LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: DMW-6B
Weather: CLEAR
Sample ID: DMW-6B- 240314
Landau Representative: DSB
Date: 03/14/24 Time: 12:17

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.70 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 10.00 Time: 11:32 Describe: Flush Mount
Static DTW (ft): 10.09 Time: 11:37 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 2
Begin Purge (Date/Time): 3/14/2024 11:38 End Purge (Date/Time): 3/14/2024 12:06 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:41	14.5	0.27	1101	6.77	130.1	-	10.15	yes	
11:44	14.3	0.18	900	6.75	121.5	-	10.22	yes	
11:47	14.4	0.14	865	6.75	110.8	-	10.25	yes	
11:50	14.7	0.15	835	6.75	97.2	-	10.24	yes	
11:53	14.7	0.21	822	6.75	76	-	10.28	yes	
11:56	14.8	0.19	804	6.74	65.9	-	10.30	yes	
11:59	14.7	0.16	792	6.74	52.3	-	10.34	yes	
12:02	14.6	0.15	787	6.74	40.8	-	10.37	yes	
12:05	14.7	0.15	786	6.74	31	-	10.40	yes	
12:08									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: GEOCHEMICAL SAMPLE
Signature: DSB Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-1S
Weather:
Sample ID: EMW-1S- 240313
Landau Representative: SKL, G_J, AT, DSB
Date: 03/13/24 Time: 11:53

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 6.90 Time: 11:38
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 3/13/2024 11:39 End Purge (Date/Time): 3/13/2024 11:52 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:42	9.7	4.87	492.7	7.06	123	-	6.25	yes	
11:45	9.7	5.01	483.5	7.21	118.3	-	6.25	yes	
11:48	9.6	5.25	479.7	7.23	117.1	-	6.27	yes	
11:51	9.6	5.39	478.9	7.23	116.8	-	6.28	yes	
11:54									
11:57									
12:00									
12:03									
12:06									
12:09									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-2S
Weather: sunny, 50's
Sample ID: EMW-2S- 240313
Landau Representative: G_J
Date: 03/13/24 Time: 14:45

WELL INFORMATION

Screened Interval: Top (ft): 4.80 Bottom (ft): 19.60 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 6.52 Time: 14:18 Describe: Flush Mount
Static DTW (ft): 6.56 Time: 14:20 Flow-Thru Cell Vol.: 200 mL WQM No.: #5
Begin Purge (Date/Time): 3/13/2024 14:22 End Purge (Date/Time): 3/13/2024 14:44 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
14:25	11.8	0.37	479.1	6.37	59.4	-	6.79	yes	
14:28	11.7	0.30	484.0	6.37	51.9	-	6.84	yes	
14:31	12.1	0.32	488.4	6.37	42.2	-	6.89	yes	
14:34	12.1	0.28	488.8	6.37	41.9	-	6.91	yes	
14:37	12.3	0.25	491.6	6.37	37.7	-	6.96	yes	
14:40	12.2	0.24	491.4	6.38	35.9	-	7.05	yes	
14:43	12.3	0.24	492.6	6.38	33.3	-	7.07	yes	
14:46									
14:49									
14:52									

Sample Description (turbidity, color, odor, sheen): clear, coloreless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-3S
Weather: Sunny, 50s
Sample ID: EMW-3S- 240313
Landau Representative: SKL, G_J, AT, DSB
Date: 03/13/24 Time: 14:03

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 9.61 Time: 13:48
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 3/13/2024 13:49 End Purge (Date/Time): 3/13/2024 14:02 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:52	9.4	7.06	14009	6.67	125.8	-	9.94	yes	
13:55	9.2	7.17	13815	6.63	126.8	-	10.16	yes	
13:58	9.2	7.17	13711	6.71	132.5	-	10.46	yes	
14:01	9.1	6.91	13605	6.72	132.6	-	10.51	yes	
14:04									
14:07									
14:10									
14:13									
14:16									
14:19									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-4D
Weather: 50s; overcast
Sample ID: EMW-4D- 240312
Landau Representative: SKL, G_J, AT, DSB
Date: 03/12/24 Time: 13:25

WELL INFORMATION

Screened Interval: Top (ft): 75.00 Bottom (ft): 80.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 12.61 Time: 13:03 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 1
Begin Purge (Date/Time): 3/12/2024 13:08 End Purge (Date/Time): 3/12/2024 13:24 Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:11	12.4	0.44	9144	6.73	-112.5	-	13.80	yes	
13:14	12.1	0.34	9163	6.77	-124.8	-	13.82	yes	
13:17	12.3	0.31	9147	6.78	-129.8	-	13.86	yes	
13:20	12.3	0.29	9181	6.79	-132.3	-	13.90	yes	
13:23	12.3	0.31	9196	6.79	-135.5	-	13.92	yes	
13:26									
13:29									
13:32									
13:35									
13:38									

Sample Description (turbidity, color, odor, sheen): little turbid, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/12/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-5SA
Weather: Sunny, 50's
Sample ID: EMW-5SA- 240314
Landau Representative: G_J
Date: 03/14/24 Time: 15:55

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 12.23 Time: 15:23
Describe: Flush Mount
Static DTW (ft): 12.24 Time: 15:26
Flow-Thru Cell Vol.: 200 mL WQM No.: #5
Begin Purge (Date/Time): 3/14/2024 15:28
End Purge (Date/Time): 3/14/2024 15:53
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
15:31	15.3	0.82	591	6.49	-37.2	-	12.26	yes	
15:34	15.3	0.27	590	6.47	-58.9	-	12.28	yes	
15:37	15.1	0.22	591	6.47	-61.1	-	12.29	yes	
15:40	14.9	0.17	591	6.46	-65.5	-	12.30	yes	
15:43	14.8	0.15	592	6.46	-67.6	-	12.30	yes	
15:46	15.0	0.13	592	6.45	-70.6	-	12.32	yes	
15:49	15.1	0.14	593	6.45	-71.5	-	12.32	yes	
15:52	15.1	0.14	593	6.45	-71.7	-	12.32	yes	
15:55									
15:58									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 02/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-6S
Weather:
Sample ID: EMW-6S- 240313
Landau Representative: SKL, G_J, AT, DSB
Date: 03/13/24 Time: 12:44

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 6.42 Time: 12:25
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 3/13/2024 12:27
End Purge (Date/Time): 3/13/2024 12:42
Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:30	9.3	2.42	347.5	6.91	115.1	-	6.50	yes	
12:33	9.1	2.11	346.9	6.87	111.3	-	6.51	yes	
12:36	9.1	2.25	346.7	6.85	107.3	-	6.52	yes	
12:39	9.0	2.27	342.8	6.85	100.8	-	6.53	yes	
12:42	9.0	2.31	342	6.84	99.8	-	6.53	yes	
12:45									
12:48									
12:51									
12:54									
12:57									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-7S
Weather: sunny, 40's
Sample ID: EMW-7S- 240314
Landau Representative: G_J
Date: 03/14/24 Time: 11:50

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 8.23 Time: 11:18 Describe: Flush Mount
Static DTW (ft): 8.23 Time: 5:31 Flow-Thru Cell Vol.: 200 mL WQM No.: #5
Begin Purge (Date/Time): 3/14/2024 11:27 End Purge (Date/Time): 3/14/2024 11:49 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:30	12.4	1.51	508	6.59	21.9	-	8.26	yes	
11:33	12.1	1.38	502	6.52	20	-	8.26	yes	
11:36	12.1	1.35	504	6.50	10.4	-	8.26	yes	
11:39	12.1	1.41	506	6.50	4.3	-	8.26	yes	
11:42	12.0	1.41	508	6.48	-6.2	-	8.26	yes	
11:45	12.0	1.42	508	6.48	-9.9	-	8.26	yes	
11:48	12.2	1.55	511	6.47	-14.3	-	8.26	yes	
11:51									
11:54									
11:57									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-9SA
Weather: Sunny, 50s
Sample ID: EMW-9SA- 240313
Landau Representative: SKL, G_J, AT, DSB
Date: 03/13/24 Time: 15:58

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 12.79 Time: 15:37 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 3/13/2024 15:38 End Purge (Date/Time): 3/13/2024 15:57 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
15:41	13.8	0.78	605.2	6.60	-81.1	-	12.79	yes	
15:44	14.1	0.45	592.1	6.60	-92.1	-	12.79	yes	
15:47	14.1	0.41	590.9	6.60	-95.2	-	12.79	yes	
15:50	14.1	0.37	583.9	6.65	-98.3	-	12.79	yes	
15:53	14.1	0.39	580.5	6.65	-102.1	-	12.79	yes	
15:56	14.1	0.36	578.2	6.66	-103.9	-	12.79	yes	
15:59									
16:02									
16:05									
16:08									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-10D
Weather: CLEAR
Sample ID: EMW-10D- 240314
Landau Representative: DSB
Date: 03/14/24 Time: 14:57

WELL INFORMATION

Screened Interval: Top (ft): 40.00 Bottom (ft): 49.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 11.83 Time: 13:41
Describe: Flush Mount
Static DTW (ft): 12.32 Time: 13:35
Flow-Thru Cell Vol.: 200 mL
WQM No.: YSI 2
Begin Purge (Date/Time): 3/14/2024 14:37
End Purge (Date/Time): 3/14/2024 14:55
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:40	13.4	0.35	7908	6.57	179.8	-	12.37	yes	
14:43	13.5	0.21	8081	6.71	169.5	-	12.39	yes	
14:46	13.5	0.16	8110	6.74	163.1	-	12.41	yes	
14:49	13.5	0.15	8096	6.75	156.4	-	12.44	yes	
14:52	13.6	0.14	8036	6.76	149.6	-	12.45	yes	
14:55	13.5	0.14	8008	6.76	145.5	-	12.47	yes	
14:58									
15:01									
15:04									
15:07									

Sample Description (turbidity, color, odor, sheen): CLEAR COLORLESS NO ODOR NO SHEEN EFFERVESENT
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID:
☐ MS/MSD
Comments: GEOCHEMICAL SAMPLE
Signature: DSB
Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-11S
Weather: CLEAR
Sample ID: EMW-11S- 240313
Landau Representative: DSB
Date: 03/13/24 Time: 12:57

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 10.92 Time: 12:18
Describe: Flush Mount
Static DTW (ft): 10.96 Time: 12:22
Flow-Thru Cell Vol.: 200 mL
WQM No.: YSI 2
Begin Purge (Date/Time): 3/13/2024 12:28
End Purge (Date/Time): 3/13/2024 12:44
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:31	13.4	0.39	421.5	6.55	101.4	-	11.21	yes	
12:34	13.5	0.27	418.9	6.53	93.6	-	11.25	yes	
12:37	13.5	0.24	421.9	6.53	85.1	-	11.27	yes	
12:40	13.6	0.25	423.3	6.54	77.2	-	11.29	yes	
12:43	13.6	0.24	425.9	6.54	73.6	-	11.30	yes	
12:46									
12:49									
12:52									
12:55									
12:58									

Sample Description (turbidity, color, odor, sheen): YELLOW, LOW TUBIDITY, NONS
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: EMW-31S-240313
☐ MS/MSD
Comments:
Signature: DSB
Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-12S
Weather: Sunny, 50s
Sample ID: EMW-12S- 240314
Landau Representative: SKL, G_J, AT, DSB
Date: 03/14/24 Time: 15:09

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 14.29 Time: 14:36
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 3
Begin Purge (Date/Time): 3/14/2024 14:41 End Purge (Date/Time): 3/14/2024 15:08 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:44	13.1	2.77	198.4	6.80	115.3	-	14.41	Yes	
14:47	12.9	2.22	186.6	6.68	89.3	-	14.43	Yes	
14:50	13.0	1.82	185.1	6.67	67.6	-	14.45	Yes	
14:53	13.1	1.61	185.4	6.64	55.6	-	14.47	Yes	
14:56	13.0	1.52	184.4	6.63	42.3	-	14.49	Yes	
14:59	13.2	1.45	185.3	6.63	38	-	14.52	Yes	
15:02	13.1	1.09	185.6	6.61	34.6	-	14.55	Yes	
15:05	13.2	1.06	187.9	6.63	25.6	-	14.58	Yes	
15:08	13.2	0.99	189.7	6.63	25.2	-	14.60	Yes	
15:11									

Sample Description (turbidity, color, odor, sheen): moderate turbidity, yellow tint, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Adam Torocsik Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-13S
Weather: CLEAR
Sample ID: EMW-13S- 240313
Landau Representative: DSB
Date: 03/13/24 Time: 15:47

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 10.56 Time: 15:16
Describe: Flush Mount
Static DTW (ft): 10.89 Time: 15:21
Flow-Thru Cell Vol.: 200 mL
WQM No.: YSI 2
Begin Purge (Date/Time): 3/13/2024 15:24
End Purge (Date/Time): 3/13/2024 15:40
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
15:27	9.2	7.87	11864	7.46	134.4	-	11.59	yes	
15:30	9.5	7.21	11824	7.51	134.3	-	11.38	yes	
15:33	9.6	6.93	11965	7.61	134.2	-	11.56	yes	
15:36	9.7	6.61	12044	7.62	134.3	-	11.57	yes	
15:39	9.6	6.62	12067	7.63	134.3	-	11.59	yes	
15:42									
15:45									
15:48									
15:51									
15:54									

Sample Description (turbidity, color, odor, sheen):
$Fe\ 2^+$ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID:
☐ MS/MSD
Comments:
Signature: DSB
Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-14D
Weather: CLEAR
Sample ID: EMW-14D- 240313
Landau Representative: DSB
Date: 03/13/24 Time: 14:57

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 14.20 Time: 14:00
Describe: Flush Mount
Static DTW (ft): 14.23 Time: 14:19
Flow-Thru Cell Vol.: 200 mL
WQM No.: YSI 2
Begin Purge (Date/Time): 3/13/2024 14:20
End Purge (Date/Time): 3/13/2024 14:51
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:23	11.5	2.70	8106	6.99	141	-	14.26	yes	
14:26	12.2	1.53	7985	6.80	145.6	-	14.27	yes	
14:29	12.1	0.85	8254	6.80	144.9	-	14.28	yes	
14:32	12.3	0.49	8466	6.80	140.5	-	14.28	yes	
14:35	13.0	0.30	8693	6.80	124.7	-	14.29	yes	
14:38	13.1	0.27	8765	6.80	118	-	14.29	yes	
14:41	13.1	0.24	8868	6.81	105.4	-	14.29	yes	
14:44	13.2	0.22	8876	6.81	100	-	14.29	yes	
14:47	13.2	0.20	8982	6.81	89	-	14.29	yes	
14:50	13.1	0.20	9020	6.81	79.3	-	14.29	yes	

Sample Description (turbidity, color, odor, sheen): CLEAR COLORLESS NONS
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: DSB
Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-15D
Weather: SUNNY, 50S
Sample ID: EMW-15D- 240313
Landau Representative: KVP
Date: 03/13/24 Time: 14:58

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.68 Time: 14:35
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 1
Begin Purge (Date/Time): 3/13/2024 14:36
End Purge (Date/Time): 3/13/2024 15:07
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:39	13.1	7.87	2780	7.67	-38.9	-	13.74	yes	LOTS OF ORGANIC MATTER ORGANIC SN
14:42	13.1	5.65	2940	7.09	-41	-	13.71	yes	YSI EMPTIED OF ORGANIC MATTER
14:45	13.2	1.15	3777	7.04	-45.5	-	13.71	yes	
14:48	13.2	0.96	3859	6.96	-43.7	-	13.68	yes	
14:51	13.1	0.83	3992	6.93	-50.1	-	13.68	yes	
14:54	13.2	0.77	4174	6.82	-46.7	-	13.65	yes	
14:57	13.2	0.59	4469	6.66	-45.5	-	13.65	yes	
15:00	13.3	0.56	4509	6.63	-43.2	-	13.65	yes	
15:03	13.3	0.54	4599	6.63	-40.2	-	13.56	yes	

Sample Description (turbidity, color, odor, sheen): CLEAR COLORLESS NO ODOR OR SHEEN
Fe^{2+} (mg/L): N/A

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: KVP Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-16D
Weather: 50s; overcast
Sample ID: EMW-16D- 240312
Landau Representative: SKL, G_J, AT, DSB
Date: 03/12/24 Time: 0:00

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 14.07 Time: 14:02 Describe: Flush Mount
Static DTW (ft): 14.07 Time: 14::04 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 2
Begin Purge (Date/Time): 3/12/2024 14:05 End Purge (Date/Time): 3/12/2024 14:35 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:08	12.5	1.42	10611	7.04	101.6	-	14.07	yes	
14:11	12.6	0.78	13991	6.99	106	-	14.06	yes	
14:14	12.5	0.58	17225	6.78	113.5	-	14.05	yes	
14:17	12.5	0.59	20063	6.77	99.6	-	14.04	yes	
14:20	12.6	0.53	20779	6.76	86.3	-	14.03	yes	
14:23	12.6	0.40	21053	6.76	75.4	-	14.01	yes	
14:26	12.6	0.34	21094	6.76	65.8	-	13.90	yes	
14:29	12.6	0.31	21043	6.77	56.1	-	13.89	yes	
14:32	12.6	0.29	21023	6.77	51.7	-	13.89	yes	
14:35	12.6	0.29	21004	6.77	48.5	-	13.87	yes	

Sample Description (turbidity, color, odor, sheen): CLEAR COLORLESS NONS
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: DSB Date: 03/12/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-17S
Weather: sunny, 50s
Sample ID: EMW-17S- 240314
Landau Representative: G_J
Date: 03/14/24 Time: 12:55

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 9.89 Time: 12:27
Describe: Flush Mount
Static DTW (ft): 9.84 Time: 12:30
Flow-Thru Cell Vol.: 200 mL
WQM No.: #5
Begin Purge (Date/Time): 3/14/2024 12:32
End Purge (Date/Time): 3/14/2024 12:51
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
12:35	13.3	0.55	513	6.53	33.1	-	10.04	yes	
12:38	13.0	0.37	512	6.51	37.4	-	10.06	yes	
12:41	13.1	0.32	510	6.50	35.7	-	10.09	yes	
12:44	13.3	0.28	510	6.50	27.6	-	10.13	yes	
12:47	13.3	0.28	511	6.50	26.8	-	10.14	yes	
12:50	13.5	0.28	511	6.50	24.6	-	10.19	yes	
12:53									
12:56									
12:59									
13:02									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-18S
Weather: sunny, 40's
Sample ID: EMW-18S- 240313
Landau Representative: SKL, G_J, AT, DSB
Date: 03/13/24 Time: 13:05

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 9.41 Time: 12:13 Describe: Flush Mount
Static DTW (ft): 9.63 Time: 12:26 Flow-Thru Cell Vol.: 200 mL WQM No.: #5
Begin Purge (Date/Time): 3/13/2024 12:29 End Purge (Date/Time): 3/13/2024 13:00 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:32	13.6	0.56	435.1	6.27	107.2	-	9.62	yes	
12:35	13.6	0.65	432.3	6.26	90.2	-	9.65	yes	
12:38	13.5	0.44	429.5	6.26	68.1	-	9.69	yes	
12:41	13.8	0.28	428.5	6.25	42.7	-	9.76	yes	
12:44	13.7	0.27	428.5	6.25	42.7	-	9.78	yes	
12:47	13.7	0.24	428.1	6.25	31.1	-	9.78	yes	
12:50	13.7	0.30	428.9	6.26	-15.9	-	9.84	yes	
12:53	13.8	0.25	427.8	6.25	-9.1	-	9.90	yes	
12:56	13.9	0.24	428.3	6.25	-9.0	-	9.91	yes	
12:59	13.8	0.24	428.2	6.25	-13.3	-	9.97	yes	

Sample Description (turbidity, color, odor, sheen): clear, yellow hue, no lodor, no sheen
$Fe\ 2^+$ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-19D
Weather: CLEAR
Sample ID: EMW-19D- 240314
Landau Representative: DSB
Date: 03/14/24 Time: 15:27

WELL INFORMATION

Screened Interval: Top (ft): 75.00 Bottom (ft): 80.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.50 Time: 15:13
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 2
Begin Purge (Date/Time): 3/14/2024 15:15
End Purge (Date/Time): 3/14/2024 15:24
Gallons Purged: 0.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
15:18	13.3	0.13	38110	6.85	-26.5	-	12.53	yes	
15:21	13.2	0.13	38393	6.85	-22.9	-	12.56	yes	
15:24	13.2	0.12	38439	6.86	-21.9	-	12.59	yes	
15:27									
15:30									
15:33									
15:36									
15:39									
15:42									
15:45									

Sample Description (turbidity, color, odor, sheen): COLORLESS BROWN PARTICLES SUSPENDED MOD TURBIDI
$Fe\ 2^+$ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID:
☐ MS/MSD
Comments: GEOCHEMICAL SAMPLE
Signature: DSB
Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-20D
Weather: SUNNY, 50S
Sample ID: EMW-20D- 240313
Landau Representative: KVP
Date: 03/13/24 Time: 14:20

WELL INFORMATION

Screened Interval: Top (ft): 75.00 Bottom (ft): 80.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): Time: 13:45
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 1
Begin Purge (Date/Time): 3/13/2024 13:50 End Purge (Date/Time): 3/13/2024 14:19 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
13:53	12.9	2.98	6984	7.03	50.3	-	14.15	YES	
13:56	13.5	1.16	7027	6.82	4.4	-	13.16	YES	
13:59	13.5	0.84	7480	6.45	-16.2	-	13.19	YES	
14:02	13.0	0.76	7562	6.37	-14.9	-	13.19	YES	
14:05	12.8	0.67	7647	6.42	-18.1	-	13.29	YES	
14:08	12.6	0.53	12187	6.32	-8.7	-	13.29	YES	
14:11	12.7	0.47	13600	6.29	-9.1	-	13.29	YES	
14:14	12.6	0.45	13626	6.24	-10.8	-	13.29	YES	
14:17	12.5	0.49	14002	6.25	-15.1	-	13.29	YES	

Sample Description (turbidity, color, odor, sheen): CLEAR, SLIGHT YELLOW TINT, NO ODOR OR SHEEN
Fe^{2+} (mg/L): N/A

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: KVP Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-21D
Weather: wind
Sample ID: EMW-21D 240312
Landau Representative: SKL, G_J, AT, DSB
Date: 03/12/24 Time: 13:37

WELL INFORMATION

Screened Interval: Top (ft): 75.00 Bottom (ft): 80.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 6.20 Time: 0:00 Describe: Flush Mount
Static DTW (ft): 8.96 Time: 13:03 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 2
Begin Purge (Date/Time): 3/12/2024 13:04 End Purge (Date/Time): 3/12/2024 13:34 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:07	10.8	1.98	10353	6.98	172.2	-	8.97	yes	
13:10	10.5	1.68	11075	6.98	175	-	8.97	yes	
13:13	10.8	1.35	11728	6.98	174.9	-	8.98	yes	
13:16	10.7	1.26	12088	6.99	174.6	-	8.98	yes	
13:19	10.5	1.23	13319	6.98	173.7	-	8.99	yes	
13:22	10.4	0.99	14346	6.98	171	-	9.00	yes	
13:25	10.6	0.81	16460	6.97	169.2	-	9.00	yes	
13:28	10.6	0.81	17112	6.99	163.6	-	8.99	yes	
13:31	10.7	0.77	18006	6.99	158.7	-	8.99	yes	
13:34	10.9	0.70	20087	6.99	149.8	-	8.99	yes	

Sample Description (turbidity, color, odor, sheen): YELLOW LOW TURBIDITY NONS
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: DSB Date: 03/12/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-22D
Weather: 50s; overcast
Sample ID: EMW-22D- 240312
Landau Representative: SKL, G_J, AT, DSB
Date: 03/12/24 Time: 14:10

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 17.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 11.92 Time: 13:38 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 3/12/2024 13:39 End Purge (Date/Time): 3/12/2024 14:09 Gallons Purged: 2.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:42	12.1	1.39	34977	6.98	-100.8	-	11.98	yes	
13:45	12.2	1.02	36135	7.02	-133.4	-	11.98	yes	
13:48	12.4	0.94	36133	7.05	-139.9	-	11.98	yes	
13:51	12.0	0.77	36204	7.07	-144.2	-	11.98	yes	
13:54	12.2	0.73	36191	7.03	-146.7	-	11.98	yes	
13:57	12.3	0.59	36210	7.05	-148.9	-	11.98	yes	
14:00	12.5	0.48	36240	7.04	-150.9	-	11.98	yes	
14:03	12.2	0.43	36277	7.05	-152.4	-	11.98	yes	
14:06	12.2	0.42	36259	7.06	-153.2	-	11.98	yes	
14:09	12.2	0.39	36271	7.06	-154.1	-	11.98	yes	

Sample Description (turbidity, color, odor, sheen): little turbid, colorless, no odor, no sheen **Fe^{2+} (mg/L):**

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/12/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-23S
Weather: Sunny, 50s
Sample ID: EMW-23S- 240314
Landau Representative: SKL, G_J, AT, DSB
Date: 03/14/24 Time: 15:00

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 10.35 Time: 14:36 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 1
Begin Purge (Date/Time): 3/14/2024 14:38 End Purge (Date/Time): 3/14/2024 14:59 Gallons Purged: 1.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:41	13.8	7.89	476.4	6.68	11.2	-	10.39	yes	
14:44	13.6	5.98	469.6	6.31	6.1	-	10.39	yes	
14:47	13.5	5.67	469.4	6.27	1.1	-	10.39	yes	
14:50	13.3	5.21	468.7	6.24	-6.3	-	10.44	yes	
14:53	13.3	5.01	468.8	6.24	-8.2	-	10.45	yes	
14:56	13.3	4.77	468.7	6.24	-10.2	-	10.45	yes	
14:59	13.3	4.51	469	6.23	-11.1	-	10.46	yes	
15:02									
15:05									
15:08									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: EMW-31S
Weather: CLEAR
Sample ID: EMW-31S- 240313
Landau Representative: DSB
Date: 03/13/24 Time: 12:20

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): Time:
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 2
Begin Purge (Date/Time): 3/13/2024 12:29 End Purge (Date/Time): 3/13/2024 12:44 Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:32	13.5	0.35	419.2	6.54	97.8	-	11.17	yes	
12:35	13.5	0.25	420.1	6.53	88.8	-	11.27	yes	
12:38	13.5	0.24	422.5	6.53	82.1	-	11.28	yes	
12:41	13.6	0.25	423.5	6.54	76.5	-	11.29	yes	
12:44	13.7	0.25	425.9	6.54	73	-	11.30	yes	
12:47									
12:50									
12:53									
12:56									
12:59									

Sample Description (turbidity, color, odor, sheen): YELLOW LOW TURBIDITY NONS
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: EMW-11S-2403 ☐ MS/MSD
Comments:
Signature: DSB Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: HC-4
Weather: Sunny, 50s
Sample ID: HC-4- 240314
Landau Representative: SKL, G_J, AT, DSB
Date: 03/14/24 Time: 16:09

WELL INFORMATION

Screened Interval: Top (ft): 6.50 Bottom (ft): 16.50 Well Secure? ☐ No ☑ Yes Damaged? ☐ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 13.73 Time: 15:37 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 3
Begin Purge (Date/Time): 3/14/2024 15:38 End Purge (Date/Time): 3/14/2024 16:06 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
15:41	15.6	3.43	779	6.56	81.1	-	13.74	Yes	
15:44	15.5	3.02	788	6.63	91	-	13.76	Yes	
15:47	15.6	2.74	789	6.53	94.3	-	13.76	Yes	
15:50	15.7	2.57	793	6.53	100.1	-	13.77	Yes	
15:53	15.8	2.45	796	6.51	102.8	-	13.78	Yes	
15:56	15.8	2.30	801	6.49	105	-	13.78	Yes	
15:59	15.8	2.19	807	6.50	107.6	-	13.78	Yes	
16:02	15.6	2.02	810	6.49	109.8	-	13.78	Yes	
16:05	15.7	1.98	809	6.50	110.4	-	13.78	Yes	
16:08									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Adam Torocsik Date: 03/14/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: March Ground Water Monitoring Event
Well ID: HC-20
Weather: CLEAR
Sample ID: HC-20- 240313
Landau Representative: DSB
Date: 03/13/24 Time: 12:07

WELL INFORMATION

Screened Interval: Top (ft): 9.50 Bottom (ft): 19.20 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 10.10 Time: 11:27 Describe: Flush Mount
Static DTW (ft): 10.08 Time: 11:32 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 2
Begin Purge (Date/Time): 3/13/2024 11:34 End Purge (Date/Time): 3/13/2024 11:58 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:37	12.9	1.54	493	6.40	97.4	-	11.22	yes	
11:40	13.1	0.77	491	6.38	100.8	-	11.21	yes	
11:43	13.0	0.66	491	6.37	99.5	-	11.20	yes	
11:46	13.2	0.51	490	6.37	95.1	-	11.25	yes	
11:49	13.1	0.43	491	6.37	91.9	-	11.28	yes	
11:52	13.2	0.28	490	6.37	82.5	-	11.32	yes	
11:55	12.9	0.25	494	6.37	77.7	-	11.15	yes	
11:58	12.9	0.27	491	6.37	74.5	-	11.18	yes	
12:01									
12:04									

Sample Description (turbidity, color, odor, sheen): YELLOW, MODERATE TURBIDITY, GARGBAGE ODOR, NO SHE **Fe^{2+} (mg/L):**

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☑ Field Filtered	2	250 mL Poly, 1 FF-1 not FF
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: DSB Date: 03/13/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-1
Weather: Rain, ~50's F
Sample ID: CMW-1- 040605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/04 Time: 10:05

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 17.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 9.04 Time: 9:34 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #2
Begin Purge (Date/Time): 6/4/2024 9:37 End Purge (Date/Time): 6/5/2004 10:04 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
9:52	13.0	5.91	12415	6.62	147.8	-	-	Yes	
9:55	13.0	5.80	12288	6.65	144.9	7.86	-	Yes	
9:58	13.0	5.95	12450	6.67	142.5	0.45	-	Yes	
10:01	13.0	6.15	12473	6.69	141	0.02	-	Yes	
10:04									
10:07									
10:10									
10:13									
10:16									
10:19									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Water level meter not reccorded due to meter issues
Signature: BLH Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-2
Weather: clear; 60s
Sample ID: CMW-2- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:40

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 17.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 12.48 Time: 11:11 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/5/2024 11:12 End Purge (Date/Time): 6/5/2024 11:39 Gallons Purged: 2.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:15	15.2	8.08	4152	6.37	61.6	233	12.52	yes	clear; no odor
11:18	14.2	7.72	3993	6.89	61.1	225	12.79	yes	clear; no odor
11:21	14.6	7.02	4119	7.17	52.9	121	12.95	yes	clear; no odor
11:24	14.7	6.36	4136	7.36	49.2	121	13.18	yes	clear; no odor
11:27	14.6	6.01	4191	7.53	47.9	86.4	13.26	yes	clear; no odor
11:30	14.7	5.66	4248	7.66	46.8	72.3	13.36	yes	clear; no odor
11:33	14.8	5.32	4441	7.72	40.2	46.5	13.54	yes	clear; no odor
11:36	14.9	5.32	4398	7.75	34.4	47.3	13.69	yes	clear; no odor
11:39	14.8	5.32	4482	7.71	38	39.4	13.79	yes	clear; no odor
11:42									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 15.0' below top of casing
Signature: SKL Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-3
Weather: rain; 50s
Sample ID: CMW-3- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 10:56

WELL INFORMATION

Screened Interval: Top (ft): 3.50 Bottom (ft): 18.50
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.33 Time: 10:38
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/4/2024 10:40
End Purge (Date/Time): 6/4/2024 10:55
Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:43	12.8	6.94	5340	7.38	173.5	21.6	13.35	yes	clear; no odor
10:46	12.6	5.66	5449	7.38	168.9	16.9	13.35	yes	clear; no odor
10:49	12.6	4.61	5664	7.31	163.7	3.42	13.35	yes	clear; no odor
10:52	12.6	4.38	5763	7.30	156.2	3.03	13.35	yes	clear; no odor
10:55	12.6	4.29	5799	7.30	155.1	1.28	13.35	yes	clear; no odor
10:58									
11:01									
11:04									
11:07									
11:10									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
$Fe\ 2^+$ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 15.5' below top of casing
Signature: SKL
Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-4
Weather: CLEAR
Sample ID: CMW-4- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 12:27

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 18.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 14.33 Time: 11:55 Describe: Flush Mount
Static DTW (ft): 14.42 Time: 12:03 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/5/2024 12:07 End Purge (Date/Time): 6/5/2024 12:19 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:10	14.6	6.32	1232	7.54	-12	-	14.80	yes	INITIALLY PURGED BROWN
12:13	14.4	6.24	1203	7.53	-9.9	-	14.84	yes	clear
12:16	14.5	6.22	1185	7.51	-8.4	-	14.87	yes	
12:19	14.4	5.85	1185	7.51	-7.2	17.1	14.88	yes	
12:22									
12:25									
12:28									
12:31									
12:34									
12:37									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 16.5' below top of casing
Signature: DSB Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-5
Weather: clear
Sample ID: CMW-5- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:07

WELL INFORMATION

Screened Interval: Top (ft): 3.00 Bottom (ft): 18.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 15.26 Time: 10:42 Describe: Flush Mount
Static DTW (ft): 15.27 Time: 10:46 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/5/2024 10:47 End Purge (Date/Time): 6/5/2024 11:05 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:50	14.3	2.70	1209	6.55	-44.1	-	15.28		
10:53	14.1	2.01	1210	6.55	-48	-	15.28		
10:56	14.1	1.98	1212	6.55	-50.5	-	15.28		
10:59	14.5	1.67	1232	6.56	-57.2	-	15.29		
11:02	14.2	1.69	1220	6.57	-60.5	-	15.29		
11:05	14.4	1.70	1224	6.58	-63.2	239	15.29		see comment below
11:08									
11:11									
11:14									
11:17									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: turb collected later due to equipment issue. Water had turned yellow and cloudy at time of test. Water collected in glass jar to hold at time of sampling. sample intake placed at 16.5' below top of casing
Signature: DSB Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-6
Weather: LT RAIN
Sample ID: CMW-6- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 12:11

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.50
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 14.55 Time: 11:50 Describe: Flush Mount
Static DTW (ft): 14.55 Time: 11:53 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/4/2024 11:53 End Purge (Date/Time): 6/4/2024 12:09 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:56	13.8	7.04	11180	7.17	16.9	-	14.49	yes	
11:59	13.9	7.49	11783	7.22	17.2	-	14.48	yes	
12:02	13.9	7.24	12071	7.24	17.8	-	14.48	yes	
12:05	14.0	7.08	12246	7.25	18	-	14.45	yes	
12:08	14.0	7.04	12320	7.26	18	0.41	14.44	yes	
12:11									
12:14									
12:17									
12:20									
12:23									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 16.0' below top of casing
Signature: DSB Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: CMW-7
Weather: Sunny, 70's
Sample ID: CMW-7- 240606
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/06/24 Time: 12:54

WELL INFORMATION

Screened Interval: Top (ft): 4.50 Bottom (ft): 19.30
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 15.53 Time: 12:28
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/6/2024 12:32 End Purge (Date/Time): 6/6/2024 12:52 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:35	16.0	1.17	1332	6.67	97.3	197	15.58	Yes	
12:38	15.9	1.11	1323	6.66	96.7	191	15.63	Yes	
12:41	16.1	0.97	1307	6.64	91.8	158	15.64	Yes	
12:44	16.1	0.94	1281	6.64	83.7	134	15.64	Yes	
12:47	15.9	1.00	1271	6.64	77.2	80.2	15.64	Yes	
12:50	15.8	1.03	1262	6.64	74.8	70.5	15.64	Yes	

Sample Description (turbidity, color, odor, sheen): Light brown, turbid, no odor, no sheen
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	8270E	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 17.0' below top of casing
Signature: Emerson Cole Date: 06/06/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: SLR-1
Weather: Rain, ~60F
Sample ID: SLR-1- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 12:50

WELL INFORMATION

Screened Interval: Top (ft): 9.20 Bottom (ft): 19.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Stick Up
Static DTW (ft): Time:
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #2
Begin Purge (Date/Time): 6/4/2024 12:28 End Purge (Date/Time): 6/4/2024 12:48 Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:32	13.8	1.39	325.7	7.21	1.4	0.02	-	Yes	
12:35	13.8	0.44	309.5	6.94	18.6	0.02	-	Yes	
12:39	13.9	0.37	309.5	6.87	17.7	0.02	-	Yes	
12:42	13.8	0.35	310.0	6.85	14.1	0.02	-	Yes	
12:45	13.7	0.33	312.5	6.83	10.9	0.02	-	Yes	
12:48									
12:51									
12:54									
12:57									
13:00									

Sample Description (turbidity, color, odor, sheen): Slight Yellow tint, clear, no odor, no sheen
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD

Comments: Water level meter not reccorded due to meter issues

Signature: BLH Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: SLR-2
Weather: sunny, 50's
Sample ID: SLR-2- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:45

WELL INFORMATION

Screened Interval: Top (ft): 8.00 Bottom (ft): 17.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Stick Up
Static DTW (ft): 7.59 Time: 11:29
Flow-Thru Cell Vol.: 200 mL WQM No.: #2
Begin Purge (Date/Time): 6/5/2024 11:30 End Purge (Date/Time): 6/5/2024 11:43 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:33	14.6	2.90	138.6	7.20	-0.2	-	8.06	yes	
11:36	14.8	2.39	137.3	7.10	10.8	-	8.12	yes	
11:39	15.0	2.27	136.8	7.05	13.4	-	8.17	yes	
11:42	15.0	2.22	135.8	7.02	12.4	42.65	8.22	yes	
11:45									
11:48									
11:51									
11:54									
11:57									
12:00									

Sample Description (turbidity, color, odor, sheen): little turbid, colorless, no odor, no sheen
Fe 2^{+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: SLR-3
Weather: partly cloudy, 50's
Sample ID: SLR-3- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:05

WELL INFORMATION

Screened Interval: Top (ft): 3.90 Bottom (ft): 13.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 7.44 Time: 10:37
Flow-Thru Cell Vol.: 200 mL WQM No.: #2
Begin Purge (Date/Time): 6/5/2024 10:40
End Purge (Date/Time): 6/5/2024 11:02
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:43	15.6	0.91	740	6.66	48.7	-	7.88	yes	
10:46	15.7	0.46	752	6.72	53.5	-	8.08	yes	
10:49	15.3	0.37	740	6.75	48.7	-	8.12	yes	
10:52	15.1	0.28	741	6.78	44.1	-	8.32	yes	
10:55	15.4	0.26	744	6.79	38.0	-	8.39	yes	
10:58	15.0	0.25	738	6.80	35.5	-	8.41	yes	
11:01	14.9	0.25	734	6.81	31.6	13.14	8.46	yes	
11:04									
11:07									
11:10									

Sample Description (turbidity, color, odor, sheen): clear, brown hue, no odor, no sheen
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: SLR-6
Weather: sunny, 60's
Sample ID: SLR-6- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 12:20

WELL INFORMATION

Screened Interval: Top (ft): 3.90 Bottom (ft): 13.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 8.52 Time: 12:01
Flow-Thru Cell Vol.: 200 mL WQM No.: #2
Begin Purge (Date/Time): 6/5/2024 12:03
End Purge (Date/Time): 6/5/2024 12:19
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:06	13.5	6.53	282.1	6.45	34.6	-	8.75	yes	
12:09	13.0	5.61	275.8	6.37	35.0	-	8.78	yes	
12:12	12.8	5.12	270.2	6.34	38.0	-	8.95	yes	
12:15	12.7	4.74	268	6.32	40.6	-	9.01	yes	
12:18	13.0	4.84	275.6	6.26	45.2	188.3	9.05	yes	
12:21									
12:24									
12:27									
12:30									
12:33									

Sample Description (turbidity, color, odor, sheen): colorless, turbid, no odor, no sheen
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 11.0' below top of casing
Signature: G_J Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: SLR-7
Weather: light rain, ~60F
Sample ID: SLR-7- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 13:45

WELL INFORMATION

Screened Interval: Top (ft): 4.20 Bottom (ft): 14.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): Time:
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #2
Begin Purge (Date/Time): 6/4/2024 13:12 End Purge (Date/Time): 6/4/2024 13:43 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:15	14.8	4.95	634	6.75	49.7	23.2	-	Yes	
13:18	14.5	4.31	632	6.71	52.9	12.8	-	Yes	
13:21	14.6	3.30	640	6.70	56.5	10.7	-	Yes	
13:24	14.6	3.02	661	6.68	59.6	13.9	-	Yes	
13:27	14.9	3.38	666	6.69	59.7	14.5	-	Yes	
13:31	14.6	2.29	676	6.71	60.0	63.3	-	Yes	well dry; lowered intake ~2 ft.
13:34	14.5	1.81	671	6.70	60.0	41.3	-	Yes	
13:37	14.3	1.93	688	6.70	60.9	38.1	-	Yes	
13:40	14.2	1.99	687	6.70	61.2	25.9	-	Yes	
13:43	14.2	2.00	690	6.70	61.8	16.2	-	Yes	

Sample Description (turbidity, color, odor, sheen): Slight Yellow tint, clear, no odor, no sheen
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: On slowest Pump speed. Water level meter not reccorded due to meter issues
Signature: BLH Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: HC-4
Weather: Sunny, 60's
Sample ID: HC-4- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 12:07

WELL INFORMATION

Screened Interval: Top (ft): 6.50 Bottom (ft): 16.20 Well Secure? ☐ No ☑ Yes Damaged? ☐ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.91 Time: 11:45 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/5/2024 11:48 End Purge (Date/Time): 6/5/2024 12:06 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:51	16.1	2.27	923	6.53	-50.7	6.04	14.29	Yes	
11:54	16.9	2.09	783	6.46	-51.4	2.7	14.28	Yes	
11:57	17.9	1.89	757	6.46	-66	0.82	14.29	Yes	
12:00	16.9	1.74	734	6.45	-70.8	0.62	14.29	Yes	
12:03	16.5	1.60	717	6.44	-72.6	0.02	14.29	Yes	
12:06	16.5	1.60	714	6.44	-72.3	0.02	14.29	Yes	
12:09									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☑ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☑ Dedicated
Emerson Cole ☑ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 15.5' below top of casing
Signature: Emerson Cole Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: HC-20
Weather: rain, ~60F
Sample ID: HC-20- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 14:55

WELL INFORMATION

Screened Interval: Top (ft): 9.50 Bottom (ft): 19.20
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): Time:
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #2
Begin Purge (Date/Time): 6/4/2024 14:34 End Purge (Date/Time): 6/4/2024 14:54 Gallons Purged: 0.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:37	14.6	0.77	450.1	6.37	67.1	13.9	-	Yes	
14:40	14.7	0.54	445.6	6.26	71.4	5.25	-	Yes	
14:43	14.7	0.52	442.0	6.24	70.6	4.72	-	Yes	
14:46	14.7	0.52	440.3	6.22	71.5	7.06	-	Yes	
14:49	14.8	0.50	441.3	6.21	68.8	7.63	-	Yes	
14:52	14.6	0.49	439.7	6.21	65.2	4.59	-	Yes	
14:55									
14:58									
15:01									
15:04									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Water level meter not reccorded due to meter issues
Signature: BLH Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: DMW2
Weather:
Sample ID: DMW2- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 15:07

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 18.70 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 12.24 Time: 14:39 Describe: Flush Mount
Static DTW (ft): 12.22 Time: 14:42 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/4/2024 14:46 End Purge (Date/Time): 6/4/2024 15:01 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:49	14.7	0.54	605	6.48	-13.9	-	12.18	yes	
14:52	14.6	0.60	617	6.51	-22.3	-	12.14	yes	
14:55	14.9	0.58	629	6.51	-26.2	-	12.13	yes	
14:58	14.6	0.60	632	6.51	-29	0.02	12.12	yes	
15:01									
15:04									
15:07									
15:10									
15:13									
15:16									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: DMW2-2406 ☐ MS/MSD
Comments: sample intaked placed at 14.5' below top of casing
Signature: DSB Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: DMW-12
Weather: RAIN
Sample ID: DMW-12- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 14:57

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 18.70 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 12.24 Time: 14:39 Describe: Flush Mount
Static DTW (ft): 12.22 Time: 14:42 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/4/2024 14:46 End Purge (Date/Time): 6/4/2024 15:01 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:49	14.6	0.59	607	6.48	-6.1	-	12.18	yes	
14:52	14.7	0.58	619	6.51	-23.5	-	12.14	yes	
14:55	14.9	0.63	629	6.51	-26.8	-	12.13	yes	
14:58	14.6	0.61	632	6.52	-29.4	0.02	12.12	yes	
15:01									
15:04									
15:07									
15:10									
15:13									
15:16									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: DMW2-2406 ☐ MS/MSD
Comments: sample intaked placed at 14.5' below top of casing
Signature: DSB Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: DMW3
Weather: rain; 50s
Sample ID: DMW3- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 15:21

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 18.70 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 12.33 Time: 14:45 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/4/2024 14:50 End Purge (Date/Time): 6/4/2024 15:20 Gallons Purged: 2.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:53	13.5	0.08	145.3	6.06	94.1	4.7	12.38	yes	clear; no odor
14:56	13.6	0.06	162.1	5.96	85	4.56	12.38	yes	clear; no odor
14:59	13.5	0.07	221.1	6.05	80.4	2.21	12.38	yes	clear; no odor
15:02	13.5	0.10	254.2	6.13	69.7	0.48	12.38	yes	clear; no odor
15:05	13.6	0.09	264.5	6.16	58.3	1.92	12.38	yes	clear; no odor
15:08	13.6	0.08	270.1	6.18	46.7	0.02	12.38	yes	clear; no odor
15:11	13.6	0.07	280.2	6.20	38.1	2.13	12.38	yes	clear; no odor
15:14	13.6	0.06	290.2	6.22	27.7	0.12	12.38	yes	clear; no odor
15:17	13.6	0.06	296.1	6.23	21.1	2.31	12.38	yes	clear; no odor
15:20	13.6	0.07	291.1	6.24	17.8	1.59	12.38	yes	clear; no odor

