																																	2.5 / 5
014																																	2.5 / 5
015																																	2.5 / 5
016																																	2.5 / 5
017																																	2.5 / 5
018																																	2.5 / 5
019																																	2.5 / 5
020																																	2.5 / 5

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name:

Terracon

Courier: ☒ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco

☐ Client

☐ Pace

Other: _____

WO#: 40283307



40283307

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used SR - 129 Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.5 / Corr: 0.5

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 08/29/24

Initials: SKU

Labeled By Initials: EA

Chain of Custody Present: ☒ Yes ☐ No ☐ N/A

1.

Chain of Custody Filled Out: ☒ Yes ☐ No ☐ N/A

2.

Chain of Custody Relinquished: ☒ Yes ☐ No ☐ N/A

3.

Sampler Name & Signature on COC: ☒ Yes ☐ No ☐ N/A

4.

Samples Arrived within Hold Time: ☒ Yes ☐ No

5.

- DI VOA Samples frozen upon receipt ☐ Yes ☐ No

Date/Time: _____

Short Hold Time Analysis (<72hr): ☒ Yes ☐ No

6.

Rush Turn Around Time Requested: ☐ Yes ☒ No

7.

Sufficient Volume:

8.

For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A

Correct Containers Used: ☒ Yes ☐ No

9.

Correct Type: Pace Green Bay, Pace IR, Non-Pace

Containers Intact: ☒ Yes ☐ No

10.

Filtered volume received for Dissolved tests ☐ Yes ☐ No ☒ N/A

11.

Sample Labels match COC: ☒ Yes ☐ No ☐ N/A

12.

-Includes date/time/ID/Analysis Matrix: W & S

Trip Blank Present: ☐ Yes ☒ No ☐ N/A

13.

Trip Blank Custody Seals Present ☐ Yes ☐ No ☒ N/A

Pace Trip Blank Lot # (if purchased): _____

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 2



September 20, 2024

Blaine Schroyer
Terracon, Inc. - Franklin
4900 S Pennsylvania Ave Ste100
Cudahy, WI 53110

RE: Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Dear Blaine Schroyer:

Enclosed are the analytical results for sample(s) received by the laboratory on September 06, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

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

Sincerely,

A handwritten signature in black ink that reads "Dan Milewsky".

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-21-8

Virginia VELAP Certification ID: 11873

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-21-00008

Federal Fish & Wildlife Permit #: 51774A

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SAMPLE SUMMARY

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40283707001	P-3 (0.5)	Solid	09/05/24 09:10	09/06/24 08:20
40283707002	P-3 (4)	Solid	09/05/24 09:12	09/06/24 08:20
40283707003	P-3 (6)	Solid	09/05/24 09:14	09/06/24 08:20
40283707004	P-3 (10)	Solid	09/05/24 09:19	09/06/24 08:20
40283707005	P-4 (0.5)	Solid	09/05/24 12:13	09/06/24 08:20
40283707006	P-4 (2)	Solid	09/05/24 12:14	09/06/24 08:20
40283707007	P-4 (4)	Solid	09/05/24 12:15	09/06/24 08:20
40283707008	P-4 (6)	Solid	09/05/24 12:18	09/06/24 08:20
40283707009	P-4 (10)	Solid	09/05/24 12:26	09/06/24 08:20
40283707010	P-5 (0.5)	Solid	09/05/24 11:42	09/06/24 08:20
40283707011	P-5 (2)	Solid	09/05/24 11:43	09/06/24 08:20
40283707012	P-5 (4)	Solid	09/05/24 11:44	09/06/24 08:20
40283707013	P-5 (6)	Solid	09/05/24 11:45	09/06/24 08:20
40283707014	P-5 (10)	Solid	09/05/24 11:49	09/06/24 08:20
40283707015	P-6 (0.5)	Solid	09/05/24 10:15	09/06/24 08:20
40283707016	P-6 (2)	Solid	09/05/24 10:16	09/06/24 08:20
40283707017	P-6 (4)	Solid	09/05/24 10:17	09/06/24 08:20
40283707018	P-6 (6)	Solid	09/05/24 10:25	09/06/24 08:20
40283707019	P-6 (10)	Solid	09/05/24 10:27	09/06/24 08:20
40283707020	P-7 (0.5)	Solid	09/05/24 11:09	09/06/24 08:20
40283707021	P-7 (2)	Solid	09/05/24 11:10	09/06/24 08:20
40283707022	P-7 (4)	Solid	09/05/24 11:10	09/06/24 08:20
40283707023	P-7 (6)	Solid	09/05/24 11:14	09/06/24 08:20
40283707024	P-7 (10)	Solid	09/05/24 11:17	09/06/24 08:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40283707001	P-3 (0.5)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40283707002	P-3 (4)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707003	P-3 (6)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707004	P-3 (10)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707005	P-4 (0.5)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707006	P-4 (2)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707007	P-4 (4)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707008	P-4 (6)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707009	P-4 (10)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707010	P-5 (0.5)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707011	P-5 (2)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707012	P-5 (4)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707013	P-5 (6)	EPA 6010D	SIS	2	PASI-G