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intaked placed at 14.5' below top of casing
Signature: SKL Date: 06/04/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: DMW-6B
Weather:
Sample ID: DMW-6B- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 13:17

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.11 Time: 12:07
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/4/2024 12:20 End Purge (Date/Time): 6/4/2024 13:16 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:23	14.8	0.61	549	6.72	148.3	14.29	13.11	Yes	
12:26	14.8	0.46	486.3	6.70	140.7	7.61	13.11	Yes	
12:29	14.8	0.44	478.8	6.71	133	7.22	13.09	Yes	
12:32	14.8	0.42	475.7	6.71	117.3	6.86	13.09	Yes	
12:35	14.8	0.41	469.4	6.72	100.8	4.46	13.09	Yes	
12:38	14.9	0.41	469.5	6.73	80.2	3.64	13.06	Yes	
12:41	14.8	0.41	467.7	6.73	65.5	4.07	13.06	Yes	
12:44	14.7	0.44	466.4	6.72	55.4	3.62	13.06	Yes	
12:47	14.8	0.44	466.2	6.73	40.8	4.17	13.06	Yes	
1:03	15.7	0.51	476.6	6.72	-29.9	3.44	12.98	Yes	Ysi batteries changed
13:06	15.7	0.49	476.1	6.72	-34.4	1.5	12.98	Yes	
13:09	15.5	0.49	473.1	6.72	-37.7	2.75	12.96	Yes	
13:12	15.6	0.49	473.1	6.72	-44.8	1.94	12.96	Yes	
13:15	15.5	0.49	471.8	6.72	-47.6	2.16	12.98	Yes	

Sample Description (turbidity, color, odor, sheen): Clear, light brown color, no odor, no sheen
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 15.0' below top of casing
Signature: Emerson Cole Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-1S
Weather:
Sample ID: EMW-1S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 13:01

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 10.28 Time: 12:40 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/4/2024 12:42 End Purge (Date/Time): 6/4/2024 13:00 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:45	13.3	0.91	428.9	6.54	96.4	22.4	10.39	yes	clear; no odor
12:48	12.8	0.48	421.8	6.59	39.9	28.4	10.65	yes	clear; no odor
12:51	12.9	0.36	422.7	6.61	-5.7	40	10.87	yes	clear; no odor
12:54	13.0	0.30	425.3	6.62	-20.6	26.9	10.99	yes	clear; no odor
12:57	13.1	0.31	425.6	6.63	-23.1	23.1	11.08	yes	clear; no odor
13:00	13.3	0.29	428.4	6.63	-29.1	26.1	11.14	yes	clear; no odor
13:03									
13:06									
13:09									
13:12									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-2S
Weather: sunny, 60's
Sample ID: EMW-2S- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 12:51

WELL INFORMATION

Screened Interval: Top (ft): 4.80 Bottom (ft): 19.60 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 8.60 Time: 12:31 Flow-Thru Cell Vol.: 200 mL WQM No.: #2
Begin Purge (Date/Time): 6/5/2024 12:34 End Purge (Date/Time): 6/5/2024 12:50 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:37	12.3	3.97	400.8	6.50	60.1	-	8.96	yes	
12:40	12.3	2.41	395.6	6.51	56.3	-	9.05	yes	
12:43	12.3	0.98	395.2	6.52	55.3	-	9.08	yes	
12:46	12.4	0.96	396.9	6.52	53.3	-	9.18	yes	
12:49	12.4	0.93	400.1	6.52	51.4	93.62	9.31	yes	
12:52									
12:55									
12:58									
13:01									
13:04									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: G_J Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-3S
Weather: clear; 60s
Sample ID: EMW-3S- 240606
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/06/24 Time: 12:38

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.89 Time: 12:15
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 6/6/2024 12:19 End Purge (Date/Time): 6/6/2024 12:37 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:22	16.5	3.65	6581	6.29	94.5	36.9	14.01	yes	little turbid; no odor
12:25	13.7	3.81	6248	6.18	92.5	36.4	14.15	yes	little turbid; no odor
12:28	13.6	4.25	6122	6.21	89.6	27.6	14.15	yes	little turbid; no odor
12:31	13.8	4.61	6099	6.20	86.8	11	14.15	yes	clear; no odor
12:34	13.9	4.62	6112	6.19	81.2	9.2	14.15	yes	clear; no odor
12:37	14.0	4.58	6130	6.19	76.9	6.93	14.15	yes	clear; no odor
12:40									
12:43									
12:46									
12:49									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 16.0' below top of casing
Signature: SKL Date: 06/06/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-4D
Weather: Rain, ~50's F
Sample ID: EMW-4D- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 11:00

WELL INFORMATION

Screened Interval: Top (ft): 40.00 Bottom (ft): 49.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): Time:
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #2
Begin Purge (Date/Time): 6/4/2024 10:36 End Purge (Date/Time): 6/4/2024 10:56 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:39	13.4	0.63		6.68	104.8	12.3	-	Yes	
10:42	13.5	0.69	7850	6.69	102.5	62.2	-	Yes	
10:45	13.5	0.41	7915	6.70	100.0	26.3	-	Yes	
10:48	13.5	0.37	7971	6.71	95.6	35.5	-	Yes	
10:53	13.4	0.37	8041	6.72	93.0	43.9	-	Yes	
10:56	13.5	0.41	8161	6.72	90.7	19.7	-	Yes	
10:59									
11:02									
11:05									
11:08									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Water level meter not reccorded due to meter issues
Signature: BLH Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-5SA
Weather: clear; 60s
Sample ID: EMW-5SA- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 12:17

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.00 Time: 11:55
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/5/2024 11:58 End Purge (Date/Time): 6/5/2024 12:16 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:01	17.4	0.23	569	6.80	8.8	6	13.14	yes	clear; no odor
12:04	15.5	0.04	507	6.54	-31.3	3.37	13.14	yes	clear; no odor
12:07	15.8	0.03	507	6.49	-40.3	1.76	13.14	yes	clear; no odor
12:10	15.9	0.06	506	6.46	-47	2.34	13.14	yes	clear; no odor
12:13	15.8	0.05	505	6.44	-52.4	1.73	13.14	yes	clear; no odor
12:16	15.7	0.05	504	6.43	-57	3.69	13.14	yes	clear; no odor
12:19									
12:22									
12:25									
12:28									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 15.0' below top of casing
Signature: SKL Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-6S
Weather: rain; 50s
Sample ID: EMW-6S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 13:46

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 7.48 Time: 13:26
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/4/2024 13:29 End Purge (Date/Time): 6/4/2024 13:44 Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:32	13.3	2.38	289	6.58	68.7	14.8	7.53	yes	clear; no odor
13:35	13.3	1.92	289.3	6.44	76.3	9.89	7.55	yes	clear; no odor
13:38	13.2	1.80	291.4	6.40	81.3	4.09	7.56	yes	clear; no odor
13:41	13.1	1.65	287.8	6.39	80.6	2.1	7.57	yes	clear; no odor
13:44	13.1	1.63	285.7	6.39	78.2	3.47	7.58	yes	clear; no odor
13:47									
13:50									
13:53									
13:56									
13:59									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: EMW-26S-2406 ☐ MS/MSD
Comments:
Signature: SKL Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-26S
Weather: rain; 50s
Sample ID: EMW-26S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 16:00

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 7.48 Time: 13:26
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/4/2024 13:30 End Purge (Date/Time): 6/4/2024 13:45 Gallons Purged: 1.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:33	13.2	1.90	286.6	6.50	70.9	14.8	7.53	yes	clear; no odor
13:36	13.2	1.96	291	6.43	77	9.89	7.55	yes	clear; no odor
13:39	13.2	1.75	290.5	6.40	81.5	4.09	7.56	yes	clear; no odor
13:42	13.1	1.62	287.2	6.39	79.4	2.1	7.57	yes	clear; no odor
13:45	13.1	1.72	286.9	6.39	78.2	3.47	7.58	yes	clear; no odor
13:48									
13:51									
13:54									
13:57									
14:00									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: EMW-6S-2406 ☐ MS/MSD
Comments:
Signature: SKL Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-7S
Weather: LT RAIN
Sample ID: EMW-7S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 13:57

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 10.09 Time: 13:27
Describe: Flush Mount
Static DTW (ft): 10.09 Time: 13:32
Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/4/2024 13:35
End Purge (Date/Time): 6/4/2024 13:50
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:38	16.4	2.18	291.2	6.50	-9.9	-	11.34	yes	
13:41	16.0	1.73	288.5	6.50	-15.9	-	11.51	yes	
13:44	16.0	1.59	286.6	6.50	-16	-	11.87	yes	
13:47	15.9	1.50	284.9	6.50	-15.4	-	12.04	yes	
13:50	15.8	1.58	283	6.51	-14	8.83	12.18	yes	
13:53									
13:56									
13:59									
14:02									
14:05									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: DSB Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-9SA
Weather: clear; 60s
Sample ID: EMW-9SA- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:01

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.77 Time: 10:36
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/5/2024 10:39 End Purge (Date/Time): 6/5/2024 11:00 Gallons Purged: 1.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:42	14.5	0.46	470.6	6.25	79.6	11	13.82	yes	clear; no odor
10:45	14.4	0.41	451.3	6.28	20.9	8.16	13.83	yes	clear; no odor
10:48	14.4	0.23	448.9	6.31	-2.6	7.85	13.85	yes	clear; no odor
10:51	14.4	0.18	450.1	6.32	-15.8	2.74	13.86	yes	clear; no odor
10:54	14.5	0.14	450.1	6.33	-24.1	5.61	13.88	yes	clear; no odor
10:57	14.6	0.13	450.1	6.33	-29.1	5.09	13.89	yes	clear; no odor
11:00	14.5	0.13	450.1	6.34	-34	3.91	13.90	yes	clear; no odor
11:03									
11:06									
11:09									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 16.0' below top of casing
Signature: SKL Date: 06/05/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-10D
Weather: Sunny, 60's
Sample ID: EMW-10D- 240606
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/06/24 Time: 12:12

WELL INFORMATION

Screened Interval: Top (ft): 40.00 Bottom (ft): 49.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.03 Time: 11:20
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #4
Begin Purge (Date/Time): 6/6/2024 11:24 End Purge (Date/Time): 6/6/2024 12:10 Gallons Purged: 3.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:27	15.9	4.45	5980	6.47	169.5	5.05	13.06	yes	
11:30	16.1	3.42	5720	6.67	158.9	3.07	13.08	yes	
11:33	16.0	3.36	6136	6.63	148.9	0.02	13.10	yes	
11:36	15.8	3.40	6334	6.65	135.1	0.02	13.11	yes	
11:39	16.1	3.40	6466	6.66	119.2	0.02	13.12	yes	
11:42	16.0	3.34	6490	6.67	110.2	0.02	13.14	yes	
11:45	16.0	3.63	6525	6.65	98.2	0.02	13.15	yes	
11:48	16.1	3.50	6586	6.66	85.9	0.02	13.16	yes	
11:51	16.2	3.30	6635	6.67	68.6	0.02	13.17	yes	
11:54	16.2	3.02	6671	6.67	58.3	0.02	13.18	yes	
11:57	16.1	2.94	6686	6.67	51.9	0.02	13.19	yes	
12:00	16.3	2.81	6710	6.68	44.3	0.02	13.20	yes	
12:03	16.5	2.68	6754	6.66	34.2	0.02	13.21	yes	
12:06	16.5	2.65	6767	6.66	29.2	0.02	13.22	yes	
12:09	16.6	2.53	6797	6.66	24.4	0.02	13.23	yes	

Sample Description (turbidity, color, odor, sheen): Clear, colorless, effervescent, no odor, no sheen
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Number	
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Emerson Cole Date: 06/06/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-11S
Weather: Raining, 50's
Sample ID: EMW-11S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 14:47

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.90 Time: 13:47
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/4/2024 14:00 End Purge (Date/Time): 6/4/2024 14:56 Gallons Purged: 2.8
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:03	15.1	1.11	278.7	6.13	118.1	206.4	12.88	Yes	
14:06	14.9	0.82	290.7	6.16	116.7	218	12.86	Yes	
14:09	15.0	0.68	297	6.20	111.6	245	12.86	Yes	
14:12	15.1	0.64	311.4	6.21	110.3	116.6	12.84	Yes	
14:15	14.9	0.56	353.6	6.31	102.8	61.91	12.81	Yes	
14:18	15.0	0.50	367.7	6.36	95	37.84	12.80	Yes	
14:21	15.0	0.49	378.4	6.40	83.3	27.7	12.78	Yes	
14:24	15.1	0.48	386.9	6.43	66.4	19.8	12.76	Yes	
14:27	15.1	0.51	389.6	6.44	57.3	15.13	12.76	Yes	
14:30	15.0	0.51	398.6	6.46	42.5	22.12	12.76	Yes	
14:33	15.0	0.52	400.1	6.47	38.9	22.88	12.73	Yes	
14:36	15.0	0.53	403.6	6.48	25.3	17.09	12.71	Yes	
14:40	15.1	0.55	403.7	6.49	12.9	14.21	12.69	Yes	
14:43	15.1	0.56	405.3	6.49	4.2	16.04	12.66	Yes	
14:46	15.2	0.58	407.8	6.49	-4.9	12.89	12.64	Yes	
14:49	15.2	0.59	409.4	6.50	-11.7	14.25	12.64	Yes	
14:52	15.2	0.60	410.7	6.50	-15.6	11.95	12.61	Yes	
14:55	15.1	0.60	411.1	6.50	-20.7	7.51	12.59	Yes	

Sample Description (turbidity, color, odor, sheen): Clear, light brown color, no odor, no sheen
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated 125 mL amber
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 15.0' below top of casing
Signature: Emerson Cole Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-12S
Weather: LT RAIN
Sample ID: EMW-12S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 11:37

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 14.82 Time: 11:02
Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/4/2024 11:04
End Purge (Date/Time): 6/4/2024 11:28
Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:07	13.9	2.10	175.3	6.60	-7.5	-	14.84	yes	
11:10	13.9	1.79	181.9	6.53	-14.6	-	14.85	yes	
11:13	14.0	1.69	192.8	6.53	-15.6	-	14.85	yes	
11:16	14.0	1.59	201.7	6.53	-16.5	-	14.86	yes	
11:19	14.0	1.60	225.1	6.52	-16.6	-	14.86	yes	
11:22	13.9	1.66	235.5	6.53	-16.2	-	14.86	yes	
11:25	14.0	1.66	237	6.53	-15.2	-	14.86	yes	
11:28	14.0	1.64	236.5	6.54	-15.4	19.3	14.86	yes	
11:31									
11:34									

Sample Description (turbidity, color, odor, sheen): LOW TURBIDITY COLORLESS NONS
Fe 2^+ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 17.0' below top of casing
Signature: DSB Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-13S
Weather: Rain, 50's
Sample ID: EMW-13S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 11:32

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.20 Time: 11:17
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/4/2024 11:17 End Purge (Date/Time): 6/4/2024 11:30 Gallons Purged: 0.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:20	13.1	4.85	4548	7.42	144.6	12.73	12.24	yes	
11:23	13.7	4.60	4395	7.58	143.2	7.9	12.24	yes	
11:26	13.9	4.53	4397	7.62	142.9	8.81	12.26	yes	
11:29	13.8	4.53	4411	7.66	142.7	6.61	12.26	yes	
11:32									
11:35									
11:38									
11:41									
11:44									
11:47									

Sample Description (turbidity, color, odor, sheen): Brown organics, colorless, no odor, no sheen
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Emerson Cole Date: 06/04/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-14D
Weather: Rain, 50s
Sample ID: EMW-14D- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 10:47

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.72 Time: 9:41 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/4/2024 9:43 End Purge (Date/Time): 6/4/2024 10:44 Gallons Purged: 2.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
9:46	13.5	1.63	7381	6.45	187	47.7	14.84	Yes	brown organics
9:49	13.6	1.12	8368	6.50	183.1	30.9	14.87	Yes	
9:52	13.7	1.00	8530	6.54	179.6	29.8	14.89	Yes	
9:55	13.8	0.97	8639	6.54	175.2	13.8	14.89	Yes	
9:58	13.9	0.95	8756	6.55	170.7	20.97	14.89	Yes	
10:01	13.8	0.94	8790	6.56	166.6	26.99	14.89	Yes	
10:04	13.8	0.99	7018	6.61	161.4	60.2	14.89	Yes	
10:07	13.6	0.96	4634	6.68	158.3	52.1	14.93	Yes	
10:10	13.5	0.92	3768	6.69	156.3	55.78	14.93	Yes	
10:13	13.7	0.88	3774	6.64	152.9	43.34	14.93	Yes	
10:16	13.7	0.84	7454	6.48	149.5	37.64	14.93	Yes	
10:19	13.8	0.86	8321	6.51	143.5	17.98	14.95	Yes	
10:22	13.7	0.86	8618	6.53	139.3	15.71	14.95	Yes	
10:25	13.8	0.83	8742	6.57	131.2	15.48	14.95	Yes	
10:28	13.8	0.83	8779	6.56	126.6	7.65	14.95	Yes	
10:31	13.8	0.83	8792	6.58	121.6	8.08	14.95	Yes	
10:34	13.8	0.87	8814	6.57	113.9	2.53	14.95	Yes	
10:37	13.7	0.81	8769	6.57	107	4.3	14.95	Yes	
10:40	13.8	0.85	8766	6.58	104.9	4.3	14.91	Yes	
10:43	13.9	0.82	8788	6.57	99	4.93	14.91	Yes	

Sample Description (turbidity, color, odor, sheen): Brown organics, colorless, no odor, no sheen **Fe^{2+} (mg/L):** NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☑ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260B SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Emerson Cole Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-15D
Weather: CLEAR
Sample ID: EMW-15D- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:57

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 14.88 Time: 11:26 Describe: Flush Mount
Static DTW (ft): 14.97 Time: 11:30 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/5/2024 11:33 End Purge (Date/Time): 6/5/2024 11:54 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:36	14.1	1.41	6616	6.74	-11.2	-	15.02	yes	brown particulates
11:39	14.1	1.16	7068	6.80	-15.4	-	15.03	yes	brown particulates
11:42	14.1	1.13	7210	6.82	-18.6	-	15.00	yes	brown particulates
11:45	14.1	3.00	7472	6.83	-20.9	-	14.98	yes	brown particulates
11:48	14.2	4.32	7582	6.83	-21.9	-	14.97	yes	brown particulates
11:51	14.2	4.40	7618	6.83	-22.3	-	14.97	yes	brown particulates
11:54	14.2	4.60	7661	6.83	-22.8	19.8	14.97	yes	brown particulates
11:57									
12:00									

Sample Description (turbidity, color, odor, sheen): CLEAR COLORLESS NONS FINE BROWN PARTICI
$Fe\ 2^{+}$ (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: DSB Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-16D
Weather: 60's, Sunny
Sample ID: EMW-16D- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 11:10

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 15.96 Time: 10:38 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/5/2024 10:40 End Purge (Date/Time): 6/5/2024 11:08 Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:43	16.5	4.43	6664	6.88	-17	47.6	16.03	Yes	organics
10:46	16.7	3.85	6777	6.89	-15.5	29.7	16.03	Yes	
10:49	17.1	3.06	6997	6.90	-11.3	20	16.06	Yes	
10:52	16.0	2.60	6945	6.89	-5.6	19.6	16.08	Yes	
10:55	15.8	2.26	7077	6.85	-2.5	19.3	16.08	Yes	
10:58	16.8	1.65	7444	6.80	-1.2	13.3	16.08	Yes	
11:01	17.4	1.53	7827	6.76	0.4	15.3	16.08	Yes	
11:04	17.2	1.46	7980	6.75	2.5	19.3	16.11	Yes	
11:07	17.2	1.45	8038	6.74	3.8	12.3	16.01	Yes	
11:10									

Sample Description (turbidity, color, odor, sheen): Brown organics, colorless, no odor, no sheen **Fe^{2+} (mg/L):** NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Emerson Cole Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-17S
Weather: Sunny, 60's
Sample ID: EMW-17S- 240605
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/05/24 Time: 13:47

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.51 Time: 13:15
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 6/5/2024 13:23 End Purge (Date/Time): 6/5/2024 13:45 Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:26	15.2	0.81	367.5	6.27	-97.7	14	12.50	Yes	black and white particulates
13:29	15.2	0.67	363.2	6.23	-104.2	26.2	12.50	Yes	
13:32	15.2	0.65	357.6	6.34	-105.5	9.72	12.50	Yes	
13:35	15.1	0.67	348.4	6.34	-116.1	5.01	12.51	Yes	
13:38	15.1	0.63	338	6.36	-107.4	3.88	12.51	Yes	
13:41	15.0	0.63	336.4	6.35	-108.9	2.7	12.51	Yes	
13:44	14.8	0.58	329.2	6.36	-112.2	5.34	12.51	Yes	
13:47									
13:50									
13:53									

Sample Description (turbidity, color, odor, sheen): Colorless, black and white particulates, no odor, no sheen
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☑ Polyethylene ☑ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: sample intake placed at 14.50' below top of casing
Signature: Emerson Cole Date: 06/05/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-18S
Weather: lt rain
Sample ID: EMW-18S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 13:17

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): 11.60 Time: 12:42 Describe: Flush Mount
Static DTW (ft): 11.60 Time: 12:44 Flow-Thru Cell Vol.: 200 mL WQM No.: 5
Begin Purge (Date/Time): 6/4/2024 12:44 End Purge (Date/Time): 6/4/2024 13:12 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:47	13.9	0.63	494.7	6.43	0.1	-	11.60	yes	clear; no odor
12:50	13.9	0.60	449.3	6.38	-2.8	-	11.60	yes	clear; no odor
12:53	13.9	0.72	434.5	6.36	-4.6	-	11.60	yes	clear; no odor
12:56	14.0	0.78	432.5	6.34	-6.4	-	11.60	yes	clear; no odor
12:59	14.0	1.59	420.3	6.34	-8.6	-	11.60	yes	clear; no odor
13:02	14.3	1.71	418.1	6.33	-11.1	-	11.60	yes	clear; no odor
13:05	14.3	1.16	415.4	6.33	-12.2	-	11.60	yes	clear; no odor
13:08	14.2	1.10	414.3	6.34	-14.6	-	11.60	yes	clear; no odor
13:11	14.2	1.07	404.3	6.34	-15.8	17.7	11.60	yes	clear; no odor
13:14									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: dsb Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: June Groundwater Monitoring Event
Well ID: EMW-23S
Weather: rain; 50s
Sample ID: EMW-23S- 240604
Landau Representative: SKL, G_J, ETC, BLH, DSB
Date: 06/04/24 Time: 11:50

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 11.00 Time: 11:20
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #1
Begin Purge (Date/Time): 6/4/2024 11:22 End Purge (Date/Time): 6/4/2024 11:49 Gallons Purged: 2.25
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:25	13.6	1.15	423.8	6.49	152.7	774	11.07	yes	turbid; light brown organics
11:28	13.5	0.59	410.9	6.32	147	62.4	11.09	yes	turbid; light brown organics
11:31	13.5	0.52	407.9	6.29	144.2	33.4	11.11	yes	turbid; light brown organics
11:34	13.5	0.36	407.1	6.27	137.2	21.2	11.10	yes	clear; no odor
11:37	13.6	0.46	408.9	6.26	127	16.9	11.10	yes	clear; no odor
11:40	13.6	0.37	410.7	6.26	114.9	25.8	11.10	yes	clear; no odor
11:43	13.6	0.31	411.9	6.27	100.1	10.5	11.10	yes	clear; no odor
11:46	13.6	0.28	412.8	6.27	98.1	13.9	11.10	yes	clear; no odor
11:49	13.6	0.28	413.2	6.27	90.1	7.11	11.10	yes	clear; no odor
11:52									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no sheen, no odor
Fe^{2+} (mg/L): NA

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	**8260D SIM**	8021	524	624		3	40 mL HCl pres. VOA
Semivolatiles:	**8270E**	8270 SIM	8011	625			2	125 mL amber
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020B**	200.7	200.8	7471	☐ Field Filtered	1	250 mL unpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL pres. HNO3 HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 06/04/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-1
Weather: 60s, cloudy
Sample ID: CMW-1- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 10:19

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 17.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 9.67 Time: 9:45 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/16/2024 9:59 End Purge (Date/Time): 9/16/2024 10:18 Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
10:02	17.6	8.77	21688	6.52	75.9	-	9.74	yes	
10:05	17.7	6.92	21888	6.49	72.5	-	9.74	yes	
10:08	17.6	7.63	21916	6.48	70.4	-	9.75	yes	
10:11	17.8	3.80	22001	6.47	67.5	-	9.75	yes	
10:14	17.6	3.73	21942	6.47	68.4	-	9.75	yes	
10:17	17.6	3.76	21953	6.47	68.7	1.18	9.75	yes	
10:20									
10:23									
10:26									
10:29									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 10.0 feet below top of casing
Signature: Darius T Withrow Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-2
Weather: mid 60s cloudy
Sample ID: CMW-2- 240918
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/18/24 Time: 12:59

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 17.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 11.88 Time: 10:11 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/18/2024 12:44 End Purge (Date/Time): 9/18/2024 12:53 Gallons Purged: 0.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:47	18.6	4.77	18922	7.48	45.4	-	12.36	yes	
12:50	18.5	4.66	18899	7.51	45.7	-	12.43	yes	
12:53	18.5	4.56	18939	7.54	44.4	18.4	12.59	yes	
12:56									
12:59									
13:02									
13:05									
13:08									
13:11									
13:14									

Sample Description (turbidity, color, odor, sheen): colorless; trace turbidity; no odor; no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 14.0' below top of casing
Signature: SKL Date: 09/18/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-3
Weather: mid 60s cloudy
Sample ID: CMW-3- 240918
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/18/24 Time: 11:59

WELL INFORMATION

Screened Interval: Top (ft): 3.50 Bottom (ft): 18.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.30 Time: 10:16 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/18/2024 11:40 End Purge (Date/Time): 9/18/2024 11:53 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
11:43	17.8	4.83	16691	7.22	81.6	-	13.85	yes	
11:46	17.8	4.41	16739	7.28	71.7	-	13.85	yes	
11:49	17.8	4.50	16786	7.31	68.9	-	13.85	yes	
11:52	17.8	4.25	16874	7.32	64.4	8.11	13.85	yes	
11:55									
11:58									
12:01									
12:04									
12:07									
12:10									

Sample Description (turbidity, color, odor, sheen): little turbid, colorless, no odor, no sheen **Fe 2^+ (mg/L):**

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 16.0 feet below top of water
Signature: SKL Date: 09/18/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-4
Weather: 60s, cloudy
Sample ID: CMW-4- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 10:55

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 18.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.01 Time: 10:21 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/16/2024 10:33 End Purge (Date/Time): 9/16/2024 10:54 Gallons Purged: 1.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:36	17.8	8.80	12343	6.86	89.6	-	14.45	yes	
10:39	17.6	6.29	12605	7.15	86.7	-	14.53	yes	
10:42	17.7	5.54	12558	7.23	83	-	14.61	yes	
10:45	17.6	4.91	12439	7.28	79.4	-	14.69	yes	
10:48	17.6	4.56	12514	7.29	76.8	-	14.75	yes	
10:51	17.5	4.36	12583	7.31	75.2	-	14.75	yes	
10:54	17.7	4.36	12647	7.31	72.5	8.78	14.75	yes	
10:57									
11:00									
11:03									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 16.5 feet below top of casing
Signature: SKL Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-5
Weather: 60s; cloudy
Sample ID: CMW-5- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 12:42

WELL INFORMATION

Screened Interval: Top (ft): 3.00 Bottom (ft): 18.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.85 Time: 10:26 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/17/2024 12:17 End Purge (Date/Time): 9/17/2024 12:41 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:20	17.6	1.92	1410	6.29	10.5	-	14.35	yes	clear; no odor
12:23	16.4	0.52	1396	6.53	-40.1	-	14.35	yes	clear; no odor
12:26	16.3	0.44	1400	6.59	-53.5	-	14.35	yes	clear; no odor
12:29	16.3	0.42	1418	6.63	-79.9	-	14.35	yes	clear; no odor
12:32	16.4	0.38	1420	6.65	-89.5	-	14.35	yes	clear; no odor
12:35	16.3	0.35	1422	6.66	-91.4	-	14.35	yes	clear; no odor
12:38	16.4	0.33	1429	6.66	-94.8	-	14.35	yes	clear; no odor
12:41	16.3	0.32	1425	6.67	-97.4	0.09	14.35	yes	clear; no odor
12:44									
12:47									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 17.0 feet below top of casing
Signature: SKL Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-6
Weather: Overcast, 60's
Sample ID: CMW-6- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 10:34

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.93 Time: 10:41 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/16/2024 10:20 End Purge (Date/Time): 9/16/2024 10:32 Gallons Purged: 0.8
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
10:23	17.8	3.14	19320	7.48	189.6	9.01	14.98	Yes	
10:26	18.0	2.90	20540	7.45	188.5	0.02	14.98	Yes	
10:29	17.9	2.87	20766	7.46	187.7	0.02	14.98	Yes	
10:32	18.0	2.95	21100	7.46	187.7	0.02	14.98	Yes	
10:35									
10:38									
10:41									
10:44									
10:47									
10:50									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen **Fe 2^+ (mg/L):**

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 17.0 feet below top of casing
Signature: Emerson Cole Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: CMW-7
Weather: cloudy, 60's
Sample ID: CMW-7- 240916
Landau Representative: G_J
Date: 09/16/24 Time: 11:50

WELL INFORMATION

Screened Interval: Top (ft): 4.50 Bottom (ft): 19.30
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 15.02 Time: 10:38
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/16/2024 11:29
End Purge (Date/Time): 9/16/2024 11:48
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:32	17.0	1.10	723	6.62	31.1	40.0	15.11	yes	
11:35	16.9	1.27	786	6.64	1.3	25.0	15.11	yes	
11:38	16.9	1.36	793	6.65	-9.3	23.2	15.07	yes	
11:41	16.8	1.48	790	6.66	-14.7	21.9	15.07	yes	
11:44	16.8	1.54	795	6.67	-20.4	19.1	15.07	yes	
11:47	16.8	1.56	791	6.67	-22.8	17.3	15.07	yes	
11:50									
11:53									
11:56									
11:59									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 17.0 feet
Signature: GJ
Date: 09/16/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: SLR-1
Weather: 60s, cloudy
Sample ID: SLR-1- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 13:19

WELL INFORMATION

Screened Interval: Top (ft): 9.20 Bottom (ft): 19.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Stick Up
Static DTW (ft): 11.26 Time: 9:50 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/16/2024 12:56 End Purge (Date/Time): 9/16/2024 13:15 Gallons Purged: 1.50
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:59	17.5	0.83	309.6	7.04	23.8	-	11.83	yes	
13:02	17.4	0.43	304.9	6.93	7.4	-	11.83	yes	
13:05	17.5	0.40	303.3	6.89	2.3	-	11.83	yes	
13:08	17.5	0.40	300.6	6.85	-5.7	-	11.84	yes	
13:11	17.4	0.38	298.9	6.82	-9.4	-	11.84	yes	
13:14	17.1	0.38	295.6	6.81	-11.6	1.14	11.84	yes	
13:17									
13:20									
13:23									
13:26									

Sample Description (turbidity, color, odor, sheen): light brown, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Darius T Withrow Date: 09/16/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: SLR-2
Weather: cloudy, 60's
Sample ID: SLR-2- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 12:43

WELL INFORMATION

Screened Interval: Top (ft): 8.00 Bottom (ft): 17.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Stick Up
Static DTW (ft): 9.90 Time: 9:56 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI#5
Begin Purge (Date/Time): 9/17/2024 12:18 End Purge (Date/Time): 9/17/2024 12:40 Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
12:21	15.5	2.69	189.3	6.60	46.1	-	11.06	yes	
12:24	15.5	1.81	189.2	6.59	55	-	11.23	yes	
12:27	15.4	1.19	187	6.59	47.8	-	11.46	yes	
12:30	15.3	0.83	185.9	6.60	41.5	-	11.66	yes	
12:33	15.4	0.74	184.3	6.60	37.5	-	11.76	yes	
12:36	15.4	0.69	182.6	6.60	37.6	-	11.85	yes	
12:39	15.3	0.74	181.4	6.60	40.5	11.9	11.94	yes	
12:42									
12:45									
12:48									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Darius T Withrow Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: SLR-3
Weather: cloudy, 60's
Sample ID: SLR-3- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 10:49

WELL INFORMATION

Screened Interval: Top (ft): 3.90 Bottom (ft): 13.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 7.59 Time: 10:01
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/17/2024 10:30
End Purge (Date/Time): 9/17/2024 10:48
Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:33	20.1	0.62	632	6.69	-2.6	-	7.70	yes	
10:36	20.1	0.46	636	6.76	-81.7	-	7.91	yes	
10:39	19.7	0.39	632	6.77	-97.5	-	8.10	yes	
10:42	19.5	0.32	627	6.79	-107.1	-	8.23	yes	
10:45	19.2	0.30	617	6.80	-112.4	-	8.31	yes	
10:48	19.0	0.29	611	6.81	-116.3	9.2	8.39	yes	
10:51									
10:54									
10:57									
11:00									

Sample Description (turbidity, color, odor, sheen): light brown, no odor, no sheen
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: SKL
Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: SLR-6
Weather: cloudy, 60's
Sample ID: SLR-6- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24
Time: 10:53

WELL INFORMATION

Screened Interval: Top (ft): 3.90 Bottom (ft): 13.70
Well Secure? ☐ No ☑ Yes
Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft):
Time:
Describe: Flush Mount
Static DTW (ft): 8.54
Time: 9:58
Flow-Thru Cell Vol.: 200 mL
WQM No.: YSI#5
Begin Purge (Date/Time): 9/17/2024 10:31
End Purge (Date/Time): 9/17/2024 10:50
Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:34	16.1	4.46	217.2	6.47	85.2	-	8.68	yes	
10:37	16.0	3.46	212.9	6.35	84.6	-	8.79	yes	
10:40	16.0	3.01	210.3	6.30	87.6	-	8.88	yes	
10:43	16.0	2.98	209.2	6.28	81	-	8.93	yes	
10:46	16.0	2.82	207.8	6.27	78.5	-	8.96	yes	
10:49	15.9	2.94	207.8	6.27	77.3	6.15	8.96	yes	
10:52									
10:55									
10:58									
11:01									

Sample Description (turbidity, color, odor, sheen): Small pine needles/organics in water, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump
Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID:
☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Darius T Withrow
Date: 09/17/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: SLR-7
Weather: 60s, cloudy
Sample ID: SLR-7- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 14:29

WELL INFORMATION

Screened Interval: Top (ft): 4.20 Bottom (ft): 14.00 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 9.29 Time: 9:51 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/16/2024 13:57 End Purge (Date/Time): 9/16/2024 14:25 Gallons Purged: 1.8
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:00	19.8	1.65	562	6.61	36.6	-	9.79	yes	
14:03	19.9	1.30	568	6.62	32.4	-	9.84	yes	
14:06	20.2	1.10	576	6.62	25.3	-	9.84	yes	
14:09	20.2	0.91	581	6.62	22	-	9.84	yes	
14:12	19.8	0.75	578	6.63	23.2	-	9.84	yes	
14:15	19.8	0.65	579	6.63	21.6	-	9.84	yes	
14:18	19.5	0.57	577	6.63	26.1	-	9.84	yes	
14:21	19.4	0.54	575	6.64	22.1	-	9.84	yes	
14:24	19.6	0.52	578	6.64	24.8	18.1	9.84	yes	
14:27									Reading after sampling

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
$Fe\ 2^+$ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 11.5 feet below top of casing
Signature: Darius T Withrow Date: 09/16/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: DMW2
Weather: cloudy, 50's
Sample ID: DMW2- 240917
Landau Representative: G_J
Date: 09/17/24 Time: 10:05

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 18.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 11.80 Time: 9:22
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/17/2024 9:33
End Purge (Date/Time): 9/17/2024 10:04
Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
9:36	17.2	0.72	796	6.55	64.8	1.43	11.95	yes	
9:39	17.1	0.52	794	6.56	36.9	0.02	11.99	yes	
9:42	16.9	0.52	790	6.56	25.9	0.02	12.01	yes	
9:45	16.9	0.44	786	6.56	16.8	0.02	12.03	yes	
9:48	16.8	0.37	780	6.56	11.5	0.02	12.04	yes	
9:51	16.6	0.23	761	6.56	-0.4	0.02	12.08	yes	
9:54	16.5	0.22	754	6.56	-7.7	0.02	12.11	yes	
9:57	16.5	0.20	748	6.56	-10.1	0.02	12.12	yes	
10:00	16.4	0.18	730	6.56	-15.6	0.02	12.15	yes	
10:03	16.4	0.18	726	6.57	-17.2	0.02	12.17	yes	

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: Duplicate sample ID: DMW12-240917 ☐ MS/MSD
Comments: Sample intake placed at 14 feet below top of casing
Signature: GJ Date: 09/17/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: DMW12
Weather: cloudy, 50's
Sample ID: DMW12- 240917
Landau Representative: G_J
Date: 09/17/24 Time: 10:45

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 18.70 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 11.80 Time: 9:23 Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/17/2024 9:34 End Purge (Date/Time): 9/17/2024 10:05 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
9:37	17.2	0.63	795	6.56	49.6	1.43	11.95	yes	
9:40	17.0	0.51	793	6.56	33.1	0.02	11.99	yes	
9:43	16.9	0.51	788	6.56	21.6	0.02	12.01	yes	
9:46	16.9	0.37	783	6.56	13.3	0.02	12.03	yes	
9:49	16.8	0.33	777	6.56	8.9	0.02	12.04	yes	
9:52	16.6	0.23	760	6.56	-2.2	0.02	12.09	yes	
9:55	16.5	0.21	750	6.56	-9.0	0.02	12.11	yes	
9:58	16.5	0.19	730	6.56	-11.2	0.02	12.12	yes	
10:01	16.4	0.18	729	6.56	-16.5	0.02	12.15	yes	
10:04	16.4	0.18	725	6.56	-18.9	0.02	12.17	yes	

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: Parent sample ID: DMW2-240917 ☐ MS/MSD
Comments: Sample intake placed at 14 feet below top of casing
Signature: GJ Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: DMW3
Weather: cloudy, 60's
Sample ID: DMW3- 240917
Landau Representative: G_J
Date: 09/17/24 Time: 13:30

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 18.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.77 Time: 10:19
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/17/2024 13:11
End Purge (Date/Time): 9/17/2024 13:27
Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:14	15.9	0.27	321.6	6.76	-4.6	2.45	12.89	yes	
13:17	15.8	0.27	289.1	6.40	-6.1	0.02	12.89	yes	
13:20	15.8	0.28	281.7	6.35	-5.3	0.02	12.89	yes	
13:23	15.8	0.27	278.2	6.34	-2.6	0.02	12.89	yes	
13:26	15.7	0.26	274.1	6.32	-2.7	0.02	12.89	yes	
13:29									
13:32									
13:35									
13:38									
13:41									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 15 feet below top of casing
Signature: GJ
Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: DMW-6B
Weather: 60s, cloudy
Sample ID: DMW-6B- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 13:24

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.70
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.09 Time: 10:30
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/16/2024 13:06
End Purge (Date/Time): 9/16/2024 13:22
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:09	18.3	0.64	586	7.23	157.9	12.9	13.06	Yes	
13:12	18.1	0.58	566	7.10	158.9	4.89	13.05	Yes	
13:15	18.0	0.62	536	7.04	154	3.52	13.03	Yes	
13:18	18.0	0.59	535	7.00	149.8	3.11	13.01	Yes	
13:21	17.9	0.59	533	7.00	144.1	2.48	13.00	Yes	
13:24									
13:27									
13:30									
13:33									
13:36									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 15.5 below top of casing
Signature: Emerson Cole
Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-1S
Weather: 60s, cloudy
Sample ID: EMW-1S- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 13:17

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 10.19 Time: 9:48
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/16/2024 12:58 End Purge (Date/Time): 9/16/2024 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:01	17.4	1.23	630	6.88	-0.7	-	10.68	yes	turbid; no odor
13:04	16.3	0.75	453.7	6.71	-73.6	-	11.01	yes	turbid; no odor
13:07	16.3	0.62	458.3	6.72	-94.1	-	11.24	yes	turbid; no odor
13:10	16.3	0.57	459.7	6.72	-100.7	-	11.35	yes	turbid; no odor
13:13	16.0	0.55	457.4	6.73	-105.6	-	11..47	yes	turbid; no odor
13:16	15.9	0.53	454.5	6.73	-110.2	118	11.58	yes	turbid; no odor
13:19									
13:22									
13:25									
13:28									

Sample Description (turbidity, color, odor, sheen): turbid, no odor, no sheen
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: SKL Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-2S
Weather: cloudy, 60's
Sample ID: EMW-2S- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 11:43

WELL INFORMATION

Screened Interval: Top (ft): 4.80 Bottom (ft): 19.60 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 8.34 Time: 9:57 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/17/2024 11:26 End Purge (Date/Time): 9/17/2024 11:39 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:29	14.0	1.21	298.3	6.43	97.3	-	8.02	yes	
11:32	14.1	0.65	301.8	6.46	80.8	-	8.15	yes	
11:35	14.1	0.62	304.1	6.46	77.9	-	8.15	yes	
11:38	14.1	0.60	306.3	6.45	74.8	12	8.15	yes	
11:41									
11:44									
11:47									
11:50									
11:53									
11:56									

Sample Description (turbidity, color, odor, sheen): trace turbidity - brown speck, colorless, no odor, no sheen **Fe^{2+} (mg/L):**

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Darius T Withrow Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-3S
Weather: cloudy, 60's
Sample ID: EMW-3S- 240918
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/18/24 Time: 11:47

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.27 Time: 10:02
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/18/2024 11:25 End Purge (Date/Time): 9/18/2024 11:46 Gallons Purged: 1.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:28	18.3	2.07	15521	6.16	29.1	-	13.66	yes	clear; no odor
11:31	18.1	1.79	15560	6.08	25.7	-	14.18	yes	clear; no odor
11:34	18.2	2.23	15481	6.04	30.2	-	14.33	yes	clear; no odor
11:37	18.2	2.31	15510	5.99	36.7	-	14.33	yes	clear; no odor
11:40	18.2	2.33	15515	5.97	43.1	-	14.33	yes	clear; no odor
11:43	18.2	2.35	15496	5.97	47.5	-	14.33	yes	clear; no odor
11:46	18.1	2.40	15502	5.97	50.5	4.01	14.33	yes	clear; no odor
11:49									
11:52									
11:55									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake set at 15.5 feet below top of casing
Signature: SKL Date: 09/18/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-4D
Weather: low 60s cloudy
Sample ID: EMW-4D- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 11:29

WELL INFORMATION

Screened Interval: Top (ft): 40.00 Bottom (ft): 49.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 15.87 Time: 10:57 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #5
Begin Purge (Date/Time): 9/16/2024 11:00 End Purge (Date/Time): 9/16/2024 11:19 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:03	15.5	1.82	7450	6.87	22.6	-	15.96	yes	
11:06	15.2	1.07	6877	6.80	21.3	-	15.96	yes	
11:09	15.1	0.85	6832	6.78	15.2	-	15.96	yes	
11:12	15.0	0.56	6787	6.77	13	-	15.96	yes	
11:15	15.0	0.55	6811	6.76	23	-	15.96	yes	
11:18	15.0	0.52	6839	6.76	15.3	1.81	15.89	yes	
11:21									
11:24									
11:27									
11:30									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Darius T Withrow Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-5SA
Weather: cloudy, 60's
Sample ID: EMW-5SA- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 11:24

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.90 Time: 10:05
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/17/2024 11:05
End Purge (Date/Time): 9/17/2024 11:23
Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:08	17.3	0.43	414.7	6.68	-9.5	-	12.89	yes	clear; no odor
11:11	16.6	0.27	398.6	6.60	-33.9	-	12.89	yes	clear; no odor
11:14	16.5	0.25	397	6.56	-41.2	-	12.89	yes	clear; no odor
11:17	16.5	0.23	396.8	6.59	-50.1	-	12.89	yes	clear; no odor
11:20	16.5	0.23	395.4	6.60	-54.2	-	12.89	yes	clear; no odor
11:23	16.5	0.23	395.4	6.61	-58.2	0.02	12.89	yes	clear; no odor
11:26									
11:29									
11:32									
11:35									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 15 feet below top of casing
Signature: SKL Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-6S
Weather: cloudy, 60's
Sample ID: EMW-6S- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 13:59

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 11.10 Time: 13:36 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/17/2024 13:39 End Purge (Date/Time): 9/17/2024 13:58 Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:42	16.0	0.31	287.5	6.28	62.9	-	11.56	yes	
13:45	15.9	0.27	282.3	6.27	55.6	-	11.63	yes	
13:48	15.8	0.29	282.7	6.27	51.3	-	11.70	yes	
13:51	16.0	0.29	283.6	6.26	40.1	-	11.79	yes	
13:54	15.8	0.28	285.5	6.25	44.7	-	12.19	yes	
13:57	15.9	0.29	284.1	6.25	42.3	1.66	12.31	yes	
14:00									
14:03									
14:06									
14:09									