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SAMPLE ANALYTE COUNT

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40283707014	P-5 (10)	EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
40283707015	P-6 (0.5)	ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707016	P-6 (2)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
40283707017	P-6 (4)	EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
40283707018	P-6 (6)	ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
40283707019	P-6 (10)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
40283707020	P-7 (0.5)	EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
40283707021	P-7 (2)	ASTM D2974-87	MYH	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40283707022	P-7 (4)	EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
40283707023	P-7 (6)	EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
40283707024	P-7 (10)	ASTM D2974-87	SKW	1	PASI-G
		EPA 6010D	SIS	2	PASI-G
		EPA 8270E by SIM	RJN	20	PASI-G
		ASTM D2974-87	SKW	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707001	P-3 (0.5)					
EPA 6010D	Chromium	868	mg/kg	5.2	09/11/24 16:41	
EPA 6010D	Lead	2170	mg/kg	10.4	09/11/24 16:41	
EPA 8270E by SIM	Acenaphthene	429J	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Acenaphthylene	244J	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Anthracene	1470J	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Benzo(a)anthracene	4370	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Benzo(a)pyrene	4270	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Benzo(b)fluoranthene	5460	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Benzo(g,h,i)perylene	2400	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Benzo(k)fluoranthene	2580	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Chrysene	4960	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Dibenz(a,h)anthracene	676J	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Fluoranthene	10400	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Fluorene	481J	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	1940	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Naphthalene	376J	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Phenanthrene	7000	ug/kg	1850	09/13/24 19:12	
EPA 8270E by SIM	Pyrene	9630	ug/kg	1850	09/13/24 19:12	
ASTM D2974-87	Percent Moisture	9.5	%	0.10	09/12/24 09:09	
40283707002	P-3 (4)					
EPA 6010D	Chromium	25.6	mg/kg	1.1	09/10/24 18:27	
EPA 6010D	Lead	16.9	mg/kg	2.1	09/10/24 18:27	
EPA 8270E by SIM	Acenaphthene	62.6J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Acenaphthylene	26.5J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Anthracene	184	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Benzo(a)anthracene	450	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Benzo(a)pyrene	501	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Benzo(b)fluoranthene	604	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Benzo(g,h,i)perylene	265	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Benzo(k)fluoranthene	280	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Chrysene	500	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Dibenz(a,h)anthracene	67.0J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Fluoranthene	1110	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Fluorene	56.8J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	215	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	1-Methylnaphthalene	58.9J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	2-Methylnaphthalene	76.6J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Naphthalene	88.2J	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Phenanthrene	763	ug/kg	93.8	09/13/24 19:29	
EPA 8270E by SIM	Pyrene	950	ug/kg	93.8	09/13/24 19:29	
ASTM D2974-87	Percent Moisture	10.9	%	0.10	09/09/24 15:23	
40283707003	P-3 (6)					
EPA 6010D	Chromium	20.5	mg/kg	1.1	09/10/24 18:29	
EPA 6010D	Lead	29.8	mg/kg	2.3	09/10/24 18:29	
EPA 8270E by SIM	Anthracene	4.1J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Benzo(a)anthracene	12.2J	ug/kg	19.0	09/16/24 11:31	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707003	P-3 (6)					
EPA 8270E by SIM	Benzo(a)pyrene	11.6J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Benzo(b)fluoranthene	14.3J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Benzo(g,h,i)perylene	9.7J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Benzo(k)fluoranthene	6.5J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Chrysene	15.6J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Fluoranthene	27.1	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	6.1J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Naphthalene	3.5J	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Phenanthrene	21.1	ug/kg	19.0	09/16/24 11:31	
EPA 8270E by SIM	Pyrene	22.0	ug/kg	19.0	09/16/24 11:31	
ASTM D2974-87	Percent Moisture	12.1	%	0.10	09/09/24 15:24	
40283707004	P-3 (10)					
EPA 6010D	Chromium	15.7	mg/kg	1.1	09/10/24 18:31	
EPA 6010D	Lead	29.3	mg/kg	2.3	09/10/24 18:31	
EPA 8270E by SIM	Acenaphthene	10.2J	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Acenaphthylene	3.1J	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Anthracene	32.9	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Benzo(a)anthracene	81.8	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Benzo(a)pyrene	91.1	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Benzo(b)fluoranthene	102	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Benzo(g,h,i)perylene	68.1	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Benzo(k)fluoranthene	42.8	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Chrysene	81.0	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Dibenz(a,h)anthracene	10.5J	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Fluoranthene	202	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Fluorene	7.2J	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	49.4	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	1-Methylnaphthalene	12.9J	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	2-Methylnaphthalene	18.8J	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Naphthalene	46.7	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Phenanthrene	94.2	ug/kg	19.1	09/16/24 11:47	
EPA 8270E by SIM	Pyrene	170	ug/kg	19.1	09/16/24 11:47	
ASTM D2974-87	Percent Moisture	12.4	%	0.10	09/09/24 15:24	
40283707005	P-4 (0.5)					
EPA 6010D	Chromium	23.7	mg/kg	1.1	09/10/24 18:33	
EPA 6010D	Lead	78.8	mg/kg	2.1	09/10/24 18:33	
EPA 8270E by SIM	Acenaphthene	24.6J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Anthracene	99.6J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Benzo(a)anthracene	507	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Benzo(a)pyrene	573	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Benzo(b)fluoranthene	741	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Benzo(g,h,i)perylene	442	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Benzo(k)fluoranthene	302	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Chrysene	518	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Dibenz(a,h)anthracene	105J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Fluoranthene	1040	ug/kg	151	09/16/24 16:55	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707005	P-4 (0.5)					
EPA 8270E by SIM	Fluorene	24.6J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	340	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	1-Methylnaphthalene	29.2J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	2-Methylnaphthalene	39.7J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Naphthalene	49.3J	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Phenanthrene	411	ug/kg	151	09/16/24 16:55	
EPA 8270E by SIM	Pyrene	841	ug/kg	151	09/16/24 16:55	
ASTM D2974-87	Percent Moisture	11.5	%	0.10	09/09/24 15:24	
40283707006	P-4 (2)					
EPA 6010D	Chromium	38.6	mg/kg	5.5	09/11/24 14:30	MO
EPA 6010D	Lead	160	mg/kg	10.9	09/11/24 14:30	
EPA 8270E by SIM	Acenaphthene	61.2J	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Anthracene	218J	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Benzo(a)anthracene	856	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Benzo(a)pyrene	962	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Benzo(b)fluoranthene	1050	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Benzo(g,h,i)perylene	727	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Benzo(k)fluoranthene	498	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Chrysene	779	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Dibenz(a,h)anthracene	154J	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Fluoranthene	1900	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	552	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	1-Methylnaphthalene	55.1J	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	2-Methylnaphthalene	71.3J	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Naphthalene	132J	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Phenanthrene	876	ug/kg	366	09/16/24 15:38	
EPA 8270E by SIM	Pyrene	1670	ug/kg	366	09/16/24 15:38	
ASTM D2974-87	Percent Moisture	8.8	%	0.10	09/09/24 15:24	
40283707007	P-4 (4)					
EPA 6010D	Chromium	20.9	mg/kg	1.1	09/10/24 18:51	
EPA 6010D	Lead	118	mg/kg	2.1	09/10/24 18:51	
EPA 8270E by SIM	Anthracene	815J	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Benzo(a)anthracene	2900	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Benzo(a)pyrene	3050	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Benzo(b)fluoranthene	3200	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Benzo(g,h,i)perylene	2340	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Benzo(k)fluoranthene	1550	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Chrysene	2480	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Dibenz(a,h)anthracene	456J	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Fluoranthene	6070	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	1770	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Naphthalene	659J	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Phenanthrene	2660	ug/kg	1520	09/16/24 15:53	
EPA 8270E by SIM	Pyrene	6220	ug/kg	1520	09/16/24 15:53	
ASTM D2974-87	Percent Moisture	11.8	%	0.10	09/09/24 15:24	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707008	P-4 (6)					
EPA 6010D	Chromium	27.5	mg/kg	1.1	09/10/24 18:55	
EPA 6010D	Lead	86.7	mg/kg	2.1	09/10/24 18:55	
EPA 8270E by SIM	Acenaphthene	19.4J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Acenaphthylene	17.0J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Anthracene	61.0J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Benzo(a)anthracene	265	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Benzo(a)pyrene	297	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Benzo(b)fluoranthene	350	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Benzo(g,h,i)perylene	208	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Benzo(k)fluoranthene	130	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Chrysene	260	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Dibenz(a,h)anthracene	44.9J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Fluoranthene	612	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Fluorene	15.4J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	159	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	1-Methylnaphthalene	45.5J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	2-Methylnaphthalene	58.6J	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Naphthalene	117	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Phenanthrene	290	ug/kg	79.0	09/16/24 16:09	
EPA 8270E by SIM	Pyrene	529	ug/kg	79.0	09/16/24 16:09	
ASTM D2974-87	Percent Moisture	15.3	%	0.10	09/09/24 15:24	
40283707009	P-4 (10)					
EPA 6010D	Chromium	14.4	mg/kg	1.2	09/10/24 18:57	
EPA 6010D	Lead	99.3	mg/kg	2.3	09/10/24 18:57	
EPA 8270E by SIM	Anthracene	37.8J	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Benzo(a)anthracene	158	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Benzo(a)pyrene	175	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Benzo(b)fluoranthene	202	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Benzo(g,h,i)perylene	126	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Benzo(k)fluoranthene	95.1	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Chrysene	159	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Dibenz(a,h)anthracene	25.8J	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Fluoranthene	332	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	97.6	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	1-Methylnaphthalene	27.9J	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	2-Methylnaphthalene	37.7J	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Naphthalene	67.7J	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Phenanthrene	152	ug/kg	81.0	09/16/24 16:24	
EPA 8270E by SIM	Pyrene	298	ug/kg	81.0	09/16/24 16:24	
ASTM D2974-87	Percent Moisture	17.6	%	0.10	09/09/24 15:24	
40283707010	P-5 (0.5)					
EPA 6010D	Chromium	20.0	mg/kg	1.0	09/10/24 19:04	
EPA 6010D	Lead	74.9	mg/kg	2.1	09/10/24 19:04	
EPA 8270E by SIM	Acenaphthene	80.8J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Anthracene	263J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Benzo(a)anthracene	1210	ug/kg	360	09/16/24 17:11	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707010	P-5 (0.5)					
EPA 8270E by SIM	Benzo(a)pyrene	1300	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Benzo(b)fluoranthene	1690	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Benzo(g,h,i)perylene	933	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Benzo(k)fluoranthene	704	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Chrysene	1220	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Dibenz(a,h)anthracene	244J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Fluoranthene	2520	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Fluorene	85.9J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	740	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	1-Methylnaphthalene	55.8J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	2-Methylnaphthalene	74.3J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Naphthalene	162J	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Phenanthrene	966	ug/kg	360	09/16/24 17:11	
EPA 8270E by SIM	Pyrene	1970	ug/kg	360	09/16/24 17:11	
ASTM D2974-87	Percent Moisture	7.1	%	0.10	09/09/24 15:24	
40283707011	P-5 (2)					
EPA 6010D	Chromium	28.1	mg/kg	1.0	09/10/24 19:06	
EPA 6010D	Lead	860	mg/kg	2.1	09/10/24 19:06	
EPA 8270E by SIM	Acenaphthene	54.4J	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Anthracene	130J	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Benzo(a)anthracene	551	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Benzo(a)pyrene	606	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Benzo(b)fluoranthene	697	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Benzo(g,h,i)perylene	453	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Benzo(k)fluoranthene	282	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Chrysene	479	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Dibenz(a,h)anthracene	97.2J	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Fluoranthene	1240	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Fluorene	38.5J	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	346	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	2-Methylnaphthalene	29.6J	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Naphthalene	64.3J	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Phenanthrene	611	ug/kg	186	09/16/24 17:26	
EPA 8270E by SIM	Pyrene	1070	ug/kg	186	09/16/24 17:26	
ASTM D2974-87	Percent Moisture	10.4	%	0.10	09/09/24 15:24	
40283707012	P-5 (4)					
EPA 6010D	Chromium	20.9	mg/kg	1.2	09/10/24 19:08	
EPA 6010D	Lead	56.5	mg/kg	2.3	09/10/24 19:08	
EPA 8270E by SIM	Acenaphthene	7.4J	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Acenaphthylene	5.0J	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Anthracene	19.8J	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Benzo(a)anthracene	126	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Benzo(a)pyrene	148	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Benzo(b)fluoranthene	184	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Benzo(g,h,i)perylene	122	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Benzo(k)fluoranthene	72.7	ug/kg	19.8	09/16/24 16:40	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707012	P-5 (4)					
EPA 8270E by SIM	Chrysene	123	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Dibenz(a,h)anthracene	25.1	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Fluoranthene	271	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Fluorene	4.5J	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	91.3	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	1-Methylnaphthalene	10.8J	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	2-Methylnaphthalene	14.2J	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Naphthalene	21.5	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Phenanthrene	96.3	ug/kg	19.8	09/16/24 16:40	
EPA 8270E by SIM	Pyrene	248	ug/kg	19.8	09/16/24 16:40	
ASTM D2974-87	Percent Moisture	15.6	%	0.10	09/09/24 15:24	
40283707013	P-5 (6)					
EPA 6010D	Chromium	11.1	mg/kg	1.1	09/10/24 19:10	
EPA 6010D	Lead	24.8	mg/kg	2.2	09/10/24 19:10	
EPA 8270E by SIM	Anthracene	2.8J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Benzo(a)anthracene	13.3J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Benzo(a)pyrene	12.6J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Benzo(b)fluoranthene	16.7J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Benzo(g,h,i)perylene	9.9J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Benzo(k)fluoranthene	6.3J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Chrysene	13.9J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Fluoranthene	25.9	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	6.5J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Phenanthrene	8.8J	ug/kg	18.6	09/16/24 12:02	
EPA 8270E by SIM	Pyrene	19.5	ug/kg	18.6	09/16/24 12:02	
ASTM D2974-87	Percent Moisture	10.2	%	0.10	09/09/24 15:24	
40283707014	P-5 (10)					
EPA 6010D	Chromium	19.1	mg/kg	1.1	09/10/24 19:12	
EPA 6010D	Lead	31.4	mg/kg	2.3	09/10/24 19:12	
EPA 8270E by SIM	Anthracene	451J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Benzo(a)anthracene	922	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Benzo(a)pyrene	813	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Benzo(b)fluoranthene	837	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Benzo(g,h,i)perylene	550J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Benzo(k)fluoranthene	357J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Chrysene	666J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Fluoranthene	2500	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Fluorene	224J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	392J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Naphthalene	119J	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Phenanthrene	2090	ug/kg	770	09/16/24 17:41	
EPA 8270E by SIM	Pyrene	2300	ug/kg	770	09/16/24 17:41	
ASTM D2974-87	Percent Moisture	13.3	%	0.10	09/09/24 15:24	
40283707015	P-6 (0.5)					
EPA 6010D	Chromium	72.9	mg/kg	0.99	09/10/24 19:14	
EPA 6010D	Lead	370	mg/kg	2.0	09/10/24 19:14	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707015	P-6 (0.5)					
EPA 8270E by SIM	Acenaphthene	467J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Anthracene	1150J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Benzo(a)anthracene	3450	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Benzo(a)pyrene	3170	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Benzo(b)fluoranthene	3400	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Benzo(g,h,i)perylene	2050	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Benzo(k)fluoranthene	1640J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Chrysene	3020	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Dibenz(a,h)anthracene	497J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Fluoranthene	7560	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Fluorene	451J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	1560J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Naphthalene	408J	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Phenanthrene	5120	ug/kg	1840	09/16/24 17:57	
EPA 8270E by SIM	Pyrene	7450	ug/kg	1840	09/16/24 17:57	
ASTM D2974-87	Percent Moisture	9.2	%	0.10	09/09/24 15:24	
40283707016	P-6 (2)					
EPA 6010D	Chromium	22.5	mg/kg	0.99	09/10/24 19:16	
EPA 6010D	Lead	103	mg/kg	2.0	09/10/24 19:16	
EPA 8270E by SIM	Acenaphthene	145J	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Anthracene	224J	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Benzo(a)anthracene	770	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Benzo(a)pyrene	789	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Benzo(b)fluoranthene	835	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Benzo(g,h,i)perylene	547	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Benzo(k)fluoranthene	395	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Chrysene	630	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Dibenz(a,h)anthracene	118J	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Fluoranthene	1910	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Fluorene	95.4J	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	424	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Naphthalene	89.4J	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Phenanthrene	1200	ug/kg	373	09/16/24 18:12	
EPA 8270E by SIM	Pyrene	1790	ug/kg	373	09/16/24 18:12	
ASTM D2974-87	Percent Moisture	10.4	%	0.10	09/09/24 15:25	
40283707017	P-6 (4)					
EPA 6010D	Chromium	22.1	mg/kg	1.1	09/10/24 19:18	
EPA 6010D	Lead	19.9	mg/kg	2.3	09/10/24 19:18	
EPA 8270E by SIM	Acenaphthene	6.6J	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Acenaphthylene	4.3J	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Anthracene	23.0	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Benzo(a)anthracene	125	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Benzo(a)pyrene	170	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Benzo(b)fluoranthene	219	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Benzo(g,h,i)perylene	147	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Benzo(k)fluoranthene	77.9	ug/kg	19.8	09/16/24 12:17	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707017	P-6 (4)					
EPA 8270E by SIM	Chrysene	141	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Dibenz(a,h)anthracene	27.1	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Fluoranthene	247	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Fluorene	5.5J	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	109	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	1-Methylnaphthalene	11.4J	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	2-Methylnaphthalene	14.6J	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Naphthalene	28.9	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Phenanthrene	103	ug/kg	19.8	09/16/24 12:17	
EPA 8270E by SIM	Pyrene	235	ug/kg	19.8	09/16/24 12:17	
ASTM D2974-87	Percent Moisture	15.6	%	0.10	09/09/24 15:25	
40283707018	P-6 (6)					
EPA 6010D	Chromium	15.4	mg/kg	1.0	09/10/24 19:20	
EPA 6010D	Lead	20.6	mg/kg	2.1	09/10/24 19:20	
EPA 8270E by SIM	Acenaphthene	5.9J	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Acenaphthylene	3.0J	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Anthracene	28.9	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Benzo(a)anthracene	121	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Benzo(a)pyrene	144	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Benzo(b)fluoranthene	168	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Benzo(g,h,i)perylene	112	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Benzo(k)fluoranthene	68.6	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Chrysene	130	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Dibenz(a,h)anthracene	21.8	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Fluoranthene	252	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Fluorene	5.8J	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	84.0	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	1-Methylnaphthalene	5.3J	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	2-Methylnaphthalene	7.1J	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Naphthalene	18.8J	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Phenanthrene	105	ug/kg	18.8	09/16/24 12:33	
EPA 8270E by SIM	Pyrene	226	ug/kg	18.8	09/16/24 12:33	
ASTM D2974-87	Percent Moisture	11.3	%	0.10	09/09/24 15:25	
40283707019	P-6 (10)					
EPA 6010D	Chromium	13.1	mg/kg	1.2	09/10/24 19:22	
EPA 6010D	Lead	77.4	mg/kg	2.4	09/10/24 19:22	
EPA 8270E by SIM	Acenaphthene	3.1J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Anthracene	8.4J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Benzo(a)anthracene	26.2	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Benzo(a)pyrene	29.2	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Benzo(b)fluoranthene	34.2	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Benzo(g,h,i)perylene	19.4J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Benzo(k)fluoranthene	13.1J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Chrysene	27.3	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Dibenz(a,h)anthracene	4.1J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Fluoranthene	54.9	ug/kg	20.3	09/16/24 20:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707019	P-6 (10)					
EPA 8270E by SIM	Fluorene	3.5J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	15.8J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	1-Methylnaphthalene	3.6J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	2-Methylnaphthalene	6.0J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Naphthalene	16.7J	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Phenanthrene	31.1	ug/kg	20.3	09/16/24 20:30	
EPA 8270E by SIM	Pyrene	50.4	ug/kg	20.3	09/16/24 20:30	
ASTM D2974-87	Percent Moisture	17.8	%	0.10	09/09/24 15:25	
40283707020	P-7 (0.5)					
EPA 6010D	Chromium	57.0	mg/kg	1.1	09/10/24 19:28	
EPA 6010D	Lead	457	mg/kg	2.2	09/10/24 19:28	
EPA 8270E by SIM	Acenaphthene	97.3J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Acenaphthylene	68.3J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Anthracene	296J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Benzo(a)anthracene	1090	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Benzo(a)pyrene	1200	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Benzo(b)fluoranthene	1380	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Benzo(g,h,i)perylene	845	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Benzo(k)fluoranthene	614	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Chrysene	1070	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Dibenz(a,h)anthracene	204J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Fluoranthene	2540	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Fluorene	106J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	665	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	1-Methylnaphthalene	57.7J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	2-Methylnaphthalene	63.4J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Naphthalene	100J	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Phenanthrene	1400	ug/kg	366	09/17/24 16:11	
EPA 8270E by SIM	Pyrene	2090	ug/kg	366	09/17/24 16:11	
ASTM D2974-87	Percent Moisture	8.9	%	0.10	09/09/24 15:25	
40283707021	P-7 (2)					
EPA 6010D	Chromium	45.5	mg/kg	1.1	09/10/24 19:30	
EPA 6010D	Lead	235	mg/kg	2.1	09/10/24 19:30	
EPA 8270E by SIM	Anthracene	582J	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Benzo(a)anthracene	1480	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Benzo(a)pyrene	1380	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Benzo(b)fluoranthene	1510	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Benzo(g,h,i)perylene	1020	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Benzo(k)fluoranthene	688J	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Chrysene	1220	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Dibenz(a,h)anthracene	215J	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Fluoranthene	3560	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	785J	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Naphthalene	141J	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Phenanthrene	2110	ug/kg	943	09/17/24 16:26	
EPA 8270E by SIM	Pyrene	3310	ug/kg	943	09/17/24 16:26	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707021	P-7 (2)					
ASTM D2974-87	Percent Moisture	11.5	%	0.10	09/12/24 09:09	
40283707022	P-7 (4)					
EPA 6010D	Chromium	44.0	mg/kg	1.0	09/10/24 19:32	
EPA 6010D	Lead	84.7	mg/kg	2.1	09/10/24 19:32	
EPA 8270E by SIM	Acenaphthene	36.6J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Anthracene	84.8J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Benzo(a)anthracene	415	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Benzo(a)pyrene	501	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Benzo(b)fluoranthene	578	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Benzo(g,h,i)perylene	355	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Benzo(k)fluoranthene	256	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Chrysene	411	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Dibenz(a,h)anthracene	79.7J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Fluoranthene	894	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Fluorene	27.9J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	279	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	1-Methylnaphthalene	51.9J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	2-Methylnaphthalene	65.4J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Naphthalene	79.3J	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Phenanthrene	437	ug/kg	145	09/16/24 20:45	
EPA 8270E by SIM	Pyrene	821	ug/kg	145	09/16/24 20:45	
ASTM D2974-87	Percent Moisture	7.8	%	0.10	09/12/24 09:09	
40283707023	P-7 (6)					
EPA 6010D	Chromium	75.2	mg/kg	5.0	09/11/24 14:39	
EPA 6010D	Lead	2380	mg/kg	10.0	09/11/24 14:39	
EPA 8270E by SIM	Acenaphthene	10.8J	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Acenaphthylene	9.6J	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Anthracene	29.4	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Benzo(a)anthracene	125	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Benzo(a)pyrene	130	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Benzo(b)fluoranthene	172	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Benzo(g,h,i)perylene	85.2	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Benzo(k)fluoranthene	60.9	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Chrysene	141	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Dibenz(a,h)anthracene	21.8	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Fluoranthene	303	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Fluorene	10.7J	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	70.2	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	1-Methylnaphthalene	12.1J	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	2-Methylnaphthalene	16.4J	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Naphthalene	17.1J	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Phenanthrene	161	ug/kg	17.8	09/16/24 21:01	
EPA 8270E by SIM	Pyrene	236	ug/kg	17.8	09/16/24 21:01	
ASTM D2974-87	Percent Moisture	6.1	%	0.10	09/12/24 09:09	
40283707024	P-7 (10)					
EPA 6010D	Chromium	13.8	mg/kg	1.1	09/10/24 19:37	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40283707024	P-7 (10)					
EPA 6010D	Lead	39.2	mg/kg	2.2	09/10/24 19:37	
EPA 8270E by SIM	Acenaphthene	14.9J	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Acenaphthylene	8.2J	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Anthracene	45.4	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Benzo(a)anthracene	126	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Benzo(a)pyrene	133	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Benzo(b)fluoranthene	147	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Benzo(g,h,i)perylene	85.0	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Benzo(k)fluoranthene	62.7	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Chrysene	120	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Dibenz(a,h)anthracene	18.7J	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Fluoranthene	315	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Fluorene	14.2J	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Indeno(1,2,3-cd)pyrene	67.0	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	1-Methylnaphthalene	12.8J	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	2-Methylnaphthalene	16.9J	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Naphthalene	41.8	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Phenanthrene	208	ug/kg	20.7	09/16/24 13:35	
EPA 8270E by SIM	Pyrene	253	ug/kg	20.7	09/16/24 13:35	
ASTM D2974-87	Percent Moisture	19.3	%	0.10	09/12/24 09:09	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Method: EPA 6010D
Description: 6010D MET ICP
Client: Terracon, Inc. - Milwaukee
Date: September 20, 2024

General Information:

24 samples were analyzed for EPA 6010D by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 483775

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40283707006

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 2769956)
- Chromium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Method: EPA 8270E by SIM
Description: 8270E MSSV PAH by SIM
Client: Terracon, Inc. - Milwaukee
Date: September 20, 2024

General Information:

24 samples were analyzed for EPA 8270E by SIM by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 484288

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- P-3 (0.5) (Lab ID: 40283707001)
- 2-Fluorobiphenyl (S)
- Terphenyl-d14 (S)

QC Batch: 484385

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- P-6 (0.5) (Lab ID: 40283707015)
- 2-Fluorobiphenyl (S)
- Terphenyl-d14 (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Method: EPA 8270E by SIM

Description: 8270E MSSV PAH by SIM

Client: Terracon, Inc. - Milwaukee

Date: September 20, 2024

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-3 (0.5) Lab ID: 40283707001 Collected: 09/05/24 09:10 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	868	mg/kg	5.2	1.4	5	09/10/24 07:05	09/11/24 16:41	7440-47-3	
Lead	2170	mg/kg	10.4	3.1	5	09/10/24 07:05	09/11/24 16:41	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	429J	ug/kg	1850	240	100	09/13/24 08:22	09/13/24 19:12	83-32-9	
Acenaphthylene	244J	ug/kg	1850	233	100	09/13/24 08:22	09/13/24 19:12	208-96-8	
Anthracene	1470J	ug/kg	1850	229	100	09/13/24 08:22	09/13/24 19:12	120-12-7	
Benzo(a)anthracene	4370	ug/kg	1850	239	100	09/13/24 08:22	09/13/24 19:12	56-55-3	
Benzo(a)pyrene	4270	ug/kg	1850	210	100	09/13/24 08:22	09/13/24 19:12	50-32-8	
Benzo(b)fluoranthene	5460	ug/kg	1850	257	100	09/13/24 08:22	09/13/24 19:12	205-99-2	
Benzo(g,h,i)perylene	2400	ug/kg	1850	324	100	09/13/24 08:22	09/13/24 19:12	191-24-2	
Benzo(k)fluoranthene	2580	ug/kg	1850	236	100	09/13/24 08:22	09/13/24 19:12	207-08-9	
Chrysene	4960	ug/kg	1850	348	100	09/13/24 08:22	09/13/24 19:12	218-01-9	
Dibenz(a,h)anthracene	676J	ug/kg	1850	256	100	09/13/24 08:22	09/13/24 19:12	53-70-3	
Fluoranthene	10400	ug/kg	1850	219	100	09/13/24 08:22	09/13/24 19:12	206-44-0	
Fluorene	481J	ug/kg	1850	222	100	09/13/24 08:22	09/13/24 19:12	86-73-7	
Indeno(1,2,3-cd)pyrene	1940	ug/kg	1850	385	100	09/13/24 08:22	09/13/24 19:12	193-39-5	
1-Methylnaphthalene	<270	ug/kg	1850	270	100	09/13/24 08:22	09/13/24 19:12	90-12-0	
2-Methylnaphthalene	<270	ug/kg	1850	270	100	09/13/24 08:22	09/13/24 19:12	91-57-6	
Naphthalene	376J	ug/kg	1850	180	100	09/13/24 08:22	09/13/24 19:12	91-20-3	
Phenanthrene	7000	ug/kg	1850	212	100	09/13/24 08:22	09/13/24 19:12	85-01-8	
Pyrene	9630	ug/kg	1850	272	100	09/13/24 08:22	09/13/24 19:12	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	39-120		100	09/13/24 08:22	09/13/24 19:12	321-60-8	S4
Terphenyl-d14 (S)	0	%	36-120		100	09/13/24 08:22	09/13/24 19:12	1718-51-0	S4
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	9.5	%	0.10	0.10	1		09/12/24 09:09		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Sample: P-3 (4) Lab ID: 40283707002 Collected: 09/05/24 09:12 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	25.6	mg/kg	1.1	0.30	1	09/10/24 07:05	09/10/24 18:27	7440-47-3	
Lead	16.9	mg/kg	2.1	0.64	1	09/10/24 07:05	09/10/24 18:27	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	62.6J	ug/kg	93.8	12.2	5	09/13/24 08:22	09/13/24 19:29	83-32-9	
Acenaphthylene	26.5J	ug/kg	93.8	11.8	5	09/13/24 08:22	09/13/24 19:29	208-96-8	
Anthracene	184	ug/kg	93.8	11.6	5	09/13/24 08:22	09/13/24 19:29	120-12-7	
Benzo(a)anthracene	450	ug/kg	93.8	12.1	5	09/13/24 08:22	09/13/24 19:29	56-55-3	
Benzo(a)pyrene	501	ug/kg	93.8	10.7	5	09/13/24 08:22	09/13/24 19:29	50-32-8	
Benzo(b)fluoranthene	604	ug/kg	93.8	13.0	5	09/13/24 08:22	09/13/24 19:29	205-99-2	
Benzo(g,h,i)perylene	265	ug/kg	93.8	16.5	5	09/13/24 08:22	09/13/24 19:29	191-24-2	
Benzo(k)fluoranthene	280	ug/kg	93.8	12.0	5	09/13/24 08:22	09/13/24 19:29	207-08-9	
Chrysene	500	ug/kg	93.8	17.7	5	09/13/24 08:22	09/13/24 19:29	218-01-9	
Dibenz(a,h)anthracene	67.0J	ug/kg	93.8	13.0	5	09/13/24 08:22	09/13/24 19:29	53-70-3	
Fluoranthene	1110	ug/kg	93.8	11.1	5	09/13/24 08:22	09/13/24 19:29	206-44-0	
Fluorene	56.8J	ug/kg	93.8	11.2	5	09/13/24 08:22	09/13/24 19:29	86-73-7	
Indeno(1,2,3-cd)pyrene	215	ug/kg	93.8	19.5	5	09/13/24 08:22	09/13/24 19:29	193-39-5	
1-Methylnaphthalene	58.9J	ug/kg	93.8	13.7	5	09/13/24 08:22	09/13/24 19:29	90-12-0	
2-Methylnaphthalene	76.6J	ug/kg	93.8	13.7	5	09/13/24 08:22	09/13/24 19:29	91-57-6	
Naphthalene	88.2J	ug/kg	93.8	9.1	5	09/13/24 08:22	09/13/24 19:29	91-20-3	
Phenanthrene	763	ug/kg	93.8	10.7	5	09/13/24 08:22	09/13/24 19:29	85-01-8	
Pyrene	950	ug/kg	93.8	13.8	5	09/13/24 08:22	09/13/24 19:29	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73	%	39-120		5	09/13/24 08:22	09/13/24 19:29	321-60-8	
Terphenyl-d14 (S)	76	%	36-120		5	09/13/24 08:22	09/13/24 19:29	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	10.9	%	0.10	0.10	1		09/09/24 15:23		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-3 (6) Lab ID: 40283707003 Collected: 09/05/24 09:14 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	20.5	mg/kg	1.1	0.31	1	09/10/24 07:05	09/10/24 18:29	7440-47-3	
Lead	29.8	mg/kg	2.3	0.68	1	09/10/24 07:05	09/10/24 18:29	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<2.5	ug/kg	19.0	2.5	1	09/16/24 07:54	09/16/24 11:31	83-32-9	
Acenaphthylene	<2.4	ug/kg	19.0	2.4	1	09/16/24 07:54	09/16/24 11:31	208-96-8	
Anthracene	4.1J	ug/kg	19.0	2.4	1	09/16/24 07:54	09/16/24 11:31	120-12-7	
Benzo(a)anthracene	12.2J	ug/kg	19.0	2.5	1	09/16/24 07:54	09/16/24 11:31	56-55-3	
Benzo(a)pyrene	11.6J	ug/kg	19.0	2.2	1	09/16/24 07:54	09/16/24 11:31	50-32-8	
Benzo(b)fluoranthene	14.3J	ug/kg	19.0	2.6	1	09/16/24 07:54	09/16/24 11:31	205-99-2	
Benzo(g,h,i)perylene	9.7J	ug/kg	19.0	3.3	1	09/16/24 07:54	09/16/24 11:31	191-24-2	
Benzo(k)fluoranthene	6.5J	ug/kg	19.0	2.4	1	09/16/24 07:54	09/16/24 11:31	207-08-9	
Chrysene	15.6J	ug/kg	19.0	3.6	1	09/16/24 07:54	09/16/24 11:31	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	19.0	2.6	1	09/16/24 07:54	09/16/24 11:31	53-70-3	
Fluoranthene	27.1	ug/kg	19.0	2.2	1	09/16/24 07:54	09/16/24 11:31	206-44-0	
Fluorene	<2.3	ug/kg	19.0	2.3	1	09/16/24 07:54	09/16/24 11:31	86-73-7	
Indeno(1,2,3-cd)pyrene	6.1J	ug/kg	19.0	4.0	1	09/16/24 07:54	09/16/24 11:31	193-39-5	
1-Methylnaphthalene	<2.8	ug/kg	19.0	2.8	1	09/16/24 07:54	09/16/24 11:31	90-12-0	
2-Methylnaphthalene	<2.8	ug/kg	19.0	2.8	1	09/16/24 07:54	09/16/24 11:31	91-57-6	
Naphthalene	3.5J	ug/kg	19.0	1.9	1	09/16/24 07:54	09/16/24 11:31	91-20-3	
Phenanthrene	21.1	ug/kg	19.0	2.2	1	09/16/24 07:54	09/16/24 11:31	85-01-8	
Pyrene	22.0	ug/kg	19.0	2.8	1	09/16/24 07:54	09/16/24 11:31	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	39-120		1	09/16/24 07:54	09/16/24 11:31	321-60-8	
Terphenyl-d14 (S)	69	%	36-120		1	09/16/24 07:54	09/16/24 11:31	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	12.1	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-3 (10) Lab ID: 40283707004 Collected: 09/05/24 09:19 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	15.7	mg/kg	1.1	0.32	1	09/10/24 07:05	09/10/24 18:31	7440-47-3	
Lead	29.3	mg/kg	2.3	0.68	1	09/10/24 07:05	09/10/24 18:31	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	10.2J	ug/kg	19.1	2.5	1	09/16/24 07:54	09/16/24 11:47	83-32-9	
Acenaphthylene	3.1J	ug/kg	19.1	2.4	1	09/16/24 07:54	09/16/24 11:47	208-96-8	
Anthracene	32.9	ug/kg	19.1	2.4	1	09/16/24 07:54	09/16/24 11:47	120-12-7	
Benzo(a)anthracene	81.8	ug/kg	19.1	2.5	1	09/16/24 07:54	09/16/24 11:47	56-55-3	
Benzo(a)pyrene	91.1	ug/kg	19.1	2.2	1	09/16/24 07:54	09/16/24 11:47	50-32-8	
Benzo(b)fluoranthene	102	ug/kg	19.1	2.6	1	09/16/24 07:54	09/16/24 11:47	205-99-2	
Benzo(g,h,i)perylene	68.1	ug/kg	19.1	3.3	1	09/16/24 07:54	09/16/24 11:47	191-24-2	
Benzo(k)fluoranthene	42.8	ug/kg	19.1	2.4	1	09/16/24 07:54	09/16/24 11:47	207-08-9	
Chrysene	81.0	ug/kg	19.1	3.6	1	09/16/24 07:54	09/16/24 11:47	218-01-9	
Dibenz(a,h)anthracene	10.5J	ug/kg	19.1	2.6	1	09/16/24 07:54	09/16/24 11:47	53-70-3	
Fluoranthene	202	ug/kg	19.1	2.3	1	09/16/24 07:54	09/16/24 11:47	206-44-0	
Fluorene	7.2J	ug/kg	19.1	2.3	1	09/16/24 07:54	09/16/24 11:47	86-73-7	
Indeno(1,2,3-cd)pyrene	49.4	ug/kg	19.1	4.0	1	09/16/24 07:54	09/16/24 11:47	193-39-5	
1-Methylnaphthalene	12.9J	ug/kg	19.1	2.8	1	09/16/24 07:54	09/16/24 11:47	90-12-0	
2-Methylnaphthalene	18.8J	ug/kg	19.1	2.8	1	09/16/24 07:54	09/16/24 11:47	91-57-6	
Naphthalene	46.7	ug/kg	19.1	1.9	1	09/16/24 07:54	09/16/24 11:47	91-20-3	
Phenanthrene	94.2	ug/kg	19.1	2.2	1	09/16/24 07:54	09/16/24 11:47	85-01-8	
Pyrene	170	ug/kg	19.1	2.8	1	09/16/24 07:54	09/16/24 11:47	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	55	%	39-120		1	09/16/24 07:54	09/16/24 11:47	321-60-8	
Terphenyl-d14 (S)	53	%	36-120		1	09/16/24 07:54	09/16/24 11:47	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	12.4	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-4 (0.5) Lab ID: 40283707005 Collected: 09/05/24 12:13 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	23.7	mg/kg	1.1	0.29	1	09/10/24 07:05	09/10/24 18:33	7440-47-3	
Lead	78.8	mg/kg	2.1	0.63	1	09/10/24 07:05	09/10/24 18:33	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	24.6J	ug/kg	151	19.6	8	09/16/24 07:54	09/16/24 16:55	83-32-9	
Acenaphthylene	<19.0	ug/kg	151	19.0	8	09/16/24 07:54	09/16/24 16:55	208-96-8	
Anthracene	99.6J	ug/kg	151	18.7	8	09/16/24 07:54	09/16/24 16:55	120-12-7	
Benzo(a)anthracene	507	ug/kg	151	19.5	8	09/16/24 07:54	09/16/24 16:55	56-55-3	
Benzo(a)pyrene	573	ug/kg	151	17.1	8	09/16/24 07:54	09/16/24 16:55	50-32-8	
Benzo(b)fluoranthene	741	ug/kg	151	20.9	8	09/16/24 07:54	09/16/24 16:55	205-99-2	
Benzo(g,h,i)perylene	442	ug/kg	151	26.5	8	09/16/24 07:54	09/16/24 16:55	191-24-2	
Benzo(k)fluoranthene	302	ug/kg	151	19.3	8	09/16/24 07:54	09/16/24 16:55	207-08-9	
Chrysene	518	ug/kg	151	28.4	8	09/16/24 07:54	09/16/24 16:55	218-01-9	
Dibenz(a,h)anthracene	105J	ug/kg	151	20.9	8	09/16/24 07:54	09/16/24 16:55	53-70-3	
Fluoranthene	1040	ug/kg	151	17.8	8	09/16/24 07:54	09/16/24 16:55	206-44-0	
Fluorene	24.6J	ug/kg	151	18.1	8	09/16/24 07:54	09/16/24 16:55	86-73-7	
Indeno(1,2,3-cd)pyrene	340	ug/kg	151	31.4	8	09/16/24 07:54	09/16/24 16:55	193-39-5	
1-Methylnaphthalene	29.2J	ug/kg	151	22.0	8	09/16/24 07:54	09/16/24 16:55	90-12-0	
2-Methylnaphthalene	39.7J	ug/kg	151	22.1	8	09/16/24 07:54	09/16/24 16:55	91-57-6	
Naphthalene	49.3J	ug/kg	151	14.7	8	09/16/24 07:54	09/16/24 16:55	91-20-3	
Phenanthrene	411	ug/kg	151	17.3	8	09/16/24 07:54	09/16/24 16:55	85-01-8	
Pyrene	841	ug/kg	151	22.2	8	09/16/24 07:54	09/16/24 16:55	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	39-120		8	09/16/24 07:54	09/16/24 16:55	321-60-8	
Terphenyl-d14 (S)	55	%	36-120		8	09/16/24 07:54	09/16/24 16:55	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	11.5	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-4 (2) Lab ID: 40283707006 Collected: 09/05/24 12:14 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	38.6	mg/kg	5.5	1.5	5	09/10/24 07:05	09/11/24 14:30	7440-47-3	M0
Lead	160	mg/kg	10.9	3.3	5	09/10/24 07:05	09/11/24 14:30	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	61.2J	ug/kg	366	47.5	20	09/16/24 07:54	09/16/24 15:38	83-32-9	
Acenaphthylene	<46.2	ug/kg	366	46.2	20	09/16/24 07:54	09/16/24 15:38	208-96-8	
Anthracene	218J	ug/kg	366	45.4	20	09/16/24 07:54	09/16/24 15:38	120-12-7	
Benzo(a)anthracene	856	ug/kg	366	47.3	20	09/16/24 07:54	09/16/24 15:38	56-55-3	
Benzo(a)pyrene	962	ug/kg	366	41.6	20	09/16/24 07:54	09/16/24 15:38	50-32-8	
Benzo(b)fluoranthene	1050	ug/kg	366	50.8	20	09/16/24 07:54	09/16/24 15:38	205-99-2	
Benzo(g,h,i)perylene	727	ug/kg	366	64.3	20	09/16/24 07:54	09/16/24 15:38	191-24-2	
Benzo(k)fluoranthene	498	ug/kg	366	46.8	20	09/16/24 07:54	09/16/24 15:38	207-08-9	
Chrysene	779	ug/kg	366	69.1	20	09/16/24 07:54	09/16/24 15:38	218-01-9	
Dibenz(a,h)anthracene	154J	ug/kg	366	50.7	20	09/16/24 07:54	09/16/24 15:38	53-70-3	
Fluoranthene	1900	ug/kg	366	43.3	20	09/16/24 07:54	09/16/24 15:38	206-44-0	
Fluorene	<43.9	ug/kg	366	43.9	20	09/16/24 07:54	09/16/24 15:38	86-73-7	
Indeno(1,2,3-cd)pyrene	552	ug/kg	366	76.3	20	09/16/24 07:54	09/16/24 15:38	193-39-5	
1-Methylnaphthalene	55.1J	ug/kg	366	53.5	20	09/16/24 07:54	09/16/24 15:38	90-12-0	
2-Methylnaphthalene	71.3J	ug/kg	366	53.6	20	09/16/24 07:54	09/16/24 15:38	91-57-6	
Naphthalene	132J	ug/kg	366	35.7	20	09/16/24 07:54	09/16/24 15:38	91-20-3	
Phenanthrene	876	ug/kg	366	41.9	20	09/16/24 07:54	09/16/24 15:38	85-01-8	
Pyrene	1670	ug/kg	366	53.8	20	09/16/24 07:54	09/16/24 15:38	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	39-120		20	09/16/24 07:54	09/16/24 15:38	321-60-8	
Terphenyl-d14 (S)	64	%	36-120		20	09/16/24 07:54	09/16/24 15:38	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	8.8	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-4 (4) Lab ID: 40283707007 Collected: 09/05/24 12:15 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	20.9	mg/kg	1.1	0.30	1	09/10/24 07:05	09/10/24 18:51	7440-47-3	
Lead	118	mg/kg	2.1	0.64	1	09/10/24 07:05	09/10/24 18:51	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<197	ug/kg	1520	197	80	09/16/24 07:54	09/16/24 15:53	83-32-9	
Acenaphthylene	<191	ug/kg	1520	191	80	09/16/24 07:54	09/16/24 15:53	208-96-8	
Anthracene	815J	ug/kg	1520	188	80	09/16/24 07:54	09/16/24 15:53	120-12-7	
Benzo(a)anthracene	2900	ug/kg	1520	196	80	09/16/24 07:54	09/16/24 15:53	56-55-3	
Benzo(a)pyrene	3050	ug/kg	1520	172	80	09/16/24 07:54	09/16/24 15:53	50-32-8	
Benzo(b)fluoranthene	3200	ug/kg	1520	211	80	09/16/24 07:54	09/16/24 15:53	205-99-2	
Benzo(g,h,i)perylene	2340	ug/kg	1520	266	80	09/16/24 07:54	09/16/24 15:53	191-24-2	
Benzo(k)fluoranthene	1550	ug/kg	1520	194	80	09/16/24 07:54	09/16/24 15:53	207-08-9	
Chrysene	2480	ug/kg	1520	286	80	09/16/24 07:54	09/16/24 15:53	218-01-9	
Dibenz(a,h)anthracene	456J	ug/kg	1520	210	80	09/16/24 07:54	09/16/24 15:53	53-70-3	
Fluoranthene	6070	ug/kg	1520	179	80	09/16/24 07:54	09/16/24 15:53	206-44-0	
Fluorene	<182	ug/kg	1520	182	80	09/16/24 07:54	09/16/24 15:53	86-73-7	
Indeno(1,2,3-cd)pyrene	1770	ug/kg	1520	316	80	09/16/24 07:54	09/16/24 15:53	193-39-5	
1-Methylnaphthalene	<222	ug/kg	1520	222	80	09/16/24 07:54	09/16/24 15:53	90-12-0	
2-Methylnaphthalene	<222	ug/kg	1520	222	80	09/16/24 07:54	09/16/24 15:53	91-57-6	
Naphthalene	659J	ug/kg	1520	148	80	09/16/24 07:54	09/16/24 15:53	91-20-3	
Phenanthrene	2660	ug/kg	1520	174	80	09/16/24 07:54	09/16/24 15:53	85-01-8	
Pyrene	6220	ug/kg	1520	223	80	09/16/24 07:54	09/16/24 15:53	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	39-120		80	09/16/24 07:54	09/16/24 15:53	321-60-8	
Terphenyl-d14 (S)	66	%	36-120		80	09/16/24 07:54	09/16/24 15:53	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	11.8	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-4 (6) Lab ID: 40283707008 Collected: 09/05/24 12:18 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	27.5	mg/kg	1.1	0.29	1	09/10/24 07:05	09/10/24 18:55	7440-47-3	
Lead	86.7	mg/kg	2.1	0.63	1	09/10/24 07:05	09/10/24 18:55	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	19.4J	ug/kg	79.0	10.2	4	09/16/24 07:54	09/16/24 16:09	83-32-9	
Acenaphthylene	17.0J	ug/kg	79.0	10	4	09/16/24 07:54	09/16/24 16:09	208-96-8	
Anthracene	61.0J	ug/kg	79.0	9.8	4	09/16/24 07:54	09/16/24 16:09	120-12-7	
Benzo(a)anthracene	265	ug/kg	79.0	10.2	4	09/16/24 07:54	09/16/24 16:09	56-55-3	
Benzo(a)pyrene	297	ug/kg	79.0	9.0	4	09/16/24 07:54	09/16/24 16:09	50-32-8	
Benzo(b)fluoranthene	350	ug/kg	79.0	11.0	4	09/16/24 07:54	09/16/24 16:09	205-99-2	
Benzo(g,h,i)perylene	208	ug/kg	79.0	13.9	4	09/16/24 07:54	09/16/24 16:09	191-24-2	
Benzo(k)fluoranthene	130	ug/kg	79.0	10.1	4	09/16/24 07:54	09/16/24 16:09	207-08-9	