Sample Description (turbidity, color, odor, sheen): little turbid, colorless, no odor,no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: Duplicate ID: EMW-26S-2406 ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: SKL Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-26S
Weather: cloudy, 60's
Sample ID: EMW-26S- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 8:00

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 11.10 Time: 13:36
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI#3
Begin Purge (Date/Time): 9/17/2024 13:40 End Purge (Date/Time): 9/17/2024 13:59 Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:43	16.0	0.31	287.5	6.28	61.2	-	11.56	yes	
13:46	16.1	0.40	281.8	6.26	54.6	-	11.63	yes	
13:49	16.0	0.29	282.6	6.25	50.1	-	11.70	yes	
13:52	15.9	0.30	284.9	6.25	40.1	-	11.96	yes	
13:55	15.9	0.28	284.9	6.25	44.7	-	12.21	yes	
13:58	15.9	0.30	284.1	6.24	42.3	1.66	12.54	yes	
14:01									
14:04									
14:07									
14:10									

Sample Description (turbidity, color, odor, sheen): little turbid, colorless, no odor,no sheen
Fe 2^+ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: Parent ID:EMW-6S-2406 ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: SKL Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-7S
Weather: 60s, sunny
Sample ID: EMW-7S- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 14:01

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 10.94 Time: 9:53
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/16/2024 13:48
End Purge (Date/Time): 9/16/2024 14:00
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:51	19.4	2.82	268.3	6.51	9.5	-	13.65	yes	clear; no odor
13:54	17.7	1.25	265	6.42	9.2	-	14.12	yes	clear; no odor
13:57	17.6	1.18	262.5	6.47	5.7	-	14.12	yes	clear; no odor
14:00	17.6	1.26	263.9	6.52	1.1	3.3	14.12	yes	clear; no odor
14:03									
14:06									
14:09									
14:12									
14:15									
14:18									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: SKL Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-9SA
Weather: cloudy, 60's
Sample ID: EMW-9SA- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 12:02

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.68 Time: 10:13
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/17/2024 11:40 End Purge (Date/Time): 9/17/2024 12:01 Gallons Purged: 1.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:43	17.2	0.43	521	6.28	14.5	-	13.63	yes	clear; no odor
11:46	16.1	0.25	513	6.36	-21.4	-	13.63	yes	clear; no odor
11:49	16.0	0.27	512	6.40	-31.1	-	13.63	yes	clear; no odor
11:52	15.8	0.32	505	6.42	-40	-	13.63	yes	clear; no odor
11:55	15.7	0.35	506	6.44	-45.5	-	13.63	yes	clear; no odor
11:58	15.7	0.37	503	6.44	-48.6	-	13.63	yes	clear; no odor
12:01	15.7	0.34	505	6.45	-53.5	0.32	13.63	yes	clear; no odor
12:04									
12:07									
12:10									

Sample Description (turbidity, color, odor, sheen): clear; coloress; no odor; no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 16 feet below top of casing
Signature: SKL Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-10D
Weather: cloudy, 60's
Sample ID: EMW-10D- 240917
Landau Representative: G_J
Date: 09/17/24 Time: 12:20

WELL INFORMATION

Screened Interval: Top (ft): 40.00 Bottom (ft): 49.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.99 Time: 10:18
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/17/2024 11:53
End Purge (Date/Time): 9/17/2024 12:15
Gallons Purged: 1.75
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:56	15.2	0.35	5953	6.67	76.4	11.1	13.09	yes	
11:59	15.1	0.35	6054	6.74	41.6	0.02	13.09	yes	
12:02	15.3	0.36	6066	6.76	24.5	0.02	13.09	yes	
12:05	15.3	0.33	6052	6.77	17.6	0.02	13.09	yes	
12:08	15.2	0.20	5945	6.78	2.1	0.02	13.09	yes	
12:11	15.2	0.18	5908	6.79	-4.7	0.02	13.09	yes	
12:14	15.2	0.18	5904	6.79	-7.8	0.02	13.09	yes	
12:17									
12:20									
12:23									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: GJ Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-11S
Weather: 60s, sunny
Sample ID: EMW-11S- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 14:29

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.83 Time: 10:23
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/16/2024 13:56 End Purge (Date/Time): 9/16/2024 14:27 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
13:59	18.6	1.09	274.8	6.39	151.1	109	13.02	Yes	
14:02	18.1	0.79	280.5	6.36	140.9	59.7	13.02	Yes	
14:05	18.8	0.77	296.5	6.37	132.4	34.9	13.01	Yes	
14:08	18.0	0.77	331.5	6.41	128.3	19.2	13.01	Yes	
14:11	18.0	0.73	356.7	6.50	121.4	11.9	12.99	Yes	
14:14	18.1	0.80	378.2	6.60	105.5	5.92	12.95	Yes	
14:17	18.3	0.79	395.3	6.64	97	4.17	12.95	Yes	
14:20	18.3	0.86	402.2	6.67	87.4	4.43	12.92	Yes	
14:23	18.2	0.86	402.5	6.69	84.8	4.1	12.92	Yes	
14:26	18.4	0.90	405.5	6.70	78	3.4	12.90	Yes	

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
$Fe\ 2^+$ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☑ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 15 feet below top of casing
Signature: Emerson Cole Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-12S
Weather: Cloudy, 60's
Sample ID: EMW-12S- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 12:13

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 14.76 Time: 10:36
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/17/2024 11:41 End Purge (Date/Time): 9/17/2024 12:12 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:44	14.3	1.59	466.7	7.99	116.5	108	14.62	Yes	
11:47	14.2	1.32	285	7.67	114.4	145	14.62	Yes	
11:50	14.2	1.26	219.8	7.36	122	167	14.81	Yes	
11:53	14.2	1.31	174.6	7.18	127.9	159	14.83	Yes	
11:56	14.2	1.26	168.6	7.07	131.7	145	14.83	Yes	
11:59	14.1	1.36	173	6.98	135.5	116	14.83	Yes	
12:02	14.1	1.25	179.4	6.92	138.1	98.6	14.83	Yes	
12:05	14.1	1.23	183.8	6.88	139.9	84.8	14.83	Yes	
12:08	14.1	1.24	186.3	6.86	141	65.3	14.83	Yes	
12:11	14.1	1.26	188.5	6.84	142.2	60.1	14.83	Yes	

Sample Description (turbidity, color, odor, sheen): Cloudy, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at 17 feet below top of casing
Signature: Emerson Cole Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-13S
Weather: 60s, cloudy
Sample ID: EMW-13S- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 12:07

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.01 Time: 10:44
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/16/2024 11:49 End Purge (Date/Time): 9/16/2024 12:05 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:52	18.2	1.84	17668	7.32	189.3	-	12.03	Yes	
11:55	18.3	2.90	17843	7.53	188.9	-	12.03	Yes	
11:58	18.3	3.78	17830	7.73	188.2	-	12.03	Yes	
12:01	18.4	3.64	17967	7.77	188.1	-	12.03	Yes	
12:04	18.4	3.46	17978	7.81	187.9	10	12.03	Yes	
12:07									
12:10									
12:13									
12:16									
12:19									

Sample Description (turbidity, color, odor, sheen): Colorless, trace turbidity, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Emerson Cole Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-14D
Weather: 60s, cloudy
Sample ID: EMW-14D- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 11:19

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 15.00 Time: 10:41
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/16/2024 10:59 End Purge (Date/Time): 9/16/2024 11:18 Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:02	16.7	0.89	10101	7.30	186.8	0.02	14.86	Yes	
11:05	16.9	0.81	10963	7.19	186.7	0.02	14.84	Yes	
11:08	17.0	0.80	11575	7.10	186.9	0.02	14.82	Yes	
11:11	17.1	0.92	11650	7.09	186.8	0.02	14.80	Yes	
11:14	17.0	0.88	11683	7.07	186.5	0.02	14.79	Yes	
11:17	16.9	0.88	11726	7.05	185.7	0.02	14.80	Yes	
11:20									
11:23									
11:26									
11:29									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Emerson Cole Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-15D
Weather: 60s, cloudy
Sample ID: EMW-15D- 240916
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/16/24 Time: 11:35

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 14.55 Time: 10:22 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #3
Begin Purge (Date/Time): 9/16/2024 11:16 End Purge (Date/Time): 9/16/2024 11:34 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:19	17.4	4.30	9399	7.57	65.8	-	14.48	yes	clear; no odor
11:22	15.5	1.34	11124	6.91	-27.4	-	14.48	yes	clear; no odor
11:25	15.4	0.96	11178	6.81	-66.2	-	14.48	yes	clear; no odor
11:28	15.3	0.85	11119	6.81	-73.3	-	14.48	yes	clear; no odor
11:31	15.3	0.81	11062	6.80	-75.6	-	14.48	yes	clear; no odor
11:34	15.3	0.78	11005	6.81	-80.7	4.2	14.48	yes	clear; no odor
11:37									
11:40									
11:43									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L): N/A

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: SKL Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-16D
Weather: Cloudy, 60's
Sample ID: EMW-16D- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 11:08

WELL INFORMATION

Screened Interval: Top (ft): 39.50 Bottom (ft): 49.50
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 15.66 Time: 10:40
Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/17/2024 10:33
End Purge (Date/Time): 9/17/2024 11:06
Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:36	15.6	5.52	5516	7.08	208.8	9.87	15.36	Yes	
10:39	15.7	4.15	5734	7.12	202.5	4.1	15.38	Yes	
10:42	15.9	3.67	6127	7.12	200.1	4.37	15.41	Yes	
10:45	16.0	3.30	6770	7.11	198.7	4.45	15.42	Yes	
10:48	15.9	3.21	7982	7.06	198.5	13.1	15.43	Yes	
10:51	15.8	2.98	10095	6.95	199.6	40.6	15.47	Yes	
10:54	15.8	2.31	17065	6.77	202.5	28.1	15.47	Yes	
10:57	15.7	1.92	18599	6.77	200.2	17.6	15.47	Yes	
11:00	15.7	1.61	19282	6.77	198.2	12.5	15.47	Yes	
11:03	15.8	1.56	19615	6.77	195.4	13	15.49	Yes	
11:05	15.8	1.55	19741	6.77	193.9	7.71	15.51	Yes	

Sample Description (turbidity, color, odor, sheen): Colorless, trace turibidity, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Emerson Cole Date: 09/17/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-17S
Weather: sunny, 60's
Sample ID: EMW-17S- 240916
Landau Representative: G_J
Date: 09/16/24 Time: 14:35

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.20 Time: 13:58
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/16/2024 14:03
End Purge (Date/Time): 9/16/2024 14:31
Gallons Purged: 1.8
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
14:06	19.2	0.64	374.5	6.12	47.4	16.3	12.25	yes	
14:09	18.6	0.35	370.2	6.02	20.1	9.86	12.22	yes	
14:12	18.3	0.29	369.8	6.08	11.9	5.83	12.22	yes	
14:15	17.7	0.24	361.7	6.17	-2.6	5.45	12.17	yes	
14:18	17.6	0.21	359.3	6.20	-8.3	2.41	12.17	yes	
14:21	17.3	0.20	355.9	6.22	-13	1.94	12.17	yes	
14:24	17.9	0.18	356.1	6.27	-19.9	0.02	12.17	yes	
14:27	17.4	0.17	350.2	6.27	-22.9	0.02	12.17	yes	
14:30	17.4	0.17	347.2	6.27	-24.3	0.02	12.17	yes	
14:33									

Sample Description (turbidity, color, odor, sheen): clear, clorless, no odor, no sheen
$Fe\ 2^+$ (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: GJ Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-18S
Weather: PARTLY CLOUDY, 60'S
Sample ID: EMW-18S- 240916
Landau Representative: G_J
Date: 09/16/24 Time: 13:35

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 11.41 Time: 10:10
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/16/2024 13:02
End Purge (Date/Time): 9/16/2024 13:33
Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:05	18.0	3.22	444.3	5.95	62.5	11.8	11.70	yes	
13:08	17.6	2.33	438.8	5.98	53.3	4.34	11.70	yes	
13:11	17.7	1.91	432.4	6.13	36.7	4.21	11.70	yes	
13:14	17.5	1.45	427.9	6.18	25.9	1.82	11.70	yes	
13:17	17.4	0.97	423.7	6.22	18.7	0.64	11.70	yes	
13:20	17.6	0.65	421.6	6.25	11.8	0.57	11.70	yes	
13:23	17.7	0.50	420.1	6.27	5.7	0.51	11.70	yes	
13:26	16.9	0.40	413.9	6.23	4.1	0.02	11.70	yes	
13:29	16.9	0.39	412.1	6.25	-2.3	0.02	11.70	yes	
13:32	17.4	0.39	414.1	6.28	-5.1	0.02	11.70	yes	

Sample Description (turbidity, color, odor, sheen): clear, clorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☑ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: GJ
Date: 09/16/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: EMW-23S
Weather: cloudy, 50's
Sample ID: EMW-23S- 240917
Landau Representative: G_J
Date: 09/17/24 Time: 11:15

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 20.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 10.77 Time: 10:50
Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/17/2024 10:53
End Purge (Date/Time): 9/17/2024 11:12
Gallons Purged: 1.2
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:56	16.4	0.37	363.5	6.38	62.8	42.1	10.80	yes	
10:59	16.0	0.36	354.4	6.33	51.5	23.9	10.82	yes	
11:02	15.7	0.30	352.2	6.36	41.9	17.7	10.83	yes	
11:05	15.7	0.25	351.6	6.39	34.9	14.5	10.85	yes	
11:08	15.7	0.23	351.1	6.39	32.4	11.2	10.86	yes	
11:11	15.7	0.24	351.2	6.39	29	9.90	10.87	yes	
11:14									
11:17									
11:20									
11:23									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: GJ
Date: 09/17/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: HC-4
Weather: cloudy, 60's
Sample ID: HC-4- 240918
Landau Representative: G_J
Date: 09/18/24 Time: 12:25

WELL INFORMATION

Screened Interval: Top (ft): 6.50 Bottom (ft): 16.50 Well Secure? ☐ No ☑ Yes Damaged? ☐ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 13.51 Time: 11:47 Flow-Thru Cell Vol.: 200 mL WQM No.: 2
Begin Purge (Date/Time): 9/18/2024 11:52 End Purge (Date/Time): 9/18/2024 12:23 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:55	17.5	3.10	774	6.51	96.4	2.86	13.58	yes	
11:58	17.5	2.47	778	6.48	97.9	0.2	13.58	yes	
12:01	17.7	1.72	790	6.47	96.6	0.02	13.59	yes	
12:04	17.6	1.49	794	6.46	95.7	0.02	13.59	yes	
12:07	17.6	1.34	796	6.46	93.9	0.02	13.60	yes	
12:10	17.6	1.18	795	6.46	91.4	0.02	13.61	yes	
12:13	17.6	1.03	796	6.45	89.3	0.02	13.62	yes	
12:16	17.6	0.95	797	6.45	87.4	0.02	13.62	yes	
12:19	17.7	0.90	798	6.45	85.7	0.02	13.63	yes	
12:22	17.7	0.86	798	6.45	83.7	0.02	13.64	yes	

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L):

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: GJ Date: 09/18/24

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: September Groundwater Monitoring Event
Well ID: HC-20
Weather: Overcast, 60's
Sample ID: HC-20- 240917
Landau Representative: SKL, G_J, ETC, DTW
Date: 09/17/24 Time: 13:12

WELL INFORMATION

Screened Interval: Top (ft): 9.50 Bottom (ft): 19.20 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 12.62 Time: 10:02 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI 4
Begin Purge (Date/Time): 9/17/2024 13:00 End Purge (Date/Time): 9/17/2024 13:10 Gallons Purged: 0.6
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	**± 3%**	**± 10%**	**± 3%**	**± 0.1 units**	**± 10 mV**	**± 10%**	**± 0.00 ft**	**(Yes/No)**	
13:03	17.6	0.97	328.9	6.34	168.9	21.7	13.42	Yes	
13:06	17.5	0.93	329.5	6.33	166.2	19.4	13.42	Yes	
13:09	17.7	0.91	332.1	6.32	162.2	19	13.42	Yes	
13:12									
13:15									
13:18									
13:21									
13:24									
13:27									
13:30									

Sample Description (turbidity, color, odor, sheen): little turbidity, colorless, no odor, no sheen **Fe^{2+} (mg/L):**

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☑ Alconox Wash ☐ Tap Rinse ☑ DI Water ☐ Dedicated
☐ Other (describe sequence):

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	**8260**	**8260 SIM**	8021	524	624		6	40 mL Voas
Semivolatiles:	**8270**	8270 SIM	8011	625			2	125 mL Ambers
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	**6020**	200.7	200.8	7471	☐ Field Filtered	1	250 mL nonpres. HDPE
PCBs & Nitroaromatics:	8082	1668	608	8330			1	250 mL NO3 pres. HDPE
Dioxin-Furans:	1613	8290						
PFAS:	1633	537.1	533	SOP				
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments: Sample intake placed at midpoint of screen
Signature: Emerson Cole Date: 09/17/24

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: CMW-4
Weather: light rain, 60s
Sample ID: CMW-4- 250806
Landau Representative: KVP
Date: 08/06/25 Time: 10:30

WELL INFORMATION

Screened Interval: Top (ft): 2.50 Bottom (ft): 18.00
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.83 Time: 9:47
Flow-Thru Cell Vol.: 200 mL
WQM No.: Pine Rental
Begin Purge (Date/Time): 8/6/2025 9:59
End Purge (Date/Time): 8/6/2025 10:23
Gallons Purged: 1.50
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:02	17.8	5.48	16369	7.40	202.6	49.5		yes	
10:05	17.4	4.62	16381	7.40	202.5	29		yes	
10:08	17.4	4.32	16410	7.41	201.9	18.3		yes	
10:11	17.4	4.55	16391	7.41	201.2	15.7		yes	
10:14	17.6	4.24	16638	7.42	197.3	8.9		yes	
10:17	17.3	4.21	16573	7.42	196.2	6.46		yes	
10:20	17.3	4.21	16616	7.42	194	6.32		yes	
10:23	17.3	4.05	16603	7.42	191.6	6.39		yes	
10:26									
10:29									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: KVP
Date: 08/06/25

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: CMW-6
Weather: 70s, sunny
Sample ID: CMW-6- 250807
Landau Representative: SKL
Date: 08/07/25 Time: 10:42

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.50 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 15.11 Time: 10:14 Flow-Thru Cell Vol.: 200 mL WQM No.: YSI #4
Begin Purge (Date/Time): 8.7.25 10:17 End Purge (Date/Time): 8/7/2025 10:41 Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:20	16.7	5.42	15481	7.16	239.5	12.7	15.13	yes	clear; no odor
10:23	16.5	4.55	21444	7.26	235.8	7.74	15.14	yes	clear; no odor
10:26	16.5	4.52	22098	7.20	230.7	6.98	15.14	yes	clear; no odor
10:29	16.5	4.49	22790	7.18	226.7	5.62	15.13	yes	clear; no odor
10:32	16.6	4.18	23547	7.24	223.3	4.87	15.17	yes	clear; no odor
10:35	16.6	4.02	23846	7.24	221.5	2.83	15.17	yes	clear; no odor
10:38	16.6	3.95	23901	7.22	219.9	2.53	15.18	yes	clear; no odor
10:41	16.7	4.01	24239	7.25	218.8	2.31	15.18	yes	clear; no odor
10:44									
10:47									

Sample Description (turbidity, color, odor, sheen): Clear, colorless, no odor, no sheen
Fe^{2+} (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL Date: 08/07/25

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: DMW-6B
Weather: 60s light rain
Sample ID: DMW-6B- 250806
Landau Representative: kvp srn
Date: 08/06/25 Time: 12:15

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.70
Well Secure? ☐ No ☑ Yes
Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.23 Time: 11:30
Flow-Thru Cell Vol.: 200 mL
WQM No.: rented ysi pro quattro
Begin Purge (Date/Time): 8/6/2025 11:46
End Purge (Date/Time): 8/6/2025 12:10
Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:49	17.2	0.22	683	6.90	-129.4	7.04	13.25	y	
11:52	17.1	0.38	596	6.85	-129.9	6.22	13.25	y	
11:55	17.0	0.53	517	6.84	-131.2	4.34	13.25	y	
11:58	17.0	0.58	497	6.80	-130.5	3.64	13.25	y	
12:01	17.1	0.16	487	6.81	-132.7	2.99	13.25	y	
12:04	17.0	0.68	475	6.82	-134	3.07	13.25	y	
12:07	17.0	0.36	470	6.82	-135.3	2.03	13.25	y	
12:10	17.0	0.11	467	6.83	-136.1	2.13	13.25	y	
12:13									
12:16									

Sample Description (turbidity, color, odor, sheen): clear, light yellow hue, no odor, no sheen
Fe 2^+ (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SRN
Date: 08/06/25

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: EMW-1S
Weather: 60s light rain
Sample ID: EMW-1S- 250806
Landau Representative: SKL CSS
Date: 08/06/25 Time: 12:06

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80 Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time: Describe: Flush Mount
Static DTW (ft): 10.17 Time: 11:36 Flow-Thru Cell Vol.: 200 mL WQM No.: Pine Rental
Begin Purge (Date/Time): 8/6/2025 11:41 End Purge (Date/Time): 8/6/2025 12:05 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
11:44	15.9	1.75	399.6	6.12	-69.8	11.17	10.63	yes	light brown; organic odor
11:47	15.6	0.68	399.4	6.06	-76.1	2.23	10.67	yes	light brown; organic odor
11:50	15.2	0.44	395.6	6.06	-81.5	6.42	10.69	yes	light brown; organic odor
11:53	15.0	0.40	394.5	6.08	-83.3	4.61	10.70	yes	light brown; organic odor
11:56	14.9	0.37	393.2	6.11	-86.2	5.98	10.71	yes	light brown; organic odor
11:59	14.8	0.34	392.3	6.14	-89	11.3	10.72	yes	light brown; organic odor
12:02	14.8	0.33	393.3	6.16	-91.2	10.2	10.73	yes	light brown; organic odor
12:05	14.9	0.31	393.5	6.17	-93.7	9.2	10.74	yes	light brown; organic odor
12:08									
12:11									

Sample Description (turbidity, color, odor, sheen): light brown, clear, organic odor, no sheen **Fe 2^+ (mg/L):** NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual) ☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: **DUP-1-250806 @ 800** ☐ MS/MSD
Comments:
Signature: SKL Date: 08/06/25

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: EMW-6S
Weather: 60s light rain
Sample ID: EMW-6S- 250806
Landau Representative: SKL CSS
Date: 08/06/25 Time: 13:22

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes
Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 11.94 Time: 12:55
Flow-Thru Cell Vol.: 200 mL
WQM No.: Pine Rental
Begin Purge (Date/Time): 8/6/2025 13:00
End Purge (Date/Time): 8/6/2025 13:21
Gallons Purged: 1.5
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:03	15.9	0.71	216.7	5.87	125.1	18.4	12.08	yes	clear; no odor
13:06	15.3	0.43	215.6	5.76	110.8	6.02	12.09	yes	clear; no odor
13:09	15.1	0.41	214.6	5.71	105.7	4.35	12.08	yes	clear; no odor
13:12	15.4	0.37	213.9	5.68	100.1	4.79	12.07	yes	clear; no odor
13:15	15.5	0.34	214.6	5.66	94.7	4.63	12.07	yes	clear; no odor
13:18	15.5	0.32	214.1	5.66	91	5.2	12.08	yes	clear; no odor
13:21	15.5	0.31	214.5	5.66	86.7	5.41	12.05	yes	clear; no odor
13:24									
13:27									
13:30									

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor, no sheen
Fe^{2+} (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: SKL
Date: 08/06/25

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: EMW-7S
Weather: overcast, 60s
Sample ID: EMW-7S- 250806
Landau Representative: kvp srn
Date: 08/06/25 Time: 13:40

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 12.73 Time: 12:53
Flow-Thru Cell Vol.: 200 mL WQM No.: Pine Rental
Begin Purge (Date/Time): 8/6/2025 13:02 End Purge (Date/Time): 8/6/2025 13:40 Gallons Purged: 2.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
13:05	16.7	0.59	283.9	6.39	11.9	69.6	13.01	y	
13:08	16.6	0.57	282.2	6.41	10.5	9.7	13.00	y	
13:11	16.4	0.58	281.9	6.45	7.2	18.9	12.99	y	
13:14	16.3	0.50	282.6	6.46	3.5	8.55	12.99	y	
13:17	16.2	0.40	282.4	6.47	-1.4	7.57	12.98	y	
13:20	16.3	0.32	287.1	6.46	-7.4	6.56	12.95	y	
13:23	16.2	0.27	289.6	6.48	-16.8	6.5	12.95	y	
13:26	16.2	0.24	292.4	6.50	-25.7	6.65	12.94	y	
13:29	16.2	0.22	293.9	6.51	-33.9	6.04	12.93	y	
13:32	16.1	0.26	295.5	6.51	-38.9	3.89	12.93	y	
13:35	16.1	0.28	296.4	6.51	-42.5	3.75	12.92	y	
13:38	16.2	0.29	298.6	6.52	-48.3	4.07	12.90	y	

Sample Description (turbidity, color, odor, sheen): Clear, light yellow hue, moderate organic odor, no sheen
$Fe\ 2^+$ (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☐ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: KVP Date: 08/06/25

LANDAU ASSOCIATES

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.020.022
Event: PFAS Groundwater Monitoring Event
Well ID: EMW-9SA
Weather: 60s, rainy
Sample ID: EMW-9SA- 250806
Landau Representative: Caleb Saks
Date: 08/06/25 Time: 10:00

WELL INFORMATION

Screened Interval: Top (ft): 5.00 Bottom (ft): 19.80
Well Secure? ☐ No ☑ Yes Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Flush Mount
Static DTW (ft): 13.48 Time: 9:25
Flow-Thru Cell Vol.: 200 mL
WQM No.: Pine Rental 45984
Begin Purge (Date/Time): 8/6/2025 9:31
End Purge (Date/Time): 8/6/2025 9:59
Gallons Purged: 2.50
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
9:34	15.5	1.01	436	6.00	-44.5	44.6	13.55	Yes	
9:37	15.5	0.67	435	6.01	-53.1	41.4	13.57	Yes	
9:40	15.4	0.53	421	6.04	-58.4	41.5	13.57	Yes	
9:43	15.4	0.46	422	6.03	-60.7	41	13.58	Yes	
9:46	15.4	0.41	420	6.03	-62.2	44.2	13.58	Yes	
9:49	15.3	0.37	412	6.03	-64.7	44.2	13.60	Yes	
9:52	15.3	0.34	410	6.02	-66.2	44.2	13.61	Yes	
9:55	15.3	0.32	414	6.01	-64.9	44.2	13.62	Yes	
9:58	15.3	0.31	410	6.01	-65.6	44.2	13.63	Yes	
10:01									

Sample Description (turbidity, color, odor, sheen): Clear, yellow tint, no odor, no sheen
Fe 2^+ (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: CSS Date: 08/06/25

// GROUNDWATER LOW-FLOW SAMPLE COLLECTION FORM

Project Name: 8th Avenue Teminals Site
Project Number: 2175001.030.034
Event: PFAS Groundwater Monitoring Event
Well ID: SLR-2
Weather: 60s, cloudy intermitant mist
Sample ID: SLR-2- 250807
Landau Representative: KVP
Date: 08/07/25 Time: 10:40

WELL INFORMATION

Screened Interval: Top (ft): 8.00 Bottom (ft): 17.80
Well Secure? ☐ No ☑ Yes
Damaged? ☑ No ☐ Yes
DTW After Cap Opened (ft): Time:
Describe: Stick Up
Static DTW (ft): 10.70 Time: 10:15
Flow-Thru Cell Vol.: 200 mL
WQM No.: rental from Pine
Begin Purge (Date/Time): 8/7/2025 10:21
End Purge (Date/Time): 8/7/2025 10:35
Gallons Purged: 1.0
Water Disposal: ☑ 55-gal drum ☐ Storage tank ☐ Ground ☐ Other:

PURGE DATA

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Purge Vol ≥1 flow-thru cell vol.	Comments/ Observations
Stabilization →	± 3%	± 10%	± 3%	± 0.1 units	± 10 mV	± 10%	± 0.00 ft	(Yes/No)	
10:24	13.9	3.43	108.3	6.42	202.9	5.45	10.46	Yes	
10:27	14.1	2.83	108.9	6.30	209.1	5.27	10.52	Yes	
10:30	14.2	2.84	109.1	6.25	212.8	3.64	10.60	Yes	
10:33	14.2	2.91	109.2	6.23	215.2	1.02	10.69	Yes	

Sample Description (turbidity, color, odor, sheen): clear, colorless, no odor or sheen
Fe 2^+ (mg/L): NM

PUMP AND MATERIAL INFORMATION

Collection Method: ☐ Bailer ☑ Pump Type: Peristaltic Pump
Material: ☑ Stainless Steel ☑ PVC ☐ Teflon ☑ High Density Polyethylene ☐ Other ☑ Dedicated
Decon Procedure: ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☑ Other (describe sequence): Alconox wash then followed by lab provided PFAS free water rinse

CONFIRMATION PARAMETERS (if applicable per Landau Field Manual)

☐ Applicable

Time	Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (S.U)	ORP (mV)	Turbidity (NTU)	DTW (ft)	Comments/Observations

Scheduled Analysis (Circle/Bold Applicable)							Bottle Information	
							Number	Type
Volatiles:	8260	8260 SIM	8021	524	624			
Semivolatiles:	8270	8270 SIM	8011	625				
Petroleum Hydrocarbons:	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx SGC				
Total/Dissolved Metals:	6010	6020	200.7	200.8	7471	☐ Field Filtered		
PCBs & Nitroaromatics:	8082	1668	608	8330				
Dioxin-Furans:	1613	8290						
PFAS:	**1633**	537.1	533	SOP			2x 500mL HDPE, 1x 60mL HDPE	
Conventionals:	300.0	SM2450C	SM2450D	SM5310C	RSK175			
Other:								

Duplicate or Parent Sample ID: ☐ MS/MSD
Comments:
Signature: Kalpana Prasad Date: 08/07/25

APPENDIX D

Laboratory Reports for 2024 Soil Samples and 2024 and 2025 Groundwater Samples

Soil Samples

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Friday, March 22, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4C1045 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4C1045, which was received by the laboratory on 3/7/2024 at 10:30:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.
(See Cooler Receipt Form for details)
Default Cooler 3.1 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EMW-23S-7.5-8.0	A4C1045-01	Soil	03/06/24 10:50	03/07/24 10:30

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-7.5-8.0 (A4C1045-01)				**Matrix: Soil**		**Batch: 24C0440**		
Diesel	ND	11.6	23.2	mg/kg dry	1	03/13/24 22:02	NWTPH-Dx	
Oil	ND	23.2	46.4	mg/kg dry	1	03/13/24 22:02	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 86 %*		*Limits: 50-150 %*	*1*	*03/13/24 22:02*	*NWTPH-Dx*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-7.5-8.0 (A4C1045-01)				**Matrix: Soil**		**Batch: 24C0339**		
Vinyl chloride	ND	0.00630	0.0126	mg/kg dry	100	03/11/24 16:08	5035A/8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*03/11/24 16:08*	*5035A/8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/11/24 16:08*	*5035A/8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*79-120 %*	*1*	*03/11/24 16:08*	*5035A/8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-7.5-8.0 (A4C1045-01)				**Matrix: Soil**		**Batch: 24C0590**		
Acenaphthene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Acenaphthylene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Anthracene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Benz(a)anthracene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Benzo(a)pyrene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Chrysene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Fluoranthene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Fluorene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
1-Methylnaphthalene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
2-Methylnaphthalene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Naphthalene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Phenanthrene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Pyrene	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Dibenzofuran	ND	0.00586	0.0117	mg/kg dry	1	03/18/24 15:37	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		*Recovery:*	*87 %*	*Limits: 44-120 %*	*1*	*03/18/24 15:37*	*EPA 8270E SIM*	
p-Terphenyl-d14 (Surr)			*85 %*	*54-127 %*	*1*	*03/18/24 15:37*	*EPA 8270E SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-7.5-8.0 (A4C1045-01)				**Matrix: Soil**				
Batch: 24C0605								
Antimony	ND	0.702	1.40	mg/kg dry	10	03/19/24 00:18	EPA 6020B	
Arsenic	**1.77**	0.702	1.40	mg/kg dry	10	03/19/24 00:18	EPA 6020B	
Copper	**14.6**	1.40	2.81	mg/kg dry	10	03/19/24 00:18	EPA 6020B	
Lead	**2.01**	0.140	0.281	mg/kg dry	10	03/19/24 00:18	EPA 6020B	
Selenium	ND	0.702	1.40	mg/kg dry	10	03/19/24 00:18	EPA 6020B	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-7.5-8.0 (A4C1045-01)				**Matrix: Soil**		**Batch: 24C0289**		
% Solids	**76.2**	1.00	1.00	%	1	03/11/24 06:08	EPA 8000D	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0440 - EPA 3546 (Fuels)							**Soil**					
Blank (24C0440-BLK1)			Prepared: 03/13/24 04:25		Analyzed: 03/13/24 21:21							
NWTPH-Dx												
Diesel	ND	10.0	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	20.0	40.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 88 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (24C0440-BS1)			Prepared: 03/13/24 04:25		Analyzed: 03/13/24 21:41							
NWTPH-Dx												
Diesel	111	10.0	20.0	mg/kg wet	1	125	---	88	38-132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 90 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (24C0440-DUP1)			Prepared: 03/13/24 04:25		Analyzed: 03/13/24 22:23							
QC Source Sample: EMW-23S-7.5-8.0 (A4C1045-01)												
NWTPH-Dx												
Diesel	ND	11.9	23.8	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	23.8	47.6	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 86 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (24C0440-DUP2)			Prepared: 03/13/24 15:58		Analyzed: 03/13/24 23:45							
QC Source Sample: Non-SDG (A4C1235-05)												
Diesel	ND	11.3	22.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	22.6	45.2	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 74 %*	*Limits: 50-150 %*			*Dilution: 1x*					

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0339 - EPA 5035A							**Soil**					
Blank (24C0339-BLK1)			Prepared: 03/11/24 12:34		Analyzed: 03/11/24 15:41							
5035A/8260D SIM												
Vinyl chloride	ND	0.00500	0.0100	mg/kg wet	100	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*101 %*	*79-120 %*			*"*					
LCS (24C0339-BS1)			Prepared: 03/11/24 12:34		Analyzed: 03/11/24 14:47							
5035A/8260D SIM												
Vinyl chloride	0.0228	0.00500	0.0100	mg/kg wet	100	0.0200	---	114	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*99 %*	*79-120 %*			*"*					
Duplicate (24C0339-DUP1)			Prepared: 02/27/24 11:27		Analyzed: 03/11/24 17:02							
QC Source Sample: Non-SDG (A4C1039-01)												
Vinyl chloride	ND	0.0110	0.0220	mg/kg dry	100	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*97 %*	*79-120 %*			*"*					
Matrix Spike (24C0339-MS1)			Prepared: 03/06/24 14:02		Analyzed: 03/11/24 18:23							
QC Source Sample: Non-SDG (A4C1039-05)												
5035A/8260D SIM												
Vinyl chloride	0.0477	0.00958	0.0192	mg/kg dry	100	0.0383	ND	124	56-135%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*97 %*	*79-120 %*			*"*					

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0590 - EPA 3546							**Soil**					
Blank (24C0590-BLK1)			Prepared: 03/18/24 04:17		Analyzed: 03/18/24 14:46							
EPA 8270E SIM												
Acenaphthene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.00500	0.0100	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 89 %*		*Limits: 44-120 %*			*Dilution: 1x*				
p-Terphenyl-d14 (Surr)			*93 %*		*54-127 %*			*"*				
LCS (24C0590-BS1)			Prepared: 03/18/24 04:17		Analyzed: 03/18/24 15:11							
EPA 8270E SIM												
Acenaphthene	0.733	0.00500	0.0100	mg/kg wet	1	0.800	---	92	40-123%	---	---	
Acenaphthylene	0.732	0.00500	0.0100	mg/kg wet	1	0.800	---	91	32-132%	---	---	
Anthracene	0.743	0.00500	0.0100	mg/kg wet	1	0.800	---	93	47-123%	---	---	
Benz(a)anthracene	0.731	0.00500	0.0100	mg/kg wet	1	0.800	---	91	49-126%	---	---	
Benzo(a)pyrene	0.774	0.00500	0.0100	mg/kg wet	1	0.800	---	97	45-129%	---	---	
Benzo(b)fluoranthene	0.730	0.00500	0.0100	mg/kg wet	1	0.800	---	91	45-132%	---	---	
Benzo(k)fluoranthene	0.771	0.00500	0.0100	mg/kg wet	1	0.800	---	96	47-132%	---	---	
Benzo(g,h,i)perylene	0.744	0.00500	0.0100	mg/kg wet	1	0.800	---	93	43-134%	---	---	
Chrysene	0.795	0.00500	0.0100	mg/kg wet	1	0.800	---	99	50-124%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0590 - EPA 3546							**Soil**					
LCS (24C0590-BS1)			Prepared: 03/18/24 04:17		Analyzed: 03/18/24 15:11							
Dibenz(a,h)anthracene	0.809	0.00500	0.0100	mg/kg wet	1	0.800	---	101	45-134%	---	---	
Fluoranthene	0.815	0.00500	0.0100	mg/kg wet	1	0.800	---	102	50-127%	---	---	
Fluorene	0.746	0.00500	0.0100	mg/kg wet	1	0.800	---	93	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	0.773	0.00500	0.0100	mg/kg wet	1	0.800	---	97	45-133%	---	---	
1-Methylnaphthalene	0.738	0.00500	0.0100	mg/kg wet	1	0.800	---	92	40-120%	---	---	
2-Methylnaphthalene	0.750	0.00500	0.0100	mg/kg wet	1	0.800	---	94	38-122%	---	---	
Naphthalene	0.758	0.00500	0.0100	mg/kg wet	1	0.800	---	95	35-123%	---	---	
Phenanthrene	0.742	0.00500	0.0100	mg/kg wet	1	0.800	---	93	50-121%	---	---	
Pyrene	0.824	0.00500	0.0100	mg/kg wet	1	0.800	---	103	47-127%	---	---	
Dibenzofuran	0.728	0.00500	0.0100	mg/kg wet	1	0.800	---	91	44-120%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 90 %*		*Limits: 44-120 %*			*Dilution: 1x*				
p-Terphenyl-d14 (Surr)			*91 %*		*54-127 %*			*"*				
Duplicate (24C0590-DUP1)			Prepared: 03/18/24 04:17		Analyzed: 03/18/24 16:03							
QC Source Sample: EMW-23S-7.5-8.0 (A4C1045-01)												
EPA 8270E SIM												
Acenaphthene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Chrysene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Fluorene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
1-Methylnaphthalene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Pyrene	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0590 - EPA 3546							**Soil**					
Duplicate (24C0590-DUP1)			Prepared: 03/18/24 04:17	Analyzed: 03/18/24 16:03								
QC Source Sample: EMW-23S-7.5-8.0 (A4C1045-01)												
Dibenzofuran	ND	0.00591	0.0118	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 88 %*	*Limits: 44-120 %*			*Dilution: 1x*					
p-Terphenyl-d14 (Surr)			*88 %*	*54-127 %*			*"*					
Matrix Spike (24C0590-MS1)			Prepared: 03/18/24 04:17	Analyzed: 03/18/24 16:54								**PRO**
QC Source Sample: Non-SDG (A4C1244-24)												
EPA 8270E SIM												
Acenaphthene	0.578	0.00448	0.00896	mg/kg dry	1	0.717	ND	81	40-123%	---	---	
Acenaphthylene	0.576	0.00448	0.00896	mg/kg dry	1	0.717	ND	80	32-132%	---	---	
Anthracene	0.567	0.00448	0.00896	mg/kg dry	1	0.717	ND	79	47-123%	---	---	
Benz(a)anthracene	0.573	0.00448	0.00896	mg/kg dry	1	0.717	ND	80	49-126%	---	---	
Benzo(a)pyrene	0.486	0.00448	0.00896	mg/kg dry	1	0.717	ND	68	45-129%	---	---	
Benzo(b)fluoranthene	0.565	0.00448	0.00896	mg/kg dry	1	0.717	ND	79	45-132%	---	---	
Benzo(k)fluoranthene	0.593	0.00448	0.00896	mg/kg dry	1	0.717	ND	83	47-132%	---	---	
Benzo(g,h,i)perylene	0.525	0.00448	0.00896	mg/kg dry	1	0.717	ND	73	43-134%	---	---	
Chrysene	0.624	0.00448	0.00896	mg/kg dry	1	0.717	ND	87	50-124%	---	---	
Dibenz(a,h)anthracene	0.602	0.00448	0.00896	mg/kg dry	1	0.717	ND	84	45-134%	---	---	
Fluoranthene	0.641	0.00448	0.00896	mg/kg dry	1	0.717	ND	89	50-127%	---	---	
Fluorene	0.597	0.00448	0.00896	mg/kg dry	1	0.717	ND	83	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	0.562	0.00448	0.00896	mg/kg dry	1	0.717	ND	78	45-133%	---	---	
1-Methylnaphthalene	0.577	0.00448	0.00896	mg/kg dry	1	0.717	ND	81	40-120%	---	---	
2-Methylnaphthalene	0.588	0.00448	0.00896	mg/kg dry	1	0.717	ND	82	38-122%	---	---	
Naphthalene	0.600	0.00448	0.00896	mg/kg dry	1	0.717	ND	84	35-123%	---	---	
Phenanthrene	0.573	0.00448	0.00896	mg/kg dry	1	0.717	ND	80	50-121%	---	---	
Pyrene	0.649	0.00448	0.00896	mg/kg dry	1	0.717	ND	91	47-127%	---	---	
Dibenzofuran	0.584	0.00448	0.00896	mg/kg dry	1	0.717	ND	81	44-120%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			*Recovery: 77 %*	*Limits: 44-120 %*			*Dilution: 1x*					
p-Terphenyl-d14 (Surr)			*74 %*	*54-127 %*			*"*					

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0605 - EPA 3051A							**Soil**					
Blank (24C0605-BLK1)			Prepared: 03/18/24 09:39	Analyzed: 03/18/24 22:19								
EPA 6020B												
Antimony	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	1.00	2.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.100	0.200	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
LCS (24C0605-BS1)			Prepared: 03/18/24 09:39	Analyzed: 03/18/24 22:34								
EPA 6020B												
Antimony	23.7	0.500	1.00	mg/kg wet	10	25.0	---	95	80-120%	---	---	
Arsenic	46.9	0.500	1.00	mg/kg wet	10	50.0	---	94	80-120%	---	---	
Copper	51.3	1.00	2.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Lead	49.1	0.100	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Selenium	23.8	0.500	1.00	mg/kg wet	10	25.0	---	95	80-120%	---	---	
Duplicate (24C0605-DUP1)			Prepared: 03/18/24 09:39	Analyzed: 03/18/24 22:55								
QC Source Sample: Non-SDG (A4C1023-08)												
Antimony	ND	0.493	0.986	mg/kg dry	10	---	ND	---	---	---	20%	PRO
Arsenic	**1.89**	0.493	0.986	mg/kg dry	10	---	1.86	---	---	1	20%	PRO
Copper	**57.3**	0.986	1.97	mg/kg dry	10	---	52.9	---	---	8	20%	PRO
Lead	**74.1**	0.0986	0.197	mg/kg dry	10	---	68.0	---	---	9	20%	PRO
Selenium	ND	0.493	0.986	mg/kg dry	10	---	ND	---	---	---	20%	PRO
Matrix Spike (24C0605-MS1)			Prepared: 03/18/24 09:39	Analyzed: 03/18/24 23:11								
QC Source Sample: Non-SDG (A4C1023-08)												
EPA 6020B												
Antimony	22.8	0.519	1.04	mg/kg dry	10	25.9	ND	88	75-125%	---	---	PRO
Arsenic	49.1	0.519	1.04	mg/kg dry	10	51.9	1.86	91	75-125%	---	---	PRO
Copper	103	1.04	2.07	mg/kg dry	10	51.9	52.9	96	75-125%	---	---	PRO
Lead	115	0.104	0.207	mg/kg dry	10	51.9	68.0	91	75-125%	---	---	PRO
Selenium	24.0	0.519	1.04	mg/kg dry	10	25.9	ND	93	75-125%	---	---	PRO

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0289 - Total Solids (Dry Weight) - 2022							**Soil**					
Duplicate (24C0289-DUP1)			Prepared: 03/08/24 09:48			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A3L1239-01)												
% Solids	**84.2**	1.00	1.00	%	1	---	84.7	---	---	0.6	10%	
Duplicate (24C0289-DUP2)			Prepared: 03/08/24 09:48			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A3L1239-02)												
% Solids	**80.4**	1.00	1.00	%	1	---	83.0	---	---	3	10%	
Duplicate (24C0289-DUP3)			Prepared: 03/08/24 09:48			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A3L1239-03)												
% Solids	**83.7**	1.00	1.00	%	1	---	83.0	---	---	0.8	10%	
Duplicate (24C0289-DUP4)			Prepared: 03/08/24 09:48			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A3L1239-04)												
% Solids	**84.2**	1.00	1.00	%	1	---	87.7	---	---	4	10%	
Duplicate (24C0289-DUP5)			Prepared: 03/08/24 09:48			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A3L1239-05)												
% Solids	**86.1**	1.00	1.00	%	1	---	86.6	---	---	0.6	10%	
Duplicate (24C0289-DUP6)			Prepared: 03/08/24 19:13			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A4C1109-01)												
% Solids	**90.0**	1.00	1.00	%	1	---	89.0	---	---	1	10%	
Duplicate (24C0289-DUP7)			Prepared: 03/08/24 19:13			Analyzed: 03/11/24 06:08						
QC Source Sample: Non-SDG (A4C1110-02)												
% Solids	**76.1**	1.00	1.00	%	1	---	76.2	---	---	0.1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0440							
A4C1045-01	Soil	NWTPH-Dx	03/06/24 10:50	03/13/24 04:25	11.3g/5mL	10g/5mL	0.89

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0339							
A4C1045-01	Soil	5035A/8260D SIM	03/06/24 10:50	03/06/24 10:50	6.91g/5mL	5g/5mL	0.72

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0590							
A4C1045-01	Soil	EPA 8270E SIM	03/06/24 10:50	03/18/24 04:17	11.19g/5mL	10g/5mL	0.89

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0605							
A4C1045-01	Soil	EPA 6020B	03/06/24 10:50	03/18/24 09:39	0.467g/50mL	0.5g/50mL	1.07

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0289							
A4C1045-01	Soil	EPA 8000D	03/06/24 10:50	03/08/24 09:48			NA

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

PRO Sample has undergone sample processing prior to extraction and analysis.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

LANDAU ASSOCIATES

Chain-of-Custody Record

☒ North Seattle (206) 631-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178 ☐ _____

Date 3/6/24 Page 1 of 1

Turnaround Time: Standard / Accelerated

Project Name: 8th Avenue Terminal Site
Project No.: 2175001.020.022
Project Location/Event: Seattle, WA
Sampler's Name: Spencer Lo
Project Contact: Mike Staton
Send Results To: Mike Staton - mstaton@landaulnc.com

Special Handling Requirements:
Shipment Method:
Stored on ice: (Yes) / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Dioxins - NWTPH-Dx	PAHs 8270E	VOAs Chlorinated 8260D SIM	Antimony, Arsenic, Copper, Lead	Selenium	HPH
EMW-23S-7.5-8.0	3/6/24	1050	Soil	3	X	X	X	X		
EMW-23S-19.0-20.0	3/6/24	1130	Soil	3					X	

Observations/Comments
- ___ Allow water samples to settle, collect aliquot from clear portion ☐
- ___ NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- ___ Dissolved metal samples were field filtered

Other
- Antimony, Arsenic, Copper, Lead and Selenium by 6020B
- Sample may need to be analyzed with silica gel clean up - Contact Mike Staton/Initial analytical results

Relinquished by	Received by	Relinquished by	Received by
Signature: Spencer Lo	Signature: [illegible]	Signature:	Signature:
Printed Name: Spencer Lo	Printed Name: Madison Mikesell	Printed Name:	Printed Name:
Company: LAI	Company: Apex Labs	Company:	Company:
Date: 3/6/24 Time: 1500	Date: 3.7.24 Time: 1030	Date: Time:	Date: Time:

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1045 - 03 22 24 1708**

APEX LABS COOLER RECEIPT FORM

Client: Landau Element WO#: A4C1045

Project/Project #: 8th Avenue Terminal Site # 2175001.020.022

Delivery Info:

Date/time received: 3.7.24 @ 1030 By: MHM

Delivered by: Apex__Client__ESS__FedEx✓UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ___ No ✓

Cooler Inspection Date/time inspected: 3.7.24 @ 1030 By: MHM

Chain of Custody included? Yes ✓ No ___

Signed/dated by client? Yes ✓ No ___

Contains USDA Reg. Soils? Yes ___ No ✓ Unsure (inform QA) ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.1						
Custody seals? (Y/N)	n						
Received on ice? (Y/N)	y						
Temp. blanks? (Y/N)	y						
Ice type: (Gel/Real/Other)	real						
Condition (In/Out):	in						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3.7.24 @ 1120 By: MHM

All samples intact? Yes ✓ No ___ Comments:

Bottle labels/COCs agree? Yes ✓ No ___ Comments:

COC/container discrepancies form initiated? Yes ___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No ___ Comments:

Do VOA vials have visible headspace? Yes ___ No ___ NA ✓

Comments

Water samples: pH checked: Yes___No___NA ✓ pH appropriate? Yes___No___NA ✓ pH ID:

Comments:

2718 4282 0490

Labeled by: KAM Witness: APW Cooler Inspected by: MHM

Form Y-003 R-01

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

FINAL LAB REPORT

8th Avenue Terminal Site

B9197

18-Mar-2024

Prepared by

SGS NORTH AMERICA

Prepared for

Landau Associates, Inc.