Chrysene	260	ug/kg	79.0	14.9	4	09/16/24 07:54	09/16/24 16:09	218-01-9	
Dibenz(a,h)anthracene	44.9J	ug/kg	79.0	10.9	4	09/16/24 07:54	09/16/24 16:09	53-70-3	
Fluoranthene	612	ug/kg	79.0	9.3	4	09/16/24 07:54	09/16/24 16:09	206-44-0	
Fluorene	15.4J	ug/kg	79.0	9.5	4	09/16/24 07:54	09/16/24 16:09	86-73-7	
Indeno(1,2,3-cd)pyrene	159	ug/kg	79.0	16.4	4	09/16/24 07:54	09/16/24 16:09	193-39-5	
1-Methylnaphthalene	45.5J	ug/kg	79.0	11.5	4	09/16/24 07:54	09/16/24 16:09	90-12-0	
2-Methylnaphthalene	58.6J	ug/kg	79.0	11.5	4	09/16/24 07:54	09/16/24 16:09	91-57-6	
Naphthalene	117	ug/kg	79.0	7.7	4	09/16/24 07:54	09/16/24 16:09	91-20-3	
Phenanthrene	290	ug/kg	79.0	9.0	4	09/16/24 07:54	09/16/24 16:09	85-01-8	
Pyrene	529	ug/kg	79.0	11.6	4	09/16/24 07:54	09/16/24 16:09	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	39-120		4	09/16/24 07:54	09/16/24 16:09	321-60-8	
Terphenyl-d14 (S)	67	%	36-120		4	09/16/24 07:54	09/16/24 16:09	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	15.3	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-4 (10) Lab ID: 40283707009 Collected: 09/05/24 12:26 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	14.4	mg/kg	1.2	0.32	1	09/10/24 07:05	09/10/24 18:57	7440-47-3	
Lead	99.3	mg/kg	2.3	0.69	1	09/10/24 07:05	09/10/24 18:57	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<10.5	ug/kg	81.0	10.5	4	09/16/24 07:54	09/16/24 16:24	83-32-9	
Acenaphthylene	<10.2	ug/kg	81.0	10.2	4	09/16/24 07:54	09/16/24 16:24	208-96-8	
Anthracene	37.8J	ug/kg	81.0	10.1	4	09/16/24 07:54	09/16/24 16:24	120-12-7	
Benzo(a)anthracene	158	ug/kg	81.0	10.5	4	09/16/24 07:54	09/16/24 16:24	56-55-3	
Benzo(a)pyrene	175	ug/kg	81.0	9.2	4	09/16/24 07:54	09/16/24 16:24	50-32-8	
Benzo(b)fluoranthene	202	ug/kg	81.0	11.2	4	09/16/24 07:54	09/16/24 16:24	205-99-2	
Benzo(g,h,i)perylene	126	ug/kg	81.0	14.2	4	09/16/24 07:54	09/16/24 16:24	191-24-2	
Benzo(k)fluoranthene	95.1	ug/kg	81.0	10.4	4	09/16/24 07:54	09/16/24 16:24	207-08-9	
Chrysene	159	ug/kg	81.0	15.3	4	09/16/24 07:54	09/16/24 16:24	218-01-9	
Dibenz(a,h)anthracene	25.8J	ug/kg	81.0	11.2	4	09/16/24 07:54	09/16/24 16:24	53-70-3	
Fluoranthene	332	ug/kg	81.0	9.6	4	09/16/24 07:54	09/16/24 16:24	206-44-0	
Fluorene	<9.7	ug/kg	81.0	9.7	4	09/16/24 07:54	09/16/24 16:24	86-73-7	
Indeno(1,2,3-cd)pyrene	97.6	ug/kg	81.0	16.9	4	09/16/24 07:54	09/16/24 16:24	193-39-5	
1-Methylnaphthalene	27.9J	ug/kg	81.0	11.8	4	09/16/24 07:54	09/16/24 16:24	90-12-0	
2-Methylnaphthalene	37.7J	ug/kg	81.0	11.8	4	09/16/24 07:54	09/16/24 16:24	91-57-6	
Naphthalene	67.7J	ug/kg	81.0	7.9	4	09/16/24 07:54	09/16/24 16:24	91-20-3	
Phenanthrene	152	ug/kg	81.0	9.3	4	09/16/24 07:54	09/16/24 16:24	85-01-8	
Pyrene	298	ug/kg	81.0	11.9	4	09/16/24 07:54	09/16/24 16:24	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	39-120		4	09/16/24 07:54	09/16/24 16:24	321-60-8	
Terphenyl-d14 (S)	57	%	36-120		4	09/16/24 07:54	09/16/24 16:24	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	17.6	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-5 (0.5) Lab ID: 40283707010 Collected: 09/05/24 11:42 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	20.0	mg/kg	1.0	0.29	1	09/10/24 07:05	09/10/24 19:04	7440-47-3	
Lead	74.9	mg/kg	2.1	0.63	1	09/10/24 07:05	09/10/24 19:04	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	80.8J	ug/kg	360	46.7	20	09/16/24 07:54	09/16/24 17:11	83-32-9	
Acenaphthylene	<45.4	ug/kg	360	45.4	20	09/16/24 07:54	09/16/24 17:11	208-96-8	
Anthracene	263J	ug/kg	360	44.7	20	09/16/24 07:54	09/16/24 17:11	120-12-7	
Benzo(a)anthracene	1210	ug/kg	360	46.6	20	09/16/24 07:54	09/16/24 17:11	56-55-3	
Benzo(a)pyrene	1300	ug/kg	360	40.9	20	09/16/24 07:54	09/16/24 17:11	50-32-8	
Benzo(b)fluoranthene	1690	ug/kg	360	50.0	20	09/16/24 07:54	09/16/24 17:11	205-99-2	
Benzo(g,h,i)perylene	933	ug/kg	360	63.2	20	09/16/24 07:54	09/16/24 17:11	191-24-2	
Benzo(k)fluoranthene	704	ug/kg	360	46.0	20	09/16/24 07:54	09/16/24 17:11	207-08-9	
Chrysene	1220	ug/kg	360	67.9	20	09/16/24 07:54	09/16/24 17:11	218-01-9	
Dibenz(a,h)anthracene	244J	ug/kg	360	49.9	20	09/16/24 07:54	09/16/24 17:11	53-70-3	
Fluoranthene	2520	ug/kg	360	42.6	20	09/16/24 07:54	09/16/24 17:11	206-44-0	
Fluorene	85.9J	ug/kg	360	43.2	20	09/16/24 07:54	09/16/24 17:11	86-73-7	
Indeno(1,2,3-cd)pyrene	740	ug/kg	360	75.0	20	09/16/24 07:54	09/16/24 17:11	193-39-5	
1-Methylnaphthalene	55.8J	ug/kg	360	52.6	20	09/16/24 07:54	09/16/24 17:11	90-12-0	
2-Methylnaphthalene	74.3J	ug/kg	360	52.7	20	09/16/24 07:54	09/16/24 17:11	91-57-6	
Naphthalene	162J	ug/kg	360	35.1	20	09/16/24 07:54	09/16/24 17:11	91-20-3	
Phenanthrene	966	ug/kg	360	41.2	20	09/16/24 07:54	09/16/24 17:11	85-01-8	
Pyrene	1970	ug/kg	360	52.9	20	09/16/24 07:54	09/16/24 17:11	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	39-120		20	09/16/24 07:54	09/16/24 17:11	321-60-8	
Terphenyl-d14 (S)	61	%	36-120		20	09/16/24 07:54	09/16/24 17:11	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	7.1	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-5 (2) Lab ID: 40283707011 Collected: 09/05/24 11:43 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	28.1	mg/kg	1.0	0.29	1	09/10/24 07:05	09/10/24 19:06	7440-47-3	
Lead	860	mg/kg	2.1	0.63	1	09/10/24 07:05	09/10/24 19:06	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	54.4J	ug/kg	186	24.2	10	09/16/24 07:54	09/16/24 17:26	83-32-9	
Acenaphthylene	<23.5	ug/kg	186	23.5	10	09/16/24 07:54	09/16/24 17:26	208-96-8	
Anthracene	130J	ug/kg	186	23.1	10	09/16/24 07:54	09/16/24 17:26	120-12-7	
Benzo(a)anthracene	551	ug/kg	186	24.1	10	09/16/24 07:54	09/16/24 17:26	56-55-3	
Benzo(a)pyrene	606	ug/kg	186	21.2	10	09/16/24 07:54	09/16/24 17:26	50-32-8	
Benzo(b)fluoranthene	697	ug/kg	186	25.9	10	09/16/24 07:54	09/16/24 17:26	205-99-2	
Benzo(g,h,i)perylene	453	ug/kg	186	32.7	10	09/16/24 07:54	09/16/24 17:26	191-24-2	
Benzo(k)fluoranthene	282	ug/kg	186	23.8	10	09/16/24 07:54	09/16/24 17:26	207-08-9	
Chrysene	479	ug/kg	186	35.2	10	09/16/24 07:54	09/16/24 17:26	218-01-9	
Dibenz(a,h)anthracene	97.2J	ug/kg	186	25.8	10	09/16/24 07:54	09/16/24 17:26	53-70-3	
Fluoranthene	1240	ug/kg	186	22.1	10	09/16/24 07:54	09/16/24 17:26	206-44-0	
Fluorene	38.5J	ug/kg	186	22.4	10	09/16/24 07:54	09/16/24 17:26	86-73-7	
Indeno(1,2,3-cd)pyrene	346	ug/kg	186	38.8	10	09/16/24 07:54	09/16/24 17:26	193-39-5	
1-Methylnaphthalene	<27.2	ug/kg	186	27.2	10	09/16/24 07:54	09/16/24 17:26	90-12-0	
2-Methylnaphthalene	29.6J	ug/kg	186	27.3	10	09/16/24 07:54	09/16/24 17:26	91-57-6	
Naphthalene	64.3J	ug/kg	186	18.2	10	09/16/24 07:54	09/16/24 17:26	91-20-3	
Phenanthrene	611	ug/kg	186	21.3	10	09/16/24 07:54	09/16/24 17:26	85-01-8	
Pyrene	1070	ug/kg	186	27.4	10	09/16/24 07:54	09/16/24 17:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	39-120		10	09/16/24 07:54	09/16/24 17:26	321-60-8	
Terphenyl-d14 (S)	55	%	36-120		10	09/16/24 07:54	09/16/24 17:26	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	10.4	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-5 (4) Lab ID: 40283707012 Collected: 09/05/24 11:44 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	20.9	mg/kg	1.2	0.32	1	09/10/24 07:05	09/10/24 19:08	7440-47-3	
Lead	56.5	mg/kg	2.3	0.70	1	09/10/24 07:05	09/10/24 19:08	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	7.4J	ug/kg	19.8	2.6	1	09/16/24 07:54	09/16/24 16:40	83-32-9	
Acenaphthylene	5.0J	ug/kg	19.8	2.5	1	09/16/24 07:54	09/16/24 16:40	208-96-8	
Anthracene	19.8J	ug/kg	19.8	2.5	1	09/16/24 07:54	09/16/24 16:40	120-12-7	
Benzo(a)anthracene	126	ug/kg	19.8	2.6	1	09/16/24 07:54	09/16/24 16:40	56-55-3	
Benzo(a)pyrene	148	ug/kg	19.8	2.2	1	09/16/24 07:54	09/16/24 16:40	50-32-8	
Benzo(b)fluoranthene	184	ug/kg	19.8	2.7	1	09/16/24 07:54	09/16/24 16:40	205-99-2	
Benzo(g,h,i)perylene	122	ug/kg	19.8	3.5	1	09/16/24 07:54	09/16/24 16:40	191-24-2	
Benzo(k)fluoranthene	72.7	ug/kg	19.8	2.5	1	09/16/24 07:54	09/16/24 16:40	207-08-9	
Chrysene	123	ug/kg	19.8	3.7	1	09/16/24 07:54	09/16/24 16:40	218-01-9	
Dibenz(a,h)anthracene	25.1	ug/kg	19.8	2.7	1	09/16/24 07:54	09/16/24 16:40	53-70-3	
Fluoranthene	271	ug/kg	19.8	2.3	1	09/16/24 07:54	09/16/24 16:40	206-44-0	
Fluorene	4.5J	ug/kg	19.8	2.4	1	09/16/24 07:54	09/16/24 16:40	86-73-7	
Indeno(1,2,3-cd)pyrene	91.3	ug/kg	19.8	4.1	1	09/16/24 07:54	09/16/24 16:40	193-39-5	
1-Methylnaphthalene	10.8J	ug/kg	19.8	2.9	1	09/16/24 07:54	09/16/24 16:40	90-12-0	
2-Methylnaphthalene	14.2J	ug/kg	19.8	2.9	1	09/16/24 07:54	09/16/24 16:40	91-57-6	
Naphthalene	21.5	ug/kg	19.8	1.9	1	09/16/24 07:54	09/16/24 16:40	91-20-3	
Phenanthrene	96.3	ug/kg	19.8	2.3	1	09/16/24 07:54	09/16/24 16:40	85-01-8	
Pyrene	248	ug/kg	19.8	2.9	1	09/16/24 07:54	09/16/24 16:40	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	39-120		1	09/16/24 07:54	09/16/24 16:40	321-60-8	
Terphenyl-d14 (S)	59	%	36-120		1	09/16/24 07:54	09/16/24 16:40	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	15.6	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-5 (6) Lab ID: 40283707013 Collected: 09/05/24 11:45 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	11.1	mg/kg	1.1	0.31	1	09/10/24 07:05	09/10/24 19:10	7440-47-3	
Lead	24.8	mg/kg	2.2	0.67	1	09/10/24 07:05	09/10/24 19:10	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<2.4	ug/kg	18.6	2.4	1	09/16/24 07:54	09/16/24 12:02	83-32-9	
Acenaphthylene	<2.3	ug/kg	18.6	2.3	1	09/16/24 07:54	09/16/24 12:02	208-96-8	
Anthracene	2.8J	ug/kg	18.6	2.3	1	09/16/24 07:54	09/16/24 12:02	120-12-7	
Benzo(a)anthracene	13.3J	ug/kg	18.6	2.4	1	09/16/24 07:54	09/16/24 12:02	56-55-3	
Benzo(a)pyrene	12.6J	ug/kg	18.6	2.1	1	09/16/24 07:54	09/16/24 12:02	50-32-8	
Benzo(b)fluoranthene	16.7J	ug/kg	18.6	2.6	1	09/16/24 07:54	09/16/24 12:02	205-99-2	
Benzo(g,h,i)perylene	9.9J	ug/kg	18.6	3.3	1	09/16/24 07:54	09/16/24 12:02	191-24-2	
Benzo(k)fluoranthene	6.3J	ug/kg	18.6	2.4	1	09/16/24 07:54	09/16/24 12:02	207-08-9	
Chrysene	13.9J	ug/kg	18.6	3.5	1	09/16/24 07:54	09/16/24 12:02	218-01-9	
Dibenz(a,h)anthracene	<2.6	ug/kg	18.6	2.6	1	09/16/24 07:54	09/16/24 12:02	53-70-3	
Fluoranthene	25.9	ug/kg	18.6	2.2	1	09/16/24 07:54	09/16/24 12:02	206-44-0	
Fluorene	<2.2	ug/kg	18.6	2.2	1	09/16/24 07:54	09/16/24 12:02	86-73-7	
Indeno(1,2,3-cd)pyrene	6.5J	ug/kg	18.6	3.9	1	09/16/24 07:54	09/16/24 12:02	193-39-5	
1-Methylnaphthalene	<2.7	ug/kg	18.6	2.7	1	09/16/24 07:54	09/16/24 12:02	90-12-0	
2-Methylnaphthalene	<2.7	ug/kg	18.6	2.7	1	09/16/24 07:54	09/16/24 12:02	91-57-6	
Naphthalene	<1.8	ug/kg	18.6	1.8	1	09/16/24 07:54	09/16/24 12:02	91-20-3	
Phenanthrene	8.8J	ug/kg	18.6	2.1	1	09/16/24 07:54	09/16/24 12:02	85-01-8	
Pyrene	19.5	ug/kg	18.6	2.7	1	09/16/24 07:54	09/16/24 12:02	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	65	%	39-120		1	09/16/24 07:54	09/16/24 12:02	321-60-8	
Terphenyl-d14 (S)	66	%	36-120		1	09/16/24 07:54	09/16/24 12:02	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	10.2	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-5 (10) Lab ID: 40283707014 Collected: 09/05/24 11:49 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	19.1	mg/kg	1.1	0.32	1	09/10/24 07:05	09/10/24 19:12	7440-47-3	
Lead	31.4	mg/kg	2.3	0.69	1	09/10/24 07:05	09/10/24 19:12	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<99.8	ug/kg	770	99.8	40	09/16/24 07:54	09/16/24 17:41	83-32-9	
Acenaphthylene	<97.0	ug/kg	770	97.0	40	09/16/24 07:54	09/16/24 17:41	208-96-8	
Anthracene	451J	ug/kg	770	95.5	40	09/16/24 07:54	09/16/24 17:41	120-12-7	
Benzo(a)anthracene	922	ug/kg	770	99.4	40	09/16/24 07:54	09/16/24 17:41	56-55-3	
Benzo(a)pyrene	813	ug/kg	770	87.4	40	09/16/24 07:54	09/16/24 17:41	50-32-8	
Benzo(b)fluoranthene	837	ug/kg	770	107	40	09/16/24 07:54	09/16/24 17:41	205-99-2	
Benzo(g,h,i)perylene	550J	ug/kg	770	135	40	09/16/24 07:54	09/16/24 17:41	191-24-2	
Benzo(k)fluoranthene	357J	ug/kg	770	98.3	40	09/16/24 07:54	09/16/24 17:41	207-08-9	
Chrysene	666J	ug/kg	770	145	40	09/16/24 07:54	09/16/24 17:41	218-01-9	
Dibenz(a,h)anthracene	<106	ug/kg	770	106	40	09/16/24 07:54	09/16/24 17:41	53-70-3	
Fluoranthene	2500	ug/kg	770	91.1	40	09/16/24 07:54	09/16/24 17:41	206-44-0	
Fluorene	224J	ug/kg	770	92.3	40	09/16/24 07:54	09/16/24 17:41	86-73-7	
Indeno(1,2,3-cd)pyrene	392J	ug/kg	770	160	40	09/16/24 07:54	09/16/24 17:41	193-39-5	
1-Methylnaphthalene	<112	ug/kg	770	112	40	09/16/24 07:54	09/16/24 17:41	90-12-0	
2-Methylnaphthalene	<113	ug/kg	770	113	40	09/16/24 07:54	09/16/24 17:41	91-57-6	
Naphthalene	119J	ug/kg	770	75.0	40	09/16/24 07:54	09/16/24 17:41	91-20-3	
Phenanthrene	2090	ug/kg	770	88.1	40	09/16/24 07:54	09/16/24 17:41	85-01-8	
Pyrene	2300	ug/kg	770	113	40	09/16/24 07:54	09/16/24 17:41	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%	39-120		40	09/16/24 07:54	09/16/24 17:41	321-60-8	
Terphenyl-d14 (S)	63	%	36-120		40	09/16/24 07:54	09/16/24 17:41	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	13.3	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-6 (0.5) Lab ID: 40283707015 Collected: 09/05/24 10:15 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	72.9	mg/kg	0.99	0.28	1	09/10/24 07:05	09/10/24 19:14	7440-47-3	
Lead	370	mg/kg	2.0	0.60	1	09/10/24 07:05	09/10/24 19:14	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	467J	ug/kg	1840	239	100	09/16/24 07:54	09/16/24 17:57	83-32-9	
Acenaphthylene	<232	ug/kg	1840	232	100	09/16/24 07:54	09/16/24 17:57	208-96-8	
Anthracene	1150J	ug/kg	1840	228	100	09/16/24 07:54	09/16/24 17:57	120-12-7	
Benzo(a)anthracene	3450	ug/kg	1840	238	100	09/16/24 07:54	09/16/24 17:57	56-55-3	
Benzo(a)pyrene	3170	ug/kg	1840	209	100	09/16/24 07:54	09/16/24 17:57	50-32-8	
Benzo(b)fluoranthene	3400	ug/kg	1840	255	100	09/16/24 07:54	09/16/24 17:57	205-99-2	
Benzo(g,h,i)perylene	2050	ug/kg	1840	323	100	09/16/24 07:54	09/16/24 17:57	191-24-2	
Benzo(k)fluoranthene	1640J	ug/kg	1840	235	100	09/16/24 07:54	09/16/24 17:57	207-08-9	
Chrysene	3020	ug/kg	1840	347	100	09/16/24 07:54	09/16/24 17:57	218-01-9	
Dibenz(a,h)anthracene	497J	ug/kg	1840	254	100	09/16/24 07:54	09/16/24 17:57	53-70-3	
Fluoranthene	7560	ug/kg	1840	218	100	09/16/24 07:54	09/16/24 17:57	206-44-0	
Fluorene	451J	ug/kg	1840	220	100	09/16/24 07:54	09/16/24 17:57	86-73-7	
Indeno(1,2,3-cd)pyrene	1560J	ug/kg	1840	383	100	09/16/24 07:54	09/16/24 17:57	193-39-5	
1-Methylnaphthalene	<269	ug/kg	1840	269	100	09/16/24 07:54	09/16/24 17:57	90-12-0	
2-Methylnaphthalene	<269	ug/kg	1840	269	100	09/16/24 07:54	09/16/24 17:57	91-57-6	
Naphthalene	408J	ug/kg	1840	179	100	09/16/24 07:54	09/16/24 17:57	91-20-3	
Phenanthrene	5120	ug/kg	1840	211	100	09/16/24 07:54	09/16/24 17:57	85-01-8	
Pyrene	7450	ug/kg	1840	270	100	09/16/24 07:54	09/16/24 17:57	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	39-120		100	09/16/24 07:54	09/16/24 17:57	321-60-8	S4
Terphenyl-d14 (S)	0	%	36-120		100	09/16/24 07:54	09/16/24 17:57	1718-51-0	S4
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	9.2	%	0.10	0.10	1		09/09/24 15:24		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

Sample: P-6 (2) Lab ID: 40283707016 Collected: 09/05/24 10:16 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	22.5	mg/kg	0.99	0.27	1	09/10/24 07:05	09/10/24 19:16	7440-47-3	
Lead	103	mg/kg	2.0	0.59	1	09/10/24 07:05	09/10/24 19:16	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	145J	ug/kg	373	48.4	20	09/16/24 07:54	09/16/24 18:12	83-32-9	
Acenaphthylene	<47.0	ug/kg	373	47.0	20	09/16/24 07:54	09/16/24 18:12	208-96-8	
Anthracene	224J	ug/kg	373	46.3	20	09/16/24 07:54	09/16/24 18:12	120-12-7	
Benzo(a)anthracene	770	ug/kg	373	48.2	20	09/16/24 07:54	09/16/24 18:12	56-55-3	
Benzo(a)pyrene	789	ug/kg	373	42.4	20	09/16/24 07:54	09/16/24 18:12	50-32-8	
Benzo(b)fluoranthene	835	ug/kg	373	51.8	20	09/16/24 07:54	09/16/24 18:12	205-99-2	
Benzo(g,h,i)perylene	547	ug/kg	373	65.4	20	09/16/24 07:54	09/16/24 18:12	191-24-2	
Benzo(k)fluoranthene	395	ug/kg	373	47.6	20	09/16/24 07:54	09/16/24 18:12	207-08-9	
Chrysene	630	ug/kg	373	70.3	20	09/16/24 07:54	09/16/24 18:12	218-01-9	
Dibenz(a,h)anthracene	118J	ug/kg	373	51.6	20	09/16/24 07:54	09/16/24 18:12	53-70-3	
Fluoranthene	1910	ug/kg	373	44.1	20	09/16/24 07:54	09/16/24 18:12	206-44-0	
Fluorene	95.4J	ug/kg	373	44.7	20	09/16/24 07:54	09/16/24 18:12	86-73-7	
Indeno(1,2,3-cd)pyrene	424	ug/kg	373	77.7	20	09/16/24 07:54	09/16/24 18:12	193-39-5	
1-Methylnaphthalene	<54.5	ug/kg	373	54.5	20	09/16/24 07:54	09/16/24 18:12	90-12-0	
2-Methylnaphthalene	<54.5	ug/kg	373	54.5	20	09/16/24 07:54	09/16/24 18:12	91-57-6	
Naphthalene	89.4J	ug/kg	373	36.3	20	09/16/24 07:54	09/16/24 18:12	91-20-3	
Phenanthrene	1200	ug/kg	373	42.7	20	09/16/24 07:54	09/16/24 18:12	85-01-8	
Pyrene	1790	ug/kg	373	54.8	20	09/16/24 07:54	09/16/24 18:12	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	50	%	39-120		20	09/16/24 07:54	09/16/24 18:12	321-60-8	
Terphenyl-d14 (S)	50	%	36-120		20	09/16/24 07:54	09/16/24 18:12	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	10.4	%	0.10	0.10	1		09/09/24 15:25		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-6 (4) Lab ID: 40283707017 Collected: 09/05/24 10:17 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	22.1	mg/kg	1.1	0.31	1	09/10/24 07:05	09/10/24 19:18	7440-47-3	
Lead	19.9	mg/kg	2.3	0.67	1	09/10/24 07:05	09/10/24 19:18	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	6.6J	ug/kg	19.8	2.6	1	09/16/24 07:54	09/16/24 12:17	83-32-9	
Acenaphthylene	4.3J	ug/kg	19.8	2.5	1	09/16/24 07:54	09/16/24 12:17	208-96-8	
Anthracene	23.0	ug/kg	19.8	2.5	1	09/16/24 07:54	09/16/24 12:17	120-12-7	
Benzo(a)anthracene	125	ug/kg	19.8	2.6	1	09/16/24 07:54	09/16/24 12:17	56-55-3	
Benzo(a)pyrene	170	ug/kg	19.8	2.2	1	09/16/24 07:54	09/16/24 12:17	50-32-8	
Benzo(b)fluoranthene	219	ug/kg	19.8	2.7	1	09/16/24 07:54	09/16/24 12:17	205-99-2	
Benzo(g,h,i)perylene	147	ug/kg	19.8	3.5	1	09/16/24 07:54	09/16/24 12:17	191-24-2	
Benzo(k)fluoranthene	77.9	ug/kg	19.8	2.5	1	09/16/24 07:54	09/16/24 12:17	207-08-9	
Chrysene	141	ug/kg	19.8	3.7	1	09/16/24 07:54	09/16/24 12:17	218-01-9	
Dibenz(a,h)anthracene	27.1	ug/kg	19.8	2.7	1	09/16/24 07:54	09/16/24 12:17	53-70-3	
Fluoranthene	247	ug/kg	19.8	2.3	1	09/16/24 07:54	09/16/24 12:17	206-44-0	
Fluorene	5.5J	ug/kg	19.8	2.4	1	09/16/24 07:54	09/16/24 12:17	86-73-7	
Indeno(1,2,3-cd)pyrene	109	ug/kg	19.8	4.1	1	09/16/24 07:54	09/16/24 12:17	193-39-5	
1-Methylnaphthalene	11.4J	ug/kg	19.8	2.9	1	09/16/24 07:54	09/16/24 12:17	90-12-0	
2-Methylnaphthalene	14.6J	ug/kg	19.8	2.9	1	09/16/24 07:54	09/16/24 12:17	91-57-6	
Naphthalene	28.9	ug/kg	19.8	1.9	1	09/16/24 07:54	09/16/24 12:17	91-20-3	
Phenanthrene	103	ug/kg	19.8	2.3	1	09/16/24 07:54	09/16/24 12:17	85-01-8	
Pyrene	235	ug/kg	19.8	2.9	1	09/16/24 07:54	09/16/24 12:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	65	%	39-120		1	09/16/24 07:54	09/16/24 12:17	321-60-8	
Terphenyl-d14 (S)	67	%	36-120		1	09/16/24 07:54	09/16/24 12:17	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	15.6	%	0.10	0.10	1		09/09/24 15:25		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-6 (6) Lab ID: 40283707018 Collected: 09/05/24 10:25 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	15.4	mg/kg	1.0	0.29	1	09/10/24 07:05	09/10/24 19:20	7440-47-3	
Lead	20.6	mg/kg	2.1	0.62	1	09/10/24 07:05	09/10/24 19:20	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	5.9J	ug/kg	18.8	2.4	1	09/16/24 07:54	09/16/24 12:33	83-32-9	
Acenaphthylene	3.0J	ug/kg	18.8	2.4	1	09/16/24 07:54	09/16/24 12:33	208-96-8	
Anthracene	28.9	ug/kg	18.8	2.3	1	09/16/24 07:54	09/16/24 12:33	120-12-7	
Benzo(a)anthracene	121	ug/kg	18.8	2.4	1	09/16/24 07:54	09/16/24 12:33	56-55-3	
Benzo(a)pyrene	144	ug/kg	18.8	2.1	1	09/16/24 07:54	09/16/24 12:33	50-32-8	
Benzo(b)fluoranthene	168	ug/kg	18.8	2.6	1	09/16/24 07:54	09/16/24 12:33	205-99-2	
Benzo(g,h,i)perylene	112	ug/kg	18.8	3.3	1	09/16/24 07:54	09/16/24 12:33	191-24-2	
Benzo(k)fluoranthene	68.6	ug/kg	18.8	2.4	1	09/16/24 07:54	09/16/24 12:33	207-08-9	
Chrysene	130	ug/kg	18.8	3.5	1	09/16/24 07:54	09/16/24 12:33	218-01-9	
Dibenz(a,h)anthracene	21.8	ug/kg	18.8	2.6	1	09/16/24 07:54	09/16/24 12:33	53-70-3	
Fluoranthene	252	ug/kg	18.8	2.2	1	09/16/24 07:54	09/16/24 12:33	206-44-0	
Fluorene	5.8J	ug/kg	18.8	2.3	1	09/16/24 07:54	09/16/24 12:33	86-73-7	
Indeno(1,2,3-cd)pyrene	84.0	ug/kg	18.8	3.9	1	09/16/24 07:54	09/16/24 12:33	193-39-5	
1-Methylnaphthalene	5.3J	ug/kg	18.8	2.7	1	09/16/24 07:54	09/16/24 12:33	90-12-0	
2-Methylnaphthalene	7.1J	ug/kg	18.8	2.8	1	09/16/24 07:54	09/16/24 12:33	91-57-6	
Naphthalene	18.8J	ug/kg	18.8	1.8	1	09/16/24 07:54	09/16/24 12:33	91-20-3	
Phenanthrene	105	ug/kg	18.8	2.2	1	09/16/24 07:54	09/16/24 12:33	85-01-8	
Pyrene	226	ug/kg	18.8	2.8	1	09/16/24 07:54	09/16/24 12:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	39-120		1	09/16/24 07:54	09/16/24 12:33	321-60-8	
Terphenyl-d14 (S)	70	%	36-120		1	09/16/24 07:54	09/16/24 12:33	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	11.3	%	0.10	0.10	1		09/09/24 15:25		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-6 (10) Lab ID: 40283707019 Collected: 09/05/24 10:27 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	13.1	mg/kg	1.2	0.33	1	09/10/24 07:05	09/10/24 19:22	7440-47-3	
Lead	77.4	mg/kg	2.4	0.71	1	09/10/24 07:05	09/10/24 19:22	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	3.1J	ug/kg	20.3	2.6	1	09/16/24 08:28	09/16/24 20:30	83-32-9	
Acenaphthylene	<2.6	ug/kg	20.3	2.6	1	09/16/24 08:28	09/16/24 20:30	208-96-8	
Anthracene	8.4J	ug/kg	20.3	2.5	1	09/16/24 08:28	09/16/24 20:30	120-12-7	
Benzo(a)anthracene	26.2	ug/kg	20.3	2.6	1	09/16/24 08:28	09/16/24 20:30	56-55-3	
Benzo(a)pyrene	29.2	ug/kg	20.3	2.3	1	09/16/24 08:28	09/16/24 20:30	50-32-8	
Benzo(b)fluoranthene	34.2	ug/kg	20.3	2.8	1	09/16/24 08:28	09/16/24 20:30	205-99-2	
Benzo(g,h,i)perylene	19.4J	ug/kg	20.3	3.6	1	09/16/24 08:28	09/16/24 20:30	191-24-2	
Benzo(k)fluoranthene	13.1J	ug/kg	20.3	2.6	1	09/16/24 08:28	09/16/24 20:30	207-08-9	
Chrysene	27.3	ug/kg	20.3	3.8	1	09/16/24 08:28	09/16/24 20:30	218-01-9	
Dibenz(a,h)anthracene	4.1J	ug/kg	20.3	2.8	1	09/16/24 08:28	09/16/24 20:30	53-70-3	
Fluoranthene	54.9	ug/kg	20.3	2.4	1	09/16/24 08:28	09/16/24 20:30	206-44-0	
Fluorene	3.5J	ug/kg	20.3	2.4	1	09/16/24 08:28	09/16/24 20:30	86-73-7	
Indeno(1,2,3-cd)pyrene	15.8J	ug/kg	20.3	4.2	1	09/16/24 08:28	09/16/24 20:30	193-39-5	
1-Methylnaphthalene	3.6J	ug/kg	20.3	3.0	1	09/16/24 08:28	09/16/24 20:30	90-12-0	
2-Methylnaphthalene	6.0J	ug/kg	20.3	3.0	1	09/16/24 08:28	09/16/24 20:30	91-57-6	
Naphthalene	16.7J	ug/kg	20.3	2.0	1	09/16/24 08:28	09/16/24 20:30	91-20-3	
Phenanthrene	31.1	ug/kg	20.3	2.3	1	09/16/24 08:28	09/16/24 20:30	85-01-8	
Pyrene	50.4	ug/kg	20.3	3.0	1	09/16/24 08:28	09/16/24 20:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	49	%	39-120		1	09/16/24 08:28	09/16/24 20:30	321-60-8	
Terphenyl-d14 (S)	55	%	36-120		1	09/16/24 08:28	09/16/24 20:30	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	17.8	%	0.10	0.10	1		09/09/24 15:25		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-7 (0.5) Lab ID: 40283707020 Collected: 09/05/24 11:09 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	57.0	mg/kg	1.1	0.30	1	09/10/24 07:05	09/10/24 19:28	7440-47-3	
Lead	457	mg/kg	2.2	0.65	1	09/10/24 07:05	09/10/24 19:28	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	97.3J	ug/kg	366	47.5	20	09/16/24 08:28	09/17/24 16:11	83-32-9	
Acenaphthylene	68.3J	ug/kg	366	46.2	20	09/16/24 08:28	09/17/24 16:11	208-96-8	
Anthracene	296J	ug/kg	366	45.4	20	09/16/24 08:28	09/17/24 16:11	120-12-7	
Benzo(a)anthracene	1090	ug/kg	366	47.3	20	09/16/24 08:28	09/17/24 16:11	56-55-3	
Benzo(a)pyrene	1200	ug/kg	366	41.6	20	09/16/24 08:28	09/17/24 16:11	50-32-8	
Benzo(b)fluoranthene	1380	ug/kg	366	50.8	20	09/16/24 08:28	09/17/24 16:11	205-99-2	
Benzo(g,h,i)perylene	845	ug/kg	366	64.3	20	09/16/24 08:28	09/17/24 16:11	191-24-2	
Benzo(k)fluoranthene	614	ug/kg	366	46.8	20	09/16/24 08:28	09/17/24 16:11	207-08-9	
Chrysene	1070	ug/kg	366	69.1	20	09/16/24 08:28	09/17/24 16:11	218-01-9	
Dibenz(a,h)anthracene	204J	ug/kg	366	50.7	20	09/16/24 08:28	09/17/24 16:11	53-70-3	
Fluoranthene	2540	ug/kg	366	43.3	20	09/16/24 08:28	09/17/24 16:11	206-44-0	
Fluorene	106J	ug/kg	366	43.9	20	09/16/24 08:28	09/17/24 16:11	86-73-7	
Indeno(1,2,3-cd)pyrene	665	ug/kg	366	76.3	20	09/16/24 08:28	09/17/24 16:11	193-39-5	
1-Methylnaphthalene	57.7J	ug/kg	366	53.5	20	09/16/24 08:28	09/17/24 16:11	90-12-0	
2-Methylnaphthalene	63.4J	ug/kg	366	53.6	20	09/16/24 08:28	09/17/24 16:11	91-57-6	
Naphthalene	100J	ug/kg	366	35.7	20	09/16/24 08:28	09/17/24 16:11	91-20-3	
Phenanthrene	1400	ug/kg	366	41.9	20	09/16/24 08:28	09/17/24 16:11	85-01-8	
Pyrene	2090	ug/kg	366	53.8	20	09/16/24 08:28	09/17/24 16:11	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	56	%	39-120		20	09/16/24 08:28	09/17/24 16:11	321-60-8	
Terphenyl-d14 (S)	52	%	36-120		20	09/16/24 08:28	09/17/24 16:11	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	8.9	%	0.10	0.10	1		09/09/24 15:25		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-7 (2) Lab ID: 40283707021 Collected: 09/05/24 11:10 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	45.5	mg/kg	1.1	0.30	1	09/10/24 07:05	09/10/24 19:30	7440-47-3	
Lead	235	mg/kg	2.1	0.64	1	09/10/24 07:05	09/10/24 19:30	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	<122	ug/kg	943	122	50	09/16/24 08:28	09/17/24 16:26	83-32-9	
Acenaphthylene	<119	ug/kg	943	119	50	09/16/24 08:28	09/17/24 16:26	208-96-8	
Anthracene	582J	ug/kg	943	117	50	09/16/24 08:28	09/17/24 16:26	120-12-7	
Benzo(a)anthracene	1480	ug/kg	943	122	50	09/16/24 08:28	09/17/24 16:26	56-55-3	
Benzo(a)pyrene	1380	ug/kg	943	107	50	09/16/24 08:28	09/17/24 16:26	50-32-8	
Benzo(b)fluoranthene	1510	ug/kg	943	131	50	09/16/24 08:28	09/17/24 16:26	205-99-2	
Benzo(g,h,i)perylene	1020	ug/kg	943	165	50	09/16/24 08:28	09/17/24 16:26	191-24-2	
Benzo(k)fluoranthene	688J	ug/kg	943	121	50	09/16/24 08:28	09/17/24 16:26	207-08-9	
Chrysene	1220	ug/kg	943	178	50	09/16/24 08:28	09/17/24 16:26	218-01-9	
Dibenz(a,h)anthracene	215J	ug/kg	943	131	50	09/16/24 08:28	09/17/24 16:26	53-70-3	
Fluoranthene	3560	ug/kg	943	112	50	09/16/24 08:28	09/17/24 16:26	206-44-0	
Fluorene	<113	ug/kg	943	113	50	09/16/24 08:28	09/17/24 16:26	86-73-7	
Indeno(1,2,3-cd)pyrene	785J	ug/kg	943	196	50	09/16/24 08:28	09/17/24 16:26	193-39-5	
1-Methylnaphthalene	<138	ug/kg	943	138	50	09/16/24 08:28	09/17/24 16:26	90-12-0	
2-Methylnaphthalene	<138	ug/kg	943	138	50	09/16/24 08:28	09/17/24 16:26	91-57-6	
Naphthalene	141J	ug/kg	943	91.9	50	09/16/24 08:28	09/17/24 16:26	91-20-3	
Phenanthrene	2110	ug/kg	943	108	50	09/16/24 08:28	09/17/24 16:26	85-01-8	
Pyrene	3310	ug/kg	943	139	50	09/16/24 08:28	09/17/24 16:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%	39-120		50	09/16/24 08:28	09/17/24 16:26	321-60-8	
Terphenyl-d14 (S)	62	%	36-120		50	09/16/24 08:28	09/17/24 16:26	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	11.5	%	0.10	0.10	1		09/12/24 09:09		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-7 (4) Lab ID: 40283707022 Collected: 09/05/24 11:10 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	44.0	mg/kg	1.0	0.29	1	09/10/24 07:05	09/10/24 19:32	7440-47-3	
Lead	84.7	mg/kg	2.1	0.62	1	09/10/24 07:05	09/10/24 19:32	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	36.6J	ug/kg	145	18.8	8	09/16/24 08:28	09/16/24 20:45	83-32-9	
Acenaphthylene	<18.3	ug/kg	145	18.3	8	09/16/24 08:28	09/16/24 20:45	208-96-8	
Anthracene	84.8J	ug/kg	145	18.0	8	09/16/24 08:28	09/16/24 20:45	120-12-7	
Benzo(a)anthracene	415	ug/kg	145	18.7	8	09/16/24 08:28	09/16/24 20:45	56-55-3	
Benzo(a)pyrene	501	ug/kg	145	16.5	8	09/16/24 08:28	09/16/24 20:45	50-32-8	
Benzo(b)fluoranthene	578	ug/kg	145	20.1	8	09/16/24 08:28	09/16/24 20:45	205-99-2	
Benzo(g,h,i)perylene	355	ug/kg	145	25.4	8	09/16/24 08:28	09/16/24 20:45	191-24-2	
Benzo(k)fluoranthene	256	ug/kg	145	18.5	8	09/16/24 08:28	09/16/24 20:45	207-08-9	
Chrysene	411	ug/kg	145	27.3	8	09/16/24 08:28	09/16/24 20:45	218-01-9	
Dibenz(a,h)anthracene	79.7J	ug/kg	145	20.1	8	09/16/24 08:28	09/16/24 20:45	53-70-3	
Fluoranthene	894	ug/kg	145	17.2	8	09/16/24 08:28	09/16/24 20:45	206-44-0	
Fluorene	27.9J	ug/kg	145	17.4	8	09/16/24 08:28	09/16/24 20:45	86-73-7	
Indeno(1,2,3-cd)pyrene	279	ug/kg	145	30.2	8	09/16/24 08:28	09/16/24 20:45	193-39-5	
1-Methylnaphthalene	51.9J	ug/kg	145	21.2	8	09/16/24 08:28	09/16/24 20:45	90-12-0	
2-Methylnaphthalene	65.4J	ug/kg	145	21.2	8	09/16/24 08:28	09/16/24 20:45	91-57-6	
Naphthalene	79.3J	ug/kg	145	14.1	8	09/16/24 08:28	09/16/24 20:45	91-20-3	
Phenanthrene	437	ug/kg	145	16.6	8	09/16/24 08:28	09/16/24 20:45	85-01-8	
Pyrene	821	ug/kg	145	21.3	8	09/16/24 08:28	09/16/24 20:45	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	39-120		8	09/16/24 08:28	09/16/24 20:45	321-60-8	
Terphenyl-d14 (S)	63	%	36-120		8	09/16/24 08:28	09/16/24 20:45	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	7.8	%	0.10	0.10	1		09/12/24 09:09		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-7 (6) Lab ID: 40283707023 Collected: 09/05/24 11:14 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	75.2	mg/kg	5.0	1.4	5	09/10/24 07:05	09/11/24 14:39	7440-47-3	
Lead	2380	mg/kg	10.0	3.0	5	09/10/24 07:05	09/11/24 14:39	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	10.8J	ug/kg	17.8	2.3	1	09/16/24 08:28	09/16/24 21:01	83-32-9	
Acenaphthylene	9.6J	ug/kg	17.8	2.2	1	09/16/24 08:28	09/16/24 21:01	208-96-8	
Anthracene	29.4	ug/kg	17.8	2.2	1	09/16/24 08:28	09/16/24 21:01	120-12-7	
Benzo(a)anthracene	125	ug/kg	17.8	2.3	1	09/16/24 08:28	09/16/24 21:01	56-55-3	
Benzo(a)pyrene	130	ug/kg	17.8	2.0	1	09/16/24 08:28	09/16/24 21:01	50-32-8	
Benzo(b)fluoranthene	172	ug/kg	17.8	2.5	1	09/16/24 08:28	09/16/24 21:01	205-99-2	
Benzo(g,h,i)perylene	85.2	ug/kg	17.8	3.1	1	09/16/24 08:28	09/16/24 21:01	191-24-2	
Benzo(k)fluoranthene	60.9	ug/kg	17.8	2.3	1	09/16/24 08:28	09/16/24 21:01	207-08-9	
Chrysene	141	ug/kg	17.8	3.4	1	09/16/24 08:28	09/16/24 21:01	218-01-9	
Dibenz(a,h)anthracene	21.8	ug/kg	17.8	2.5	1	09/16/24 08:28	09/16/24 21:01	53-70-3	
Fluoranthene	303	ug/kg	17.8	2.1	1	09/16/24 08:28	09/16/24 21:01	206-44-0	
Fluorene	10.7J	ug/kg	17.8	2.1	1	09/16/24 08:28	09/16/24 21:01	86-73-7	
Indeno(1,2,3-cd)pyrene	70.2	ug/kg	17.8	3.7	1	09/16/24 08:28	09/16/24 21:01	193-39-5	
1-Methylnaphthalene	12.1J	ug/kg	17.8	2.6	1	09/16/24 08:28	09/16/24 21:01	90-12-0	
2-Methylnaphthalene	16.4J	ug/kg	17.8	2.6	1	09/16/24 08:28	09/16/24 21:01	91-57-6	
Naphthalene	17.1J	ug/kg	17.8	1.7	1	09/16/24 08:28	09/16/24 21:01	91-20-3	
Phenanthrene	161	ug/kg	17.8	2.0	1	09/16/24 08:28	09/16/24 21:01	85-01-8	
Pyrene	236	ug/kg	17.8	2.6	1	09/16/24 08:28	09/16/24 21:01	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	39-120		1	09/16/24 08:28	09/16/24 21:01	321-60-8	
Terphenyl-d14 (S)	56	%	36-120		1	09/16/24 08:28	09/16/24 21:01	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	6.1	%	0.10	0.10	1		09/12/24 09:09		