Mike Staton

155 NE 100th St Ste 302
Seattle, WA 98125
Phone: (206) 707-5199
Email: mstaton@landauinc.com

This report is approved by

Amy Boehm

amy.boehm@sgs.com

Senior Project Manager

This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/en/terms_and_conditions.htm. Attention is drawn to the limitation of liability,indemnification and jurisdiction issues defined therein.

SGS remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

The management and staff of SGS welcomes customer feedback, both positive and negative, as we continually improve our services. Please visit our web site at www.sgs.com/ultratrace and click on the 'Email Us' link or go to our survey here. Thank you for choosing SGS.

Any holder of this document is advised that it is a final submission and supersedes and voids all prior reports with the same report or identification number. The information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility in conducting the work herein is to its Client and does not exonerate parties to a transaction from exercising all of their rights and obligations under such applicable transaction documents. This report may be reproduced in full only. The Company expressly disclaims any and all liability for the Client's use of or reliance upon the data contained herein. Any alteration, forgery or falsification of the content or appearance of this document which is not expressly authorized by the Company is unlawful and offenders may be prosecuted to the fullest extent of the law.
Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	8th Avenue Terminal Site
SGS Project #	B9197
Analytical Protocol(s)	8290A
No. Samples Submitted	2 (2nd sample on hold)
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	07-Mar-24
Condition Received	Good
Temperature upon Receipt (ºC)	4.4
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: EMW-23s-7.5-8.0 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	Landau Associates, Inc.	Matrix:	Soil	Lab Project ID:	B9197	Date Received:	07-Mar-2024
Project ID:	8th Avenue Terminal Site	Weight/Volume:	10.25 g	Lab Sample ID	B9197_20963_DF_001	Date Extracted:	12-Mar-2024
Date Collected:	06-Mar-2024	% Solid:	80.4 %	QC Batch No:	20963	Date Analyzed:	15-Mar-2024
		Split:	-	Dilution:	-	Time Analyzed:	2:44:49

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.347			ES 2378-TCDD	98	
12378-PeCDD	ND	0.213			ES 12378-PeCDD	91.8	
123478-HxCDD	EMPC		0.295	J	ES 123478-HxCDD	96.4	
123678-HxCDD	ND	0.228			ES 123678-HxCDD	95.6	
123789-HxCDD	ND	0.201			ES 123789-HxCDD	96.4	
1234678-HpCDD	1.31			J	ES 1234678-HpCDD	100	
OCDD	10.2				ES OCDD	106	
2378-TCDF	ND	0.108			ES 2378-TCDF	94.3	
12378-PeCDF	ND	0.125			ES 12378-PeCDF	93.2	
23478-PeCDF	ND	0.128			ES 23478-PeCDF	92.2	
123478-HxCDF	ND	0.119			ES 123478-HxCDF	101	
123678-HxCDF	ND	0.112			ES 123678-HxCDF	106	
234678-HxCDF	ND	0.124			ES 234678-HxCDF	104	
123789-HxCDF	ND	0.117			ES 123789-HxCDF	103	
1234678-HpCDF	ND	0.109			ES 1234678-HpCDF	108	
1234789-HpCDF	ND	0.142			ES 1234789-HpCDF	97.3	
OCDF	ND	0.223			ES OCDF	107	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.9	
Total TCDD	ND	0.347	ND		CS 12347-PeCDD	n/a	
Total PeCDD	ND	0.213	ND		CS 12346-PeCDF	n/a	
Total HxCDD	1.26		1.88		CS 123469-HxCDF	n/a	
Total HpCDD	3.42		3.42		CS 1234689-HpCDF	n/a	
Total TCDF	ND	0.108	ND				
Total PeCDF	ND	0.126	ND				
Total HxCDF	ND	0.118	ND				
Total HpCDF	ND	0.124	ND				
Total PCDD/Fs	**14.9**		**15.5**				
ITEF TEQs							
TEQ: ND=0	0.0233		0.0528				
TEQ: ND=DL/2	0.337	0.326	0.366				
TEQ: ND=DL	0.651	0.651	0.68				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: Method Blank B9197_20963 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	Landau Associates, Inc.	Matrix:	Soil	Lab Project ID:	B9197	Date Received:	n/a
Project ID:	8th Avenue Terminal Site	Weight/Volume:	10.00 g	Lab Sample ID	MB1_20963_DF_SDS	Date Extracted:	12-Mar-2024
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	20963	Date Analyzed:	15-Mar-2024
		Split:	-	Dilution:	-	Time Analyzed:	1:58:31

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.254			ES 2378-TCDD	102	
12378-PeCDD	ND	0.198			ES 12378-PeCDD	96.9	
123478-HxCDD	ND	0.18			ES 123478-HxCDD	96	
123678-HxCDD	ND	0.18			ES 123678-HxCDD	95.9	
123789-HxCDD	ND	0.165			ES 123789-HxCDD	99.6	
1234678-HpCDD	ND	0.268			ES 1234678-HpCDD	103	
OCDD	ND	0.258			ES OCDD	102	
2378-TCDF	ND	0.103			ES 2378-TCDF	93.4	
12378-PeCDF	ND	0.109			ES 12378-PeCDF	94.7	
23478-PeCDF	ND	0.111			ES 23478-PeCDF	89.6	
123478-HxCDF	ND	0.119			ES 123478-HxCDF	107	
123678-HxCDF	ND	0.11			ES 123678-HxCDF	113	
234678-HxCDF	ND	0.12			ES 234678-HxCDF	104	
123789-HxCDF	ND	0.136			ES 123789-HxCDF	99.7	
1234678-HpCDF	ND	0.0985			ES 1234678-HpCDF	111	
1234789-HpCDF	ND	0.138			ES 1234789-HpCDF	101	
OCDF	ND	0.218			ES OCDF	106	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	86.8	
Total TCDD	ND	0.254	ND		CS 12347-PeCDD	n/a	
Total PeCDD	ND	0.198	ND		CS 12346-PeCDF	n/a	
Total HxCDD	ND	0.174	ND		CS 123469-HxCDF	n/a	
Total HpCDD	ND	0.268	ND		CS 1234689-HpCDF	n/a	
Total TCDF	ND	0.103	ND				
Total PeCDF	ND	0.11	ND				
Total HxCDF	ND	0.12	ND				
Total HpCDF	ND	0.116	ND				
Total PCDD/Fs	**ND**		**ND**				
ITEF TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.266	0.266	0.266				
TEQ: ND=DL	0.531	0.531	0.531				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS North America		
Initial Calibration:	ICAL: HRMS3_DF_10172022_26APR2023		
Instrument ID:	HRMS3	GC Column ID:	ZB-5ms
VER Data Filename:	240314C19	Analysis Date:	15-MAR-2024 00:25:50
Lab ID:	OPR1_20963_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	10.4	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	45	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	47.7	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	48	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	47.4	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	46.6	35	-	70	Y
OCDD	100	93.2	78	-	144	Y
2,3,7,8-TCDF	10	9.43	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	43.4	40	-	67	Y
2,3,4,7,8-PeCDF	50	45.8	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	45	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	43.6	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	43.9	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	42.4	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	44.3	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	42.2	39	-	69	Y
OCDF	100	85.7	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 15 Mar 2024 14:48 Analyst: TF

METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name:	SGS North America		
Initial Calibration:	ICAL: HRMS3_DF_10172022_26APR2023		
Instrument ID:	HRMS3	GC Column ID:	ZB-5ms
VER Data Filename:	240314C19	Analysis Date:	15-MAR-2024 00:25:50
Lab ID:	OPR1_20963_DF		

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	102	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	99.3	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	100	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	103	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	99.7	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	105	26	-	166	Y
13C-OCDD	200	200	26	-	397	Y
13C-2,3,7,8-TCDF	100	106	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	105	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	104	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	109	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	113	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	111	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	104	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	112	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	107	20	-	186	Y
13C-OCDF	200	214	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	35.4	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 15 Mar 2024 14:48 Analyst: TF

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*07-Mar-24 at 09:28*
AP Project name:	*B9197*
Requested TAT:	*15 business days*
Projected due date:	*28-Mar-24*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Mike Staton*
Company:	*Landau Associates, Inc.*
Project Name & Site:	*8th Avenue Terminal Site*
Project PO#:	*2175001.020.022*
QAAP/Contract #:	*2024 746*
Requested Analysis:	*M8290A*
Phone#:	*206-707-5199*
Email Address:	*mstaton@landauinc.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
EMW-23s-7.5-8.0	B9197_001	Soil	1	8oz Amber	06-Mar-24	10:50	4.4	1	2718 4292 4822
EMW-23s-19.0-20.0	B9197_002	Soil - HOLD	1	8oz Amber	06-Mar-24	11:30	4.4	1	2718 4292 4822

Preservation Type:

Sample Seals: No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 7 Mar 24

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SGS CHAIN OF CUSTODY | ULTRATRACE ANALYSIS

B9197

PROJECT INFO:

PROJECT: 8th Avenue Terminal Site

P.O. # 2175001.020.022

QUOTE #:

SITE / PWSID REF:

TURN AROUND TIME: Standard

REPORT LEVEL: (see reverse)

☐ Standard ☐ Basic ☐ Other:

SPECIAL DELIVERABLES: ☐ State of Origin:

☒ EDD: ☐ Other:

SEND DOCUMENTATION / RESULTS TO:

COMPANY: Landau Associates, Inc.

CONTACT: Mike Staton

ADDRESS: 155 NE 100th Street, Suite 302

PHONE: 206-707-5199

EMAIL: mstaton@landauinc.com

INVOICE TO: (☐ CHECK IF SAME)

COMPANY: Landau Associates CONTACT: Lev Shulga

ADDRESS: 155 NE 100th Street, Suite 302

PHONE: 425-329-0276

EMAIL: ap@landauinc.com

SPECIAL INSTRUCTIONS / COMMENTS:

☐ 2,3,7,8-TCDD ☐ DRBC ☐ 2,3,7,8-TCDD/F ☐ TMDL ☐ _____

TEFS: ☐ ITEFS ☐ MA-TEFS ☐ WHO-98 ☐ CT-TEFS ☐ WHO-05 ☐ _____

LAB ID	SAMPLE ID / DESCRIPTION	DATE	TIME	QC MS	QC MSD	QC DUP	TYPE (C, G)	MATRIX	CONT. QTY	METHOD 8290	METHOD 1613B	METHOD 1668 A	METHOD 1668 B	METHOD 1668 C	PAH BY HRGC/MS	QUANTIC	U-SVOA	WHO-2/WHO-2S	PPH	REMARKS
001	EMW-23s-7.5-8.0	3/6/24	1050					Soil	1	X										
002	EMW-23s-19.0-20.0	3/6/24	1130					Soil	1										X	hold pending analysis

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
[signature]	3/6/24	1500	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: Ashley Orcallo DATE: 3/7/2024 TIME: 9:28

COC SEAL: ☐ INTACT ☐ BROKEN ☑ ABSENT

SAMPLE RECEIPT TEMP: °C 4.4°

CARRIER: FedEx TRACKING #:

NOTES: 2718 4292 4822

SGS NORTH AMERICA INC. | ULTRATRACE LABORATORY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 910 794 1613 www.sgs.com/ultratrace

Member of the SGS Group (SGS SA)

B9197

A 4822 03.07

1 10:30

ORIGIN ID:UQEA (206) 450-9913

LANDAU ASSOCIATES INC
155 NE 100TH ST STE 302

SEATTLE, WA 98125
UNITED STATES US

SHIP DA
ACTWGT:
CAD: 6
DIMS:

BILL T

RT 358

FZ 357

TO SGS NORTH AMERICA

5500 BUSINESS DR

WILMINGTON NC 28405

(910) 350-1903

REF: 2175001.020.022

INV:

PO:

DEPT:

FedEx Express

E

Part # 156297-439 REV 8/24

TRK# 0201 2718 4292 4822

THU - 07 MAR 10:30A
PRIORITY OVERNIGHT

AHS

XG ILMA

28405
NC-US RDU

Groundwater Samples

March 2024 Event

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Wednesday, April 24, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4C1305 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4C1305, which was received by the laboratory on 3/14/2024 at 1:22:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: mpoquiz@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information		
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.		
(See Cooler Receipt Form for details)		
Default Cooler	0.9	degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CMW-1-240312	A4C1305-01	Water	03/12/24 14:48	03/14/24 13:22
CMW-7-240312	A4C1305-02	Water	03/12/24 15:17	03/14/24 13:22
EMW-4D-240312	A4C1305-03	Water	03/12/24 13:25	03/14/24 13:22
EMW-16D-240312	A4C1305-04	Water	03/12/24 14:37	03/14/24 13:22
EMW-21D-240312	A4C1305-05	Water	03/12/24 13:37	03/14/24 13:22
EMW-22D-240312	A4C1305-06	Water	03/12/24 14:10	03/14/24 13:22
SLR-1-240312	A4C1305-07	Water	03/12/24 15:50	03/14/24 13:22

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL CASE NARRATIVE

A4C1305 **Apex Laboratories**

Amended Report Revision #1:

This report supercedes all previous reports.

Per the client's request, the case narrative from Apex work order (WO) A4D1138 is provided below.

Metals Filtration Note:

The water samples from Apex WOs A4C1305, A4C1335, and A4C1365 were analyzed for total arsenic (As) and copper (Cu) as well as field filtered dissolved As and Cu using 0.45 um field filters. Per the client's request, select samples from these WOs were re-logged under Apex WO A4D1138 and filtered in the laboratory using 0.45 um lab filters. A summary of the As results generated is provided below.

EMW-21D-240312
Apex WO: A4C1305-05 / A4D1138-01
Total As: 605 ug/L
Dissolved As (0.45 um Field Filter): 152 ug/L
Dissolved As (0.45 um Lab Filter): 3.17 ug/L

CMW-6-240313
Apex WO: A4C1335-04 / A4D1138-04
Total As: 41.9 ug/L
Dissolved As (0.45 um Field Filter): 40.8 ug/L
Dissolved As (0.45 um Lab Filter): 48.5 ug/L

EMW-13S-240313
Apex WO: A4C1335-11 / A4D1138-05
Total As: 102 ug/L
Dissolved As (0.45 um Field Filter): 84.6 ug/L
Dissolved As (0.45 um Lab Filter): 82.1 ug/L

CMW-5-240314
Apex WO: A4C1365-01 / A4D1138-06
Total As: 106 ug/L
Dissolved As (0.45 um Field Filter): 93.7 ug/L
Dissolved As (0.45 um Lab Filter): 5.64 ug/L

DMW2-240314
Apex WO: A4C1365-04 / A4D1138-07
Total As: 152 ug/L
Dissolved As (0.45 um Field Filter): 140 ug/L
Dissolved As (0.45 um Lab Filter): 9.27 ug/L

The data above indicates that the filters used in the field did not consistently remove particles in the samples greater than 0.45 um in

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL CASE NARRATIVE

A4C1305 **Apex Laboratories**

size. At a minimum, this is seen in the samples EMW-21D-240312, CMW-5-240314, and DMW2-240314. Therefore the dissolved As and dissolved Cu quantifications reported for at least a portion of the samples in Apex WOs A4C1305, A4C1335, and A4C1365 after field filtering should not be relied upon.

It should be noted that the lab filtrations were completed using samples collected in unpreserved glass bottles rather than the method-recommended nitric-preserved poly bottles. The data has been qualified accordingly.

Kurt Johnson
Director of Forensic Services
04/24/2024

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240312 (A4C1305-01)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 15:07	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	*1*	*03/18/24 15:07*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/18/24 15:07*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*03/18/24 15:07*	*EPA 8260D SIM*	
CMW-7-240312 (A4C1305-02)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	**0.0940**	0.0100	0.0200	ug/L	1	03/18/24 15:34	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*	*Limits: 80-120 %*	*1*	*03/18/24 15:34*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*03/18/24 15:34*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*03/18/24 15:34*	*EPA 8260D SIM*	
EMW-4D-240312 (A4C1305-03)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	**0.435**	0.0100	0.0200	ug/L	1	03/18/24 20:30	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/18/24 20:30*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*96 %*	*80-120 %*	*1*	*03/18/24 20:30*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*03/18/24 20:30*	*EPA 8260D SIM*	
EMW-16D-240312 (A4C1305-04)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 16:01	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*	*Limits: 80-120 %*	*1*	*03/18/24 16:01*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*03/18/24 16:01*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*03/18/24 16:01*	*EPA 8260D SIM*	
EMW-21D-240312 (A4C1305-05)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 16:28	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	*1*	*03/18/24 16:28*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*03/18/24 16:28*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*03/18/24 16:28*	*EPA 8260D SIM*	
EMW-22D-240312 (A4C1305-06)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 16:55	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	*1*	*03/18/24 16:55*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*96 %*	*80-120 %*	*1*	*03/18/24 16:55*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*03/18/24 16:55*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-1-240312 (A4C1305-07)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 17:21	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	*1*	*03/18/24 17:21*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*03/18/24 17:21*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*03/18/24 17:21*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240312 (A4C1305-01)				**Matrix: Water**		**Batch: 24C0644**		
Acenaphthene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Acenaphthylene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Anthracene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Chrysene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Fluoranthene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Fluorene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00785	0.0157	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0314	0.0628	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0314	0.0628	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Naphthalene	ND	0.0314	0.0628	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Phenanthrene	ND	0.0314	0.0628	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Pyrene	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Dibenzofuran	ND	0.0157	0.0314	ug/L	1	03/19/24 21:53	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 98 %*	*Limits: 78-134 %*	*1*	*03/19/24 21:53*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/19/24 21:53*	*EPA 8270E LVI*	
CMW-7-240312 (A4C1305-02)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Acenaphthene	ND	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Acenaphthylene	**0.0231**	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	**J**
Anthracene	**0.0442**	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Chrysene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-7-240312 (A4C1305-02)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Fluoranthene	ND	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Fluorene	ND	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0103	0.0205	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0411	0.0822	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0411	0.0822	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Naphthalene	ND	0.0411	0.0822	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Phenanthrene	ND	0.0411	0.0822	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Pyrene	ND	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Dibenzofuran	ND	0.0205	0.0411	ug/L	1	03/19/24 22:24	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*	*Limits: 78-134 %*	*1*	*03/19/24 22:24*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*107 %*	*80-132 %*	*1*	*03/19/24 22:24*	*EPA 8270E LVI*	
EMW-4D-240312 (A4C1305-03)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Acenaphthene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Acenaphthylene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Anthracene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Chrysene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Fluoranthene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Fluorene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0107	0.0213	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0427	0.0854	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0427	0.0854	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Naphthalene	ND	0.0427	0.0854	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Phenanthrene	ND	0.0427	0.0854	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Pyrene	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Dibenzofuran	ND	0.0213	0.0427	ug/L	1	03/19/24 22:56	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*	*Limits: 78-134 %*	*1*	*03/19/24 22:56*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/19/24 22:56*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-4D-240312 (A4C1305-03)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
EMW-16D-240312 (A4C1305-04)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Acenaphthene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Acenaphthylene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Anthracene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Chrysene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Fluoranthene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Fluorene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00994	0.0199	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0397	0.0795	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0397	0.0795	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Naphthalene	ND	0.0397	0.0795	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Phenanthrene	ND	0.0397	0.0795	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Pyrene	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Dibenzofuran	ND	0.0199	0.0397	ug/L	1	03/19/24 23:28	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*96 %*	*Limits: 78-134 %*	*1*	*03/19/24 23:28*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*03/19/24 23:28*	*EPA 8270E LVI*	
EMW-21D-240312 (A4C1305-05)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Acenaphthene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Acenaphthylene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Anthracene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Chrysene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-21D-240312 (A4C1305-05)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Dibenz(a,h)anthracene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Fluoranthene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Fluorene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0105	0.0209	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0419	0.0838	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0419	0.0838	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Naphthalene	ND	0.0419	0.0838	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Phenanthrene	ND	0.0419	0.0838	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Pyrene	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Dibenzofuran	ND	0.0209	0.0419	ug/L	1	03/20/24 00:00	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*96 %*	*Limits: 78-134 %*	*1*	*03/20/24 00:00*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*03/20/24 00:00*	*EPA 8270E LVI*	
EMW-22D-240312 (A4C1305-06)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Acenaphthene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Acenaphthylene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Anthracene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Chrysene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Fluoranthene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Fluorene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00926	0.0185	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0370	0.0741	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0370	0.0741	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Naphthalene	ND	0.0370	0.0741	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Phenanthrene	ND	0.0370	0.0741	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Pyrene	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	
Dibenzofuran	ND	0.0185	0.0370	ug/L	1	03/20/24 00:32	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-22D-240312 (A4C1305-06)				**Matrix: Water**		**Batch: 24C0644**		**DCNT**
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 98 %*	*Limits: 78-134 %*	*1*	*03/20/24 00:32*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/20/24 00:32*	*EPA 8270E LVI*	
SLR-1-240312 (A4C1305-07)				**Matrix: Water**		**Batch: 24C0644**		
Acenaphthene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Acenaphthylene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Anthracene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Chrysene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Fluoranthene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Fluorene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00843	0.0169	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0337	0.0675	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0337	0.0675	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Naphthalene	ND	0.0337	0.0675	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Phenanthrene	ND	0.0337	0.0675	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Pyrene	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Dibenzofuran	ND	0.0169	0.0337	ug/L	1	03/20/24 01:04	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*	*Limits: 78-134 %*	*1*	*03/20/24 01:04*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/20/24 01:04*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240312 (A4C1305-01RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	**1.10**	0.400	0.800	ug/L	4	04/06/24 01:40	EPA 6020B	
Copper	**2.30**	0.400	0.800	ug/L	4	04/06/24 01:40	EPA 6020B	
CMW-7-240312 (A4C1305-02RE2)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	**3.45**	0.400	0.800	ug/L	4	04/06/24 01:45	EPA 6020B	
Copper	**1.13**	0.400	0.800	ug/L	4	04/06/24 01:45	EPA 6020B	
EMW-4D-240312 (A4C1305-03RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 01:50	EPA 6020B	R-04
Copper	**1.50**	0.400	0.800	ug/L	4	04/06/24 01:50	EPA 6020B	
EMW-16D-240312 (A4C1305-04RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 01:54	EPA 6020B	R-04
Copper	ND	0.400	0.800	ug/L	4	04/06/24 01:54	EPA 6020B	R-04
EMW-21D-240312 (A4C1305-05RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	**605**	0.400	0.800	ug/L	4	04/06/24 01:59	EPA 6020B	
Copper	**4.47**	0.400	0.800	ug/L	4	04/06/24 01:59	EPA 6020B	
EMW-22D-240312 (A4C1305-06RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	**0.621**	0.400	0.800	ug/L	4	04/06/24 02:13	EPA 6020B	**J**
Copper	**3.17**	0.400	0.800	ug/L	4	04/06/24 02:13	EPA 6020B	
SLR-1-240312 (A4C1305-07RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	**1.51**	0.100	0.200	ug/L	1	04/06/24 02:18	EPA 6020B	
Copper	**1.10**	0.100	0.200	ug/L	1	04/06/24 02:18	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240312 (A4C1305-01RE2)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	**1.23**	0.400	0.800	ug/L	4	04/05/24 21:05	EPA 6020B (Diss)	
Copper	**2.11**	0.400	0.800	ug/L	4	04/05/24 21:05	EPA 6020B (Diss)	
CMW-7-240312 (A4C1305-02RE3)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	**2.70**	0.400	0.800	ug/L	4	04/05/24 22:48	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/05/24 22:48	EPA 6020B (Diss)	R-04
EMW-4D-240312 (A4C1305-03RE3)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	ND	0.400	0.800	ug/L	4	04/05/24 22:52	EPA 6020B (Diss)	R-04
Copper	**1.30**	0.400	0.800	ug/L	4	04/05/24 22:52	EPA 6020B (Diss)	
EMW-16D-240312 (A4C1305-04RE3)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	ND	0.400	0.800	ug/L	4	04/05/24 22:57	EPA 6020B (Diss)	R-04
Copper	**0.696**	0.400	0.800	ug/L	4	04/05/24 22:57	EPA 6020B (Diss)	**J**
EMW-21D-240312 (A4C1305-05RE2)				**Matrix: Water**				
Batch: 24C0768								
Copper	**1.47**	0.400	0.800	ug/L	4	04/05/24 21:47	EPA 6020B (Diss)	
EMW-21D-240312 (A4C1305-05RE3)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	**152**	0.400	0.800	ug/L	4	04/08/24 14:38	EPA 6020B (Diss)	
EMW-22D-240312 (A4C1305-06RE2)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	ND	0.400	0.800	ug/L	4	04/05/24 21:52	EPA 6020B (Diss)	R-04
Copper	**0.423**	0.400	0.800	ug/L	4	04/05/24 21:52	EPA 6020B (Diss)	**J**
SLR-1-240312 (A4C1305-07RE3)				**Matrix: Water**				
Batch: 24C0768								
Arsenic	**1.44**	0.100	0.200	ug/L	1	04/05/24 23:02	EPA 6020B (Diss)	
Copper	**0.101**	0.100	0.200	ug/L	1	04/05/24 23:02	EPA 6020B (Diss)	**J**

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0603 - EPA 5030C							**Water**					
Blank (24C0603-BLK1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 12:52							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				
LCS (24C0603-BS1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 11:57							
EPA 8260D SIM												
Vinyl chloride	0.192	0.0100	0.0200	ug/L	1	0.200	---	96	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				
Duplicate (24C0603-DUP1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 22:17							
QC Source Sample: Non-SDG (A4C1222-02)												
Vinyl chloride	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*86 %*		*80-120 %*			*"*				
Matrix Spike (24C0603-MS1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 19:09							
QC Source Sample: Non-SDG (A4C1254-01)												
EPA 8260D SIM												
Vinyl chloride	0.370	0.0100	0.0200	ug/L	1	0.200	0.0910	**139**	**58-137%**	---	---	Q-01
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0644 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24C0644-BLK1)			Prepared: 03/19/24 07:47		Analyzed: 03/19/24 16:28							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 102 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*104 %*		*80-132 %*			*"*				
LCS (24C0644-BS1)			Prepared: 03/19/24 07:47		Analyzed: 03/19/24 17:01							
EPA 8270E LVI												
Acenaphthene	1.48	0.0160	0.0320	ug/L	1	1.60	---	92	80-120%	---	---	
Acenaphthylene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-124%	---	---	
Anthracene	1.55	0.0160	0.0320	ug/L	1	1.60	---	97	80-123%	---	---	
Benz(a)anthracene	1.57	0.00800	0.0160	ug/L	1	1.60	---	98	80-122%	---	---	
Benzo(a)pyrene	1.63	0.00800	0.0160	ug/L	1	1.60	---	102	80-129%	---	---	
Benzo(b)fluoranthene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-124%	---	---	
Benzo(k)fluoranthene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-125%	---	---	
Benzo(g,h,i)perylene	1.61	0.0160	0.0320	ug/L	1	1.60	---	100	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0644 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24C0644-BS1)			Prepared: 03/19/24 07:47		Analyzed: 03/19/24 17:01							
Chrysene	1.49	0.00800	0.0160	ug/L	1	1.60	---	93	80-120%	---	---	
Dibenz(a,h)anthracene	1.52	0.00800	0.0160	ug/L	1	1.60	---	95	80-120%	---	---	
Fluoranthene	1.56	0.0160	0.0320	ug/L	1	1.60	---	98	80-126%	---	---	
Fluorene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.56	0.00800	0.0160	ug/L	1	1.60	---	98	80-121%	---	---	
1-Methylnaphthalene	1.59	0.0320	0.0640	ug/L	1	1.60	---	100	53-148%	---	---	
2-Methylnaphthalene	1.55	0.0320	0.0640	ug/L	1	1.60	---	97	48-150%	---	---	
Naphthalene	1.59	0.0320	0.0640	ug/L	1	1.60	---	99	78-120%	---	---	
Phenanthrene	1.40	0.0320	0.0640	ug/L	1	1.60	---	88	80-120%	---	---	
Pyrene	1.59	0.0160	0.0320	ug/L	1	1.60	---	100	80-125%	---	---	
Carbazole	1.54	0.0160	0.0320	ug/L	1	1.60	---	96	65-141%	---	---	
Dibenzofuran	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*		*Limits: 78-134 %*		*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*105 %*		*80-132 %*		*"*					
LCS Dup (24C0644-BSD1)			Prepared: 03/19/24 07:47		Analyzed: 03/19/24 17:33							**Q-19**
EPA 8270E LVI												
Acenaphthene	1.52	0.0160	0.0320	ug/L	1	1.60	---	95	80-120%	3	30%	
Acenaphthylene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-124%	0.2	30%	
Anthracene	1.58	0.0160	0.0320	ug/L	1	1.60	---	99	80-123%	2	30%	
Benz(a)anthracene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-122%	2	30%	
Benzo(a)pyrene	1.67	0.00800	0.0160	ug/L	1	1.60	---	105	80-129%	3	30%	
Benzo(b)fluoranthene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-124%	0.03	30%	
Benzo(k)fluoranthene	1.62	0.00800	0.0160	ug/L	1	1.60	---	101	80-125%	1	30%	
Benzo(g,h,i)perylene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-120%	1	30%	
Chrysene	1.50	0.00800	0.0160	ug/L	1	1.60	---	94	80-120%	0.9	30%	
Dibenz(a,h)anthracene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	2	30%	
Fluoranthene	1.58	0.0160	0.0320	ug/L	1	1.60	---	99	80-126%	0.9	30%	
Fluorene	1.64	0.0160	0.0320	ug/L	1	1.60	---	103	77-127%	2	30%	
Indeno(1,2,3-cd)pyrene	1.57	0.00800	0.0160	ug/L	1	1.60	---	98	80-121%	0.2	30%	
1-Methylnaphthalene	1.64	0.0320	0.0640	ug/L	1	1.60	---	102	53-148%	3	30%	
2-Methylnaphthalene	1.57	0.0320	0.0640	ug/L	1	1.60	---	98	48-150%	2	30%	
Naphthalene	1.62	0.0320	0.0640	ug/L	1	1.60	---	101	78-120%	2	30%	
Phenanthrene	1.43	0.0320	0.0640	ug/L	1	1.60	---	89	80-120%	2	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0644 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24C0644-BSD1)			Prepared: 03/19/24 07:47		Analyzed: 03/19/24 17:33							**Q-19**
Pyrene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	80-125%	2	30%	
Carbazole	1.59	0.0160	0.0320	ug/L	1	1.60	---	99	65-141%	3	30%	
Dibenzofuran	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	76-121%	0.4	30%	

Surr: Acenaphthylene-d8 (Surr)	*Recovery: 100 %*	*Limits: 78-134 %*	*Dilution: 1x*
Benzo(a)pyrene-d12 (Surr)	*105 %*	*80-132 %*	*"*

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0874 - EPA 3015A							**Water**					
Blank (24C0874-BLK1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 22:15							
EPA 6020B												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Blank (24C0874-BLK3)			Prepared: 03/25/24 12:28		Analyzed: 04/06/24 01:31							
EPA 6020B												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
LCS (24C0874-BS1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 22:35							
EPA 6020B												
Arsenic	56.7	0.500	1.00	ug/L	1	55.6	---	102	80-120%	---	---	
Copper	60.2	1.00	2.00	ug/L	1	55.6	---	108	80-120%	---	---	
Duplicate (24C0874-DUP1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 22:47							
QC Source Sample: Non-SDG (A4C1222-02)												
Arsenic	**5.04**	0.500	1.00	ug/L	1	---	5.51	---	---	9	20%	
Copper	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (24C0874-MS1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 23:19							
QC Source Sample: Non-SDG (A4C1270-02)												
EPA 6020B												
Arsenic	58.3	0.500	1.00	ug/L	1	55.6	0.905	103	75-125%	---	---	
Copper	57.8	1.00	2.00	ug/L	1	55.6	ND	104	75-125%	---	---	
Matrix Spike Dup (24C0874-MSD1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 23:25							
QC Source Sample: Non-SDG (A4C1270-02)												
Arsenic	60.3	0.500	1.00	ug/L	1	55.6	0.905	107	75-125%	3	20%	
Copper	58.3	1.00	2.00	ug/L	1	55.6	ND	105	75-125%	0.9	20%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0768 - Matrix Matched Direct Inject							**Water**					
Blank (24C0768-BLK1)			Prepared: 03/21/24 12:34		Analyzed: 03/22/24 00:49							
EPA 6020B (Diss)												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Blank (24C0768-BLK2)			Prepared: 03/21/24 12:34		Analyzed: 03/25/24 16:19							
EPA 6020B (Diss)												
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	Q-16
Blank (24C0768-BLK3)			Prepared: 03/21/24 12:34		Analyzed: 04/05/24 20:55							
EPA 6020B (Diss)												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (24C0768-BS1)			Prepared: 03/21/24 12:34		Analyzed: 03/22/24 00:54							
EPA 6020B (Diss)												
Arsenic	53.8	0.500	1.00	ug/L	1	55.6	---	97	80-120%	---	---	
Copper	62.3	1.00	2.00	ug/L	1	55.6	---	112	80-120%	---	---	
LCS (24C0768-BS5)			Prepared: 03/21/24 12:34		Analyzed: 04/05/24 21:00							
EPA 6020B (Diss)												
Arsenic	53.1	0.100	0.200	ug/L	1	55.6	---	96	80-120%	---	---	Q-16
Duplicate (24C0768-DUP3)			Prepared: 03/21/24 12:34		Analyzed: 04/05/24 21:10							
QC Source Sample: CMW-1-240312 (A4C1305-01RE2)												
EPA 6020B (Diss)												
Arsenic	**1.22**	0.400	0.800	ug/L	4	---	1.23	---	---	1	20%	Q-16
Copper	**2.00**	0.400	0.800	ug/L	4	---	2.11	---	---	6	20%	Q-16
Matrix Spike (24C0768-MS5)			Prepared: 03/21/24 12:34		Analyzed: 04/05/24 21:19							
QC Source Sample: CMW-7-240312 (A4C1305-02RE4)												
EPA 6020B (Diss)												
Arsenic	56.7	0.400	0.800	ug/L	4	55.6	3.08	96	75-125%	---	---	Q-16
Copper	56.9	0.400	0.800	ug/L	4	55.6	6.66	90	75-125%	---	---	Q-16

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0768 - Matrix Matched Direct Inject							**Water**					
Matrix Spike Dup (24C0768-MSD5)			Prepared: 03/21/24 12:34		Analyzed: 04/05/24 21:33							
QC Source Sample: CMW-7-240312 (A4C1305-02RE4)												
EPA 6020B (Diss)												
Arsenic	59.2	2.00	4.00	ug/L	20	55.6	3.08	101	75-125%	4	20%	Q-16

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

SAMPLE PREPARATION INFORMATION

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0603							
A4C1305-01	Water	EPA 8260D SIM	03/12/24 14:48	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1305-02	Water	EPA 8260D SIM	03/12/24 15:17	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1305-03	Water	EPA 8260D SIM	03/12/24 13:25	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1305-04	Water	EPA 8260D SIM	03/12/24 14:37	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1305-05	Water	EPA 8260D SIM	03/12/24 13:37	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1305-06	Water	EPA 8260D SIM	03/12/24 14:10	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1305-07	Water	EPA 8260D SIM	03/12/24 15:50	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0644							
A4C1305-01	Water	EPA 8270E LVI	03/12/24 14:48	03/19/24 07:47	127.32mL/5mL	125mL/5mL	0.98
A4C1305-02	Water	EPA 8270E LVI	03/12/24 15:17	03/19/24 07:47	97.34mL/5mL	125mL/5mL	1.28
A4C1305-03	Water	EPA 8270E LVI	03/12/24 13:25	03/19/24 07:47	93.7mL/5mL	125mL/5mL	1.33
A4C1305-04	Water	EPA 8270E LVI	03/12/24 14:37	03/19/24 07:47	100.65mL/5mL	125mL/5mL	1.24
A4C1305-05	Water	EPA 8270E LVI	03/12/24 13:37	03/19/24 07:47	95.51mL/5mL	125mL/5mL	1.31
A4C1305-06	Water	EPA 8270E LVI	03/12/24 14:10	03/19/24 07:47	108.01mL/5mL	125mL/5mL	1.16
A4C1305-07	Water	EPA 8270E LVI	03/12/24 15:50	03/19/24 07:47	118.58mL/5mL	125mL/5mL	1.05

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0874							
A4C1305-01RE1	Water	EPA 6020B	03/12/24 14:48	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
A4C1305-02RE2	Water	EPA 6020B	03/12/24 15:17	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
A4C1305-03RE1	Water	EPA 6020B	03/12/24 13:25	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
A4C1305-04RE1	Water	EPA 6020B	03/12/24 14:37	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
A4C1305-05RE1	Water	EPA 6020B	03/12/24 13:37	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
A4C1305-06RE1	Water	EPA 6020B	03/12/24 14:10	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
A4C1305-07RE1	Water	EPA 6020B	03/12/24 15:50	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 6020B (ICPMS)

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0768							
A4C1305-01RE2	Water	EPA 6020B (Diss)	03/12/24 14:48	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-02RE3	Water	EPA 6020B (Diss)	03/12/24 15:17	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-03RE3	Water	EPA 6020B (Diss)	03/12/24 13:25	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-04RE3	Water	EPA 6020B (Diss)	03/12/24 14:37	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-05RE2	Water	EPA 6020B (Diss)	03/12/24 13:37	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-05RE3	Water	EPA 6020B (Diss)	03/12/24 13:37	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-06RE2	Water	EPA 6020B (Diss)	03/12/24 14:10	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00
A4C1305-07RE3	Water	EPA 6020B (Diss)	03/12/24 15:50	03/21/24 12:34	45mL/50mL	45mL/50mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

DCNT	Sample decanted due to the presence of sediment. Sample bottle not rinsed with solvent.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-16	Reanalysis of an original Batch QC sample.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
R-04	Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

REVISED *Resent* Per Client AW 3/14/24 A4C1305

LANDAU ASSOCIATES **Chain-of-Custody Record**

☐ North Seattle (206) 631-8660 ☐ Tacoma (253) 926-2493 ☐ Olympia (360) 791-3178 ☐ Spokane (509) 327-9737 ☐ Portland (503) 542-1080 ☐

Date 3/13/24 Page 1 of 1

Turnaround Time: Standard ☐ Accelerated ☐

Project Name 8th Ave Terminal Project No. 2175001.020.022

Project Location/Event Seattle, WA

Sampler's Name Spencer Lo Doyen Bissell

Project Contact Mike Staton

Send Results To Mike Staton, Michael.Staton@landau-inc.com

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx (w/ Silica Gel Cleanup)	PAHs (8270E SIM w/ Silica Gel Cleanup)
CMW-1-240312	3/12/24	1448	water	10	X	X
CMW-7-240312	3/12/24	1517	water	10	X	X
CMW-4D-240312	3/12/24	1325	water	10	X	X
CMW-14D-240312	3/12/24	1337	water	10	X	X
CMW-21D-240312	3/12/24	1337	water	10	X	X
CMW-22D-240312	3/12/24	1410	water	10	X	X
SLG-1-240312	3/12/24	1550	water	10	X	X

Special Handling Requirements:

Shipment Method

Stored on Ice: Yes / No

Observations/Comments

☐ Allow water samples to settle, collect aliquot from clear portion

☐ NWTPH-Dx - Add wash cleanup ☐ - Silica gel cleanup ☐

☐ Dissolved metal samples were field filtered

Other

Relinquished by	Received by	Relinquished by	Received by
Signature: Spencer Lo Doyen Bissell	Signature: Alissa Wilber	Signature	Signature
Printed Name: Spencer LDB	Printed Name: Alissa Wilber	Printed Name	Printed Name
Company: LAI	Company: Apex	Company	Company
Date: 3/13/24 Time: 1200	Date: 3/14/24 Time: 1312	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative 10/2015

Apex Laboratories

Michele Poquiz

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

Project: **8th Ave. Terminals**
Project Number: **2175001.020.022**
Project Manager: **Mike Staton**

Report ID:
A4C1305 - 04 24 24 1347

LANDAU ASSOCIATES

Chain-of-Custody Record

☑ North Seattle (206) 631-8650 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178

Date 3/13/24
Page 1 of 1

Turnaround Time: (Standard) Accelerated

A4C1305

Project Name 8th Ave Terminal
Project No. 2175001.020.022
Project Location/Event Seattle, WA
Sampler's Name Spencer Lo, Devan Brandt
Project Contact Mike Staton
Send Results To Mike Staton - mstaton@landau inc.com

Testing Parameters

VOCs Chlorinated Solvents
PAHs 8270E
Total & dissolved Arsenic Lead
Total & dissolved copper Zinc

Sample I.D.	Date	Time	Matrix	No. of Containers
CMW-1-240312	3/12/24	1448	water	10
CMW-7-240312	3/12/24	1517	water	10
EMW-4D-240312	3/12/24	1325	water	10
EMW-16D-240312	3/12/24	1437	water	10
EMW-21D-240312	3/12/24	1337	water	10
EMW-22D-240312	3/12/24	1410	water	10
SLR-1-240312	3/12/24	1550	water	10

Special Handling Requirements:
Shipment Method: ____
Stored on ice: Yes / No

Observations/Comments
__ Allow water samples to settle, collect aliquot from clear portion ☐
__ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
__ Dissolved metal samples were field filtered

Other

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Spencer Lo	Printed Name Phish Wilber	Printed Name	Printed Name
Company LAI	Company Apex	Company	Company
Date 3/13/24 Time 1200	Date 3/14/24 Time 1322	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

[signature]

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1305 - 04 24 24 1347**

APEX LABS COOLER RECEIPT FORM

Client: Landau Associates Element WO#: A4C1305

Project/Project #: 2175001.020.022 8th Ave. Terminal aee for aaw 3/14/24

Delivery Info:

Date/time received: 3/14/24 @ 1322 By: APW

Delivered by: Apex__ Client__ ESS__ FedEx X UPS X Radio__ Morgan__ SDS__ Evergreen__ Other__ aaw 3/14

From USDA Regulated Origin? Yes ____ No X aaw 3/14

Cooler Inspection Date/time inspected: 3/14/24 @ 1325 By: APW

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.9						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3.14.24 @ 14:25 By: MHM

All samples intact? Yes ✓ No ___ Comments: ____

Bottle labels/COCs agree? Yes ✓ No ___ Comments: ____

COC/container discrepancies form initiated? Yes ___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No ___ Comments: ____

Do VOA vials have visible headspace? Yes ___ No ✓ NA ___

Comments VOA's EMW-4D (6/6), EMW-21D (6/6), EMW-22D (6/6) contain Scd.