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ANALYTICAL RESULTS

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Sample: P-7 (10) Lab ID: 40283707024 Collected: 09/05/24 11:17 Received: 09/06/24 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Green Bay									
Chromium	13.8	mg/kg	1.1	0.31	1	09/10/24 07:05	09/10/24 19:37	7440-47-3	
Lead	39.2	mg/kg	2.2	0.66	1	09/10/24 07:05	09/10/24 19:37	7439-92-1	
8270E MSSV PAH by SIM									
Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Green Bay									
Acenaphthene	14.9J	ug/kg	20.7	2.7	1	09/16/24 08:28	09/16/24 13:35	83-32-9	
Acenaphthylene	8.2J	ug/kg	20.7	2.6	1	09/16/24 08:28	09/16/24 13:35	208-96-8	
Anthracene	45.4	ug/kg	20.7	2.6	1	09/16/24 08:28	09/16/24 13:35	120-12-7	
Benzo(a)anthracene	126	ug/kg	20.7	2.7	1	09/16/24 08:28	09/16/24 13:35	56-55-3	
Benzo(a)pyrene	133	ug/kg	20.7	2.4	1	09/16/24 08:28	09/16/24 13:35	50-32-8	
Benzo(b)fluoranthene	147	ug/kg	20.7	2.9	1	09/16/24 08:28	09/16/24 13:35	205-99-2	
Benzo(g,h,i)perylene	85.0	ug/kg	20.7	3.6	1	09/16/24 08:28	09/16/24 13:35	191-24-2	
Benzo(k)fluoranthene	62.7	ug/kg	20.7	2.6	1	09/16/24 08:28	09/16/24 13:35	207-08-9	
Chrysene	120	ug/kg	20.7	3.9	1	09/16/24 08:28	09/16/24 13:35	218-01-9	
Dibenz(a,h)anthracene	18.7J	ug/kg	20.7	2.9	1	09/16/24 08:28	09/16/24 13:35	53-70-3	
Fluoranthene	315	ug/kg	20.7	2.4	1	09/16/24 08:28	09/16/24 13:35	206-44-0	
Fluorene	14.2J	ug/kg	20.7	2.5	1	09/16/24 08:28	09/16/24 13:35	86-73-7	
Indeno(1,2,3-cd)pyrene	67.0	ug/kg	20.7	4.3	1	09/16/24 08:28	09/16/24 13:35	193-39-5	
1-Methylnaphthalene	12.8J	ug/kg	20.7	3.0	1	09/16/24 08:28	09/16/24 13:35	90-12-0	
2-Methylnaphthalene	16.9J	ug/kg	20.7	3.0	1	09/16/24 08:28	09/16/24 13:35	91-57-6	
Naphthalene	41.8	ug/kg	20.7	2.0	1	09/16/24 08:28	09/16/24 13:35	91-20-3	
Phenanthrene	208	ug/kg	20.7	2.4	1	09/16/24 08:28	09/16/24 13:35	85-01-8	
Pyrene	253	ug/kg	20.7	3.0	1	09/16/24 08:28	09/16/24 13:35	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	53	%	39-120		1	09/16/24 08:28	09/16/24 13:35	321-60-8	
Terphenyl-d14 (S)	56	%	36-120		1	09/16/24 08:28	09/16/24 13:35	1718-51-0	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	19.3	%	0.10	0.10	1		09/12/24 09:09		

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch:	483774	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050B	Analysis Description:	6010D MET
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283707001, 40283707002, 40283707003, 40283707004, 40283707005

METHOD BLANK: 2769950 Matrix: Solid
Associated Lab Samples: 40283707001, 40283707002, 40283707003, 40283707004, 40283707005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	mg/kg	<0.28	1.0	09/13/24 10:33	
Lead	mg/kg	<0.60	2.0	09/13/24 10:33	

LABORATORY CONTROL SAMPLE: 2769951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	mg/kg	25	25.3	101	80-120	
Lead	mg/kg	25	26.3	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769952 2769953

Parameter	Units	40283591001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/kg	24.3	30.7	30.7	53.9	56.4	96	104	75-125	5	20	
Lead	mg/kg	4.9	30.7	30.7	35.3	35.8	99	101	75-125	1	20	

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.