Water samples: pH checked: Yes ✓ No___ NA___ pH appropriate? Yes ✓ No___ NA___ pH ID: A231172

Comments: ____

2721 / 2671 / 2682

Labeled by: APW Witness: [illegible] Cooler Inspected by:

Form Y-003 R-02

Apex Laboratories

Michele Poquiz

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Wednesday, April 24, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4C1335 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4C1335, which was received by the laboratory on 3/15/2024 at 10:35:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: mpoquiz@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information					
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.					
(See Cooler Receipt Form for details)					
Cooler #1	1.1	degC	Cooler #2	1.7	degC
Cooler #3	1.9	degC	Cooler #4	3.2	degC
Cooler #5	4.3	degC			

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CMW-2-240313	A4C1335-01	Water	03/13/24 14:03	03/15/24 10:35
CMW-3-240313	A4C1335-02	Water	03/13/24 15:19	03/15/24 10:35
CMW-4-240313	A4C1335-03	Water	03/13/24 16:04	03/15/24 10:35
CMW-6-240313	A4C1335-04	Water	03/13/24 14:17	03/15/24 10:35
EMW-1S-240313	A4C1335-05	Water	03/13/24 11:53	03/15/24 10:35
EMW-2S-240313	A4C1335-06	Water	03/13/24 14:45	03/15/24 10:35
EMW-3S-240313	A4C1335-07	Water	03/13/24 14:03	03/15/24 10:35
EMW-6S-240313	A4C1335-08	Water	03/13/24 12:44	03/15/24 10:35
EMW-9SA-240313	A4C1335-09	Water	03/13/24 15:58	03/15/24 10:35
EMW-11S-240313	A4C1335-10	Water	03/13/24 12:57	03/15/24 10:35
EMW-13S-240313	A4C1335-11	Water	03/13/24 15:47	03/15/24 10:35
EMW-14D-240313	A4C1335-12	Water	03/13/24 14:57	03/15/24 10:35
EMW-15D-240313	A4C1335-13	Water	03/13/24 15:08	03/15/24 10:35
EMW-18S-240313	A4C1335-14	Water	03/13/24 13:05	03/15/24 10:35
EMW-20D-240313	A4C1335-15	Water	03/13/24 14:20	03/15/24 10:35
EMW-31S-240313	A4C1335-16	Water	03/13/24 12:20	03/15/24 10:35
SLR-2-240313	A4C1335-17	Water	03/13/24 14:00	03/15/24 10:35
SLR-3-240313	A4C1335-18	Water	03/13/24 16:05	03/15/24 10:35
SLR-6-240313	A4C1335-19	Water	03/13/24 15:20	03/15/24 10:35
HC-20-240313	A4C1335-20	Water	03/13/24 12:07	03/15/24 10:35

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL CASE NARRATIVE

A4C1335 **Apex Laboratories**

Amended Report Revision #1:

This report supercedes all previous reports.

Per the client's request, the case narrative from Apex work order (WO) A4D1138 is provided below.

Metals Filtration Note:

The water samples from Apex work orders (WO) A4C1305, A4C1335, and A4C1365 were analyzed for total arsenic (As) and copper (Cu) as well as field filtered dissolved As and Cu using 0.45 um field filters. Per the client's request, select samples from these WOs were re-logged under Apex WO A4D1138 and filtered in the laboratory using 0.45 um lab filters. A summary of the As results generated is provided below.

EMW-21D-240312
Apex WO: A4C1305-05 / A4D1138-01
Total As: 605 ug/L
Dissolved As (0.45 um Field Filter): 152 ug/L
Dissolved As (0.45 um Lab Filter): 3.17 ug/L

CMW-6-240313
Apex WO: A4C1335-04 / A4D1138-04
Total As: 41.9 ug/L
Dissolved As (0.45 um Field Filter): 40.8 ug/L
Dissolved As (0.45 um Lab Filter): 48.5 ug/L

EMW-13S-240313
Apex WO: A4C1335-11 / A4D1138-05
Total As: 102 ug/L
Dissolved As (0.45 um Field Filter): 84.6 ug/L
Dissolved As (0.45 um Lab Filter): 82.1 ug/L

CMW-5-240314
Apex WO: A4C1365-01 / A4D1138-06
Total As: 106 ug/L
Dissolved As (0.45 um Field Filter): 93.7 ug/L
Dissolved As (0.45 um Lab Filter): 5.64 ug/L

DMW2-240314
Apex WO: A4C1365-04 / A4D1138-07
Total As: 152 ug/L
Dissolved As (0.45 um Field Filter): 140 ug/L
Dissolved As (0.45 um Lab Filter): 9.27 ug/L

The data above indicates that the filters used in the field did not consistently remove particles in the samples greater than 0.45 um in

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL CASE NARRATIVE

A4C1335 **Apex Laboratories**

size. At a minimum, this is seen in the samples EMW-21D-240312, CMW-5-240314, and DMW2-240314. Therefore the dissolved As and dissolved Cu quantifications reported for at least a portion of the samples in Apex WOs A4C1305, A4C1335, and A4C1365 after field filtering should not be relied upon.

It should be noted that the lab filtrations were completed using samples collected in unpreserved glass bottles rather than the method-recommended nitric-preserved poly bottles. The data has been qualified accordingly.

Kurt Johnson
Director of Forensic Services
04/24/2024

Temperature Exceedence Clarification

Sample SLR-3-240313 (A4C1335-18RE1) PAH analysis: The sample and solvent extract created an emulsion during extraction. The sample and solvent were left in the extraction bottle to aid in the separation of the emulsion. However, the sample extract bottle containing the emulsion was not refrigerated per method 8270 requirements for a period of approximately 15hrs and is qualified Temp_S.

Mark Zehr
Organics Manager
04/22/2024

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-2-240313 (A4C1335-01)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 17:48	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	*1*	*03/18/24 17:48*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*03/18/24 17:48*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*03/18/24 17:48*	*EPA 8260D SIM*	
CMW-3-240313 (A4C1335-02)				**Matrix: Water**		**Batch: 24C0603**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/18/24 18:15	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	*1*	*03/18/24 18:15*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*03/18/24 18:15*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*03/18/24 18:15*	*EPA 8260D SIM*	
CMW-4-240313 (A4C1335-03)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 18:22	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*	*Limits: 80-120 %*	*1*	*03/19/24 18:22*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/19/24 18:22*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/19/24 18:22*	*EPA 8260D SIM*	
CMW-6-240313 (A4C1335-04)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 18:49	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*	*Limits: 80-120 %*	*1*	*03/19/24 18:49*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/19/24 18:49*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/19/24 18:49*	*EPA 8260D SIM*	
EMW-1S-240313 (A4C1335-05)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 19:16	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*	*1*	*03/19/24 19:16*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*03/19/24 19:16*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/19/24 19:16*	*EPA 8260D SIM*	
EMW-2S-240313 (A4C1335-06)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 19:43	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*	*1*	*03/19/24 19:43*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/19/24 19:43*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/19/24 19:43*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-3S-240313 (A4C1335-07)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 20:10	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	*1*	*03/19/24 20:10*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/19/24 20:10*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/19/24 20:10*	*EPA 8260D SIM*	
EMW-6S-240313 (A4C1335-08)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 20:37	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*	*1*	*03/19/24 20:37*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/19/24 20:37*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 20:37*	*EPA 8260D SIM*	
EMW-9SA-240313 (A4C1335-09)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 21:31	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*03/19/24 21:31*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/19/24 21:31*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 21:31*	*EPA 8260D SIM*	
EMW-11S-240313 (A4C1335-10)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	**0.0179**	0.0100	0.0200	ug/L	1	03/19/24 21:57	EPA 8260D SIM	**J**
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*03/19/24 21:57*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/19/24 21:57*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 21:57*	*EPA 8260D SIM*	
EMW-13S-240313 (A4C1335-11)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 22:24	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*	*1*	*03/19/24 22:24*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/19/24 22:24*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 22:24*	*EPA 8260D SIM*	
EMW-14D-240313 (A4C1335-12)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	**0.0361**	0.0100	0.0200	ug/L	1	03/19/24 22:51	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*03/19/24 22:51*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/19/24 22:51*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 22:51*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-15D-240313 (A4C1335-13)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 23:18	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*03/19/24 23:18*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/19/24 23:18*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 23:18*	*EPA 8260D SIM*	
EMW-18S-240313 (A4C1335-14)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/19/24 23:45	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*03/19/24 23:45*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*03/19/24 23:45*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/19/24 23:45*	*EPA 8260D SIM*	
EMW-20D-240313 (A4C1335-15)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 00:12	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*	*1*	*03/20/24 00:12*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 00:12*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/20/24 00:12*	*EPA 8260D SIM*	
EMW-31S-240313 (A4C1335-16)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	**0.0142**	0.0100	0.0200	ug/L	1	03/20/24 00:39	EPA 8260D SIM	**J**
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*03/20/24 00:39*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 00:39*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/20/24 00:39*	*EPA 8260D SIM*	
SLR-2-240313 (A4C1335-17)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 01:06	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*03/20/24 01:06*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 01:06*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/20/24 01:06*	*EPA 8260D SIM*	
SLR-3-240313 (A4C1335-18)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 01:33	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*03/20/24 01:33*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 01:33*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 01:33*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-6-240313 (A4C1335-19)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 03:21	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*03/20/24 03:21*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 03:21*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*107 %*	*80-120 %*	*1*	*03/20/24 03:21*	*EPA 8260D SIM*	
HC-20-240313 (A4C1335-20)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 02:00	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*03/20/24 02:00*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 02:00*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 02:00*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-2-240313 (A4C1335-01)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Acenaphthylene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Anthracene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Chrysene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Fluoranthene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Fluorene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00859	0.0172	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0343	0.0687	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0343	0.0687	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Naphthalene	ND	0.0343	0.0687	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Phenanthrene	ND	0.0343	0.0687	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Pyrene	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Dibenzofuran	ND	0.0172	0.0343	ug/L	1	03/20/24 17:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*102 %*	*Limits: 78-134 %*	*1*	*03/20/24 17:29*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/20/24 17:29*	*EPA 8270E LVI*	
CMW-3-240313 (A4C1335-02)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Acenaphthylene	ND	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Anthracene	**0.0720**	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Benz(a)anthracene	**0.0101**	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	**J**
Benzo(a)pyrene	ND	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Benzo(b)fluoranthene	**0.0101**	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	**J**
Benzo(k)fluoranthene	ND	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Chrysene	**0.0160**	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	**J**
Dibenz(a,h)anthracene	ND	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-3-240313 (A4C1335-02)				**Matrix: Water**		**Batch: 24C0683**		
Fluoranthene	**0.0380**	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Fluorene	**0.0215**	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	**J**
Indeno(1,2,3-cd)pyrene	ND	0.00917	0.0183	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0367	0.0733	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0367	0.0733	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Naphthalene	**0.0399**	0.0367	0.0733	ug/L	1	03/20/24 18:02	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0367	0.0733	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Pyrene	**0.0238**	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	**J**
Dibenzofuran	ND	0.0183	0.0367	ug/L	1	03/20/24 18:02	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*03/20/24 18:02*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/20/24 18:02*	*EPA 8270E LVI*	
CMW-4-240313 (A4C1335-03RE1)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Acenaphthylene	ND	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Anthracene	ND	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Benz(a)anthracene	**0.0242**	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Benzo(a)pyrene	**0.0274**	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Benzo(b)fluoranthene	**0.0327**	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Benzo(k)fluoranthene	**0.0121**	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	**J**
Benzo(g,h,i)perylene	ND	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Chrysene	**0.0210**	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Fluoranthene	**0.0279**	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	**J**
Fluorene	ND	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	**0.0133**	0.00807	0.0161	ug/L	1	03/20/24 18:35	EPA 8270E LVI	**J**
1-Methylnaphthalene	ND	0.0323	0.0646	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0323	0.0646	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Naphthalene	**0.0363**	0.0323	0.0646	ug/L	1	03/20/24 18:35	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0323	0.0646	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Pyrene	**0.0315**	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	**J**
Dibenzofuran	ND	0.0161	0.0323	ug/L	1	03/20/24 18:35	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*03/20/24 18:35*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-4-240313 (A4C1335-03RE1)				**Matrix: Water**		**Batch: 24C0683**		
Surrogate: Benzo(a)pyrene-d12 (Surr)			*Recovery: 110 %*	*Limits: 80-132 %*	*1*	*03/20/24 18:35*	*EPA 8270E LVI*	
CMW-6-240313 (A4C1335-04)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Acenaphthylene	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Anthracene	**0.0190**	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Chrysene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Fluoranthene	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Fluorene	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00792	0.0158	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0317	0.0634	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0317	0.0634	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Naphthalene	ND	0.0317	0.0634	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Phenanthrene	ND	0.0317	0.0634	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Pyrene	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Dibenzofuran	ND	0.0158	0.0317	ug/L	1	03/20/24 19:07	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*	*Limits: 78-134 %*	*1*	*03/20/24 19:07*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/20/24 19:07*	*EPA 8270E LVI*	
EMW-1S-240313 (A4C1335-05)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Acenaphthylene	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Anthracene	**0.0589**	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-1S-240313 (A4C1335-05)				**Matrix: Water**		**Batch: 24C0683**		
Chrysene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Fluoranthene	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Fluorene	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00829	0.0166	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0332	0.0664	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0332	0.0664	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Naphthalene	ND	0.0332	0.0664	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Phenanthrene	ND	0.0332	0.0664	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Pyrene	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Dibenzofuran	ND	0.0166	0.0332	ug/L	1	03/20/24 19:39	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*99 %*	*Limits: 78-134 %*	*1*	*03/20/24 19:39*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/20/24 19:39*	*EPA 8270E LVI*	
EMW-2S-240313 (A4C1335-06)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Acenaphthylene	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Anthracene	**0.0611**	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Chrysene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Fluoranthene	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Fluorene	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00962	0.0192	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0385	0.0769	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0385	0.0769	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Naphthalene	ND	0.0385	0.0769	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Phenanthrene	ND	0.0385	0.0769	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Pyrene	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-2S-240313 (A4C1335-06)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Dibenzofuran	ND	0.0192	0.0385	ug/L	1	03/20/24 20:12	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*96 %*	*Limits: 78-134 %*	*1*	*03/20/24 20:12*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/20/24 20:12*	*EPA 8270E LVI*	
EMW-3S-240313 (A4C1335-07)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Acenaphthylene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Anthracene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Chrysene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Fluoranthene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Fluorene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00916	0.0183	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0367	0.0733	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0367	0.0733	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Naphthalene	ND	0.0367	0.0733	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Phenanthrene	ND	0.0367	0.0733	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Pyrene	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Dibenzofuran	ND	0.0183	0.0367	ug/L	1	03/20/24 20:44	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*99 %*	*Limits: 78-134 %*	*1*	*03/20/24 20:44*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/20/24 20:44*	*EPA 8270E LVI*	
EMW-6S-240313 (A4C1335-08)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Acenaphthylene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Anthracene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-6S-240313 (A4C1335-08)				**Matrix: Water**		**Batch: 24C0683**		
Benzo(k)fluoranthene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Chrysene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Fluoranthene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Fluorene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00821	0.0164	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0328	0.0656	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0328	0.0656	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Naphthalene	ND	0.0328	0.0656	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Phenanthrene	ND	0.0328	0.0656	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Pyrene	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Dibenzofuran	ND	0.0164	0.0328	ug/L	1	03/21/24 16:44	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*	*Limits: 78-134 %*	*1*	*03/21/24 16:44*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*03/21/24 16:44*	*EPA 8270E LVI*	
EMW-9SA-240313 (A4C1335-09)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Acenaphthylene	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Anthracene	**0.0302**	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Chrysene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Fluoranthene	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Fluorene	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0108	0.0215	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0431	0.0862	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0431	0.0862	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Naphthalene	ND	0.0431	0.0862	ug/L	1	03/21/24 17:16	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-9SA-240313 (A4C1335-09)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Phenanthrene	ND	0.0431	0.0862	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Pyrene	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Dibenzofuran	ND	0.0215	0.0431	ug/L	1	03/21/24 17:16	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*95 %*	*Limits: 78-134 %*	*1*	*03/21/24 17:16*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*03/21/24 17:16*	*EPA 8270E LVI*	
EMW-11S-240313 (A4C1335-10)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	**0.578**	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Acenaphthylene	**0.0353**	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	**J**
Anthracene	**0.0524**	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Chrysene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Fluoranthene	ND	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Fluorene	ND	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0101	0.0202	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0403	0.0807	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0403	0.0807	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Naphthalene	**0.0418**	0.0403	0.0807	ug/L	1	03/21/24 17:49	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0403	0.0807	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Pyrene	ND	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Dibenzofuran	ND	0.0202	0.0403	ug/L	1	03/21/24 17:49	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*92 %*	*Limits: 78-134 %*	*1*	*03/21/24 17:49*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/21/24 17:49*	*EPA 8270E LVI*	
EMW-13S-240313 (A4C1335-11)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0331	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Acenaphthylene	ND	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Anthracene	ND	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Benz(a)anthracene	**0.0157**	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	**J**

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-13S-240313 (A4C1335-11)				**Matrix: Water**		**Batch: 24C0683**		
Benzo(a)pyrene	**0.0178**	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Benzo(b)fluoranthene	**0.0207**	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Chrysene	**0.0128**	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	**J**
Dibenz(a,h)anthracene	ND	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Fluoranthene	**0.0223**	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	**J**
Fluorene	ND	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	**0.00992**	0.00827	0.0165	ug/L	1	03/21/24 18:22	EPA 8270E LVI	**J**
1-Methylnaphthalene	ND	0.0331	0.0661	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0331	0.0661	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Naphthalene	**0.0492**	0.0331	0.0661	ug/L	1	03/21/24 18:22	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0331	0.0661	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Pyrene	**0.0223**	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	**J**
Dibenzofuran	ND	0.0165	0.0331	ug/L	1	03/21/24 18:22	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*03/21/24 18:22*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/21/24 18:22*	*EPA 8270E LVI*	
EMW-14D-240313 (A4C1335-12)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Acenaphthylene	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Anthracene	**0.0227**	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Chrysene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Fluoranthene	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Fluorene	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0111	0.0222	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0444	0.0888	ug/L	1	03/21/24 18:54	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-14D-240313 (A4C1335-12)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
2-Methylnaphthalene	ND	0.0444	0.0888	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Naphthalene	**0.0483**	0.0444	0.0888	ug/L	1	03/21/24 18:54	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0444	0.0888	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Pyrene	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Dibenzofuran	ND	0.0222	0.0444	ug/L	1	03/21/24 18:54	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*96 %*	*Limits: 78-134 %*	*1*	*03/21/24 18:54*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/21/24 18:54*	*EPA 8270E LVI*	
EMW-15D-240313 (A4C1335-13)				**Matrix: Water**		**Batch: 24C0683**		
Acenaphthene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Anthracene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Chrysene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Fluorene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00801	0.0160	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0320	0.0641	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0320	0.0641	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Naphthalene	**0.0385**	0.0320	0.0641	ug/L	1	03/21/24 19:27	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0320	0.0641	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Pyrene	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	03/21/24 19:27	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*93 %*	*Limits: 78-134 %*	*1*	*03/21/24 19:27*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/21/24 19:27*	*EPA 8270E LVI*	
EMW-18S-240313 (A4C1335-14)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Acenaphthylene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-18S-240313 (A4C1335-14)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Anthracene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Chrysene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Fluoranthene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Fluorene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0104	0.0207	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0414	0.0829	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0414	0.0829	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Naphthalene	ND	0.0414	0.0829	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Phenanthrene	ND	0.0414	0.0829	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Pyrene	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Dibenzofuran	ND	0.0207	0.0414	ug/L	1	03/21/24 19:59	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 93 %*	*Limits: 78-134 %*	*1*	*03/21/24 19:59*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*03/21/24 19:59*	*EPA 8270E LVI*	
EMW-20D-240313 (A4C1335-15)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Acenaphthylene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Anthracene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Chrysene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Fluoranthene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Fluorene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-20D-240313 (A4C1335-15)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Indeno(1,2,3-cd)pyrene	ND	0.00884	0.0177	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0354	0.0707	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0354	0.0707	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Naphthalene	ND	0.0354	0.0707	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Phenanthrene	ND	0.0354	0.0707	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Pyrene	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Dibenzofuran	ND	0.0177	0.0354	ug/L	1	03/21/24 20:31	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*	*Limits: 78-134 %*	*1*	*03/21/24 20:31*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*03/21/24 20:31*	*EPA 8270E LVI*	
EMW-31S-240313 (A4C1335-16)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	**0.644**	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Acenaphthylene	**0.0494**	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Anthracene	**0.0518**	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Chrysene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Fluoranthene	ND	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Fluorene	ND	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00987	0.0197	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0395	0.0790	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0395	0.0790	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Naphthalene	**0.0533**	0.0395	0.0790	ug/L	1	03/22/24 14:20	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0395	0.0790	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Pyrene	ND	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Dibenzofuran	ND	0.0197	0.0395	ug/L	1	03/22/24 14:20	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*	*Limits: 78-134 %*	*1*	*03/22/24 14:20*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/22/24 14:20*	*EPA 8270E LVI*	
SLR-2-240313 (A4C1335-17)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-2-240313 (A4C1335-17)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Acenaphthylene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Anthracene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Chrysene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Fluoranthene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Fluorene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00944	0.0189	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0378	0.0755	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0378	0.0755	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Naphthalene	ND	0.0378	0.0755	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Phenanthrene	ND	0.0378	0.0755	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Pyrene	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Dibenzofuran	ND	0.0189	0.0378	ug/L	1	03/22/24 14:53	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 93 %*	*Limits: 78-134 %*	*1*	*03/22/24 14:53*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*03/22/24 14:53*	*EPA 8270E LVI*	
SLR-3-240313 (A4C1335-18RE1)				**Matrix: Water**		**Batch: 24C0718**		**DCNT, R-04, TEMP_S, X**
Acenaphthene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Acenaphthylene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Anthracene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Chrysene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-3-240313 (A4C1335-18RE1)				**Matrix: Water**		**Batch: 24C0718**		**DCNT, R-04, TEMP_S, X**
Fluoranthene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Fluorene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0390	0.0779	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.156	0.312	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.156	0.312	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Naphthalene	ND	0.156	0.312	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Phenanthrene	ND	0.156	0.312	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Pyrene	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Dibenzofuran	ND	0.0779	0.156	ug/L	4	03/21/24 14:01	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*4*	*03/21/24 14:01*	*EPA 8270E LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*78 %*	*80-132 %*	*4*	*03/21/24 14:01*	*EPA 8270E LVI*	*S-05*
SLR-6-240313 (A4C1335-19)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Acenaphthylene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Anthracene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Chrysene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Fluoranthene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Fluorene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00905	0.0181	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0362	0.0724	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0362	0.0724	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Naphthalene	ND	0.0362	0.0724	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Phenanthrene	ND	0.0362	0.0724	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Pyrene	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Dibenzofuran	ND	0.0181	0.0362	ug/L	1	03/22/24 15:25	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*03/22/24 15:25*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-6-240313 (A4C1335-19)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Surrogate: Benzo(a)pyrene-d12 (Surr)		*Recovery:*	*109 %*	*Limits: 80-132 %*	*1*	*03/22/24 15:25*	*EPA 8270E LVI*	
HC-20-240313 (A4C1335-20)				**Matrix: Water**		**Batch: 24C0683**		**DCNT**
Acenaphthene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Acenaphthylene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Anthracene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Chrysene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Fluoranthene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Fluorene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0111	0.0221	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0442	0.0885	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0442	0.0885	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Naphthalene	**0.0470**	0.0442	0.0885	ug/L	1	03/22/24 15:58	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0442	0.0885	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Pyrene	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Dibenzofuran	ND	0.0221	0.0442	ug/L	1	03/22/24 15:58	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*03/22/24 15:58*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*107 %*	*80-132 %*	*1*	*03/22/24 15:58*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-2-240313 (A4C1335-01RE1)				**Matrix: Water**				
Batch: 24C0874								
Arsenic	**10.2**	0.400	0.800	ug/L	4	04/06/24 02:22	EPA 6020B	
Copper	**2.02**	0.400	0.800	ug/L	4	04/06/24 02:22	EPA 6020B	
CMW-3-240313 (A4C1335-02RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**8.11**	0.400	0.800	ug/L	4	04/06/24 02:36	EPA 6020B	
Copper	**0.729**	0.400	0.800	ug/L	4	04/06/24 02:36	EPA 6020B	**J**
CMW-4-240313 (A4C1335-03RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**12.0**	0.400	0.800	ug/L	4	04/06/24 02:46	EPA 6020B	
Copper	**2.21**	0.400	0.800	ug/L	4	04/06/24 02:46	EPA 6020B	
CMW-6-240313 (A4C1335-04RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**41.9**	0.400	0.800	ug/L	4	04/06/24 03:14	EPA 6020B	
Copper	**24.6**	0.400	0.800	ug/L	4	04/06/24 03:14	EPA 6020B	
EMW-1S-240313 (A4C1335-05RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**2.14**	0.400	0.800	ug/L	4	04/06/24 03:18	EPA 6020B	
Copper	**3.17**	0.400	0.800	ug/L	4	04/06/24 03:18	EPA 6020B	
EMW-2S-240313 (A4C1335-06RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**0.629**	0.400	0.800	ug/L	4	04/06/24 03:23	EPA 6020B	**J**
Copper	**1.01**	0.400	0.800	ug/L	4	04/06/24 03:23	EPA 6020B	
EMW-3S-240313 (A4C1335-07RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**4.60**	0.400	0.800	ug/L	4	04/06/24 03:28	EPA 6020B	
Copper	**2.01**	0.400	0.800	ug/L	4	04/06/24 03:28	EPA 6020B	
EMW-6S-240313 (A4C1335-08RE1)				**Matrix: Water**				
Batch: 24C0971								

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-6S-240313 (A4C1335-08RE1)				**Matrix: Water**				
Arsenic	**0.582**	0.400	0.800	ug/L	4	04/06/24 03:32	EPA 6020B	**J**
Copper	**0.870**	0.400	0.800	ug/L	4	04/06/24 03:32	EPA 6020B	
EMW-9SA-240313 (A4C1335-09RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**2.65**	0.400	0.800	ug/L	4	04/06/24 03:37	EPA 6020B	
Copper	**0.956**	0.400	0.800	ug/L	4	04/06/24 03:37	EPA 6020B	
EMW-11S-240313 (A4C1335-10RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**11.9**	0.400	0.800	ug/L	4	04/06/24 03:42	EPA 6020B	
Copper	**0.702**	0.400	0.800	ug/L	4	04/06/24 03:42	EPA 6020B	**J**
EMW-13S-240313 (A4C1335-11RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**102**	0.400	0.800	ug/L	4	04/06/24 03:46	EPA 6020B	
Copper	**13.6**	0.400	0.800	ug/L	4	04/06/24 03:46	EPA 6020B	
EMW-14D-240313 (A4C1335-12RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**0.733**	0.400	0.800	ug/L	4	04/06/24 03:51	EPA 6020B	**J**
Copper	ND	0.400	0.800	ug/L	4	04/06/24 03:51	EPA 6020B	R-04
EMW-15D-240313 (A4C1335-13RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**0.665**	0.400	0.800	ug/L	4	04/06/24 03:56	EPA 6020B	**J**
Copper	**1.72**	0.400	0.800	ug/L	4	04/06/24 03:56	EPA 6020B	
EMW-18S-240313 (A4C1335-14RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 04:10	EPA 6020B	R-04
Copper	ND	0.400	0.800	ug/L	4	04/06/24 04:10	EPA 6020B	R-04
EMW-20D-240313 (A4C1335-15RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**3.79**	0.400	0.800	ug/L	4	04/06/24 04:14	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-20D-240313 (A4C1335-15RE1)				**Matrix: Water**				
Copper	**13.3**	0.400	0.800	ug/L	4	04/06/24 04:14	EPA 6020B	
EMW-31S-240313 (A4C1335-16RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**12.0**	0.400	0.800	ug/L	4	04/06/24 04:19	EPA 6020B	
Copper	**0.869**	0.400	0.800	ug/L	4	04/06/24 04:19	EPA 6020B	
SLR-2-240313 (A4C1335-17RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**0.825**	0.400	0.800	ug/L	4	04/06/24 04:24	EPA 6020B	
Copper	**3.60**	0.400	0.800	ug/L	4	04/06/24 04:24	EPA 6020B	
SLR-3-240313 (A4C1335-18RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**28.0**	0.400	0.800	ug/L	4	04/06/24 04:28	EPA 6020B	
Copper	**19.3**	0.400	0.800	ug/L	4	04/06/24 04:28	EPA 6020B	
SLR-6-240313 (A4C1335-19RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**0.703**	0.400	0.800	ug/L	4	04/06/24 04:33	EPA 6020B	**J**
Copper	**6.06**	0.400	0.800	ug/L	4	04/06/24 04:33	EPA 6020B	
HC-20-240313 (A4C1335-20RE1)				**Matrix: Water**				
Batch: 24C0971								
Arsenic	**5.43**	0.400	0.800	ug/L	4	04/06/24 04:38	EPA 6020B	
Copper	ND	0.400	0.800	ug/L	4	04/06/24 04:38	EPA 6020B	R-04

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-2-240313 (A4C1335-01RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**9.52**	0.400	0.800	ug/L	4	04/05/24 23:25	EPA 6020B (Diss)	
Copper	**4.06**	0.400	0.800	ug/L	4	04/05/24 23:25	EPA 6020B (Diss)	
CMW-3-240313 (A4C1335-02RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**8.01**	0.400	0.800	ug/L	4	04/05/24 23:34	EPA 6020B (Diss)	
Copper	**0.625**	0.400	0.800	ug/L	4	04/05/24 23:34	EPA 6020B (Diss)	**J**
CMW-4-240313 (A4C1335-03RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**11.2**	0.400	0.800	ug/L	4	04/05/24 23:48	EPA 6020B (Diss)	
Copper	**1.49**	0.400	0.800	ug/L	4	04/05/24 23:48	EPA 6020B (Diss)	
CMW-6-240313 (A4C1335-04RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**40.8**	0.400	0.800	ug/L	4	04/05/24 23:53	EPA 6020B (Diss)	
Copper	**21.8**	0.400	0.800	ug/L	4	04/05/24 23:53	EPA 6020B (Diss)	
EMW-1S-240313 (A4C1335-05RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**1.83**	0.400	0.800	ug/L	4	04/05/24 23:58	EPA 6020B (Diss)	
Copper	**2.59**	0.400	0.800	ug/L	4	04/05/24 23:58	EPA 6020B (Diss)	
EMW-2S-240313 (A4C1335-06RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 00:02	EPA 6020B (Diss)	R-04
Copper	**1.79**	0.400	0.800	ug/L	4	04/06/24 00:02	EPA 6020B (Diss)	
EMW-3S-240313 (A4C1335-07RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**4.74**	0.400	0.800	ug/L	4	04/06/24 00:07	EPA 6020B (Diss)	
Copper	**1.98**	0.400	0.800	ug/L	4	04/06/24 00:07	EPA 6020B (Diss)	
EMW-6S-240313 (A4C1335-08RE1)				**Matrix: Water**				
Batch: 24C1012								

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-6S-240313 (A4C1335-08RE1)				**Matrix: Water**				
Arsenic	**0.566**	0.400	0.800	ug/L	4	04/06/24 00:21	EPA 6020B (Diss)	**J**
Copper	**0.522**	0.400	0.800	ug/L	4	04/06/24 00:21	EPA 6020B (Diss)	**J**
EMW-9SA-240313 (A4C1335-09RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**2.59**	0.400	0.800	ug/L	4	04/06/24 00:26	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/06/24 00:26	EPA 6020B (Diss)	R-04
EMW-11S-240313 (A4C1335-10RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**9.45**	0.400	0.800	ug/L	4	04/06/24 00:30	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/06/24 00:30	EPA 6020B (Diss)	R-04
EMW-13S-240313 (A4C1335-11RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**84.6**	0.400	0.800	ug/L	4	04/06/24 00:35	EPA 6020B (Diss)	
Copper	**3.52**	0.400	0.800	ug/L	4	04/06/24 00:35	EPA 6020B (Diss)	
EMW-14D-240313 (A4C1335-12RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**0.615**	0.400	0.800	ug/L	4	04/06/24 00:40	EPA 6020B (Diss)	**J**
Copper	ND	0.400	0.800	ug/L	4	04/06/24 00:40	EPA 6020B (Diss)	R-04
EMW-15D-240313 (A4C1335-13RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**0.679**	0.400	0.800	ug/L	4	04/06/24 00:44	EPA 6020B (Diss)	**J**
Copper	**1.09**	0.400	0.800	ug/L	4	04/06/24 00:44	EPA 6020B (Diss)	
EMW-18S-240313 (A4C1335-14RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 00:49	EPA 6020B (Diss)	R-04
Copper	ND	0.400	0.800	ug/L	4	04/06/24 00:49	EPA 6020B (Diss)	R-04
EMW-20D-240313 (A4C1335-15RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**1.50**	0.400	0.800	ug/L	4	04/06/24 00:54	EPA 6020B (Diss)	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-20D-240313 (A4C1335-15RE1)				**Matrix: Water**				
Copper	**1.37**	0.400	0.800	ug/L	4	04/06/24 00:54	EPA 6020B (Diss)	
EMW-31S-240313 (A4C1335-16RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**8.78**	0.400	0.800	ug/L	4	04/06/24 00:58	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/06/24 00:58	EPA 6020B (Diss)	R-04
SLR-2-240313 (A4C1335-17RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**0.549**	0.400	0.800	ug/L	4	04/06/24 01:03	EPA 6020B (Diss)	**J**
Copper	**2.70**	0.400	0.800	ug/L	4	04/06/24 01:03	EPA 6020B (Diss)	
SLR-3-240313 (A4C1335-18RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**26.4**	0.400	0.800	ug/L	4	04/06/24 01:17	EPA 6020B (Diss)	
Copper	**4.13**	0.400	0.800	ug/L	4	04/06/24 01:17	EPA 6020B (Diss)	
SLR-6-240313 (A4C1335-19RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 01:22	EPA 6020B (Diss)	R-04
Copper	**1.99**	0.400	0.800	ug/L	4	04/06/24 01:22	EPA 6020B (Diss)	
HC-20-240313 (A4C1335-20RE1)				**Matrix: Water**				
Batch: 24C1012								
Arsenic	**4.55**	0.400	0.800	ug/L	4	04/06/24 01:26	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/06/24 01:26	EPA 6020B (Diss)	R-04

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0560 - EPA 5030C							**Water**					
Blank (24C0560-BLK1)			Prepared: 03/19/24 10:00		Analyzed: 03/19/24 17:55							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*107 %*		*80-120 %*			*"*				
LCS (24C0560-BS1)			Prepared: 03/19/24 10:00		Analyzed: 03/19/24 16:56							
EPA 8260D SIM												
Vinyl chloride	0.218	0.0100	0.0200	ug/L	1	0.200	---	109	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
Duplicate (24C0560-DUP1)			Prepared: 03/19/24 10:00		Analyzed: 03/19/24 21:04							
QC Source Sample: EMW-6S-240313 (A4C1335-08)												
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*106 %*		*80-120 %*			*"*				
Matrix Spike (24C0560-MS1)			Prepared: 03/19/24 10:00		Analyzed: 03/20/24 03:47							
QC Source Sample: SLR-6-240313 (A4C1335-19)												
EPA 8260D SIM												
Vinyl chloride	0.333	0.0100	0.0200	ug/L	1	0.200	ND	**167**	**58-137%**	---	---	Q-01
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*107 %*		*80-120 %*			*"*				
Batch 24C0603 - EPA 5030C							**Water**					
Blank (24C0603-BLK1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 12:52							
EPA 8260D SIM												

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0603 - EPA 5030C							**Water**					
Blank (24C0603-BLK1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 12:52							
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*97 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*			*"*					
LCS (24C0603-BS1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 11:57							
EPA 8260D SIM												
Vinyl chloride	0.192	0.0100	0.0200	ug/L	1	0.200	---	96	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*97 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*			*"*					
Duplicate (24C0603-DUP1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 22:17							
QC Source Sample: Non-SDG (A4C1222-02)												
Vinyl chloride	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*96 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*86 %*	*80-120 %*			*"*					
Matrix Spike (24C0603-MS1)			Prepared: 03/18/24 09:46		Analyzed: 03/18/24 19:09							
QC Source Sample: Non-SDG (A4C1254-01)												
EPA 8260D SIM												
Vinyl chloride	0.370	0.0100	0.0200	ug/L	1	0.200	0.0910	**139**	**58-137%**	---	---	Q-01
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*96 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*			*"*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0683 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24C0683-BLK1)			Prepared: 03/20/24 08:27		Analyzed: 03/20/24 15:51							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 103 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*104 %*		*80-132 %*			*"*				
LCS (24C0683-BS1)			Prepared: 03/20/24 08:27		Analyzed: 03/20/24 16:24							
EPA 8270E LVI												
Acenaphthene	1.54	0.0160	0.0320	ug/L	1	1.60	---	97	80-120%	---	---	
Acenaphthylene	1.76	0.0160	0.0320	ug/L	1	1.60	---	110	80-124%	---	---	
Anthracene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	80-123%	---	---	
Benz(a)anthracene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	80-122%	---	---	
Benzo(a)pyrene	1.74	0.00800	0.0160	ug/L	1	1.60	---	109	80-129%	---	---	
Benzo(b)fluoranthene	1.74	0.00800	0.0160	ug/L	1	1.60	---	109	80-124%	---	---	
Benzo(k)fluoranthene	1.66	0.00800	0.0160	ug/L	1	1.60	---	104	80-125%	---	---	
Benzo(g,h,i)perylene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0683 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24C0683-BS1)			Prepared: 03/20/24 08:27	Analyzed: 03/20/24 16:24								
Chrysene	1.56	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	---	---	
Dibenz(a,h)anthracene	1.59	0.00800	0.0160	ug/L	1	1.60	---	100	80-120%	---	---	
Fluoranthene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-126%	---	---	
Fluorene	1.68	0.0160	0.0320	ug/L	1	1.60	---	105	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.63	0.00800	0.0160	ug/L	1	1.60	---	102	80-121%	---	---	
1-Methylnaphthalene	1.61	0.0320	0.0640	ug/L	1	1.60	---	101	53-148%	---	---	
2-Methylnaphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	48-150%	---	---	
Naphthalene	1.61	0.0320	0.0640	ug/L	1	1.60	---	100	78-120%	---	---	
Phenanthrene	1.47	0.0320	0.0640	ug/L	1	1.60	---	92	80-120%	---	---	
Pyrene	1.69	0.0160	0.0320	ug/L	1	1.60	---	106	80-125%	---	---	
Carbazole	1.58	0.0160	0.0320	ug/L	1	1.60	---	98	65-141%	---	---	
Dibenzofuran	1.75	0.0160	0.0320	ug/L	1	1.60	---	109	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 101 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*106 %*	*80-132 %*			*"*					
LCS Dup (24C0683-BSD1)			Prepared: 03/20/24 08:27	Analyzed: 03/20/24 16:57								**Q-19**
EPA 8270E LVI												
Acenaphthene	1.51	0.0160	0.0320	ug/L	1	1.60	---	94	80-120%	2	30%	
Acenaphthylene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-124%	2	30%	
Anthracene	1.59	0.0160	0.0320	ug/L	1	1.60	---	100	80-123%	2	30%	
Benz(a)anthracene	1.62	0.00800	0.0160	ug/L	1	1.60	---	101	80-122%	2	30%	
Benzo(a)pyrene	1.70	0.00800	0.0160	ug/L	1	1.60	---	106	80-129%	2	30%	
Benzo(b)fluoranthene	1.71	0.00800	0.0160	ug/L	1	1.60	---	107	80-124%	2	30%	
Benzo(k)fluoranthene	1.62	0.00800	0.0160	ug/L	1	1.60	---	101	80-125%	3	30%	
Benzo(g,h,i)perylene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-120%	0.2	30%	
Chrysene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	0.5	30%	
Dibenz(a,h)anthracene	1.57	0.00800	0.0160	ug/L	1	1.60	---	98	80-120%	1	30%	
Fluoranthene	1.62	0.0160	0.0320	ug/L	1	1.60	---	102	80-126%	2	30%	
Fluorene	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	77-127%	0.3	30%	
Indeno(1,2,3-cd)pyrene	1.63	0.00800	0.0160	ug/L	1	1.60	---	102	80-121%	0.2	30%	
1-Methylnaphthalene	1.77	0.0320	0.0640	ug/L	1	1.60	---	111	53-148%	9	30%	
2-Methylnaphthalene	1.72	0.0320	0.0640	ug/L	1	1.60	---	107	48-150%	7	30%	
Naphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	78-120%	0.2	30%	
Phenanthrene	1.46	0.0320	0.0640	ug/L	1	1.60	---	91	80-120%	1	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0683 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24C0683-BSD1)			Prepared: 03/20/24 08:27		Analyzed: 03/20/24 16:57							**Q-19**
Pyrene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-125%	2	30%	
Carbazole	1.53	0.0160	0.0320	ug/L	1	1.60	---	96	65-141%	3	30%	
Dibenzofuran	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	76-121%	0.9	30%	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 100 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*105 %*		*80-132 %*			*"*				