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch:	483775	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050B	Analysis Description:	6010D MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283707006, 40283707007, 40283707008, 40283707009, 40283707010, 40283707011, 40283707012, 40283707013, 40283707014, 40283707015, 40283707016, 40283707017, 40283707018, 40283707019, 40283707020, 40283707021, 40283707022, 40283707023, 40283707024		

METHOD BLANK:	2769954	Matrix:	Solid
Associated Lab Samples:	40283707006, 40283707007, 40283707008, 40283707009, 40283707010, 40283707011, 40283707012, 40283707013, 40283707014, 40283707015, 40283707016, 40283707017, 40283707018, 40283707019, 40283707020, 40283707021, 40283707022, 40283707023, 40283707024		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	mg/kg	<0.28	1.0	09/10/24 18:39	
Lead	mg/kg	<0.60	2.0	09/10/24 18:39	

LABORATORY CONTROL SAMPLE:		2769955				
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	mg/kg	25	25.0	100	80-120	
Lead	mg/kg	25	26.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			2769956		2769957							
Parameter	Units	40283707006	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Spike	Spike								
Chromium	mg/kg	38.6	27.2	27.3	58.6	63.8	73	92	75-125	8	20	M0
Lead	mg/kg	160	27.2	27.3	193	192	123	118	75-125	1	20	

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.

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch:	484288	Analysis Method:	EPA 8270E by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270E/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283707001, 40283707002

METHOD BLANK: 2772839 Matrix: Solid

Associated Lab Samples: 40283707001, 40283707002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	09/13/24 10:36	
2-Methylnaphthalene	ug/kg	<2.4	16.7	09/13/24 10:36	
Acenaphthene	ug/kg	<2.2	16.7	09/13/24 10:36	
Acenaphthylene	ug/kg	<2.1	16.7	09/13/24 10:36	
Anthracene	ug/kg	<2.1	16.7	09/13/24 10:36	
Benzo(a)anthracene	ug/kg	<2.2	16.7	09/13/24 10:36	
Benzo(a)pyrene	ug/kg	<1.9	16.7	09/13/24 10:36	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	09/13/24 10:36	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	09/13/24 10:36	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	09/13/24 10:36	
Chrysene	ug/kg	<3.2	16.7	09/13/24 10:36	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	09/13/24 10:36	
Fluoranthene	ug/kg	<2.0	16.7	09/13/24 10:36	
Fluorene	ug/kg	<2.0	16.7	09/13/24 10:36	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	09/13/24 10:36	
Naphthalene	ug/kg	<1.6	16.7	09/13/24 10:36	
Phenanthrene	ug/kg	<1.9	16.7	09/13/24 10:36	
Pyrene	ug/kg	<2.5	16.7	09/13/24 10:36	
2-Fluorobiphenyl (S)	%	70	39-120	09/13/24 10:36	
Terphenyl-d14 (S)	%	75	36-120	09/13/24 10:36	

LABORATORY CONTROL SAMPLE: 2772840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	334	259	78	62-120	
2-Methylnaphthalene	ug/kg	334	246	74	61-120	
Acenaphthene	ug/kg	334	293	88	66-120	
Acenaphthylene	ug/kg	334	281	84	63-120	
Anthracene	ug/kg	334	309	93	72-120	
Benzo(a)anthracene	ug/kg	334	265	79	64-120	
Benzo(a)pyrene	ug/kg	334	314	94	76-120	
Benzo(b)fluoranthene	ug/kg	334	296	89	62-120	
Benzo(g,h,i)perylene	ug/kg	334	324	97	73-120	
Benzo(k)fluoranthene	ug/kg	334	319	95	69-120	
Chrysene	ug/kg	334	290	87	70-120	
Dibenz(a,h)anthracene	ug/kg	334	311	93	72-120	
Fluoranthene	ug/kg	334	308	92	71-120	
Fluorene	ug/kg	334	298	89	68-120	
Indeno(1,2,3-cd)pyrene	ug/kg	334	303	91	72-120	

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

LABORATORY CONTROL SAMPLE: 2772840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	334	251	75	60-120	
Phenanthrene	ug/kg	334	308	92	66-120	
Pyrene	ug/kg	334	281	84	65-120	
2-Fluorobiphenyl (S)	%			86	39-120	
Terphenyl-d14 (S)	%			81	36-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2772841 2772842

Parameter	Units	40283982001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<3.1	427	425	319	290	75	68	50-120	10	34	
2-Methylnaphthalene	ug/kg	<3.1	427	425	305	272	72	64	48-120	11	29	
Acenaphthene	ug/kg	<0.0028 mg/kg	427	425	349	311	82	73	51-120	12	26	
Acenaphthylene	ug/kg	<0.0027 mg/kg	427	425	330	296	77	69	49-120	11	22	
Anthracene	ug/kg	<0.0026 mg/kg	427	425	357	327	84	77	52-120	9	25	
Benzo(a)anthracene	ug/kg	<0.0028 mg/kg	427	425	303	279	71	65	47-120	8	37	
Benzo(a)pyrene	ug/kg	<0.0024 mg/kg	427	425	357	328	84	77	53-120	8	33	
Benzo(b)fluoranthene	ug/kg	<0.0030 mg/kg	427	425	331	308	78	72	43-120	7	43	
Benzo(g,h,i)perylene	ug/kg	<0.0037 mg/kg	427	425	361	331	85	78	38-120	9	36	
Benzo(k)fluoranthene	ug/kg	<0.0027 mg/kg	427	425	375	349	88	82	49-120	7	30	
Chrysene	ug/kg	<0.0040 mg/kg	427	425	332	308	78	72	45-120	7	28	
Dibenz(a,h)anthracene	ug/kg	<0.0030 mg/kg	427	425	343	313	81	74	41-120	9	33	
Fluoranthene	ug/kg	<0.0025 mg/kg	427	425	359	339	84	80	50-120	6	43	
Fluorene	ug/kg	<0.0026 mg/kg	427	425	344	310	81	73	47-120	10	27	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.0044 mg/kg	427	425	336	311	79	73	35-120	8	33	
Naphthalene	ug/kg	<0.0021 mg/kg	427	425	318	275	74	64	42-120	14	26	
Phenanthrene	ug/kg	<0.0024 mg/kg	427	425	354	328	83	77	45-120	8	24	
Pyrene	ug/kg	<0.0031 mg/kg	427	425	302	279	71	65	42-120	8	41	
2-Fluorobiphenyl (S)	%						73	63	39-120			
Terphenyl-d14 (S)	%						64	58	36-120			

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch:	484385	Analysis Method:	EPA 8270E by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270E/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283707003, 40283707004, 40283707005, 40283707006, 40283707007, 40283707008, 40283707009, 40283707010, 40283707011, 40283707012, 40283707013, 40283707014, 40283707015, 40283707016, 40283707017, 40283707018		

METHOD BLANK: 2774052 Matrix: Solid
Associated Lab Samples: 40283707003, 40283707004, 40283707005, 40283707006, 40283707007, 40283707008, 40283707009, 40283707010, 40283707011, 40283707012, 40283707013, 40283707014, 40283707015, 40283707016, 40283707017, 40283707018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	09/16/24 10:15	
2-Methylnaphthalene	ug/kg	<2.4	16.7	09/16/24 10:15	
Acenaphthene	ug/kg	<2.2	16.7	09/16/24 10:15	
Acenaphthylene	ug/kg	<2.1	16.7	09/16/24 10:15	
Anthracene	ug/kg	<2.1	16.7	09/16/24 10:15	
Benzo(a)anthracene	ug/kg	<2.2	16.7	09/16/24 10:15	
Benzo(a)pyrene	ug/kg	<1.9	16.7	09/16/24 10:15	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	09/16/24 10:15	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	09/16/24 10:15	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	09/16/24 10:15	
Chrysene	ug/kg	<3.2	16.7	09/16/24 10:15	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	09/16/24 10:15	
Fluoranthene	ug/kg	<2.0	16.7	09/16/24 10:15	
Fluorene	ug/kg	<2.0	16.7	09/16/24 10:15	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	09/16/24 10:15	
Naphthalene	ug/kg	<1.6	16.7	09/16/24 10:15	
Phenanthrene	ug/kg	<1.9	16.7	09/16/24 10:15	
Pyrene	ug/kg	<2.5	16.7	09/16/24 10:15	
2-Fluorobiphenyl (S)	%	80	39-120	09/16/24 10:15	
Terphenyl-d14 (S)	%	97	36-120	09/16/24 10:15	

LABORATORY CONTROL SAMPLE: 2774053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	334	247	74	62-120	
2-Methylnaphthalene	ug/kg	334	236	71	61-120	
Acenaphthene	ug/kg	334	269	81	66-120	
Acenaphthylene	ug/kg	334	251	75	63-120	
Anthracene	ug/kg	334	281	84	72-120	
Benzo(a)anthracene	ug/kg	334	249	75	64-120	
Benzo(a)pyrene	ug/kg	334	309	93	76-120	
Benzo(b)fluoranthene	ug/kg	334	285	86	62-120	
Benzo(g,h,i)perylene	ug/kg	334	289	87	73-120	
Benzo(k)fluoranthene	ug/kg	334	310	93	69-120	
Chrysene	ug/kg	334	269	81	70-120	

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

LABORATORY CONTROL SAMPLE: 2774053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibenz(a,h)anthracene	ug/kg	334	290	87	72-120	
Fluoranthene	ug/kg	334	277	83	71-120	
Fluorene	ug/kg	334	264	79	68-120	
Indeno(1,2,3-cd)pyrene	ug/kg	334	288	86	72-120	
Naphthalene	ug/kg	334	248	74	60-120	
Phenanthrene	ug/kg	334	278	83	66-120	
Pyrene	ug/kg	334	256	77	65-120	
2-Fluorobiphenyl (S)	%			78	39-120	
Terphenyl-d14 (S)	%			81	36-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2774054 2774055

Parameter	Units	40284112006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<0.0030 mg/kg	415	415	287	292	69	70	50-120	2	34	
2-Methylnaphthalene	ug/kg	<0.0030 mg/kg	415	415	272	276	66	67	48-120	2	29	
Acenaphthene	ug/kg	<0.0027 mg/kg	415	415	300	302	72	73	51-120	1	26	
Acenaphthylene	ug/kg	<0.0026 mg/kg	415	415	284	287	69	69	49-120	1	22	
Anthracene	ug/kg	<0.0026 mg/kg	415	415	302	301	73	73	52-120	0	25	
Benzo(a)anthracene	ug/kg	<0.0027 mg/kg	415	415	278	274	67	66	47-120	2	37	
Benzo(a)pyrene	ug/kg	<0.0024 mg/kg	415	415	314	310	76	75	53-120	1	33	
Benzo(b)fluoranthene	ug/kg	<0.0029 mg/kg	415	415	312	310	75	75	43-120	1	43	
Benzo(g,h,i)perylene	ug/kg	<0.0036 mg/kg	415	415	324	316	78	76	38-120	3	36	
Benzo(k)fluoranthene	ug/kg	<0.0026 mg/kg	415	415	338	339	82	82	49-120	0	30	
Chrysene	ug/kg	<0.0039 mg/kg	415	415	269	266	65	64	45-120	1	28	
Dibenz(a,h)anthracene	ug/kg	<0.0029 mg/kg	415	415	326	319	79	77	41-120	2	33	
Fluoranthene	ug/kg	<0.0025 mg/kg	415	415	303	305	73	73	50-120	1	43	
Fluorene	ug/kg	<0.0025 mg/kg	415	415	297	298	72	72	47-120	0	27	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.0043 mg/kg	415	415	324	317	78	76	35-120	2	33	
Naphthalene	ug/kg	<0.0020 mg/kg	415	415	285	288	69	69	42-120	1	26	
Phenanthrene	ug/kg	<0.0024 mg/kg	415	415	301	305	72	73	45-120	1	24	
Pyrene	ug/kg	<0.0030 mg/kg	415	415	288	287	69	69	42-120	0	41	

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 27740542774055													
Parameter	Units	40284112006 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
2-Fluorobiphenyl (S)	%						68	66	39-120				
Terphenyl-d14 (S)	%						70	66	36-120				

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch: 484387 Analysis Method: EPA 8270E by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270E/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40283707019, 40283707020, 40283707021, 40283707022, 40283707023, 40283707024

METHOD BLANK: 2774058 Matrix: Solid
Associated Lab Samples: 40283707019, 40283707020, 40283707021, 40283707022, 40283707023, 40283707024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	09/16/24 10:45	
2-Methylnaphthalene	ug/kg	<2.4	16.7	09/16/24 10:45	
Acenaphthene	ug/kg	<2.2	16.7	09/16/24 10:45	
Acenaphthylene	ug/kg	<2.1	16.7	09/16/24 10:45	
Anthracene	ug/kg	<2.1	16.7	09/16/24 10:45	
Benzo(a)anthracene	ug/kg	<2.2	16.7	09/16/24 10:45	
Benzo(a)pyrene	ug/kg	<1.9	16.7	09/16/24 10:45	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	09/16/24 10:45	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	09/16/24 10:45	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	09/16/24 10:45	
Chrysene	ug/kg	<3.2	16.7	09/16/24 10:45	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	09/16/24 10:45	
Fluoranthene	ug/kg	<2.0	16.7	09/16/24 10:45	
Fluorene	ug/kg	<2.0	16.7	09/16/24 10:45	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	09/16/24 10:45	
Naphthalene	ug/kg	<1.6	16.7	09/16/24 10:45	
Phenanthrene	ug/kg	<1.9	16.7	09/16/24 10:45	
Pyrene	ug/kg	<2.5	16.7	09/16/24 10:45	
2-Fluorobiphenyl (S)	%	78	39-120	09/16/24 10:45	
Terphenyl-d14 (S)	%	94	36-120	09/16/24 10:45	

LABORATORY CONTROL SAMPLE: 2774059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	239	72	62-120	
2-Methylnaphthalene	ug/kg	333	223	67	61-120	
Acenaphthene	ug/kg	333	256	77	66-120	
Acenaphthylene	ug/kg	333	236	71	63-120	
Anthracene	ug/kg	333	262	79	72-120	
Benzo(a)anthracene	ug/kg	333	230	69	64-120	
Benzo(a)pyrene	ug/kg	333	289	87	76-120	
Benzo(b)fluoranthene	ug/kg	333	260	78	62-120	
Benzo(g,h,i)perylene	ug/kg	333	266	80	73-120	
Benzo(k)fluoranthene	ug/kg	333	292	88	69-120	
Chrysene	ug/kg	333	248	75	70-120	
Dibenz(a,h)anthracene	ug/kg	333	264	79	72-120	
Fluoranthene	ug/kg	333	257	77	71-120	
Fluorene	ug/kg	333	249	75	68-120	
Indeno(1,2,3-cd)pyrene	ug/kg	333	264	79	72-120	

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

LABORATORY CONTROL SAMPLE: 2774059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	333	234	70	60-120	
Phenanthrene	ug/kg	333	261	78	66-120	
Pyrene	ug/kg	333	237	71	65-120	
2-Fluorobiphenyl (S)	%			72	39-120	
Terphenyl-d14 (S)	%			74	36-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2774060 2774061