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0718 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24C0718-BLK1)			Prepared: 03/20/24 16:53		Analyzed: 03/21/24 10:45							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 104 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*106 %*		*80-132 %*			*"*				
LCS (24C0718-BS1)			Prepared: 03/20/24 16:53		Analyzed: 03/21/24 11:18							
EPA 8270E LVI												
Acenaphthene	1.49	0.0160	0.0320	ug/L	1	1.60	---	93	80-120%	---	---	
Acenaphthylene	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	80-124%	---	---	
Anthracene	1.54	0.0160	0.0320	ug/L	1	1.60	---	96	80-123%	---	---	
Benz(a)anthracene	1.59	0.00800	0.0160	ug/L	1	1.60	---	99	80-122%	---	---	
Benzo(a)pyrene	1.64	0.00800	0.0160	ug/L	1	1.60	---	103	80-129%	---	---	
Benzo(b)fluoranthene	1.69	0.00800	0.0160	ug/L	1	1.60	---	106	80-124%	---	---	
Benzo(k)fluoranthene	1.66	0.00800	0.0160	ug/L	1	1.60	---	104	80-125%	---	---	
Benzo(g,h,i)perylene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0718 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24C0718-BS1)			Prepared: 03/20/24 16:53		Analyzed: 03/21/24 11:18							
Chrysene	1.52	0.00800	0.0160	ug/L	1	1.60	---	95	80-120%	---	---	
Dibenz(a,h)anthracene	1.52	0.00800	0.0160	ug/L	1	1.60	---	95	80-120%	---	---	
Fluoranthene	1.60	0.0160	0.0320	ug/L	1	1.60	---	100	80-126%	---	---	
Fluorene	1.68	0.0160	0.0320	ug/L	1	1.60	---	105	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.59	0.00800	0.0160	ug/L	1	1.60	---	100	80-121%	---	---	
1-Methylnaphthalene	1.89	0.0320	0.0640	ug/L	1	1.60	---	118	53-148%	---	---	
2-Methylnaphthalene	1.84	0.0320	0.0640	ug/L	1	1.60	---	115	48-150%	---	---	
Naphthalene	1.57	0.0320	0.0640	ug/L	1	1.60	---	98	78-120%	---	---	
Phenanthrene	1.43	0.0320	0.0640	ug/L	1	1.60	---	89	80-120%	---	---	
Pyrene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-125%	---	---	
Carbazole	1.47	0.0160	0.0320	ug/L	1	1.60	---	92	65-141%	---	---	
Dibenzofuran	1.71	0.0160	0.0320	ug/L	1	1.60	---	107	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*107 %*		*80-132 %*			*"*				
LCS Dup (24C0718-BSD1)			Prepared: 03/20/24 16:53		Analyzed: 03/21/24 11:50							**Q-19**
EPA 8270E LVI												
Acenaphthene	1.51	0.0160	0.0320	ug/L	1	1.60	---	94	80-120%	1	30%	
Acenaphthylene	1.68	0.0160	0.0320	ug/L	1	1.60	---	105	80-124%	0.3	30%	
Anthracene	1.61	0.0160	0.0320	ug/L	1	1.60	---	100	80-123%	4	30%	
Benz(a)anthracene	1.64	0.00800	0.0160	ug/L	1	1.60	---	102	80-122%	3	30%	
Benzo(a)pyrene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-129%	5	30%	
Benzo(b)fluoranthene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-124%	1	30%	
Benzo(k)fluoranthene	1.68	0.00800	0.0160	ug/L	1	1.60	---	105	80-125%	1	30%	
Benzo(g,h,i)perylene	1.65	0.0160	0.0320	ug/L	1	1.60	---	103	80-120%	1	30%	
Chrysene	1.53	0.00800	0.0160	ug/L	1	1.60	---	95	80-120%	0.2	30%	
Dibenz(a,h)anthracene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	2	30%	
Fluoranthene	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	80-126%	4	30%	
Fluorene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	77-127%	3	30%	
Indeno(1,2,3-cd)pyrene	1.61	0.00800	0.0160	ug/L	1	1.60	---	100	80-121%	0.9	30%	
1-Methylnaphthalene	1.94	0.0320	0.0640	ug/L	1	1.60	---	122	53-148%	3	30%	
2-Methylnaphthalene	1.91	0.0320	0.0640	ug/L	1	1.60	---	119	48-150%	4	30%	
Naphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	78-120%	2	30%	
Phenanthrene	1.46	0.0320	0.0640	ug/L	1	1.60	---	91	80-120%	2	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0718 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24C0718-BSD1)			Prepared: 03/20/24 16:53	Analyzed: 03/21/24 11:50								**Q-19**
Pyrene	1.69	0.0160	0.0320	ug/L	1	1.60	---	106	80-125%	3	30%	
Carbazole	1.59	0.0160	0.0320	ug/L	1	1.60	---	99	65-141%	8	30%	
Dibenzofuran	1.71	0.0160	0.0320	ug/L	1	1.60	---	107	76-121%	0.2	30%	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*			*"*					
Matrix Spike (24C0718-MS1)			Prepared: 03/20/24 16:53	Analyzed: 03/21/24 12:56								
QC Source Sample: Non-SDG (A4C1270-02)												
EPA 8270E LVI												
Acenaphthene	1.83	0.0184	0.0369	ug/L	1	1.84	0.0494	96	80-120%	---	---	
Acenaphthylene	1.93	0.0184	0.0369	ug/L	1	1.84	ND	105	80-124%	---	---	
Anthracene	1.82	0.0184	0.0369	ug/L	1	1.84	ND	99	80-123%	---	---	
Benz(a)anthracene	1.89	0.00921	0.0184	ug/L	1	1.84	ND	103	80-122%	---	---	
Benzo(a)pyrene	1.95	0.00921	0.0184	ug/L	1	1.84	ND	106	80-129%	---	---	
Benzo(b)fluoranthene	1.95	0.00921	0.0184	ug/L	1	1.84	ND	106	80-124%	---	---	
Benzo(k)fluoranthene	1.94	0.00921	0.0184	ug/L	1	1.84	ND	105	80-125%	---	---	
Benzo(g,h,i)perylene	1.91	0.0184	0.0369	ug/L	1	1.84	ND	104	80-120%	---	---	
Chrysene	1.75	0.00921	0.0184	ug/L	1	1.84	ND	95	80-120%	---	---	
Dibenz(a,h)anthracene	1.80	0.00921	0.0184	ug/L	1	1.84	ND	97	80-120%	---	---	
Fluoranthene	1.90	0.0184	0.0369	ug/L	1	1.84	ND	103	80-126%	---	---	
Fluorene	2.02	0.0184	0.0369	ug/L	1	1.84	0.0245	109	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.86	0.00921	0.0184	ug/L	1	1.84	ND	101	80-121%	---	---	
1-Methylnaphthalene	2.38	0.0369	0.0737	ug/L	1	1.84	ND	129	53-148%	---	---	
2-Methylnaphthalene	2.32	0.0369	0.0737	ug/L	1	1.84	ND	126	48-150%	---	---	
Naphthalene	1.83	0.0369	0.0737	ug/L	1	1.84	0.0753	95	78-120%	---	---	
Phenanthrene	1.66	0.0369	0.0737	ug/L	1	1.84	ND	90	80-120%	---	---	
Pyrene	1.93	0.0184	0.0369	ug/L	1	1.84	ND	105	80-125%	---	---	
Carbazole	1.81	0.0184	0.0369	ug/L	1	1.84	ND	98	65-141%	---	---	
Dibenzofuran	2.00	0.0184	0.0369	ug/L	1	1.84	ND	108	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*			*"*					
Matrix Spike Dup (24C0718-MSD1)			Prepared: 03/20/24 16:53	Analyzed: 03/21/24 13:28								

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0718 - EPA 3511 (Bottle Extraction)							**Water**					
Matrix Spike Dup (24C0718-MSD1)			Prepared: 03/20/24 16:53		Analyzed: 03/21/24 13:28							
QC Source Sample: Non-SDG (A4C1270-02)												
Acenaphthene	1.81	0.0182	0.0364	ug/L	1	1.82	0.0494	97	80-120%	0.9	30%	
Acenaphthylene	1.90	0.0182	0.0364	ug/L	1	1.82	ND	104	80-124%	2	30%	
Anthracene	1.82	0.0182	0.0364	ug/L	1	1.82	ND	100	80-123%	0.03	30%	
Benz(a)anthracene	1.90	0.00910	0.0182	ug/L	1	1.82	ND	104	80-122%	0.4	30%	
Benzo(a)pyrene	1.96	0.00910	0.0182	ug/L	1	1.82	ND	108	80-129%	1	30%	
Benzo(b)fluoranthene	1.89	0.00910	0.0182	ug/L	1	1.82	ND	104	80-124%	3	30%	
Benzo(k)fluoranthene	1.90	0.00910	0.0182	ug/L	1	1.82	ND	104	80-125%	2	30%	
Benzo(g,h,i)perylene	1.85	0.0182	0.0364	ug/L	1	1.82	ND	102	80-120%	3	30%	
Chrysene	1.74	0.00910	0.0182	ug/L	1	1.82	ND	95	80-120%	0.6	30%	
Dibenz(a,h)anthracene	1.78	0.00910	0.0182	ug/L	1	1.82	ND	98	80-120%	0.7	30%	
Fluoranthene	1.89	0.0182	0.0364	ug/L	1	1.82	ND	104	80-126%	0.7	30%	
Fluorene	2.02	0.0182	0.0364	ug/L	1	1.82	0.0245	110	77-127%	0.1	30%	
Indeno(1,2,3-cd)pyrene	1.81	0.00910	0.0182	ug/L	1	1.82	ND	99	80-121%	3	30%	
1-Methylnaphthalene	2.20	0.0364	0.0728	ug/L	1	1.82	ND	121	53-148%	8	30%	
2-Methylnaphthalene	2.15	0.0364	0.0728	ug/L	1	1.82	ND	118	48-150%	8	30%	
Naphthalene	1.82	0.0364	0.0728	ug/L	1	1.82	0.0753	96	78-120%	0.4	30%	
Phenanthrene	1.66	0.0364	0.0728	ug/L	1	1.82	ND	91	80-120%	0.5	30%	
Pyrene	1.91	0.0182	0.0364	ug/L	1	1.82	ND	105	80-125%	1	30%	
Carbazole	1.88	0.0182	0.0364	ug/L	1	1.82	ND	103	65-141%	4	30%	
Dibenzofuran	1.98	0.0182	0.0364	ug/L	1	1.82	ND	109	76-121%	0.8	30%	

Surr: Acenaphthylene-d8 (Surr)	*Recovery: 97 %*	*Limits: 78-134 %*	*Dilution: 1x*	
Benzo(a)pyrene-d12 (Surr)	*109 %*	*80-132 %*	*"*	

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0874 - EPA 3015A							**Water**					
Blank (24C0874-BLK1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 22:15							
EPA 6020B												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Blank (24C0874-BLK3)			Prepared: 03/25/24 12:28		Analyzed: 04/06/24 01:31							
EPA 6020B												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
LCS (24C0874-BS1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 22:35							
EPA 6020B												
Arsenic	56.7	0.500	1.00	ug/L	1	55.6	---	102	80-120%	---	---	
Copper	60.2	1.00	2.00	ug/L	1	55.6	---	108	80-120%	---	---	
Duplicate (24C0874-DUP1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 22:47							
QC Source Sample: Non-SDG (A4C1222-02)												
Arsenic	**5.04**	0.500	1.00	ug/L	1	---	5.51	---	---	9	20%	
Copper	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (24C0874-MS1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 23:19							
QC Source Sample: Non-SDG (A4C1270-02)												
EPA 6020B												
Arsenic	58.3	0.500	1.00	ug/L	1	55.6	0.905	103	75-125%	---	---	
Copper	57.8	1.00	2.00	ug/L	1	55.6	ND	104	75-125%	---	---	
Matrix Spike Dup (24C0874-MSD1)			Prepared: 03/25/24 12:28		Analyzed: 03/25/24 23:25							
QC Source Sample: Non-SDG (A4C1270-02)												
Arsenic	60.3	0.500	1.00	ug/L	1	55.6	0.905	107	75-125%	3	20%	
Copper	58.3	1.00	2.00	ug/L	1	55.6	ND	105	75-125%	0.9	20%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0971 - EPA 3015A							**Water**					
Blank (24C0971-BLK2)			Prepared: 03/27/24 12:02		Analyzed: 04/06/24 02:27							
EPA 6020B												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
LCS (24C0971-BS2)			Prepared: 03/27/24 12:02		Analyzed: 04/06/24 02:32							
EPA 6020B												
Arsenic	48.9	0.100	0.200	ug/L	1	55.6	---	88	80-120%	---	---	Q-16
Copper	53.6	0.100	0.200	ug/L	1	55.6	---	96	80-120%	---	---	Q-16
Duplicate (24C0971-DUP2)			Prepared: 03/27/24 12:02		Analyzed: 04/06/24 02:41							
QC Source Sample: CMW-3-240313 (A4C1335-02RE1)												
EPA 6020B												
Arsenic	**8.08**	0.400	0.800	ug/L	4	---	8.11	---	---	0.4	20%	Q-16
Copper	**0.702**	0.400	0.800	ug/L	4	---	0.729	---	---	4	20%	R-04,Q-16, J
Matrix Spike (24C0971-MS2)			Prepared: 03/27/24 12:02		Analyzed: 04/06/24 02:50							
QC Source Sample: CMW-4-240313 (A4C1335-03RE1)												
EPA 6020B												
Arsenic	61.8	0.400	0.800	ug/L	4	55.6	12.0	90	75-125%	---	---	Q-16
Copper	53.5	0.400	0.800	ug/L	4	55.6	2.21	92	75-125%	---	---	Q-16

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C1012 - Matrix Matched Direct Inject							**Water**					
Blank (24C1012-BLK2)			Prepared: 03/28/24 11:16		Analyzed: 04/05/24 23:06							
EPA 6020B (Diss)												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
LCS (24C1012-BS2)			Prepared: 03/28/24 11:16		Analyzed: 04/05/24 23:11							
EPA 6020B (Diss)												
Arsenic	49.3	0.100	0.200	ug/L	1	55.6	---	89	80-120%	---	---	Q-16
Copper	54.0	0.100	0.200	ug/L	1	55.6	---	97	80-120%	---	---	Q-16
Duplicate (24C1012-DUP2)			Prepared: 03/28/24 11:16		Analyzed: 04/05/24 23:30							
QC Source Sample: CMW-2-240313 (A4C1335-01RE1)												
EPA 6020B (Diss)												
Arsenic	**9.40**	0.400	0.800	ug/L	4	---	9.52	---	---	1	20%	Q-16
Copper	**1.08**	0.400	0.800	ug/L	4	---	4.06	---	---	**116**	**20%**	Q-01, Q-16
Matrix Spike (24C1012-MS2)			Prepared: 03/28/24 11:16		Analyzed: 04/05/24 23:39							
QC Source Sample: CMW-3-240313 (A4C1335-02RE1)												
EPA 6020B (Diss)												
Arsenic	58.5	0.400	0.800	ug/L	4	55.6	8.01	91	75-125%	---	---	Q-16
Copper	54.3	0.400	0.800	ug/L	4	55.6	0.625	97	75-125%	---	---	Q-16

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

Project: **8th Ave. Terminals**
Project Number: **2175001.020.022**
Project Manager: **Mike Staton**

Report ID:
A4C1335 - 04 24 24 1351

SAMPLE PREPARATION INFORMATION

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0560							
A4C1335-03	Water	EPA 8260D SIM	03/13/24 16:04	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-04	Water	EPA 8260D SIM	03/13/24 14:17	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-05	Water	EPA 8260D SIM	03/13/24 11:53	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-06	Water	EPA 8260D SIM	03/13/24 14:45	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-07	Water	EPA 8260D SIM	03/13/24 14:03	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-08	Water	EPA 8260D SIM	03/13/24 12:44	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-09	Water	EPA 8260D SIM	03/13/24 15:58	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-10	Water	EPA 8260D SIM	03/13/24 12:57	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-11	Water	EPA 8260D SIM	03/13/24 15:47	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-12	Water	EPA 8260D SIM	03/13/24 14:57	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-13	Water	EPA 8260D SIM	03/13/24 15:08	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-14	Water	EPA 8260D SIM	03/13/24 13:05	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-15	Water	EPA 8260D SIM	03/13/24 14:20	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-16	Water	EPA 8260D SIM	03/13/24 12:20	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-17	Water	EPA 8260D SIM	03/13/24 14:00	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-18	Water	EPA 8260D SIM	03/13/24 16:05	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-19	Water	EPA 8260D SIM	03/13/24 15:20	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1335-20	Water	EPA 8260D SIM	03/13/24 12:07	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
Batch: 24C0603							
A4C1335-01	Water	EPA 8260D SIM	03/13/24 14:03	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00
A4C1335-02	Water	EPA 8260D SIM	03/13/24 15:19	03/18/24 09:46	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0683							
A4C1335-01	Water	EPA 8270E LVI	03/13/24 14:03	03/20/24 08:27	116.45mL/5mL	125mL/5mL	1.07
A4C1335-02	Water	EPA 8270E LVI	03/13/24 15:19	03/20/24 08:27	109.09mL/5mL	125mL/5mL	1.15
A4C1335-03RE1	Water	EPA 8270E LVI	03/13/24 16:04	03/20/24 13:53	123.87mL/5mL	125mL/5mL	1.01
A4C1335-04	Water	EPA 8270E LVI	03/13/24 14:17	03/20/24 08:27	126.24mL/5mL	125mL/5mL	0.99
A4C1335-05	Water	EPA 8270E LVI	03/13/24 11:53	03/20/24 08:27	120.57mL/5mL	125mL/5mL	1.04
A4C1335-06	Water	EPA 8270E LVI	03/13/24 14:45	03/20/24 08:27	104mL/5mL	125mL/5mL	1.20
A4C1335-07	Water	EPA 8270E LVI	03/13/24 14:03	03/20/24 08:27	109.12mL/5mL	125mL/5mL	1.15
A4C1335-08	Water	EPA 8270E LVI	03/13/24 12:44	03/20/24 08:27	121.86mL/5mL	125mL/5mL	1.03
A4C1335-09	Water	EPA 8270E LVI	03/13/24 15:58	03/20/24 08:27	92.86mL/5mL	125mL/5mL	1.35

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4C1335-10	Water	EPA 8270E LVI	03/13/24 12:57	03/20/24 08:27	99.18mL/5mL	125mL/5mL	1.26
A4C1335-11	Water	EPA 8270E LVI	03/13/24 15:47	03/20/24 08:27	120.94mL/5mL	125mL/5mL	1.03
A4C1335-12	Water	EPA 8270E LVI	03/13/24 14:57	03/20/24 08:27	90.11mL/5mL	125mL/5mL	1.39
A4C1335-13	Water	EPA 8270E LVI	03/13/24 15:08	03/20/24 08:27	124.81mL/5mL	125mL/5mL	1.00
A4C1335-14	Water	EPA 8270E LVI	03/13/24 13:05	03/20/24 08:27	96.51mL/5mL	125mL/5mL	1.30
A4C1335-15	Water	EPA 8270E LVI	03/13/24 14:20	03/20/24 08:27	113.15mL/5mL	125mL/5mL	1.10
A4C1335-16	Water	EPA 8270E LVI	03/13/24 12:20	03/20/24 08:27	101.29mL/5mL	125mL/5mL	1.23
A4C1335-17	Water	EPA 8270E LVI	03/13/24 14:00	03/20/24 08:27	105.93mL/5mL	125mL/5mL	1.18
A4C1335-19	Water	EPA 8270E LVI	03/13/24 15:20	03/20/24 08:27	110.49mL/5mL	125mL/5mL	1.13
A4C1335-20	Water	EPA 8270E LVI	03/13/24 12:07	03/20/24 08:27	90.42mL/5mL	125mL/5mL	1.38
Batch: 24C0718							
A4C1335-18RE1	Water	EPA 8270E LVI	03/13/24 16:05	03/20/24 16:53	102.67mL/5mL	125mL/5mL	1.22

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0874							
A4C1335-01RE1	Water	EPA 6020B	03/13/24 14:03	03/25/24 12:28	45mL/50mL	45mL/50mL	1.00
Batch: 24C0971							
A4C1335-02RE1	Water	EPA 6020B	03/13/24 15:19	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-03RE1	Water	EPA 6020B	03/13/24 16:04	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-04RE1	Water	EPA 6020B	03/13/24 14:17	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-05RE1	Water	EPA 6020B	03/13/24 11:53	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-06RE1	Water	EPA 6020B	03/13/24 14:45	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-07RE1	Water	EPA 6020B	03/13/24 14:03	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-08RE1	Water	EPA 6020B	03/13/24 12:44	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-09RE1	Water	EPA 6020B	03/13/24 15:58	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-10RE1	Water	EPA 6020B	03/13/24 12:57	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-11RE1	Water	EPA 6020B	03/13/24 15:47	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-12RE1	Water	EPA 6020B	03/13/24 14:57	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-13RE1	Water	EPA 6020B	03/13/24 15:08	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-14RE1	Water	EPA 6020B	03/13/24 13:05	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-15RE1	Water	EPA 6020B	03/13/24 14:20	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-16RE1	Water	EPA 6020B	03/13/24 12:20	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-17RE1	Water	EPA 6020B	03/13/24 14:00	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4C1335-18RE1	Water	EPA 6020B	03/13/24 16:05	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-19RE1	Water	EPA 6020B	03/13/24 15:20	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00
A4C1335-20RE1	Water	EPA 6020B	03/13/24 12:07	03/27/24 12:02	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C1012							
A4C1335-01RE1	Water	EPA 6020B (Diss)	03/13/24 14:03	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-02RE1	Water	EPA 6020B (Diss)	03/13/24 15:19	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-03RE1	Water	EPA 6020B (Diss)	03/13/24 16:04	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-04RE1	Water	EPA 6020B (Diss)	03/13/24 14:17	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-05RE1	Water	EPA 6020B (Diss)	03/13/24 11:53	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-06RE1	Water	EPA 6020B (Diss)	03/13/24 14:45	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-07RE1	Water	EPA 6020B (Diss)	03/13/24 14:03	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-08RE1	Water	EPA 6020B (Diss)	03/13/24 12:44	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-09RE1	Water	EPA 6020B (Diss)	03/13/24 15:58	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-10RE1	Water	EPA 6020B (Diss)	03/13/24 12:57	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-11RE1	Water	EPA 6020B (Diss)	03/13/24 15:47	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-12RE1	Water	EPA 6020B (Diss)	03/13/24 14:57	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-13RE1	Water	EPA 6020B (Diss)	03/13/24 15:08	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-14RE1	Water	EPA 6020B (Diss)	03/13/24 13:05	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-15RE1	Water	EPA 6020B (Diss)	03/13/24 14:20	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-16RE1	Water	EPA 6020B (Diss)	03/13/24 12:20	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-17RE1	Water	EPA 6020B (Diss)	03/13/24 14:00	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-18RE1	Water	EPA 6020B (Diss)	03/13/24 16:05	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-19RE1	Water	EPA 6020B (Diss)	03/13/24 15:20	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00
A4C1335-20RE1	Water	EPA 6020B (Diss)	03/13/24 12:07	03/28/24 11:16	45mL/50mL	45mL/50mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

DCNT	Sample decanted due to the presence of sediment. Sample bottle not rinsed with solvent.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-16	Reanalysis of an original Batch QC sample.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
R-04	Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
TEMP_S	Sample was stored in the Laboratory outside of recommended temperature. See Case Narrative
X	See Case Narrative.

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

Project: **8th Ave. Terminals**
Project Number: **2175001.020.022**
Project Manager: **Mike Staton**

Report ID:
A4C1335 - 04 24 24 1351

LANDAU ASSOCIATES **Chain-of-Custody Record**

☑ North Seattle (206) 631-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178

Date 3/13/24 Page 1 of 1

Turnaround Time: (Standard) Accelerated

A4C1335

Project Name 8th Ave Terminal Project No. 2175001.020.022
Project Location/Event Seattle, WA
Sampler's Name Spencer Lo, Devan Brandt, Colleen Johnson, Kalpana Prasad
Project Contact Mike Staton
Send Results To Mike Staton - mstaton@landauinc.com

Testing Parameters

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Sample I.D.	Date	Time	Matrix	No. of Containers	Vitamin C (Ascorbic Acid)	pH	Total and dissolved Arsenic, Boron	Total and dissolved Cobalt, Iron, Boron
CMW-2-240313	3/13/24	1403	water	10	X	X	X	X
CMW-3-240313	3/13/24	1519	water	10	X	X	X	X
CMW-4-240313	3/13/24	1604	water	10	X	X	X	X
CMW-6-240313	3/13/24	1417	water	10	X	X	X	X
EMW-1S-240313	3/13/24	1153	water	10	X	X	X	X
EMW-2S-240313	3/13/24	1445	water	10	X	X	X	X
EMW-3S-240313	3/13/24	1403	water	10	X	X	X	X
EMW-6S-240313	3/13/24	1244	water	10	X	X	X	X
EMW-9SA-240313	3/13/24	1559	water	10	X	X	X	X
EMW-11S-240313	3/13/24	1257	water	10	X	X	X	X
EMW-13S-240313	3/13/24	1547	water	10	X	X	X	X
EMW-14D-240313	3/13/24	1457	water	10	X	X	X	X
EMW-15D-240313	3/13/24	1508	water	10	X	X	X	X
EMW-18S-240313	3/13/24	1305	water	10	X	X	X	X
EMW-20D-240313	3/13/24	1420	water	10	X	X	X	X
EMW-31S-240313	3/13/24	1220	water	10	X	X	X	X
SLR-2-240313	3/13/24	1400	water	10	X	X	X	X
SLR-3-240313	3/13/24	1605	water	10	X	X	X	X
SLR-6-240313	3/13/24	1520	water	10	X	X	X	X
HC-20-240313	3/13/24	1207	water	10	X	X	X	X

Observations/Comments
___ Allow water samples to settle, collect aliquot from clear portion ☐
___ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
___ Dissolved metal samples were field filtered
Other

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Spencer Lo	Printed Name	Printed Name	Printed Name
Company CAT	Company	Company	Company
Date 3/14/24 Time 1500	Date 3/15/24 Time 1635	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1335 - 04 24 24 1351**

APEX LABS COOLER RECEIPT FORM

Client: Landau Associates Element WO#: A4 C1335

Project/Project #: 8th Ave Terminal 2175001.020.022

Delivery Info:

Date/time received: 3/15/24 @ 1035 By: JS

Delivered by: Apex__ Client__ ESS__ FedEx X UPS__ Radio__ Morgan__ SDS__ Evergreen__ Other__

From USDA Regulated Origin? Yes ____ No X

Cooler Inspection Date/time inspected: 3/15/24 @ 1035 By: JS

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.1	1.7	1.9	3.2	4.3		
Custody seals? (Y/N)	y	y	y	y	y		
Received on ice? (Y/N)	y	y	y	y	y		
Temp. blanks? (Y/N)	y	y	y	y	y		
Ice type: (Gel/Real/Other)	real	real	real	real	real		
Condition (In/Out):	In	In	In	In	In		

Cooler out of temp? (Y/N) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3.15.24 @ 12:23 By: MHM

All samples intact? Yes ✓ No ___ Comments: ____

Bottle labels/COCs agree? Yes ✓ No X Comments: ~~CMW-4 bottles weren't~~ ~~found.~~ CMW-2-240313 cont. Trends 1835

COC/container discrepancies form initiated? Yes ___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No ___ Comments: [6/6 scd. for SLR-6, SLR-3, EMW-20D, EMW-11S, EMW-2S.]

Do VOA vials have visible headspace? Yes ___ No ✓ NA ____

Comments ____

Water samples: pH checked: Yes ✓ No___ NA___ pH appropriate? Yes ✓ No___ NA____ pH ID: A231172

Comments: 2721 7933 4648

Labeled by: APW Witness: JS Cooler Inspected by: MHM

Form Y-003 R-02

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Wednesday, April 24, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4C1365 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4C1365, which was received by the laboratory on 3/16/2024 at 10:16:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: mpoquiz@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information					
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.					
(See Cooler Receipt Form for details)					
Cooler #1	3.3	degC	Cooler #2	4.1	degC
Cooler #3	2.0	degC	Cooler #4	1.4	degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CMW-5-240314	A4C1365-01	Water	03/14/24 15:00	03/16/24 10:16
SLR-7-240314	A4C1365-02	Water	03/14/24 12:49	03/16/24 10:16
SLR-17-240314	A4C1365-03	Water	03/14/24 12:39	03/16/24 10:16
DMW2-240314	A4C1365-04	Water	03/14/24 13:14	03/16/24 10:16
DMW3-240314	A4C1365-05	Water	03/14/24 13:27	03/16/24 10:16
DMW-6B-240314	A4C1365-06	Water	03/14/24 12:17	03/16/24 10:16
HC-4-240314	A4C1365-07	Water	03/14/24 16:09	03/16/24 10:16
EMW-5SA-240314	A4C1365-08	Water	03/14/24 15:55	03/16/24 10:16
EMW-7s-240314	A4C1365-09	Water	03/14/24 11:50	03/16/24 10:16
EMW-10D-240314	A4C1365-10	Water	03/14/24 14:57	03/16/24 10:16
EMW-12S-240314	A4C1365-11	Water	03/14/24 15:09	03/16/24 10:16
EMW-17S-240314	A4C1365-12	Water	03/14/24 12:55	03/16/24 10:16
EMW-19D-240314	A4C1365-13	Water	03/14/24 15:27	03/16/24 10:16
EMW-23s-240314	A4C1365-14	Water	03/14/24 15:00	03/16/24 10:16

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL CASE NARRATIVE

A4C1365 **Apex Laboratories**

Amended Report Revision #1:

This report supercedes all previous reports.

Per the client's request, the case narrative from Apex work order (WO) A4D1138 is provided below.

Metals Filtration Note:

The water samples from Apex WOs A4C1305, A4C1335, and A4C1365 were analyzed for total arsenic (As) and copper (Cu) as well as field filtered dissolved As and Cu using 0.45 um field filters. Per the client's request, select samples from these WOs were re-logged under Apex WO A4D1138 and filtered in the laboratory using 0.45 um lab filters. A summary of the As results generated is provided below.

EMW-21D-240312
Apex WO: A4C1305-05 / A4D1138-01
Total As: 605 ug/L
Dissolved As (0.45 um Field Filter): 152 ug/L
Dissolved As (0.45 um Lab Filter): 3.17 ug/L

CMW-6-240313
Apex WO: A4C1335-04 / A4D1138-04
Total As: 41.9 ug/L
Dissolved As (0.45 um Field Filter): 40.8 ug/L
Dissolved As (0.45 um Lab Filter): 48.5 ug/L

EMW-13S-240313
Apex WO: A4C1335-11 / A4D1138-05
Total As: 102 ug/L
Dissolved As (0.45 um Field Filter): 84.6 ug/L
Dissolved As (0.45 um Lab Filter): 82.1 ug/L

CMW-5-240314
Apex WO: A4C1365-01 / A4D1138-06
Total As: 106 ug/L
Dissolved As (0.45 um Field Filter): 93.7 ug/L
Dissolved As (0.45 um Lab Filter): 5.64 ug/L

DMW2-240314
Apex WO: A4C1365-04 / A4D1138-07
Total As: 152 ug/L
Dissolved As (0.45 um Field Filter): 140 ug/L
Dissolved As (0.45 um Lab Filter): 9.27 ug/L

The data above indicates that the filters used in the field did not consistently remove particles in the samples greater than 0.45 um in

Apex Laboratories

Michele Poquiz

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL CASE NARRATIVE

A4C1365 **Apex Laboratories**

size. At a minimum, this is seen in the samples EMW-21D-240312, CMW-5-240314, and DMW2-240314. Therefore the dissolved As and dissolved Cu quantifications reported for at least a portion of the samples in Apex WOs A4C1305, A4C1335, and A4C1365 after field filtering should not be relied upon.

It should be noted that the lab filtrations were completed using samples collected in unpreserved glass bottles rather than the method-recommended nitric-preserved poly bottles. The data has been qualified accordingly.

Kurt Johnson
Director of Forensic Services
04/24/2024

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Halogenated Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-6B-240314 (A4C1365-06)				**Matrix: Water**		**Batch: 24C0741**		
Vinyl chloride	**0.300**	0.100	0.200	ug/L	1	03/21/24 17:59	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits:*	*80-120 %*	*1*	*03/21/24 17:59*	*EPA 8260D*
Toluene-d8 (Surr)			*102 %*		*80-120 %*	*1*	*03/21/24 17:59*	*EPA 8260D*
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*	*1*	*03/21/24 17:59*	*EPA 8260D*

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-5-240314 (A4C1365-01)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	**0.393**	0.0100	0.0200	ug/L	1	03/20/24 02:27	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 02:27*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 02:27*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/20/24 02:27*	*EPA 8260D SIM*	
SLR-7-240314 (A4C1365-02)				**Matrix: Water**		**Batch: 24C0560**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 02:54	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 02:54*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 02:54*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*106 %*	*80-120 %*	*1*	*03/20/24 02:54*	*EPA 8260D SIM*	
SLR-17-240314 (A4C1365-03)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 16:12	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 16:12*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 16:12*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 16:12*	*EPA 8260D SIM*	
DMW2-240314 (A4C1365-04)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 17:06	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 17:06*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*03/20/24 17:06*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*96 %*	*80-120 %*	*1*	*03/20/24 17:06*	*EPA 8260D SIM*	
DMW3-240314 (A4C1365-05)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0200	0.0200	ug/L	1	03/20/24 17:33	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*03/20/24 17:33*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*03/20/24 17:33*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*95 %*	*80-120 %*	*1*	*03/20/24 17:33*	*EPA 8260D SIM*	
HC-4-240314 (A4C1365-07)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 18:27	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*03/20/24 18:27*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 18:27*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 18:27*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-5SA-240314 (A4C1365-08)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 18:54	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*03/20/24 18:54*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*03/20/24 18:54*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 18:54*	*EPA 8260D SIM*	
EMW-7s-240314 (A4C1365-09)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 19:21	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 19:21*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 19:21*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 19:21*	*EPA 8260D SIM*	
EMW-10D-240314 (A4C1365-10)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 19:47	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	*1*	*03/20/24 19:47*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*03/20/24 19:47*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 19:47*	*EPA 8260D SIM*	
EMW-12S-240314 (A4C1365-11)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 20:14	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 20:14*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 20:14*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 20:14*	*EPA 8260D SIM*	
EMW-17S-240314 (A4C1365-12)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 20:41	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*03/20/24 20:41*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 20:41*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 20:41*	*EPA 8260D SIM*	
EMW-19D-240314 (A4C1365-13)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 21:08	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	*1*	*03/20/24 21:08*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*03/20/24 21:08*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 21:08*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23s-240314 (A4C1365-14)				**Matrix: Water**		**Batch: 24C0692**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	03/20/24 21:35	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*03/20/24 21:35*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*03/20/24 21:35*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*105 %*	*80-120 %*	*1*	*03/20/24 21:35*	*EPA 8260D SIM*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-5-240314 (A4C1365-01)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	ND	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Acenaphthylene	**0.0188**	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	**J**
Anthracene	**0.0616**	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Chrysene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Fluoranthene	ND	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Fluorene	ND	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00893	0.0179	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0357	0.0715	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0357	0.0715	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Naphthalene	**0.0438**	0.0357	0.0715	ug/L	1	03/22/24 19:13	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0357	0.0715	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Pyrene	ND	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Dibenzofuran	ND	0.0179	0.0357	ug/L	1	03/22/24 19:13	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*92 %*	*Limits: 78-134 %*	*1*	*03/22/24 19:13*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*03/22/24 19:13*	*EPA 8270E LVI*	
SLR-7-240314 (A4C1365-02)				**Matrix: Water**		**Batch: 24C0733**		
Acenaphthene	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Acenaphthylene	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Anthracene	**0.0165**	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Chrysene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-7-240314 (A4C1365-02)				**Matrix: Water**		**Batch: 24C0733**		
Fluoranthene	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Fluorene	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00826	0.0165	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0331	0.0661	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0331	0.0661	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Naphthalene	**0.0331**	0.0331	0.0661	ug/L	1	03/22/24 19:46	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0331	0.0661	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Pyrene	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Dibenzofuran	ND	0.0165	0.0331	ug/L	1	03/22/24 19:46	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*91 %*	*Limits: 78-134 %*	*1*	*03/22/24 19:46*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/22/24 19:46*	*EPA 8270E LVI*	
SLR-17-240314 (A4C1365-03)				**Matrix: Water**		**Batch: 24C0733**		
Acenaphthene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Acenaphthylene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Anthracene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Chrysene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Fluoranthene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Fluorene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00815	0.0163	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0326	0.0652	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0326	0.0652	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Naphthalene	ND	0.0326	0.0652	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Phenanthrene	ND	0.0326	0.0652	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Pyrene	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Dibenzofuran	ND	0.0163	0.0326	ug/L	1	03/22/24 20:19	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*92 %*	*Limits: 78-134 %*	*1*	*03/22/24 20:19*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/22/24 20:19*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-17-240314 (A4C1365-03)				**Matrix: Water**		**Batch: 24C0733**		
DMW2-240314 (A4C1365-04)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthylene	ND	1.33	1.33	ug/L	1	03/22/24 20:51	EPA 8270E LVI	R-02
Anthracene	**1.14**	0.0193	0.0386	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0193	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00965	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00965	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00965	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0193	0.0386	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Chrysene	ND	0.00965	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00965	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Fluoranthene	**0.538**	0.0193	0.0386	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Fluorene	**17.4**	0.0193	0.0386	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00965	0.0193	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
2-Methylnaphthalene	**2.68**	0.0386	0.0772	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Naphthalene	**0.958**	0.0386	0.0772	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Phenanthrene	**8.36**	0.0386	0.0772	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Pyrene	**0.392**	0.0193	0.0386	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Dibenzofuran	**2.49**	0.0193	0.0386	ug/L	1	03/22/24 20:51	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 92 %*	*Limits: 78-134 %*	*1*	*03/22/24 20:51*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*113 %*	*80-132 %*	*1*	*03/22/24 20:51*	*EPA 8270E LVI*	
DMW2-240314 (A4C1365-04RE1)				**Matrix: Water**		**Batch: 24C0733**		
Acenaphthene	**54.5**	0.193	0.386	ug/L	10	03/26/24 19:17	EPA 8270E LVI	
1-Methylnaphthalene	**36.0**	0.386	0.772	ug/L	10	03/26/24 19:17	EPA 8270E LVI	
DMW3-240314 (A4C1365-05)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthylene	ND	3.09	3.09	ug/L	1	03/22/24 21:23	EPA 8270E LVI	R-02
Anthracene	**4.38**	0.0187	0.0374	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0187	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00934	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00934	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00934	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0187	0.0374	ug/L	1	03/22/24 21:23	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW3-240314 (A4C1365-05)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Chrysene	ND	0.00934	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00934	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Fluoranthene	**3.18**	0.0187	0.0374	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00934	0.0187	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Pyrene	**2.29**	0.0187	0.0374	ug/L	1	03/22/24 21:23	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 89 %*	*Limits: 78-134 %*	*1*	*03/22/24 21:23*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*03/22/24 21:23*	*EPA 8270E LVI*	
DMW3-240314 (A4C1365-05RE1)				**Matrix: Water**		**Batch: 24C0733**		
Acenaphthene	**99.4**	0.374	0.747	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
Fluorene	**38.9**	0.374	0.747	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
1-Methylnaphthalene	**49.1**	0.747	1.49	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
2-Methylnaphthalene	**49.5**	0.747	1.49	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
Naphthalene	**69.4**	0.747	1.49	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
Phenanthrene	**33.3**	0.747	1.49	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
Dibenzofuran	**23.0**	0.374	0.747	ug/L	20	03/26/24 19:49	EPA 8270E LVI	
DMW-6B-240314 (A4C1365-06)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	**7.07**	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Acenaphthylene	**0.175**	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Anthracene	**0.0383**	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Chrysene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Fluoranthene	ND	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Fluorene	ND	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0105	0.0210	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0420	0.0840	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0420	0.0840	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Naphthalene	**0.0709**	0.0420	0.0840	ug/L	1	03/22/24 21:55	EPA 8270E LVI	**J**

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-6B-240314 (A4C1365-06)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Phenanthrene	ND	0.0420	0.0840	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Pyrene	ND	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Dibenzofuran	ND	0.0210	0.0420	ug/L	1	03/22/24 21:55	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*91 %*	*Limits: 78-134 %*	*1*	*03/22/24 21:55*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/22/24 21:55*	*EPA 8270E LVI*	
HC-4-240314 (A4C1365-07)				**Matrix: Water**		**Batch: 24C0733**		
Acenaphthene	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Acenaphthylene	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Anthracene	**0.0390**	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Chrysene	ND	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Dibenz(a,h)anthracene	**0.0134**	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	**J**
Fluoranthene	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Fluorene	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00813	0.0163	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0325	0.0650	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0325	0.0650	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Naphthalene	ND	0.0325	0.0650	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Phenanthrene	ND	0.0325	0.0650	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Pyrene	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Dibenzofuran	ND	0.0163	0.0325	ug/L	1	03/25/24 13:41	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*91 %*	*Limits: 78-134 %*	*1*	*03/25/24 13:41*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/25/24 13:41*	*EPA 8270E LVI*	
EMW-5SA-240314 (A4C1365-08)				**Matrix: Water**		**Batch: 24C0733**		
Acenaphthene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Acenaphthylene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Anthracene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-5SA-240314 (A4C1365-08)				**Matrix: Water**		**Batch: 24C0733**		
Benzo(a)pyrene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Chrysene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Fluoranthene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Fluorene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00797	0.0159	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0319	0.0637	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0319	0.0637	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Naphthalene	ND	0.0319	0.0637	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Phenanthrene	ND	0.0319	0.0637	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Pyrene	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Dibenzofuran	ND	0.0159	0.0319	ug/L	1	03/25/24 14:14	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 90 %*	*Limits: 78-134 %*	*1*	*03/25/24 14:14*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/25/24 14:14*	*EPA 8270E LVI*	
EMW-7s-240314 (A4C1365-09)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Acenaphthylene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Anthracene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Chrysene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Fluoranthene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Fluorene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00853	0.0171	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0341	0.0683	ug/L	1	03/25/24 14:46	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-7s-240314 (A4C1365-09)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
2-Methylnaphthalene	ND	0.0341	0.0683	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Naphthalene	ND	0.0341	0.0683	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Phenanthrene	ND	0.0341	0.0683	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Pyrene	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Dibenzofuran	ND	0.0171	0.0341	ug/L	1	03/25/24 14:46	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 92 %*	*Limits: 78-134 %*	*1*	*03/25/24 14:46*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/25/24 14:46*	*EPA 8270E LVI*	
EMW-10D-240314 (A4C1365-10)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	**3.49**	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Acenaphthylene	**0.0952**	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Anthracene	ND	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Chrysene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Fluoranthene	ND	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Fluorene	**0.0735**	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00961	0.0192	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
1-Methylnaphthalene	**0.0841**	0.0385	0.0769	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0385	0.0769	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Naphthalene	**0.0423**	0.0385	0.0769	ug/L	1	03/25/24 15:19	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0385	0.0769	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Pyrene	ND	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Dibenzofuran	ND	0.0192	0.0385	ug/L	1	03/25/24 15:19	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 91 %*	*Limits: 78-134 %*	*1*	*03/25/24 15:19*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/25/24 15:19*	*EPA 8270E LVI*	
EMW-12S-240314 (A4C1365-11)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Acenaphthylene	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-12S-240314 (A4C1365-11)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Anthracene	**0.0442**	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Chrysene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Fluoranthene	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Fluorene	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0100	0.0201	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0402	0.0803	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0402	0.0803	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Naphthalene	ND	0.0402	0.0803	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Phenanthrene	ND	0.0402	0.0803	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Pyrene	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Dibenzofuran	ND	0.0201	0.0402	ug/L	1	03/25/24 15:51	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 88 %*	*Limits: 78-134 %*	*1*	*03/25/24 15:51*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*03/25/24 15:51*	*EPA 8270E LVI*	
EMW-17S-240314 (A4C1365-12)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Acenaphthylene	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Anthracene	**0.0189**	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Chrysene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Fluoranthene	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Fluorene	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-17S-240314 (A4C1365-12)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Indeno(1,2,3-cd)pyrene	ND	0.00858	0.0172	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0343	0.0686	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0343	0.0686	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Naphthalene	ND	0.0343	0.0686	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Phenanthrene	ND	0.0343	0.0686	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Pyrene	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Dibenzofuran	ND	0.0172	0.0343	ug/L	1	03/25/24 16:24	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*89 %*	*Limits: 78-134 %*	*1*	*03/25/24 16:24*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/25/24 16:24*	*EPA 8270E LVI*	
EMW-19D-240314 (A4C1365-13)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Acenaphthylene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Anthracene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Chrysene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Fluoranthene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Fluorene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00998	0.0200	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0399	0.0798	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0399	0.0798	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Naphthalene	ND	0.0399	0.0798	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Phenanthrene	ND	0.0399	0.0798	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Pyrene	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Dibenzofuran	ND	0.0200	0.0399	ug/L	1	03/25/24 16:56	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*91 %*	*Limits: 78-134 %*	*1*	*03/25/24 16:56*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*107 %*	*80-132 %*	*1*	*03/25/24 16:56*	*EPA 8270E LVI*	
EMW-23s-240314 (A4C1365-14)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23s-240314 (A4C1365-14)				**Matrix: Water**		**Batch: 24C0733**		**DCNT**
Acenaphthene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Acenaphthylene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Anthracene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Chrysene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Fluoranthene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Fluorene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00955	0.0191	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0382	0.0764	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0382	0.0764	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Naphthalene	ND	0.0382	0.0764	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Phenanthrene	ND	0.0382	0.0764	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Pyrene	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Dibenzofuran	ND	0.0191	0.0382	ug/L	1	03/25/24 17:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 90 %*	*Limits: 78-134 %*	*1*	*03/25/24 17:29*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*03/25/24 17:29*	*EPA 8270E LVI*	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-5-240314 (A4C1365-01RE1)				**Matrix: Water**				
Batch: 24C1011								
Copper	ND	0.400	0.800	ug/L	4	04/06/24 04:52	EPA 6020B	R-04
CMW-5-240314 (A4C1365-01RE2)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**106**	0.400	0.800	ug/L	4	04/09/24 13:47	EPA 6020B	
SLR-7-240314 (A4C1365-02RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**0.554**	0.400	0.800	ug/L	4	04/06/24 05:06	EPA 6020B	**J**
Copper	**2.87**	0.400	0.800	ug/L	4	04/06/24 05:06	EPA 6020B	
SLR-17-240314 (A4C1365-03RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**0.466**	0.400	0.800	ug/L	4	04/06/24 05:10	EPA 6020B	**J**
Copper	**1.74**	0.400	0.800	ug/L	4	04/06/24 05:10	EPA 6020B	
DMW2-240314 (A4C1365-04RE1)				**Matrix: Water**				
Batch: 24C1011								
Copper	**0.997**	0.400	0.800	ug/L	4	04/06/24 05:15	EPA 6020B	
DMW2-240314 (A4C1365-04RE2)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**152**	0.400	0.800	ug/L	4	04/09/24 13:51	EPA 6020B	
DMW3-240314 (A4C1365-05RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**2.65**	0.400	0.800	ug/L	4	04/06/24 05:20	EPA 6020B	
DMW3-240314 (A4C1365-05RE4)				**Matrix: Water**				
Batch: 24C1011								
Copper	**4.38**	2.00	4.00	ug/L	4	04/08/24 14:24	EPA 6020B	
DMW-6B-240314 (A4C1365-06RE1)				**Matrix: Water**				
Batch: 24C1011								
Copper	ND	0.400	0.800	ug/L	4	04/06/24 05:24	EPA 6020B	R-04

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-6B-240314 (A4C1365-06RE2)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**25.5**	0.400	0.800	ug/L	4	04/09/24 13:55	EPA 6020B	
HC-4-240314 (A4C1365-07RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**2.05**	0.400	0.800	ug/L	4	04/06/24 05:29	EPA 6020B	
Copper	**3.17**	0.400	0.800	ug/L	4	04/06/24 05:29	EPA 6020B	
EMW-5SA-240314 (A4C1365-08RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**0.992**	0.400	0.800	ug/L	4	04/06/24 05:34	EPA 6020B	
Copper	ND	0.400	0.800	ug/L	4	04/06/24 05:34	EPA 6020B	R-04
EMW-7s-240314 (A4C1365-09RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	**0.717**	0.400	0.800	ug/L	4	04/06/24 05:38	EPA 6020B	**J**
Copper	**1.03**	0.400	0.800	ug/L	4	04/06/24 05:38	EPA 6020B	
EMW-10D-240314 (A4C1365-10RE1)				**Matrix: Water**				
Batch: 24C1011								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 05:43	EPA 6020B	R-04
Copper	ND	0.400	0.800	ug/L	4	04/06/24 05:43	EPA 6020B	R-04
EMW-12S-240314 (A4C1365-11RE1)				**Matrix: Water**				
Batch: 24C1047								
Arsenic	**3.49**	0.400	0.800	ug/L	4	04/06/24 06:11	EPA 6020B	
Copper	**1.64**	0.400	0.800	ug/L	4	04/06/24 06:11	EPA 6020B	
EMW-17S-240314 (A4C1365-12RE1)				**Matrix: Water**				
Batch: 24C1047								
Arsenic	ND	0.400	0.800	ug/L	4	04/06/24 06:30	EPA 6020B	R-04
Copper	**1.29**	0.400	0.800	ug/L	4	04/06/24 06:30	EPA 6020B	
EMW-19D-240314 (A4C1365-13RE1)				**Matrix: Water**				
Batch: 24C1047								
Arsenic	**2.02**	0.400	0.800	ug/L	4	04/06/24 06:34	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-19D-240314 (A4C1365-13RE1)				**Matrix: Water**				
Copper	**12.2**	0.400	0.800	ug/L	4	04/06/24 06:34	EPA 6020B	
EMW-23s-240314 (A4C1365-14RE1)				**Matrix: Water**				
Batch: 24C1047								
Arsenic	**4.68**	0.400	0.800	ug/L	4	04/06/24 06:39	EPA 6020B	
Copper	**2.24**	0.400	0.800	ug/L	4	04/06/24 06:39	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-5-240314 (A4C1365-01)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**93.7**	0.400	0.800	ug/L	4	04/05/24 20:09	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/05/24 20:09	EPA 6020B (Diss)	R-04
SLR-7-240314 (A4C1365-02)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**0.661**	0.400	0.800	ug/L	4	04/05/24 20:13	EPA 6020B (Diss)	**J**
Copper	**2.11**	0.400	0.800	ug/L	4	04/05/24 20:13	EPA 6020B (Diss)	
SLR-17-240314 (A4C1365-03)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**0.584**	0.400	0.800	ug/L	4	04/05/24 20:18	EPA 6020B (Diss)	**J**
Copper	**2.04**	0.400	0.800	ug/L	4	04/05/24 20:18	EPA 6020B (Diss)	
DMW2-240314 (A4C1365-04)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**140**	0.400	0.800	ug/L	4	04/05/24 20:23	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/05/24 20:23	EPA 6020B (Diss)	R-04
DMW3-240314 (A4C1365-05RE1)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**2.35**	0.400	0.800	ug/L	4	04/05/24 22:01	EPA 6020B (Diss)	
Copper	**0.507**	0.400	0.800	ug/L	4	04/05/24 22:01	EPA 6020B (Diss)	**R-04,J**
DMW-6B-240314 (A4C1365-06)				**Matrix: Water**				
Batch: 24C1017								
Copper	ND	0.400	0.800	ug/L	4	04/05/24 20:41	EPA 6020B (Diss)	R-04
DMW-6B-240314 (A4C1365-06RE2)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**27.9**	0.400	0.800	ug/L	4	04/08/24 14:29	EPA 6020B (Diss)	
HC-4-240314 (A4C1365-07RE1)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**2.64**	0.400	0.800	ug/L	4	04/05/24 22:06	EPA 6020B (Diss)	
Copper	**4.21**	0.400	0.800	ug/L	4	04/05/24 22:06	EPA 6020B (Diss)	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-5SA-240314 (A4C1365-08)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**1.43**	0.400	0.800	ug/L	4	04/05/24 20:51	EPA 6020B (Diss)	
Copper	ND	0.400	0.800	ug/L	4	04/05/24 20:51	EPA 6020B (Diss)	R-04
EMW-7s-240314 (A4C1365-09)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**0.770**	0.400	0.800	ug/L	4	04/05/24 22:10	EPA 6020B (Diss)	**J**
Copper	**1.32**	0.400	0.800	ug/L	4	04/05/24 22:10	EPA 6020B (Diss)	
EMW-10D-240314 (A4C1365-10)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	ND	0.400	0.800	ug/L	4	04/05/24 22:15	EPA 6020B (Diss)	R-04
Copper	**0.761**	0.400	0.800	ug/L	4	04/05/24 22:15	EPA 6020B (Diss)	**R-04,J**
EMW-12S-240314 (A4C1365-11)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**1.10**	0.400	0.800	ug/L	4	04/05/24 22:29	EPA 6020B (Diss)	
Copper	**1.70**	0.400	0.800	ug/L	4	04/05/24 22:29	EPA 6020B (Diss)	
EMW-17S-240314 (A4C1365-12)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**0.421**	0.400	0.800	ug/L	4	04/05/24 22:34	EPA 6020B (Diss)	**J**
Copper	**2.08**	0.400	0.800	ug/L	4	04/05/24 22:34	EPA 6020B (Diss)	
EMW-19D-240314 (A4C1365-13)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	ND	0.400	0.800	ug/L	4	04/05/24 22:38	EPA 6020B (Diss)	R-04
Copper	ND	0.400	0.800	ug/L	4	04/05/24 22:38	EPA 6020B (Diss)	R-04
EMW-23s-240314 (A4C1365-14)				**Matrix: Water**				
Batch: 24C1017								
Arsenic	**5.07**	0.400	0.800	ug/L	4	04/05/24 22:43	EPA 6020B (Diss)	
Copper	**2.04**	0.400	0.800	ug/L	4	04/05/24 22:43	EPA 6020B (Diss)	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Halogenated Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0741 - EPA 5030C							**Water**					
Blank (24C0741-BLK1)			Prepared: 03/21/24 09:26		Analyzed: 03/21/24 13:54							
EPA 8260D												
Vinyl chloride	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*102 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*			*"*				
LCS (24C0741-BS1)			Prepared: 03/21/24 09:26		Analyzed: 03/21/24 12:52							
EPA 8260D												
Vinyl chloride	21.2	0.100	0.200	ug/L	1	20.0	---	106	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*96 %*		*80-120 %*			*"*				
Duplicate (24C0741-DUP1)			Prepared: 03/21/24 09:26		Analyzed: 03/22/24 00:22							
QC Source Sample: Non-SDG (A4C1222-01RE2)												
Vinyl chloride	ND	25.0	50.0	ug/L	250	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*102 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*			*"*				
Duplicate (24C0741-DUP2)			Prepared: 03/21/24 09:26		Analyzed: 03/21/24 23:27							
QC Source Sample: Non-SDG (A4C1294-01)												
Vinyl chloride	ND	0.500	1.00	ug/L	5	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*102 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				
Matrix Spike (24C0741-MS1)			Prepared: 03/21/24 09:26		Analyzed: 03/22/24 01:44							**T-02**
QC Source Sample: Non-SDG (A4C1270-02RE2)												
EPA 8260D												
Vinyl chloride	23.2	0.100	0.200	ug/L	1	20.0	ND	116	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*			*Dilution: 1x*				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Halogenated Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0741 - EPA 5030C							**Water**					
Matrix Spike (24C0741-MS1)			Prepared: 03/21/24 09:26		Analyzed: 03/22/24 01:44							**T-02**
QC Source Sample: Non-SDG (A4C1270-02RE2)												
Surr: Toluene-d8 (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*		*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*94 %*		*80-120 %*		*"*					
Matrix Spike Dup (24C0741-MSD1)			Prepared: 03/21/24 09:26		Analyzed: 03/22/24 02:11							**T-02**
QC Source Sample: Non-SDG (A4C1270-02RE2)												
Vinyl chloride	23.8	0.100	0.200	ug/L	1	20.0	ND	119	58-137%	3	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*93 %*		*80-120 %*		*"*					

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0560 - EPA 5030C							**Water**					
Blank (24C0560-BLK1)			Prepared: 03/19/24 10:00		Analyzed: 03/19/24 17:55							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 94 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*107 %*		*80-120 %*			*"*				
LCS (24C0560-BS1)			Prepared: 03/19/24 10:00		Analyzed: 03/19/24 16:56							
EPA 8260D SIM												
Vinyl chloride	0.218	0.0100	0.0200	ug/L	1	0.200	---	109	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 91 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
Duplicate (24C0560-DUP1)			Prepared: 03/19/24 10:00		Analyzed: 03/19/24 21:04							
QC Source Sample: Non-SDG (A4C1335-08)												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*106 %*		*80-120 %*			*"*				
Matrix Spike (24C0560-MS1)			Prepared: 03/19/24 10:00		Analyzed: 03/20/24 03:47							
QC Source Sample: Non-SDG (A4C1335-19)												
EPA 8260D SIM												
Vinyl chloride	0.333	0.0100	0.0200	ug/L	1	0.200	ND	**167**	**58-137%**	---	---	Q-01
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*107 %*		*80-120 %*			*"*				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0692 - EPA 5030C							**Water**					
Blank (24C0692-BLK1)			Prepared: 03/20/24 09:55		Analyzed: 03/20/24 15:45							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
LCS (24C0692-BS1)			Prepared: 03/20/24 09:55		Analyzed: 03/20/24 14:44							
EPA 8260D SIM												
Vinyl chloride	0.311	0.0100	0.0200	ug/L	1	0.200	---	**156**	**80-120%**	---	---	Q-56
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 93 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				
Duplicate (24C0692-DUP1)			Prepared: 03/20/24 09:55		Analyzed: 03/20/24 16:39							
QC Source Sample: SLR-17-240314 (A4C1365-03)												
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
Matrix Spike (24C0692-MS1)			Prepared: 03/20/24 09:55		Analyzed: 03/20/24 22:02							
QC Source Sample: EMW-23s-240314 (A4C1365-14)												
EPA 8260D SIM												
Vinyl chloride	0.365	0.0100	0.0200	ug/L	1	0.200	ND	**183**	**58-137%**	---	---	Q-54
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*98 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0733 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24C0733-BLK1)			Prepared: 03/21/24 07:09	Analyzed: 03/21/24 14:33								
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 100 %*	*Limits: 78-134 %*				*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*107 %*	*80-132 %*				*"*				
LCS (24C0733-BS1)			Prepared: 03/21/24 07:09	Analyzed: 03/21/24 15:06								
EPA 8270E LVI												
Acenaphthene	1.54	0.0160	0.0320	ug/L	1	1.60	---	96	80-120%	---	---	
Acenaphthylene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-124%	---	---	
Anthracene	1.61	0.0160	0.0320	ug/L	1	1.60	---	101	80-123%	---	---	
Benz(a)anthracene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	80-122%	---	---	
Benzo(a)pyrene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-129%	---	---	
Benzo(b)fluoranthene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	80-124%	---	---	
Benzo(k)fluoranthene	1.67	0.00800	0.0160	ug/L	1	1.60	---	104	80-125%	---	---	
Benzo(g,h,i)perylene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0733 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24C0733-BS1)			Prepared: 03/21/24 07:09	Analyzed: 03/21/24 15:06								
Chrysene	1.52	0.00800	0.0160	ug/L	1	1.60	---	95	80-120%	---	---	
Dibenz(a,h)anthracene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	---	---	
Fluoranthene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-126%	---	---	
Fluorene	1.80	0.0160	0.0320	ug/L	1	1.60	---	112	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.58	0.00800	0.0160	ug/L	1	1.60	---	99	80-121%	---	---	
1-Methylnaphthalene	2.12	0.0320	0.0640	ug/L	1	1.60	---	133	53-148%	---	---	
2-Methylnaphthalene	2.08	0.0320	0.0640	ug/L	1	1.60	---	130	48-150%	---	---	
Naphthalene	1.64	0.0320	0.0640	ug/L	1	1.60	---	102	78-120%	---	---	
Phenanthrene	1.46	0.0320	0.0640	ug/L	1	1.60	---	91	80-120%	---	---	
Pyrene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-125%	---	---	
Carbazole	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	65-141%	---	---	
Dibenzofuran	1.81	0.0160	0.0320	ug/L	1	1.60	---	113	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 102 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*			*"*					
LCS Dup (24C0733-BSD1)			Prepared: 03/21/24 07:09	Analyzed: 03/21/24 15:39								**Q-19**
EPA 8270E LVI												
Acenaphthene	1.55	0.0160	0.0320	ug/L	1	1.60	---	97	80-120%	0.7	30%	
Acenaphthylene	1.80	0.0160	0.0320	ug/L	1	1.60	---	112	80-124%	4	30%	
Anthracene	1.58	0.0160	0.0320	ug/L	1	1.60	---	99	80-123%	2	30%	
Benz(a)anthracene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	80-122%	0.02	30%	
Benzo(a)pyrene	1.69	0.00800	0.0160	ug/L	1	1.60	---	106	80-129%	2	30%	
Benzo(b)fluoranthene	1.66	0.00800	0.0160	ug/L	1	1.60	---	104	80-124%	0.6	30%	
Benzo(k)fluoranthene	1.64	0.00800	0.0160	ug/L	1	1.60	---	103	80-125%	1	30%	
Benzo(g,h,i)perylene	1.65	0.0160	0.0320	ug/L	1	1.60	---	103	80-120%	1	30%	
Chrysene	1.49	0.00800	0.0160	ug/L	1	1.60	---	93	80-120%	2	30%	
Dibenz(a,h)anthracene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	0.2	30%	
Fluoranthene	1.71	0.0160	0.0320	ug/L	1	1.60	---	107	80-126%	0.7	30%	
Fluorene	1.77	0.0160	0.0320	ug/L	1	1.60	---	111	77-127%	2	30%	
Indeno(1,2,3-cd)pyrene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-121%	1	30%	
1-Methylnaphthalene	2.37	0.0320	0.0640	ug/L	1	1.60	---	148	53-148%	11	30%	
2-Methylnaphthalene	2.23	0.0320	0.0640	ug/L	1	1.60	---	139	48-150%	7	30%	
Naphthalene	1.64	0.0320	0.0640	ug/L	1	1.60	---	103	78-120%	0.6	30%	
Phenanthrene	1.45	0.0320	0.0640	ug/L	1	1.60	---	91	80-120%	0.4	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C0733 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24C0733-BSD1)			Prepared: 03/21/24 07:09		Analyzed: 03/21/24 15:39							**Q-19**
Pyrene	1.74	0.0160	0.0320	ug/L	1	1.60	---	109	80-125%	0.7	30%	
Carbazole	1.59	0.0160	0.0320	ug/L	1	1.60	---	99	65-141%	3	30%	
Dibenzofuran	1.80	0.0160	0.0320	ug/L	1	1.60	---	113	76-121%	0.3	30%	

Surr: Acenaphthylene-d8 (Surr) Recovery: 107 % Limits: 78-134 % Dilution: 1x
Benzo(a)pyrene-d12 (Surr) 107 % 80-132 % "

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C1011 - EPA 3015A							**Water**					
Blank (24C1011-BLK1)			Prepared: 03/28/24 10:50		Analyzed: 03/29/24 09:39							
EPA 6020B												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Blank (24C1011-BLK2)			Prepared: 03/28/24 10:50		Analyzed: 04/06/24 04:42							
EPA 6020B												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	**0.183**	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16, J
LCS (24C1011-BS1)			Prepared: 03/28/24 10:50		Analyzed: 03/29/24 09:46							
EPA 6020B												
Arsenic	55.6	0.500	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Copper	60.0	1.00	2.00	ug/L	1	55.6	---	108	80-120%	---	---	
Duplicate (24C1011-DUP1)			Prepared: 03/28/24 10:50		Analyzed: 03/29/24 09:59							
QC Source Sample: Non-SDG (A4C1336-01)												
Arsenic	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	20%	R-04
Copper	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	20%	R-04
Matrix Spike (24C1011-MS1)			Prepared: 03/28/24 10:50		Analyzed: 03/29/24 10:13							
QC Source Sample: Non-SDG (A4C1336-02)												
EPA 6020B												
Arsenic	61.1	5.00	10.0	ug/L	10	55.6	ND	110	75-125%	---	---	
Copper	60.9	10.0	20.0	ug/L	10	55.6	ND	110	75-125%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C1047 - EPA 3015A							**Water**					
Blank (24C1047-BLK1)			Prepared: 03/29/24 10:20		Analyzed: 03/30/24 00:27							
EPA 6020B												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Blank (24C1047-BLK2)			Prepared: 03/29/24 10:20		Analyzed: 04/06/24 05:48							
EPA 6020B												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	Q-16
LCS (24C1047-BS1)			Prepared: 03/29/24 10:20		Analyzed: 03/30/24 00:47							
EPA 6020B												
Arsenic	55.3	0.500	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Copper	61.1	1.00	2.00	ug/L	1	55.6	---	110	80-120%	---	---	
LCS (24C1047-BS2)			Prepared: 03/29/24 10:20		Analyzed: 04/06/24 06:06							
EPA 6020B												
Arsenic	48.4	0.100	0.200	ug/L	1	55.6	---	87	80-120%	---	---	Q-16
Copper	55.0	0.100	0.200	ug/L	1	55.6	---	99	80-120%	---	---	Q-16
Duplicate (24C1047-DUP1)			Prepared: 03/29/24 10:20		Analyzed: 03/30/24 01:01							
QC Source Sample: EMW-12S-240314 (A4C1365-11)												
EPA 6020B												
Arsenic	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	20%	R-04
Copper	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	20%	R-04
Duplicate (24C1047-DUP2)			Prepared: 03/29/24 10:20		Analyzed: 04/06/24 06:16							
QC Source Sample: EMW-12S-240314 (A4C1365-11RE1)												
EPA 6020B												
Arsenic	**3.43**	0.400	0.800	ug/L	4	---	3.49	---	---	2	20%	Q-16
Copper	**1.70**	0.400	0.800	ug/L	4	---	1.64	---	---	3	20%	Q-16
Duplicate (24C1047-DUP3)			Prepared: 03/29/24 10:20		Analyzed: 04/01/24 17:27							
QC Source Sample: EMW-12S-240314 (A4C1365-11RE2)												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C1047 - EPA 3015A							**Water**					
Duplicate (24C1047-DUP3)			Prepared: 03/29/24 10:20		Analyzed: 04/01/24 17:27							
QC Source Sample: EMW-12S-240314 (A4C1365-11RE2)												
EPA 6020B												
Arsenic	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	20%	Q-16, RR-8
Copper	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	20%	Q-16, RR-8
Matrix Spike (24C1047-MS1)			Prepared: 03/29/24 10:20		Analyzed: 03/30/24 01:07							
QC Source Sample: EMW-12S-240314 (A4C1365-11)												
EPA 6020B												
Arsenic	59.2	5.00	10.0	ug/L	10	55.6	ND	107	75-125%	---	---	
Copper	61.7	10.0	20.0	ug/L	10	55.6	ND	111	75-125%	---	---	
Matrix Spike (24C1047-MS2)			Prepared: 03/29/24 10:20		Analyzed: 04/06/24 06:20							
QC Source Sample: EMW-12S-240314 (A4C1365-11RE1)												
EPA 6020B												
Arsenic	53.5	0.400	0.800	ug/L	4	55.6	3.49	90	75-125%	---	---	Q-16
Copper	57.8	0.400	0.800	ug/L	4	55.6	1.64	101	75-125%	---	---	Q-16

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection L Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24C1017 - Matrix Matched Direct Inject							**Water**					
Blank (24C1017-BLK1)			Prepared: 03/28/24 12:49		Analyzed: 04/04/24 11:25							
EPA 6020B (Diss)												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Blank (24C1017-BLK2)			Prepared: 03/28/24 12:49		Analyzed: 04/05/24 19:31							
EPA 6020B (Diss)												
Arsenic	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (24C1017-BS1)			Prepared: 03/28/24 12:49		Analyzed: 04/04/24 11:32							
EPA 6020B (Diss)												
Arsenic	52.7	0.500	1.00	ug/L	1	55.6	---	95	80-120%	---	---	
Copper	60.7	1.00	2.00	ug/L	1	55.6	---	109	80-120%	---	---	
Duplicate (24C1017-DUP1)			Prepared: 03/28/24 12:49		Analyzed: 04/04/24 11:48							
QC Source Sample: Non-SDG (A4C1363-02)												
Arsenic	**13.1**	0.500	1.00	ug/L	1	---	12.9	---	---	1	20%	
Copper	**6.78**	1.00	2.00	ug/L	1	---	6.54	---	---	4	20%	
Matrix Spike (24C1017-MS1)			Prepared: 03/28/24 12:49		Analyzed: 04/04/24 11:55							
QC Source Sample: Non-SDG (A4C1363-02)												
EPA 6020B (Diss)												
Arsenic	66.6	0.500	1.00	ug/L	1	55.6	12.9	97	75-125%	---	---	
Copper	66.1	1.00	2.00	ug/L	1	55.6	6.54	107	75-125%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

SAMPLE PREPARATION INFORMATION

Halogenated Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0741							
A4C1365-06	Water	EPA 8260D	03/14/24 12:17	03/21/24 09:26	5mL/5mL	5mL/5mL	1.00

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0560							
A4C1365-01	Water	EPA 8260D SIM	03/14/24 15:00	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
A4C1365-02	Water	EPA 8260D SIM	03/14/24 12:49	03/19/24 10:51	5mL/5mL	5mL/5mL	1.00
Batch: 24C0692							
A4C1365-03	Water	EPA 8260D SIM	03/14/24 12:39	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-04	Water	EPA 8260D SIM	03/14/24 13:14	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-05	Water	EPA 8260D SIM	03/14/24 13:27	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-07	Water	EPA 8260D SIM	03/14/24 16:09	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-08	Water	EPA 8260D SIM	03/14/24 15:55	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-09	Water	EPA 8260D SIM	03/14/24 11:50	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-10	Water	EPA 8260D SIM	03/14/24 14:57	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-11	Water	EPA 8260D SIM	03/14/24 15:09	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-12	Water	EPA 8260D SIM	03/14/24 12:55	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-13	Water	EPA 8260D SIM	03/14/24 15:27	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00
A4C1365-14	Water	EPA 8260D SIM	03/14/24 15:00	03/20/24 09:55	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C0733							
A4C1365-01	Water	EPA 8270E LVI	03/14/24 15:00	03/21/24 07:09	111.93mL/5mL	125mL/5mL	1.12
A4C1365-02	Water	EPA 8270E LVI	03/14/24 12:49	03/21/24 07:09	121mL/5mL	125mL/5mL	1.03
A4C1365-03	Water	EPA 8270E LVI	03/14/24 12:39	03/21/24 07:09	122.64mL/5mL	125mL/5mL	1.02
A4C1365-04	Water	EPA 8270E LVI	03/14/24 13:14	03/21/24 07:09	103.66mL/5mL	125mL/5mL	1.21
A4C1365-04RE1	Water	EPA 8270E LVI	03/14/24 13:14	03/21/24 07:09	103.66mL/5mL	125mL/5mL	1.21
A4C1365-05	Water	EPA 8270E LVI	03/14/24 13:27	03/21/24 07:09	107.07mL/5mL	125mL/5mL	1.17
A4C1365-05RE1	Water	EPA 8270E LVI	03/14/24 13:27	03/21/24 07:09	107.07mL/5mL	125mL/5mL	1.17
A4C1365-06	Water	EPA 8270E LVI	03/14/24 12:17	03/21/24 07:09	95.25mL/5mL	125mL/5mL	1.31
A4C1365-07	Water	EPA 8270E LVI	03/14/24 16:09	03/21/24 07:09	123mL/5mL	125mL/5mL	1.02

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4C1365-08	Water	EPA 8270E LVI	03/14/24 15:55	03/21/24 07:09	125.52mL/5mL	125mL/5mL	1.00
A4C1365-09	Water	EPA 8270E LVI	03/14/24 11:50	03/21/24 07:09	117.2mL/5mL	125mL/5mL	1.07
A4C1365-10	Water	EPA 8270E LVI	03/14/24 14:57	03/21/24 07:09	104.02mL/5mL	125mL/5mL	1.20
A4C1365-11	Water	EPA 8270E LVI	03/14/24 15:09	03/21/24 07:09	99.58mL/5mL	125mL/5mL	1.26
A4C1365-12	Water	EPA 8270E LVI	03/14/24 12:55	03/21/24 07:09	116.58mL/5mL	125mL/5mL	1.07
A4C1365-13	Water	EPA 8270E LVI	03/14/24 15:27	03/21/24 07:09	100.21mL/5mL	125mL/5mL	1.25
A4C1365-14	Water	EPA 8270E LVI	03/14/24 15:00	03/21/24 07:09	104.67mL/5mL	125mL/5mL	1.19

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C1011							
A4C1365-01RE1	Water	EPA 6020B	03/14/24 15:00	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-01RE2	Water	EPA 6020B	03/14/24 15:00	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-02RE1	Water	EPA 6020B	03/14/24 12:49	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-03RE1	Water	EPA 6020B	03/14/24 12:39	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-04RE1	Water	EPA 6020B	03/14/24 13:14	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-04RE2	Water	EPA 6020B	03/14/24 13:14	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-05RE1	Water	EPA 6020B	03/14/24 13:27	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-05RE4	Water	EPA 6020B	03/14/24 13:27	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-06RE1	Water	EPA 6020B	03/14/24 12:17	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-06RE2	Water	EPA 6020B	03/14/24 12:17	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-07RE1	Water	EPA 6020B	03/14/24 16:09	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-08RE1	Water	EPA 6020B	03/14/24 15:55	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-09RE1	Water	EPA 6020B	03/14/24 11:50	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
A4C1365-10RE1	Water	EPA 6020B	03/14/24 14:57	03/28/24 10:50	45mL/50mL	45mL/50mL	1.00
Batch: 24C1047							
A4C1365-11RE1	Water	EPA 6020B	03/14/24 15:09	03/29/24 10:20	45mL/50mL	45mL/50mL	1.00
A4C1365-12RE1	Water	EPA 6020B	03/14/24 12:55	03/29/24 10:20	45mL/50mL	45mL/50mL	1.00
A4C1365-13RE1	Water	EPA 6020B	03/14/24 15:27	03/29/24 10:20	45mL/50mL	45mL/50mL	1.00
A4C1365-14RE1	Water	EPA 6020B	03/14/24 15:00	03/29/24 10:20	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24C1017							
A4C1365-01	Water	EPA 6020B (Diss)	03/14/24 15:00	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-02	Water	EPA 6020B (Diss)	03/14/24 12:49	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-03	Water	EPA 6020B (Diss)	03/14/24 12:39	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-04	Water	EPA 6020B (Diss)	03/14/24 13:14	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-05RE1	Water	EPA 6020B (Diss)	03/14/24 13:27	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-06	Water	EPA 6020B (Diss)	03/14/24 12:17	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-06RE2	Water	EPA 6020B (Diss)	03/14/24 12:17	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-07RE1	Water	EPA 6020B (Diss)	03/14/24 16:09	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-08	Water	EPA 6020B (Diss)	03/14/24 15:55	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-09	Water	EPA 6020B (Diss)	03/14/24 11:50	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-10	Water	EPA 6020B (Diss)	03/14/24 14:57	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-11	Water	EPA 6020B (Diss)	03/14/24 15:09	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-12	Water	EPA 6020B (Diss)	03/14/24 12:55	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-13	Water	EPA 6020B (Diss)	03/14/24 15:27	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00
A4C1365-14	Water	EPA 6020B (Diss)	03/14/24 15:00	03/28/24 12:49	45mL/50mL	45mL/50mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

DCNT	Sample decanted due to the presence of sediment. Sample bottle not rinsed with solvent.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-16	Reanalysis of an original Batch QC sample.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-54	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +36%. The results are reported as Estimated Values.
Q-56	Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
R-04	Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
RR-8	Not Reported. Sample was rerun to confirm original result. Original sample is reported.
T-02	This Batch QC sample was analyzed outside of the method specified 12 hour analysis window. Results are estimated.

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

APEX LABORATORIES

ANALYTICAL REPORT

AMENDED REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

A4C1365

LANDAU ASSOCIATES

Chain-of-Custody Record

☐ North Seattle (206) 631-8660 ☐ Tacoma (253) 926-2493 ☐ Olympia (360) 791-3178 ☐ Spokane (509) 327-9737 ☐ Portland (503) 542-1080 ☐ _____

Date 3/14/23 Page 1 of 1

Turnaround Time: Standard ☐ Accelerated ☐

Project Name 8th Ave Terminal Project No. 2175001.020.022

Project Location/Event Seattle, WA

Sampler's Name Spencer Lo, Adam Torasik, Graham Johnson, Jason Arnold

Project Contact Mike Staton

Send Results To Mike.Staton@landauinc.com

Special Handling Requirements:

Shipment Method: _____

Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH Dx	Total 8270SIM	Total Copper and Arsenic	Dissolved Copper and Arsenic	Observations/Comments
CMW-5-240314	3/14/24	1500	water	10	X	X	X	X	
SLR-7-240314	3/14/24	1249	water	10	X	X	X	X	
SLR-17-240314	3/14/24	1239	water	10	X	X	X	X	
DMW2-240314	3/14/24	1314	water	10	X	X	X	X	
DMW3-240314	3/14/24	1327	water	10	X	X	X	X	
DMW-6B-240314	3/14/24	1217	water	10	X	X	X	X	
HC-4-240314	3/14/24	1609	water	10	X	X	X	X	
EMW-55A-240314	3/14/24	1555	water	10	X	X	X	X	
EMW-7S-240314	3/14/24	1150	water	10	X	X	X	X	
EMW-10D-240314	3/14/24	1457	water	10	X	X	X	X	
EMW-12S-240314	3/14/24	1509	water	10	X	X	X	X	
EMW-17S-240314	3/14/24	1255	water	10	X	X	X	X	
EMW-19D-240314	3/14/24	1527	water	10	X	X	X	X	
EMW-23S-240314	3/14/24	1500	water	10	X	X	X	X	

Observations/Comments:

- ___ Allow water samples to settle, collect aliquot from clear portion ☐
- ___ NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- ___ Dissolved metal samples were field filtered

Other
- Total dissolved copper and Arsenic by EPA 6020B
- Total copper and Arsenic by EPA 6020B

Relinquished by	Received by	Relinquished by	Received by
Signature: Spencer Lo	Signature: [signature]	Signature:	Signature:
Printed Name: Spencer Lo	Printed Name: Anissa Kepa	Printed Name:	Printed Name:
Company: LAI	Company: Apex Labs	Company:	Company:
Date: 3/15/24 Time: 1500	Date: 3/15/24 Time: 1016	Date: Time:	Date: Time:

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4C1365 - 04 24 24 1357**

APEX LABS COOLER RECEIPT FORM

Client: Landau Associates Element WO#: A4 C1365

Project/Project #: 8th Ave Terminal 2175001.020.022

Delivery Info:

Date/time received: 3/16/24 @ 1016 By: AKK

Delivered by: Apex__Client__ESS__FedEx X UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ____ No X

Cooler Inspection Date/time inspected: 3/16/24 @ 1016 By: AKK

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____ Tracking #: 2722 2602 4718

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.3	4.1	2.0	1.4			
Custody seals? (Y/N)	AKK 3/16/24 Y N	Y N	Y	Y			
Received on ice? (Y/N)	Y	Y	Y	Y			
Temp. blanks? (Y/N)	Y	Y	Y	Y			
Ice type: (Gel/Real/Other)	Real	Real	Real	Real			
Condition (In/Out):	In	In	In	In			

Cooler out of temp? (Y/N) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3/18/24 @ 1045 By: HS

All samples intact? Yes X No ___ Comments: ____

Bottle labels/COCs agree? Yes X No ___ Comments: No T on Nitrics for DMW-6B.

COC/container discrepancies form initiated? Yes ___ No ___

Containers/volumes received appropriate for analysis? Yes ___ No ___ Comments: ____

Do VOA vials have visible headspace? Yes ✓ No ___ NA ___

Comments SED 6/6 on EMW-19D, HS on 3/6 on EMW-100 (6/6)

Water samples: pH checked: Yes X No___NA___ pH appropriate? Yes X No___ (not for preservation) NA____ pH ID: A23I172

Comments: ____

Labeled by: HS Witness: MHM 12/4M Cooler Inspected by: JS

Form Y-003 R-02

Apex Laboratories

Michele Poquiz

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Tuesday, April 23, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4D1138 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4D1138, which was received by the laboratory on 3/14/2024 at 1:22:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: mpoquiz@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information		
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.		
(See Cooler Receipt Form for details)		
Default Cooler	0.9	degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EMW-21D-240312-(0.45)	A4D1138-01	Water	03/12/24 13:37	03/14/24 13:22
CMW-6-240313-(0.45)	A4D1138-04	Water	03/13/24 14:17	03/14/24 13:22
EMW-13S-240313-(0.45)	A4D1138-05	Water	03/13/24 15:47	03/14/24 13:22
CMW-5-240314-(0.45)	A4D1138-06	Water	03/14/24 15:00	03/14/24 13:22
DMW2-240314-(0.45)	A4D1138-07	Water	03/14/24 13:14	03/14/24 13:22

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

ANALYTICAL CASE NARRATIVE

A4D1138 **Apex Laboratories**

Metals Filtration Note:

The water samples from Apex work orders (WO) A4C1305, A4C1335, and A4C1365 were analyzed for total arsenic (As) and copper (Cu) as well as field filtered dissolved As and Cu using 0.45 um field filters. Per the client's request, select samples from these WOs were re-logged under Apex WO A4D1138 and filtered in the laboratory using 0.45 um lab filters. A summary of the As results generated is provided below.

EMW-21D-240312
Apex WO: A4C1305-05 / A4D1138-01
Total As: 605 ug/L
Dissolved As (0.45 um Field Filter): 152 ug/L
Dissolved As (0.45 um Lab Filter): 3.17 ug/L

CMW-6-240313
Apex WO: A4C1335-04 / A4D1138-04
Total As: 41.9 ug/L
Dissolved As (0.45 um Field Filter): 40.8 ug/L
Dissolved As (0.45 um Lab Filter): 48.5 ug/L

EMW-13S-240313
Apex WO: A4C1335-11 / A4D1138-05
Total As: 102 ug/L
Dissolved As (0.45 um Field Filter): 84.6 ug/L
Dissolved As (0.45 um Lab Filter): 82.1 ug/L

CMW-5-240314
Apex WO: A4C1365-01 / A4D1138-06
Total As: 106 ug/L
Dissolved As (0.45 um Field Filter): 93.7 ug/L
Dissolved As (0.45 um Lab Filter): 5.64 ug/L

DMW2-240314
Apex WO: A4C1365-04 / A4D1138-07
Total As: 152 ug/L
Dissolved As (0.45 um Field Filter): 140 ug/L
Dissolved As (0.45 um Lab Filter): 9.27 ug/L

The data above indicates that the filters used in the field did not consistently remove particles in the samples greater than 0.45 um in size. At a minimum, this is seen in the samples EMW-21D-240312, CMW-5-240314, and DMW2-240314. Therefore the dissolved As and dissolved Cu quantifications reported for at least a portion of the samples in Apex WOs A4C1305, A4C1335, and A4C1365 after field filtering should not be relied upon.

It should be noted that the lab filtrations were completed using samples collected in unpreserved glass bottles rather than the method-recommended nitric-preserved poly bottles. The data has been qualified accordingly.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

ANALYTICAL CASE NARRATIVE

A4D1138 **Apex Laboratories**

Kurt Johnson
Director of Forensic Services
04/23/2024

Apex Laboratories

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-21D-240312-(0.45) (A4D1138-01)				**Matrix: Water**				
Batch: 24D0462								
Arsenic	**3.17**	---	0.832	ug/L	4	04/11/24 18:02	EPA 6020B (Diss)	**FILT1,A-01, B-02, H-12**
CMW-6-240313-(0.45) (A4D1138-04)				**Matrix: Water**				
Batch: 24D0597								
Arsenic	**48.5**	---	0.749	ug/L	4	04/18/24 11:59	EPA 6020B (Diss)	**FILT1, H-12**
Copper	**23.0**	---	3.74	ug/L	4	04/18/24 11:59	EPA 6020B (Diss)	**FILT1, H-12**
EMW-13S-240313-(0.45) (A4D1138-05)				**Matrix: Water**				
Batch: 24D0597								
Arsenic	**82.1**	---	0.749	ug/L	4	04/18/24 12:07	EPA 6020B (Diss)	**FILT1, H-12**
Copper	ND	---	3.74	ug/L	4	04/18/24 12:07	EPA 6020B (Diss)	FILT1,H-12
CMW-5-240314-(0.45) (A4D1138-06)				**Matrix: Water**				
Batch: 24D0597								
Arsenic	**5.64**	---	0.749	ug/L	4	04/18/24 12:11	EPA 6020B (Diss)	**FILT1, H-12**
DMW2-240314-(0.45) (A4D1138-07)				**Matrix: Water**				
Batch: 24D0597								
Arsenic	**9.27**	---	0.749	ug/L	4	04/18/24 12:15	EPA 6020B (Diss)	**FILT1, H-12,A-01a, Q-42**

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-21D-240312-(0.45) (A4D1138-01)				**Matrix: Water**		**Batch: 24D0457**		**H-12**
Lab Filtration (prep only)	PREP	---		N/A	1	04/11/24 12:13	NA	
CMW-6-240313-(0.45) (A4D1138-04)				**Matrix: Water**		**Batch: 24D0575**		
Lab Filtration (prep only)	PREP	---		N/A	1	04/16/24 15:21	NA	H-12
EMW-13S-240313-(0.45) (A4D1138-05)				**Matrix: Water**		**Batch: 24D0575**		
Lab Filtration (prep only)	PREP	---		N/A	1	04/16/24 15:22	NA	H-12
CMW-5-240314-(0.45) (A4D1138-06)				**Matrix: Water**		**Batch: 24D0575**		
Lab Filtration (prep only)	PREP	---		N/A	1	04/16/24 15:22	NA	H-12
DMW2-240314-(0.45) (A4D1138-07)				**Matrix: Water**		**Batch: 24D0575**		
Lab Filtration (prep only)	PREP	---		N/A	1	04/16/24 15:22	NA	H-12

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24D0462 - Matrix Matched Direct Inject							**Water**					
Blank (24D0462-BLK1)			Prepared: 04/11/24 12:52		Analyzed: 04/11/24 17:58							
EPA 6020B (Diss)												
Arsenic	ND	---	0.208	ug/L	1	---	---	---	---	---	---	B-02, FILT3
Matrix Spike (24D0462-MS1)			Prepared: 04/11/24 12:52		Analyzed: 04/11/24 18:06							
QC Source Sample: EMW-21D-240312-(0.45) (A4D1138-01)												
EPA 6020B (Diss)												
Arsenic	54.7	---	0.836	ug/L	4	44.4	3.17	116	75-125%	---	---	B-02
Matrix Spike (24D0462-MS2)			Prepared: 04/11/24 12:52		Analyzed: 04/11/24 18:18							
QC Source Sample: EMW-21D-240312-(0.22) (A4D1138-03)												
EPA 6020B (Diss)												
Arsenic	61.4	---	0.846	ug/L	4	57.1	3.25	102	75-125%	---	---	B-02
Batch 24D0597 - Matrix Matched Direct Inject							**Water**					
Blank (24D0597-BLK1)			Prepared: 04/16/24 15:32		Analyzed: 04/18/24 11:51							
EPA 6020B (Diss)												
Arsenic	ND	---	0.187	ug/L	1	---	---	---	---	---	---	FILT3a
Copper	ND	---	0.936	ug/L	1	---	---	---	---	---	---	FILT3a
LCS (24D0597-BS1)			Prepared: 04/16/24 15:32		Analyzed: 04/18/24 11:55							
EPA 6020B (Diss)												
Arsenic	42.7	---	0.187	ug/L	1	40.0	---	107	80-120%	---	---	
Copper	46.3	---	0.936	ug/L	1	40.0	---	116	80-120%	---	---	
Duplicate (24D0597-DUP1)			Prepared: 04/16/24 15:32		Analyzed: 04/18/24 12:03							
QC Source Sample: CMW-6-240313-(0.45) (A4D1138-04)												
EPA 6020B (Diss)												
Arsenic	**46.5**	---	0.749	ug/L	4	---	48.5	---	---	4	20%	
Copper	**23.3**	---	3.74	ug/L	4	---	23.0	---	---	1	20%	
Matrix Spike (24D0597-MS1)			Prepared: 04/16/24 15:32		Analyzed: 04/18/24 12:19							
QC Source Sample: DMW2-240314-(0.45) (A4D1138-07)												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24D0597 - Matrix Matched Direct Inject							**Water**					
Matrix Spike (24D0597-MS1)			Prepared: 04/16/24 15:32	Analyzed: 04/18/24 12:19								
QC Source Sample: DMW2-240314-(0.45) (A4D1138-07)												
EPA 6020B (Diss)												
Arsenic	126	---	0.749	ug/L	4	40.0	9.27	**293**	**75-125%**	---	---	Q-01
Copper	45.7	---	3.74	ug/L	4	40.0	ND	114	75-125%	---	---	
Matrix Spike Dup (24D0597-MSD1)			Prepared: 04/16/24 15:32	Analyzed: 04/18/24 12:23								
QC Source Sample: DMW2-240314-(0.45) (A4D1138-07)												
EPA 6020B (Diss)												
Arsenic	124	---	3.74	ug/L	20	40.0	9.27	**288**	**75-125%**	2	20%	Q-58
Copper	48.8	---	18.7	ug/L	20	40.0	ND	122	75-125%	6	20%	Q-58

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24D0462							
A4D1138-01	Water	EPA 6020B (Diss)	03/12/24 13:37	04/11/24 13:46	10mL/10.4mL	1mL/1mL	1.04
Batch: 24D0597							
A4D1138-04	Water	EPA 6020B (Diss)	03/13/24 14:17	04/16/24 15:32	10mL/10.4mL	45mL/50mL	0.94
A4D1138-05	Water	EPA 6020B (Diss)	03/13/24 15:47	04/16/24 15:32	10mL/10.4mL	45mL/50mL	0.94
A4D1138-06	Water	EPA 6020B (Diss)	03/14/24 15:00	04/16/24 15:32	10mL/10.4mL	45mL/50mL	0.94
A4D1138-07	Water	EPA 6020B (Diss)	03/14/24 13:14	04/16/24 15:32	10mL/10.4mL	45mL/50mL	0.94

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24D0457							
A4D1138-01	Water	NA	03/12/24 13:37	04/11/24 12:13	50mL/50mL		NA
Batch: 24D0575							
A4D1138-04	Water	NA	03/13/24 14:17	04/16/24 15:21	42mL/42mL		NA
A4D1138-05	Water	NA	03/13/24 15:47	04/16/24 15:22	30mL/30mL		NA
A4D1138-06	Water	NA	03/14/24 15:00	04/16/24 15:22	32mL/32mL		NA
A4D1138-07	Water	NA	03/14/24 13:14	04/16/24 15:22	42mL/42mL		NA

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

A-01	Sample was filtered through a 0.45 um filter, associated with lab filration batch 24D0457.
A-01a	Serial dilution was performed and meets acceptance criteria. Data are acceptable.
B-02	Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
FILT1	Sample was lab filtered and acid preserved prior to analysis. See sample preparation section of report for date and time of filtration.
FILT3	This is a laboratory filtration blank, associated with filtration batch 24D0457 0.45um. See Prep page of report for associated samples.
FILT3a	This is a laboratory filtration blank, associated with filtration batch 24D0575. See Prep page of report for associated samples.
H-12	Sample Analysis or Filtration was performed >15 minutes after sample collection. Consult regulator or permit manager to determine the usability of data for intended use.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
Q-58	Matrix Spike Duplicate QC Sample is actually a Serial Dilution of the Matrix Spike. Reported as MSD for calculation purposes only.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