Parameter	Units	40283848005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<25.3	347	346	260	254	74	73	50-120	2	34	
2-Methylnaphthalene	ug/kg	<25.4	347	346	245	241	70	69	48-120	2	29	
Acenaphthene	ug/kg	<22.5	347	346	253	248	73	72	51-120	2	26	
Acenaphthylene	ug/kg	<21.9	347	346	248	243	72	70	49-120	2	22	
Anthracene	ug/kg	<21.5	347	346	236	234	68	68	52-120	1	25	
Benzo(a)anthracene	ug/kg	<22.4	347	346	260	253	72	71	47-120	3	37	
Benzo(a)pyrene	ug/kg	<19.7	347	346	282	277	78	77	53-120	2	33	
Benzo(b)fluoranthene	ug/kg	<24.1	347	346	261	251	71	68	43-120	4	43	
Benzo(g,h,i)perylene	ug/kg	33.0J	347	346	283	265	72	67	38-120	6	36	
Benzo(k)fluoranthene	ug/kg	<22.2	347	346	274	270	77	77	49-120	1	30	
Chrysene	ug/kg	<32.7	347	346	233	225	64	62	45-120	4	28	
Dibenz(a,h)anthracene	ug/kg	<24.0	347	346	251	249	71	71	41-120	1	33	
Fluoranthene	ug/kg	<20.5	347	346	281	271	76	74	50-120	4	43	
Fluorene	ug/kg	<20.8	347	346	254	249	73	72	47-120	2	27	
Indeno(1,2,3-cd)pyrene	ug/kg	<36.1	347	346	256	249	72	70	35-120	3	33	
Naphthalene	ug/kg	<16.9	347	346	244	238	70	69	42-120	2	26	
Phenanthrene	ug/kg	<19.9	347	346	242	237	66	65	45-120	2	24	
Pyrene	ug/kg	<25.5	347	346	262	251	70	67	42-120	4	41	
2-Fluorobiphenyl (S)	%						75	69	39-120			
Terphenyl-d14 (S)	%						71	67	36-120			

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QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch:	483873	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283707002, 40283707003, 40283707004, 40283707005, 40283707006, 40283707007, 40283707008, 40283707009, 40283707010, 40283707011, 40283707012, 40283707013, 40283707014, 40283707015, 40283707016, 40283707017, 40283707018, 40283707019, 40283707020		

SAMPLE DUPLICATE: 2770334

Parameter	Units	40283721001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	22.2	4	10	

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

QC Batch:	484177	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples: 40283707001, 40283707021, 40283707022, 40283707023, 40283707024			

SAMPLE DUPLICATE: 2772117

Parameter	Units	40283695005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.8	7.3	7	10	

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REPORT OF LABORATORY ANALYSIS



QUALIFIERS

Project: 58247140 FMR BARREL PLATING
Pace Project No.: 40283707

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 - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

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 - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

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.

ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40283707001	P-3 (0.5)	EPA 3050B	483774	EPA 6010D	484010
40283707002	P-3 (4)	EPA 3050B	483774	EPA 6010D	484010
40283707003	P-3 (6)	EPA 3050B	483774	EPA 6010D	484010
40283707004	P-3 (10)	EPA 3050B	483774	EPA 6010D	484010
40283707005	P-4 (0.5)	EPA 3050B	483774	EPA 6010D	484010
40283707006	P-4 (2)	EPA 3050B	483775	EPA 6010D	484014
40283707007	P-4 (4)	EPA 3050B	483775	EPA 6010D	484014
40283707008	P-4 (6)	EPA 3050B	483775	EPA 6010D	484014
40283707009	P-4 (10)	EPA 3050B	483775	EPA 6010D	484014
40283707010	P-5 (0.5)	EPA 3050B	483775	EPA 6010D	484014
40283707011	P-5 (2)	EPA 3050B	483775	EPA 6010D	484014
40283707012	P-5 (4)	EPA 3050B	483775	EPA 6010D	484014
40283707013	P-5 (6)	EPA 3050B	483775	EPA 6010D	484014
40283707014	P-5 (10)	EPA 3050B	483775	EPA 6010D	484014
40283707015	P-6 (0.5)	EPA 3050B	483775	EPA 6010D	484014
40283707016	P-6 (2)	EPA 3050B	483775	EPA 6010D	484014
40283707017	P-6 (4)	EPA 3050B	483775	EPA 6010D	484014
40283707018	P-6 (6)	EPA 3050B	483775	EPA 6010D	484014
40283707019	P-6 (10)	EPA 3050B	483775	EPA 6010D	484014
40283707020	P-7 (0.5)	EPA 3050B	483775	EPA 6010D	484014
40283707021	P-7 (2)	EPA 3050B	483775	EPA 6010D	484014
40283707022	P-7 (4)	EPA 3050B	483775	EPA 6010D	484014
40283707023	P-7 (6)	EPA 3050B	483775	EPA 6010D	484014
40283707024	P-7 (10)	EPA 3050B	483775	EPA 6010D	484014
40283707001	P-3 (0.5)	EPA 3546	484288	EPA 8270E by SIM	484317
40283707002	P-3 (4)	EPA 3546	484288	EPA 8270E by SIM	484317
40283707003	P-3 (6)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707004	P-3 (10)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707005	P-4 (0.5)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707006	P-4 (2)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707007	P-4 (4)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707008	P-4 (6)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707009	P-4 (10)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707010	P-5 (0.5)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707011	P-5 (2)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707012	P-5 (4)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707013	P-5 (6)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707014	P-5 (10)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707015	P-6 (0.5)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707016	P-6 (2)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707017	P-6 (4)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707018	P-6 (6)	EPA 3546	484385	EPA 8270E by SIM	484451
40283707019	P-6 (10)	EPA 3546	484387	EPA 8270E by SIM	484472
40283707020	P-7 (0.5)	EPA 3546	484387	EPA 8270E by SIM	484472
40283707021	P-7 (2)	EPA 3546	484387	EPA 8270E by SIM	484472
40283707022	P-7 (4)	EPA 3546	484387	EPA 8270E by SIM	484472
40283707023	P-7 (6)	EPA 3546	484387	EPA 8270E by SIM	484472

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58247140 FMR BARREL PLATING

Pace Project No.: 40283707

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40283707024	P-7 (10)	EPA 3546	484387	EPA 8270E by SIM	484472
40283707001	P-3 (0.5)	ASTM D2974-87	484177		
40283707002	P-3 (4)	ASTM D2974-87	483873		
40283707003	P-3 (6)	ASTM D2974-87	483873		
40283707004	P-3 (10)	ASTM D2974-87	483873		
40283707005	P-4 (0.5)	ASTM D2974-87	483873		
40283707006	P-4 (2)	ASTM D2974-87	483873		
40283707007	P-4 (4)	ASTM D2974-87	483873		
40283707008	P-4 (6)	ASTM D2974-87	483873		
40283707009	P-4 (10)	ASTM D2974-87	483873		
40283707010	P-5 (0.5)	ASTM D2974-87	483873		
40283707011	P-5 (2)	ASTM D2974-87	483873		
40283707012	P-5 (4)	ASTM D2974-87	483873		
40283707013	P-5 (6)	ASTM D2974-87	483873		
40283707014	P-5 (10)	ASTM D2974-87	483873		
40283707015	P-6 (0.5)	ASTM D2974-87	483873		
40283707016	P-6 (2)	ASTM D2974-87	483873		
40283707017	P-6 (4)	ASTM D2974-87	483873		
40283707018	P-6 (6)	ASTM D2974-87	483873		
40283707019	P-6 (10)	ASTM D2974-87	483873		
40283707020	P-7 (0.5)	ASTM D2974-87	483873		
40283707021	P-7 (2)	ASTM D2974-87	484177		
40283707022	P-7 (4)	ASTM D2974-87	484177		
40283707023	P-7 (6)	ASTM D2974-87	484177		
40283707024	P-7 (10)	ASTM D2974-87	484177		

REPORT OF LABORATORY ANALYSIS

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Pace® Location Requested (City/State): Pace Analytical Green Bay 1241 Bellevue Street, Suite 9 Green Bay, WI 54302		CHAIN-OF-CUSTODY Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields				LAB USE ONLY- Affix Workorder/Login Label Here 40283707														
		Company Name: Terracon, Inc. - Milwaukee Street Address: 4900 S Pennsylvania Ave Ste100 Cudahy, WI 53110		Contact/Report To: Blaine Schroyer Phone #: 414-423-0255 E-Mail: brschroyer@terracon.com Cc E-Mail:		 Scan QR Code for instructions														
Customer Project # Project Name: 58247140 FMR BARREL PLATING		Invoice To: Accounts Payable Invoice E-Mail: apinvoices@terracon.com Purchase Order # (if applicable): Quote #:				Specify Container Size ** ☐ 1L ☐ 250mL ☐ 500mL ☐ 125mL ☐ 100mL ☐ 40mL vial ☐ EnCore ☐ TerraCore ☐ 90mL ☐ 10 Other		**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other												
Site Collection Info/Facility ID (as applicable):						Identify Container Preservative Type*** ☐ None ☐ HNO3 ☐ H2SO4 ☐ HCl ☐ NaOH ☐ Zn Acetate ☐ NaHSO4 ☐ Sod Thiosulfate ☐ Ascorbic Acid ☐ MeOH ☐ Other		*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other												
Time Zone Collected: [] AK [] PT [] MT ☒ CT [] ET		County / State origin of sample(s): Wisconsin																		
Data Deliverables: ☐ Level II ☐ Level III ☐ Level IV ☐ EQUIS ☐ Other		Regulatory Program (DW, RCRA, etc.) as applicable:		Reportable [] Yes [] No		Rush (Pre-approval required): ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ Other		DW PWSID # or WW Permit # as applicable:												
		Date Results Requested:		Field Filtered (if applicable): [] Yes ☒ No		Analysis:														
* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)																				
Customer Sample ID		Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Res. Chlorine		Dry Wt	Lead/Chromium; Dry Wt	PAH	VOC (Specific List)						
				Date	Time	Date	Time		Results	Units										
P-3 (0.5)		SL	Grab			9/5/24	0910	2												
P-3 (4)							0912													
P-3 (6)							0914													
P-3 (10)							0918													
P-4 (0.5)							1213													
P-4 (2)							1214													
P-4 (4)							1215													
P-4 (6)							1218													
P-4 (10)							1226													
P-5 (0.5)							1142													
Additional Instructions from Pace*:				Collected By: <i>Jon Com</i> (Printed Name) Signature: <i>[Signature]</i>				Customer Remarks / Special Conditions / Possible Hazards:												
								# Coolers: 1 Thermometer ID: 123 Correction Factor (°C): — Obs. Temp. (°C): 2.0 Corrected Temp (°C): 2.0 On Ice: ☒												
Relinquished by/Company: (Signature) <i>Terracon</i>				Date/Time: 9/5/24 1415				Received by/Company: (Signature) <i>CS Logistics</i>				Date/Time:				Tracking Number:				
Relinquished by/Company: (Signature) <i>CS Logistics</i>				Date/Time: 9/6/24 08:20				Received by/Company: (Signature) <i>Kris Stamp - Pace</i>				Date/Time: 9/6/24 08:20				Delivered by: [] In-Person [] Courier				
Relinquished by/Company: (Signature)				Date/Time:				Received by/Company: (Signature)				Date/Time:				[] FedEx [] UPS [] Other				
Relinquished by/Company: (Signature)				Date/Time:				Received by/Company: (Signature)				Date/Time:				Page: 1 of 3				

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at <https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/>.

ENV-FRM-CORQ-0019_v02_110123 ©

Pace® Location Requested (City/State): Pace Analytical, Green Bay, WI 1241 Bellevue Street, Suite 9 Green Bay, WI 54302										LAB USE ONLY- Affix Workorder/Login Label Here									
CHAIN-OF-CUSTODY Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields										40283707 Scan QR Code for instructions									
Company Name: Terracon, Inc. - Milwaukee Street Address: 4900 S Pennsylvania Ave Ste100 Cudahy, WI 53110					Contact/Report To: Blaine Schroyer Phone #: 414-423-0255 E-Mail: brschroyer@terracon.com Cc E-Mail:					Specify Container Size ** **Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other Identify Container Preservative Type*** *** Preservative Types (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other Analysis Requested									
Customer Project #: Project Name: 58247140 FMR BARREL PLATING					Invoice To: Accounts Payable Invoice E-Mail: apinvoices@terracon.com Purchase Order # (if applicable): Quote #:														
Site Collection Info/Facility ID (as applicable):																			
Time Zone Collected: [] AK [] PT [] MT [X] CT [] ET County / State origin of sample(s): Wisconsin																			
Data Deliverables: [] Level II [] Level III [] Level IV [] EQUIS [] Other										Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [] No Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other									
Date Results Requested:										Field Filtered (if applicable): [] Yes [X] No Analysis:									
* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)										Proj. Mgr: Dan Milewsky AcctNum / Client ID: Table #: Profile / Template: 2544 Prelog / Bottle Ord. ID: EZ 3152307 Sample Comment Preservation non-conformance identified for sample									
Customer Sample ID		Matrix *	Comp / Grab	Composite Start		Collected or Composite End		#	Res. Chlorine										
				Date	Time	Date	Time	Cont.	Results						Units				
P-7(2)		SL	Grab			9/5/24	1110	2											
P-7(4)		I	I				1111	1											
P-7(6)		I	I				1114	1											
P-7(10)		I	I				1117	2											
Additional Instructions from Pace*:										Collected By: (Printed Name) Jon Low Signature: <i>[Signature]</i>									
										Customer Remarks / Special Conditions / Possible Hazards:									
										# Coolers 1 Thermometer ID 103 Correction Factor (°C): - Obs Temp (°C) 2.0 Corrected Temp. (°C) 2.0 On Ice: Y									
										Tracking Number:									
										Delivered by: [] In-Person [] Courier [] FedEx [] UPS [] Other									
Relinquished by/Company (Signature) <i>[Signature]</i> Date/Time: 9/5/24 1415		Received by/Company (Signature) <i>[Signature]</i> Date/Time: 9/6/24 08:20			Received by/Company (Signature) <i>[Signature]</i> Date/Time: 9/6/24 08:20			Received by/Company (Signature) <i>[Signature]</i> Date/Time:											
Relinquished by/Company (Signature) <i>[Signature]</i> Date/Time:		Received by/Company (Signature) <i>[Signature]</i> Date/Time:			Received by/Company (Signature) <i>[Signature]</i> Date/Time:			Received by/Company (Signature) <i>[Signature]</i> Date/Time:											
Relinquished by/Company (Signature) <i>[Signature]</i> Date/Time:		Received by/Company (Signature) <i>[Signature]</i> Date/Time:			Received by/Company (Signature) <i>[Signature]</i> Date/Time:			Received by/Company (Signature) <i>[Signature]</i> Date/Time:											
Relinquished by/Company (Signature) <i>[Signature]</i> Date/Time:		Received by/Company (Signature) <i>[Signature]</i> Date/Time:			Received by/Company (Signature) <i>[Signature]</i> Date/Time:			Received by/Company (Signature) <i>[Signature]</i> Date/Time:											

Effective Date: 8/16/2022

Sample Preservation Receipt Form

Client Name: Terracon

Project #

40283707

All containers needing preservation have been checked and noted below.

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	WG9U	WPFU	SP5T	ZPLC	GN 1	GN 2						
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check. VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JG9U	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WG9U	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Client Name: TERRACON

Sample Preservation Receipt Form
Project #: 40283707

Pace Lab #	Glass					Plastic					Vials					Jars				General									Volume (mL)						
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2	VOA Vials (>6mm) *		H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	
021																																			2.5/5
022																																			2.5/5
023																																			2.5/5
024																																			2.5/5
025																																			2.5/5
026																																			2.5/5
027																																			2.5/5
028																																			2.5/5
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041																																			2.5/5
042																																			2.5/5
043																																			2.5/5
044																																			2.5/5
045																																			2.5/5
046																																			2.5/5
047																																			2.5/5
048																																			2.5/5

KES

9/16/24

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Terracon

Courier: ☒ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Walco
☐ Client ☐ Pace Other: _____

Tracking #: NIA

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used SR - 123 Type of Ice Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 2.0 /Corr: 2.0

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 9/6/24 /Initials: KKS

Labeled By Initials: ea

Chain of Custody Present: ☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out: ☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished: ☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC: ☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time: ☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt ☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr): ☐ Yes ☒ No	6.
Rush Turn Around Time Requested: ☐ Yes ☒ No	7.
Sufficient Volume: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A	8.
Correct Containers Used: ☒ Yes ☐ No	9.
Correct Type: <u>Pace Green Bay</u> , Pace IR, Non-Pace	
Containers Intact: ☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests ☐ Yes ☒ No ☐ N/A	11.
Sample Labels match COC: ☒ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>	
Trip Blank Present: ☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present ☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased): _____	

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 2