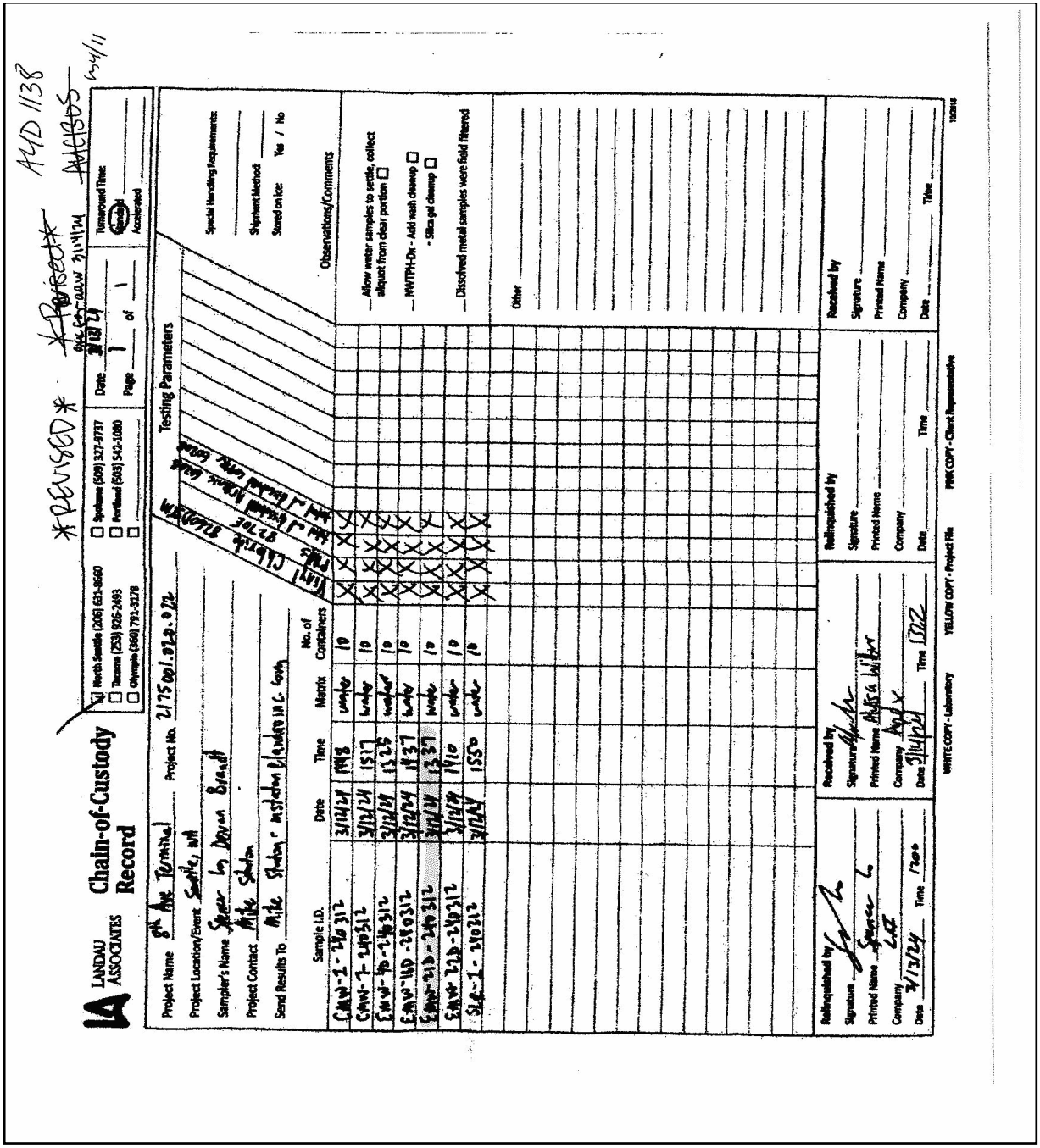
Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**



LANDAU ASSOCIATES **Chain-of-Custody Record**

☐ North Seattle (206) 621-8560 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 753-3378

Project Name: 8th Ave Terminal | Project No.: 2175001.020.022
Project Location/Event: Seattle, WA
Sampler's Name: Spencer Lo, Devon Brandt
Project Contact: Mike Staton
Send Results To: Mike Staton, Landau Associates Inc. Seattle

Date: 3/13/24 | Page 1 of 1 | Turnaround Time: Standard / Accelerated

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Dx (Silica gel cleanup)	Dissolved metals (field filtered)
EMW-1-240312	3/12/24	1448	water	10	X	X	X
EMW-7-240312	3/12/24	1517	water	10	X	X	X
EMW-10-240312	3/12/24	1525	water	10	X	X	X
EMW-11D-240312	3/12/24	1537	water	10	X	X	X
EMW-11D-240312	3/12/24	1537	water	10	X	X	X
EMW-12D-240312	3/12/24	1610	water	10	X	X	X
SLG-1-240312	3/12/24	1550	water	10	X	X	X

Special Handling Requirements: ____
Shipment Method: ____
Stored on Ice: Yes / No
Observations/Comments
__ Allow water samples to settle, collect aliquot from clear portion ☐
__ NWTPH-Dx - Add wash cleanup ☐
- Silica gel cleanup ☐
__ Dissolved metal samples were field filtered
Other ____

Relinquished by: Signature / Printed Name: Spencer Lo / Company: LAI / Date: 3/13/24 / Time: 1700
Received by: Signature / Printed Name: Alisa Wilber / Company: Apex / Date: 3/14/24 / Time: 1312
Relinquished by: Signature / Printed Name / Company / Date / Time
Received by: Signature / Printed Name / Company / Date / Time

WHITE COPY - Laboratory | YELLOW COPY - Project File | PINK COPY - Client Representative

REVISED *Project* 3/14/24 A4D1138 4-4/11

Apex Laboratories

Michele Poquiz

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

LANDAU ASSOCIATES

Chain-of-Custody Record

☑ North Seattle (206) 631-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178

Date 3/13/24 Page 1 of 1

Turnaround Time: (Standard) Accelerated

Project Name 8th Ave Terminal Project No. 2175001.020.022
Project Location/Event Seattle, WA
Sampler's Name Spencer Lo, Doran Bradshaw, Gaelan Fahlgren, Kalpana Prasad
Project Contact Mike Staton
Send Results To Mike Staton - mstaton@landaw.com

Testing Parameters: NWTPH-Dx (with and without silica gel cleanup); Dissolved Metals 8270E (Pb, Cd, As, Cr, Cu, Zn, Ni)

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Dx (silica gel cleanup)	Dissolved Metals 8270E (Pb, Cd, As, Cr, Cu, Zn, Ni)
CMW-2-240313	3/13/24	1403	water	10	X	X	X
CMW-3-240313	3/13/24	1519	water	10	X	X	X
CMW-4-240313	3/13/24	1604	water	10	X	X	X
CMW-6-240313	3/13/24	1417	water	10	X	X	X
EMW-1S-240313	3/13/24	1153	water	10	X	X	X
EMW-2S-240313	3/13/24	1445	water	10	X	X	X
EMW-3S-240313	3/13/24	1403	water	10	X	X	X
EMW-6S-240313	3/13/24	1244	water	10	X	X	X
EMW-9S-240313	3/13/24	1558	water	10	X	X	X
EMW-11S-240313	3/13/24	1257	water	10	X	X	X
EMW-13S-240313	3/13/24	1547	water	10	X	X	X
EMW-14D-240313	3/13/24	1457	water	10	X	X	X
EMW-15D-240313	3/13/24	1508	water	10	X	X	X
EMW-18S-240313	3/13/24	1305	water	10	X	X	X
EMW-20D-240313	3/13/24	1420	water	10	X	X	X
EMW-31S-240313	3/13/24	1220	water	10	X	X	X
SLR-2-240313	3/13/24	1400	water	10	X	X	X
SLR-3-240313	3/13/24	1605	water	10	X	X	X
SLR-6-240313	3/13/24	1520	water	10	X	X	X
HC-20-240313	3/13/24	1207	water	10	X	X	X

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Observations/Comments
- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other

Relinquished by: Signature / Printed Name Spencer Lo / Company LAI / Date 3/14/24 Time 1300

Received by: Signature / Printed Name / Company / Date / Time

Relinquished by: Signature / Printed Name / Company / Date / Time

Received by: Signature / Printed Name / Company / Date / Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

LANDAU ASSOCIATES **Chain-of-Custody Record**

☑ North Seattle (206) 633-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178 ☐ _____

Date 3/14/23 Page 1 of 1

Turnaround Time: Standard / Accelerated

Relog A4D1138

Project Name 8th Ave Terminal Project No. 2175001.020.022
Project Location/Event Seattle, WA
Sampler's Name Spencer Lo, Adam Torasik, Graham Johnson, Jason Grant
Project Contact Mike Staton
Send Results To Mike.Staton@landauinc.com

Special Handling Requirements:
Shipment Method: _____
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Total Dissolved Copper and Arsenic	Total Dissolved Copper and Arsenic	Dissolved Copper and Arsenic	Observations/Comments
CMW-5-240314	3/14/24	1500	water	10	X	X	X	
SLE-7-240314	3/14/24	1249	water	10	X	X	X	
SLE-17-240314	3/14/24	1239	water	10	X	X	X	
DMW3-240314	3/14/24	1314	water	10	X	X	X	
DMW3-240314	3/14/24	1327	water	10	X	X	X	
DMW-6B-240314	3/14/24	1217	water	10	X	X	X	
HC-4-240314	3/14/24	1609	water	10	X	X	X	
EMW-55A-240314	3/14/24	1555	water	10	X	X	X	
EMW-7S-240314	3/14/24	1150	water	10	X	X	X	
EMW-10D-240314	3/14/24	1457	water	10	X	X	X	
EMW-12S-240314	3/14/24	1509	water	10	X	X	X	
EMW-17S-240314	3/14/24	1255	water	10	X	X	X	
EMW-19D-240314	3/14/24	1527	water	10	X	X	X	
EMW-23S-240314	3/14/24	1500	water	10	X	X	X	

Observations/Comments:
- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other
- Total dissolved copper and Arsenic by EPA 6020B
- Total copper and Arsenic by EPA 6020B

Relinquished by	Received by	Relinquished by	Received by
Signature: Spencer Lo	Signature: [signature]	Signature:	Signature:
Printed Name: Spencer Lo	Printed Name: Mariza Lerma	Printed Name:	Printed Name:
Company: AE	Company: Apex Labs	Company:	Company:
Date: 3/15/24 Time: 1500	Date: 3/15/24 Time: 1015	Date: Time:	Date: Time:

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

APEX LABS COOLER RECEIPT FORM Relog A4D1138

Client: Landau Associates Element WO#: A4C1305

Project/Project #: 2175001.020.022 8th Ave. Terminal aee for aaw 3/14/24

Delivery Info:

Date/time received: 3/14/24 @ 1322 By: APW

Delivered by: Apex__Client__ESS__FedEx X UPS ~~X~~ Radio__Morgan__SDS__Evergreen__Other__ APW 3/14

From USDA Regulated Origin? Yes ____ No X APW 3/14

Cooler Inspection Date/time inspected: 3/14/24 @ 1325 By: APW

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.9						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3.14.24 @ 14:25 By: MHM

All samples intact? Yes ✓ No ___ Comments:

Bottle labels/COCs agree? Yes ✓ No ___ Comments:

COC/container discrepancies form initiated? Yes ___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No ___ Comments:

Do VOA vials have visible headspace? Yes ___ No ✓ NA ___

Comments VOA's EMW-4D (6/6), EMW-21D (6/6), EMW-22D (6/6) contain Scd.

Water samples: pH checked: Yes ✓ No___ NA___ pH appropriate? Yes ✓ No___ NA___ pH ID: A231172

Comments:

2721 / 2671 / 2622

Labeled by: APW Witness: [illegible] Cooler Inspected by:

Form Y-003 R-02

Apex Laboratories

Michele Poquiz

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Michele Poquiz For Kurt Johnson, Senior Chemist

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

APEX LABS COOLER RECEIPT FORM Relog A4D1138

Client: Landau Associates Element WO#: A4 C1335

Project/Project #: 8th Ave Terminal 2175001.020.022

Delivery Info:

Date/time received: 3/15/24@ 1035 By: JS

Delivered by: Apex__ Client__ ESS__ FedEx X UPS__ Radio__ Morgan__ SDS__ Evergreen__ Other__

From USDA Regulated Origin? Yes ___ No X

Cooler Inspection Date/time inspected: 3/15/24@ 1035 By: JS

Chain of Custody included? Yes X No ___

Signed/dated by client? Yes X No ___

Contains USDA Reg. Soils? Yes ___ No X Unsure (email RegSoils) ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.1	1.7	1.9	3.2	4.3		
Custody seals? (Y/N)	y	y	y	y	y		
Received on ice? (Y/N)	y	y	y	y	y		
Temp. blanks? (Y/N)	y	y	y	y	y		
Ice type: (Gel/Real/Other)	real	real	real	real	real		
Condition (In/Out):	In	In	In	In	In		

Cooler out of temp? (Y/N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3.15.24@ 12:23 By: MHM

All samples intact? Yes ✓ No ___ Comments: ___

Bottle labels/COCs agree? Yes ✓ No X Comments: ~~CMW-4 bottles weren't~~ ~~found.~~ CMW-2-240313 cont. Treads 1835

COC/container discrepancies form initiated? Yes ___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No ___ Comments: [6/6 scd. for SLR-6, SLR-3, EMW-20D, EMW-11S, EMW-2S.]

Do VOA vials have visible headspace? Yes ___ No ✓ NA ___

Comments ___

Water samples: pH checked: Yes ✓ No___ NA___ pH appropriate? Yes ✓ No___ NA___ pH ID: A231172

Comments: 2721 7733 4648

Labeled by: APW Witness: JS Cooler Inspected by: MHM

Form Y-003 R-02

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4D1138 - 04 23 24 1734**

APEX LABS COOLER RECEIPT FORM Relog A4D1138

Client: Landau Associates Element WO#: A4 C1365

Project/Project #: 8th Ave Terminal 2175001.020.022

Delivery Info:

Date/time received: 3/18/24 @ 1016 By: AKK

Delivered by: Apex__Client__ESS__FedEx X UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ____ No X

Cooler Inspection Date/time inspected: 3/18/24 @ 1016 By: AKK

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____ Tracking #: 2722 2602 4718

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.3	4.1	2.0	1.4			
Custody seals? (Y/N)	~~Y/N~~ AKK 3/18/24	~~Y/N~~	Y	Y			
Received on ice? (Y/N)	Y	Y	Y	Y			
Temp. blanks? (Y/N)	Y	Y	Y	Y			
Ice type: (Gel/Real/Other)	Real	Real	Real	Real			
Condition (In/Out):	In	In	In	In			

Cooler out of temp? (Y/N) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 3/18/24 @ 1045 By: HS

All samples intact? Yes X No ___ Comments: ____

Bottle labels/COCs agree? Yes X No ___ Comments: No T on Nitrics for DMW-6B.

COC/container discrepancies form initiated? Yes ___ No ___

Containers/volumes received appropriate for analysis? Yes ___ No ___ Comments: ____

Do VOA vials have visible headspace? Yes ✓ No ___ NA ___

Comments SED 6/6 on EMW-19D, HS on ~~3/3~~ 6/6 on EMW-10D.

Water samples: pH checked: Yes X No___NA___ pH appropriate? Yes X No___NA___ pH ID: A23I172

Comments: ____

Labeled by: HS Witness: MHM 12:4M Cooler Inspected by: JS

Form Y-003 R-02

Apex Laboratories

Michele Poquiz

Michele Poquiz For Kurt Johnson, Senior Chemist

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

June 2024 Event

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Friday, June 21, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4F0920 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4F0920, which was received by the laboratory on 6/6/2024 at 11:38:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information					
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.					
(See Cooler Receipt Form for details)					
Cooler #1	4.3	degC	Cooler #2	3.4	degC
Cooler #3	2.1	degC	Cooler #4	0.1	degC
Cooler #5	3.4	degC	Cooler #6	4.3	degC
Cooler #7	2.9	degC			

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CMW-1-240604	A4F0920-01	Water	06/04/24 10:05	06/06/24 11:38
CMW-2-240605	A4F0920-02	Water	06/05/24 11:40	06/06/24 11:38
CMW-3-240604	A4F0920-03	Water	06/04/24 10:56	06/06/24 11:38
CMW-4-240605	A4F0920-04	Water	06/05/24 12:27	06/06/24 11:38
CMW-5-240605	A4F0920-05	Water	06/05/24 11:07	06/06/24 11:38
CMW-6-240604	A4F0920-06	Water	06/04/24 12:11	06/06/24 11:38
SLR-1-240604	A4F0920-07	Water	06/04/24 12:50	06/06/24 11:38
SLR-2-240605	A4F0920-08	Water	06/05/24 11:45	06/06/24 11:38
SLR-3-240605	A4F0920-09	Water	06/05/24 11:05	06/06/24 11:38
SLR-6-240605	A4F0920-10	Water	06/05/24 12:20	06/06/24 11:38
SLR-7-240604	A4F0920-11	Water	06/04/24 13:45	06/06/24 11:38
DMW-2-240604	A4F0920-12	Water	06/04/24 15:07	06/06/24 11:38
DMW-3-240604	A4F0920-13	Water	06/04/24 15:21	06/06/24 11:38
DMW-6B-240604	A4F0920-14	Water	06/04/24 13:17	06/06/24 11:38
DMW-12-240604	A4F0920-15	Water	06/04/24 14:57	06/06/24 11:38
HC-4-240605	A4F0920-16	Water	06/05/24 12:07	06/06/24 11:38
HC-20-240604	A4F0920-17	Water	06/04/24 14:55	06/06/24 11:38
EMW-1S-240604	A4F0920-18	Water	06/04/24 13:01	06/06/24 11:38
EMW-2S-240605	A4F0920-19	Water	06/05/24 12:51	06/06/24 11:38
EMW-4D-240604	A4F0920-20	Water	06/04/24 11:00	06/06/24 11:38
EMW-5SA-240605	A4F0920-21	Water	06/05/24 12:17	06/06/24 11:38
EMW-6S-240604	A4F0920-22	Water	06/04/24 13:46	06/06/24 11:38
EMW-7S-240604	A4F0920-23	Water	06/04/24 13:57	06/06/24 11:38
EMW-9SA-240605	A4F0920-24	Water	06/05/24 11:01	06/06/24 11:38
EMW-11S-240604	A4F0920-25	Water	06/04/24 14:47	06/06/24 11:38
EMW-12S-240604	A4F0920-26	Water	06/04/24 11:37	06/06/24 11:38
EMW-13S-240604	A4F0920-27	Water	06/04/24 11:32	06/06/24 11:38
EMW-14D-240604	A4F0920-28	Water	06/04/24 10:47	06/06/24 11:38
EMW-15D-240604	A4F0920-29	Water	06/04/24 11:57	06/06/24 11:38
EMW-16D-240605	A4F0920-30	Water	06/05/24 11:10	06/06/24 11:38
EMW-17S-240605	A4F0920-31	Water	06/05/24 13:47	06/06/24 11:38
EMW-18S-240604	A4F0920-32	Water	06/04/24 13:17	06/06/24 11:38
EMW-23S-240604	A4F0920-33	Water	06/04/24 11:50	06/06/24 11:38

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EMW-26S-240604	A4F0920-34	Water	06/04/24 16:00	06/06/24 11:38

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240604 (A4F0920-01)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 12:56	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/10/24 12:56*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 12:56*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*06/10/24 12:56*	*EPA 8260D SIM*	
CMW-2-240605 (A4F0920-02)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 13:23	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/10/24 13:23*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 13:23*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*	*1*	*06/10/24 13:23*	*EPA 8260D SIM*	
CMW-3-240604 (A4F0920-03)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 13:50	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/10/24 13:50*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 13:50*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/10/24 13:50*	*EPA 8260D SIM*	
CMW-4-240605 (A4F0920-04)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 14:17	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*06/10/24 14:17*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 14:17*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/10/24 14:17*	*EPA 8260D SIM*	
CMW-5-240605 (A4F0920-05)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	**0.243**	0.0100	0.0200	ug/L	1	06/10/24 14:44	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/10/24 14:44*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 14:44*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/10/24 14:44*	*EPA 8260D SIM*	
CMW-6-240604 (A4F0920-06)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 15:10	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*06/10/24 15:10*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 15:10*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/10/24 15:10*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-1-240604 (A4F0920-07)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 15:37	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits: 80-120 %*	*1*	*06/10/24 15:37*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 15:37*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/10/24 15:37*	*EPA 8260D SIM*	
SLR-2-240605 (A4F0920-08)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 16:04	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits: 80-120 %*	*1*	*06/10/24 16:04*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 16:04*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/10/24 16:04*	*EPA 8260D SIM*	
SLR-3-240605 (A4F0920-09)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 17:25	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*06/10/24 17:25*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 17:25*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 17:25*	*EPA 8260D SIM*	
SLR-6-240605 (A4F0920-10)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 17:52	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*06/10/24 17:52*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 17:52*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/10/24 17:52*	*EPA 8260D SIM*	
SLR-7-240604 (A4F0920-11)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 18:19	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*06/10/24 18:19*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 18:19*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/10/24 18:19*	*EPA 8260D SIM*	
DMW-2-240604 (A4F0920-12)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 18:46	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*06/10/24 18:46*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 18:46*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*95 %*	*80-120 %*	*1*	*06/10/24 18:46*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-3-240604 (A4F0920-13)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 19:13	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/10/24 19:13*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*06/10/24 19:13*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*96 %*	*80-120 %*	*1*	*06/10/24 19:13*	*EPA 8260D SIM*	
DMW-6B-240604 (A4F0920-14)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	**0.418**	0.0100	0.0200	ug/L	1	06/10/24 19:40	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/10/24 19:40*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 19:40*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 19:40*	*EPA 8260D SIM*	
DMW-12-240604 (A4F0920-15)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 20:07	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/10/24 20:07*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 20:07*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*96 %*	*80-120 %*	*1*	*06/10/24 20:07*	*EPA 8260D SIM*	
HC-4-240605 (A4F0920-16)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 20:34	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*06/10/24 20:34*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 20:34*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 20:34*	*EPA 8260D SIM*	
HC-20-240604 (A4F0920-17)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 21:01	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/10/24 21:01*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 21:01*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 21:01*	*EPA 8260D SIM*	
EMW-1S-240604 (A4F0920-18)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/10/24 21:28	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/10/24 21:28*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 21:28*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 21:28*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-2S-240605 (A4F0920-19)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	**0.0562**	0.0100	0.0200	ug/L	1	06/10/24 21:55	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/10/24 21:55*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/10/24 21:55*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/10/24 21:55*	*EPA 8260D SIM*	
EMW-4D-240604 (A4F0920-20)				**Matrix: Water**		**Batch: 24F0258**		
Vinyl chloride	**0.342**	0.0100	0.0200	ug/L	1	06/10/24 22:22	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*06/10/24 22:22*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/10/24 22:22*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/10/24 22:22*	*EPA 8260D SIM*	
EMW-5SA-240605 (A4F0920-21)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/13/24 23:10	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/13/24 23:10*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/13/24 23:10*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/13/24 23:10*	*EPA 8260D SIM*	
EMW-6S-240604 (A4F0920-22)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/13/24 23:37	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*06/13/24 23:37*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/13/24 23:37*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/13/24 23:37*	*EPA 8260D SIM*	
EMW-7S-240604 (A4F0920-23)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 00:04	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 00:04*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 00:04*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 00:04*	*EPA 8260D SIM*	
EMW-9SA-240605 (A4F0920-24)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 00:31	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 00:31*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 00:31*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 00:31*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 00:58	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 00:58*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 00:58*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 00:58*	*EPA 8260D SIM*	
EMW-12S-240604 (A4F0920-26)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 01:51	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 01:51*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 01:51*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/14/24 01:51*	*EPA 8260D SIM*	
EMW-13S-240604 (A4F0920-27)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 02:18	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 02:18*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/14/24 02:18*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 02:18*	*EPA 8260D SIM*	
EMW-14D-240604 (A4F0920-28)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	**0.0291**	0.0100	0.0200	ug/L	1	06/14/24 02:45	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 02:45*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 02:45*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 02:45*	*EPA 8260D SIM*	
EMW-15D-240604 (A4F0920-29)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 03:12	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*06/14/24 03:12*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 03:12*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/14/24 03:12*	*EPA 8260D SIM*	
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 03:39	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/14/24 03:39*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/14/24 03:39*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*06/14/24 03:39*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-17S-240605 (A4F0920-31)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 04:06	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*06/14/24 04:06*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/14/24 04:06*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 04:06*	*EPA 8260D SIM*	
EMW-18S-240604 (A4F0920-32)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 04:33	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/14/24 04:33*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/14/24 04:33*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/14/24 04:33*	*EPA 8260D SIM*	
EMW-23S-240604 (A4F0920-33)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 05:00	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*06/14/24 05:00*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 05:00*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 05:00*	*EPA 8260D SIM*	
EMW-26S-240604 (A4F0920-34)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 05:27	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*06/14/24 05:27*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 05:27*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/14/24 05:27*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240604 (A4F0920-01)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Acenaphthylene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Anthracene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Chrysene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Fluoranthene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Fluorene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00825	0.0165	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0330	0.0660	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0330	0.0660	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Naphthalene	ND	0.0330	0.0660	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Phenanthrene	ND	0.0330	0.0660	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Pyrene	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Dibenzofuran	ND	0.0165	0.0330	ug/L	1	06/10/24 15:04	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*107 %*	*Limits: 78-134 %*	*1*	*06/10/24 15:04*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/10/24 15:04*	*EPA 8270E LVI*	
CMW-2-240605 (A4F0920-02)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Acenaphthylene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Anthracene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Chrysene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-2-240605 (A4F0920-02)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Fluoranthene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Fluorene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0102	0.0203	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0407	0.0813	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0407	0.0813	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Naphthalene	ND	0.0407	0.0813	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Phenanthrene	ND	0.0407	0.0813	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Pyrene	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Dibenzofuran	ND	0.0203	0.0407	ug/L	1	06/11/24 15:00	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*102 %*	*Limits: 78-134 %*	*1*	*06/11/24 15:00*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*06/11/24 15:00*	*EPA 8270E LVI*	
CMW-3-240604 (A4F0920-03)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Acenaphthylene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Anthracene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Chrysene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Fluoranthene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Fluorene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00828	0.0166	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0331	0.0663	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0331	0.0663	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Naphthalene	ND	0.0331	0.0663	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Phenanthrene	ND	0.0331	0.0663	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Pyrene	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Dibenzofuran	ND	0.0166	0.0331	ug/L	1	06/10/24 15:36	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*105 %*	*Limits: 78-134 %*	*1*	*06/10/24 15:36*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*	*1*	*06/10/24 15:36*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-3-240604 (A4F0920-03)				**Matrix: Water**		**Batch: 24F0283**		
CMW-4-240605 (A4F0920-04)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Acenaphthylene	ND	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Anthracene	ND	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Benz(a)anthracene	**0.0282**	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Benzo(a)pyrene	**0.0330**	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Benzo(b)fluoranthene	**0.0431**	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Benzo(k)fluoranthene	**0.0145**	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	**J**
Benzo(g,h,i)perylene	ND	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Chrysene	**0.0282**	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Fluoranthene	**0.0361**	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Fluorene	ND	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	**0.0172**	0.00881	0.0176	ug/L	1	06/11/24 15:33	EPA 8270E LVI	**J**
1-Methylnaphthalene	ND	0.0352	0.0704	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0352	0.0704	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Naphthalene	ND	0.0352	0.0704	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Phenanthrene	ND	0.0352	0.0704	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Pyrene	**0.0379**	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Dibenzofuran	ND	0.0176	0.0352	ug/L	1	06/11/24 15:33	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*103 %*	*Limits: 78-134 %*	*1*	*06/11/24 15:33*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/11/24 15:33*	*EPA 8270E LVI*	
CMW-5-240605 (A4F0920-05)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Acenaphthylene	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Anthracene	**0.0587**	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Chrysene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-5-240605 (A4F0920-05)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Dibenz(a,h)anthracene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Fluoranthene	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Fluorene	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0107	0.0213	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0427	0.0854	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0427	0.0854	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Naphthalene	ND	0.0427	0.0854	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Phenanthrene	ND	0.0427	0.0854	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Pyrene	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Dibenzofuran	ND	0.0213	0.0427	ug/L	1	06/11/24 16:04	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*06/11/24 16:04*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/11/24 16:04*	*EPA 8270E LVI*	
CMW-6-240604 (A4F0920-06)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Acenaphthylene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Anthracene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Chrysene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Fluoranthene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Fluorene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00978	0.0196	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0391	0.0783	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0391	0.0783	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Naphthalene	ND	0.0391	0.0783	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Phenanthrene	ND	0.0391	0.0783	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Pyrene	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	
Dibenzofuran	ND	0.0196	0.0391	ug/L	1	06/10/24 16:08	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-6-240604 (A4F0920-06)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*102 %*	*Limits: 78-134 %*	*1*	*06/10/24 16:08*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/10/24 16:08*	*EPA 8270E LVI*	
SLR-1-240604 (A4F0920-07)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Anthracene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Chrysene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Fluorene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00801	0.0160	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0320	0.0641	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0320	0.0641	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Naphthalene	**0.0332**	0.0320	0.0641	ug/L	1	06/10/24 16:41	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0320	0.0641	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Pyrene	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	06/10/24 16:41	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*97 %*	*Limits: 78-134 %*	*1*	*06/10/24 16:41*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/10/24 16:41*	*EPA 8270E LVI*	
SLR-2-240605 (A4F0920-08)				**Matrix: Water**		**Batch: 24F0344**		
Acenaphthene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Acenaphthylene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Anthracene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-2-240605 (A4F0920-08)				**Matrix: Water**		**Batch: 24F0344**		
Benzo(g,h,i)perylene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Chrysene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Fluoranthene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Fluorene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00801	0.0160	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0321	0.0641	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0321	0.0641	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Naphthalene	**0.0397**	0.0321	0.0641	ug/L	1	06/11/24 16:37	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0321	0.0641	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Pyrene	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Dibenzofuran	ND	0.0160	0.0321	ug/L	1	06/11/24 16:37	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*06/11/24 16:37*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/11/24 16:37*	*EPA 8270E LVI*	
SLR-3-240605 (A4F0920-09RE1)				**Matrix: Water**		**Batch: 24F0393**		
Acenaphthene	ND	0.0328	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Acenaphthylene	ND	0.0328	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Anthracene	**0.0217**	0.0164	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00819	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00819	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00819	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00819	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0164	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Chrysene	ND	0.0164	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00819	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Fluoranthene	**0.0221**	0.0164	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	**J**
Fluorene	ND	0.0164	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00819	0.0164	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0328	0.0655	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0328	0.0655	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Naphthalene	**0.0389**	0.0328	0.0655	ug/L	1	06/12/24 19:28	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0328	0.0655	ug/L	1	06/12/24 19:28	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-3-240605 (A4F0920-09RE1)				**Matrix: Water**		**Batch: 24F0393**		
Pyrene	ND	0.0164	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Dibenzofuran	ND	0.0164	0.0328	ug/L	1	06/12/24 19:28	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*105 %*	*Limits: 78-134 %*	*1*	*06/12/24 19:28*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/12/24 19:28*	*EPA 8270E LVI*	
SLR-6-240605 (A4F0920-10)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Acenaphthylene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Anthracene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Chrysene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Fluoranthene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Fluorene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00980	0.0196	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0392	0.0784	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0392	0.0784	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Naphthalene	**0.141**	0.0392	0.0784	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Phenanthrene	ND	0.0392	0.0784	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Pyrene	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Dibenzofuran	ND	0.0196	0.0392	ug/L	1	06/11/24 17:09	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*06/11/24 17:09*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/11/24 17:09*	*EPA 8270E LVI*	
SLR-7-240604 (A4F0920-11)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Acenaphthylene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Anthracene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-7-240604 (A4F0920-11)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Benzo(b)fluoranthene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Chrysene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Fluoranthene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Fluorene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00907	0.0181	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0363	0.0726	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0363	0.0726	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Naphthalene	ND	0.0363	0.0726	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Phenanthrene	ND	0.0363	0.0726	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Pyrene	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Dibenzofuran	ND	0.0181	0.0363	ug/L	1	06/10/24 17:14	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*	*1*	*06/10/24 17:14*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*06/10/24 17:14*	*EPA 8270E LVI*	
DMW-2-240604 (A4F0920-12)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Anthracene	**1.10**	0.0209	0.0419	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Benz(a)anthracene	**0.0141**	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	**J**
Benzo(a)pyrene	ND	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0209	0.0419	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Chrysene	ND	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Fluoranthene	**0.373**	0.0209	0.0419	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0105	0.0209	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Pyrene	**0.277**	0.0209	0.0419	ug/L	1	06/10/24 17:46	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*	*Limits: 78-134 %*	*1*	*06/10/24 17:46*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*114 %*	*80-132 %*	*1*	*06/10/24 17:46*	*EPA 8270E LVI*	
DMW-2-240604 (A4F0920-12RE1)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	**73.4**	0.419	0.837	ug/L	20	06/12/24 20:01	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-2-240604 (A4F0920-12RE1)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthylene	**3.60**	0.419	0.837	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
Fluorene	**18.3**	0.419	0.837	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
1-Methylnaphthalene	**67.3**	0.837	1.67	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
2-Methylnaphthalene	**12.9**	0.837	1.67	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
Naphthalene	**31.9**	0.837	1.67	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
Phenanthrene	**8.50**	0.837	1.67	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
Dibenzofuran	**4.65**	0.419	0.837	ug/L	20	06/12/24 20:01	EPA 8270E LVI	
DMW-3-240604 (A4F0920-13)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	**161**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Acenaphthylene	**24.9**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Anthracene	**8.53**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Benz(a)anthracene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Chrysene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Fluoranthene	**5.75**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Fluorene	**74.4**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.166	0.332	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
1-Methylnaphthalene	**79.2**	0.665	1.33	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
2-Methylnaphthalene	**80.7**	0.665	1.33	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Naphthalene	**9.41**	0.665	1.33	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Phenanthrene	**80.5**	0.665	1.33	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Pyrene	**4.10**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Dibenzofuran	**44.3**	0.332	0.665	ug/L	20	06/10/24 14:31	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*272 %*	*Limits: 78-134 %*	*20*	*06/10/24 14:31*	*EPA 8270E LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*101 %*	*80-132 %*	*20*	*06/10/24 14:31*	*EPA 8270E LVI*	*S-05*
DMW-6B-240604 (A4F0920-14)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	**8.79**	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Acenaphthylene	**0.238**	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-6B-240604 (A4F0920-14)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Anthracene	**0.0371**	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Chrysene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Fluoranthene	ND	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Fluorene	ND	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00927	0.0185	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0371	0.0742	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0371	0.0742	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Naphthalene	ND	0.0371	0.0742	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Phenanthrene	ND	0.0371	0.0742	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Pyrene	ND	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Dibenzofuran	ND	0.0185	0.0371	ug/L	1	06/10/24 18:19	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*06/10/24 18:19*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*06/10/24 18:19*	*EPA 8270E LVI*	
DMW-12-240604 (A4F0920-15)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Anthracene	**1.18**	0.0190	0.0380	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Benz(a)anthracene	**0.0190**	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0190	0.0380	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Chrysene	ND	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Fluoranthene	**0.415**	0.0190	0.0380	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00949	0.0190	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Pyrene	**0.306**	0.0190	0.0380	ug/L	1	06/10/24 18:52	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*93 %*	*Limits: 78-134 %*	*1*	*06/10/24 18:52*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-12-240604 (A4F0920-15)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Surrogate: Benzo(a)pyrene-d12 (Surr)			*Recovery: 115 %*	*Limits: 80-132 %*	*1*	*06/10/24 18:52*	*EPA 8270E LVI*	
DMW-12-240604 (A4F0920-15RE1)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	**77.3**	0.380	0.759	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
Acenaphthylene	**4.44**	0.380	0.759	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
Fluorene	**17.7**	0.380	0.759	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
1-Methylnaphthalene	**69.3**	0.759	1.52	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
2-Methylnaphthalene	**13.6**	0.759	1.52	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
Naphthalene	**32.8**	0.759	1.52	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
Phenanthrene	**9.19**	0.759	1.52	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
Dibenzofuran	**5.03**	0.380	0.759	ug/L	20	06/12/24 20:34	EPA 8270E LVI	
HC-4-240605 (A4F0920-16)				**Matrix: Water**		**Batch: 24F0344**		
Acenaphthene	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Acenaphthylene	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Anthracene	**0.0353**	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Chrysene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Fluoranthene	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Fluorene	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00841	0.0168	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0336	0.0672	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0336	0.0672	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Naphthalene	**0.0345**	0.0336	0.0672	ug/L	1	06/11/24 17:42	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0336	0.0672	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Pyrene	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Dibenzofuran	ND	0.0168	0.0336	ug/L	1	06/11/24 17:42	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*	*1*	*06/11/24 17:42*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/11/24 17:42*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC-20-240604 (A4F0920-17)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Acenaphthylene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Anthracene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Chrysene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Fluoranthene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Fluorene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00932	0.0186	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0373	0.0745	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0373	0.0745	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Naphthalene	**0.0522**	0.0373	0.0745	ug/L	1	06/10/24 19:25	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0373	0.0745	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Pyrene	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Dibenzofuran	ND	0.0186	0.0373	ug/L	1	06/10/24 19:25	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*	*Limits: 78-134 %*	*1*	*06/10/24 19:25*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/10/24 19:25*	*EPA 8270E LVI*	
EMW-1S-240604 (A4F0920-18)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Acenaphthylene	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Anthracene	**0.0229**	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Chrysene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-1S-240604 (A4F0920-18)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Fluoranthene	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Fluorene	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00976	0.0195	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0391	0.0781	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0391	0.0781	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Naphthalene	**0.0430**	0.0391	0.0781	ug/L	1	06/10/24 19:57	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0391	0.0781	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Pyrene	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Dibenzofuran	ND	0.0195	0.0391	ug/L	1	06/10/24 19:57	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*95 %*	*Limits: 78-134 %*	*1*	*06/10/24 19:57*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*06/10/24 19:57*	*EPA 8270E LVI*	
EMW-2S-240605 (A4F0920-19)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Acenaphthylene	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Anthracene	**0.0351**	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Chrysene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Fluoranthene	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Fluorene	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00900	0.0180	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0360	0.0720	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0360	0.0720	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Naphthalene	ND	0.0360	0.0720	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Phenanthrene	ND	0.0360	0.0720	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Pyrene	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Dibenzofuran	ND	0.0180	0.0360	ug/L	1	06/11/24 18:15	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*06/11/24 18:15*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-2S-240605 (A4F0920-19)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Surrogate: Benzo(a)pyrene-d12 (Surr)		*Recovery:*	*109 %*	*Limits: 80-132 %*	*1*	*06/11/24 18:15*	*EPA 8270E LVI*	
EMW-4D-240604 (A4F0920-20)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Acenaphthylene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Anthracene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Chrysene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Fluoranthene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Fluorene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00988	0.0198	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0395	0.0791	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0395	0.0791	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Naphthalene	ND	0.0395	0.0791	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Phenanthrene	ND	0.0395	0.0791	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Pyrene	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Dibenzofuran	ND	0.0198	0.0395	ug/L	1	06/10/24 20:30	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*97 %*	*Limits: 78-134 %*	*1*	*06/10/24 20:30*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/10/24 20:30*	*EPA 8270E LVI*	
EMW-5SA-240605 (A4F0920-21)				**Matrix: Water**		**Batch: 24F0344**		
Acenaphthene	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Acenaphthylene	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Anthracene	**0.0175**	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-5SA-240605 (A4F0920-21)				**Matrix: Water**		**Batch: 24F0344**		
Chrysene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Fluoranthene	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Fluorene	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00835	0.0167	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0334	0.0668	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0334	0.0668	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Naphthalene	**0.0351**	0.0334	0.0668	ug/L	1	06/11/24 18:47	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0334	0.0668	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Pyrene	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Dibenzofuran	ND	0.0167	0.0334	ug/L	1	06/11/24 18:47	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*	*1*	*06/11/24 18:47*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/11/24 18:47*	*EPA 8270E LVI*	
EMW-6S-240604 (A4F0920-22)				**Matrix: Water**		**Batch: 24F0283**		
Acenaphthene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Acenaphthylene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Anthracene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Chrysene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Fluoranthene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Fluorene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00883	0.0177	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0353	0.0706	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0353	0.0706	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Naphthalene	**0.0397**	0.0353	0.0706	ug/L	1	06/10/24 21:02	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0353	0.0706	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Pyrene	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-6S-240604 (A4F0920-22)				**Matrix: Water**		**Batch: 24F0283**		
Dibenzofuran	ND	0.0177	0.0353	ug/L	1	06/10/24 21:02	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*	*Limits: 78-134 %*	*1*	*06/10/24 21:02*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/10/24 21:02*	*EPA 8270E LVI*	
EMW-7S-240604 (A4F0920-23)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Acenaphthylene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Anthracene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Chrysene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Fluoranthene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Fluorene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00905	0.0181	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0362	0.0724	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0362	0.0724	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Naphthalene	**0.0389**	0.0362	0.0724	ug/L	1	06/10/24 21:34	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0362	0.0724	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Pyrene	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Dibenzofuran	ND	0.0181	0.0362	ug/L	1	06/10/24 21:34	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*06/10/24 21:34*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/10/24 21:34*	*EPA 8270E LVI*	
EMW-9SA-240605 (A4F0920-24)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Acenaphthylene	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Anthracene	**0.0279**	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-9SA-240605 (A4F0920-24)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Benzo(k)fluoranthene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Chrysene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Fluoranthene	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Fluorene	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00886	0.0177	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0354	0.0709	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0354	0.0709	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Naphthalene	**0.0385**	0.0354	0.0709	ug/L	1	06/11/24 19:20	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0354	0.0709	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Pyrene	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Dibenzofuran	ND	0.0177	0.0354	ug/L	1	06/11/24 19:20	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*	*1*	*06/11/24 19:20*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/11/24 19:20*	*EPA 8270E LVI*	
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	**1.23**	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Acenaphthylene	**0.0853**	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Anthracene	**0.0947**	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Chrysene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Fluoranthene	ND	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Fluorene	ND	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00981	0.0196	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0392	0.0785	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0392	0.0785	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Naphthalene	**0.0402**	0.0392	0.0785	ug/L	1	06/10/24 22:07	EPA 8270E LVI	**J**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Phenanthrene	ND	0.0392	0.0785	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Pyrene	ND	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Dibenzofuran	ND	0.0196	0.0392	ug/L	1	06/10/24 22:07	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*06/10/24 22:07*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*06/10/24 22:07*	*EPA 8270E LVI*	
EMW-12S-240604 (A4F0920-26)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Acenaphthylene	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Anthracene	**0.0285**	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Chrysene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Fluoranthene	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Fluorene	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00918	0.0184	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0367	0.0734	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0367	0.0734	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Naphthalene	ND	0.0367	0.0734	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Phenanthrene	ND	0.0367	0.0734	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Pyrene	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Dibenzofuran	ND	0.0184	0.0367	ug/L	1	06/10/24 22:39	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*99 %*	*Limits: 78-134 %*	*1*	*06/10/24 22:39*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*06/10/24 22:39*	*EPA 8270E LVI*	
EMW-13S-240604 (A4F0920-27)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	**0.0203**	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	**J**
Acenaphthylene	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Anthracene	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-13S-240604 (A4F0920-27)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Benzo(a)pyrene	ND	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Benzo(b)fluoranthene	**0.00904**	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	**J**
Benzo(k)fluoranthene	ND	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Chrysene	ND	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Fluoranthene	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Fluorene	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00904	0.0181	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0362	0.0723	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0362	0.0723	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Naphthalene	**0.0362**	0.0362	0.0723	ug/L	1	06/10/24 23:12	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0362	0.0723	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Pyrene	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Dibenzofuran	ND	0.0181	0.0362	ug/L	1	06/10/24 23:12	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*06/10/24 23:12*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/10/24 23:12*	*EPA 8270E LVI*	
EMW-14D-240604 (A4F0920-28)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Acenaphthylene	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Anthracene	**0.0191**	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Chrysene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Fluoranthene	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Fluorene	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00931	0.0186	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0372	0.0745	ug/L	1	06/10/24 23:44	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-14D-240604 (A4F0920-28)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
2-Methylnaphthalene	ND	0.0372	0.0745	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Naphthalene	**0.0614**	0.0372	0.0745	ug/L	1	06/10/24 23:44	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0372	0.0745	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Pyrene	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Dibenzofuran	ND	0.0186	0.0372	ug/L	1	06/10/24 23:44	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*06/10/24 23:44*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/10/24 23:44*	*EPA 8270E LVI*	
EMW-15D-240604 (A4F0920-29)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Acenaphthylene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Anthracene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Chrysene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Fluoranthene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Fluorene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00957	0.0191	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0383	0.0766	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0383	0.0766	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Naphthalene	**0.0388**	0.0383	0.0766	ug/L	1	06/11/24 09:39	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0383	0.0766	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Pyrene	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Dibenzofuran	ND	0.0191	0.0383	ug/L	1	06/11/24 09:39	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*107 %*	*Limits: 78-134 %*	*1*	*06/11/24 09:39*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*06/11/24 09:39*	*EPA 8270E LVI*	
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Acenaphthylene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Anthracene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Chrysene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Fluoranthene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Fluorene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00894	0.0179	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0358	0.0715	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0358	0.0715	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Naphthalene	ND	0.0358	0.0715	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Phenanthrene	ND	0.0358	0.0715	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Pyrene	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Dibenzofuran	ND	0.0179	0.0358	ug/L	1	06/11/24 19:52	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*06/11/24 19:52*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/11/24 19:52*	*EPA 8270E LVI*	
EMW-17S-240605 (A4F0920-31)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Acenaphthylene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Anthracene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Chrysene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Fluoranthene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Fluorene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-17S-240605 (A4F0920-31)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Indeno(1,2,3-cd)pyrene	ND	0.00887	0.0177	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0355	0.0710	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0355	0.0710	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Naphthalene	**0.0382**	0.0355	0.0710	ug/L	1	06/11/24 20:25	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0355	0.0710	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Pyrene	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Dibenzofuran	ND	0.0177	0.0355	ug/L	1	06/11/24 20:25	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*97 %*	*Limits: 78-134 %*	*1*	*06/11/24 20:25*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*06/11/24 20:25*	*EPA 8270E LVI*	
EMW-18S-240604 (A4F0920-32)				**Matrix: Water**		**Batch: 24F0283**		**DCNT**
Acenaphthene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Acenaphthylene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Anthracene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Chrysene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Fluoranthene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Fluorene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00924	0.0185	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0370	0.0739	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0370	0.0739	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Naphthalene	**0.0393**	0.0370	0.0739	ug/L	1	06/11/24 10:12	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0370	0.0739	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Pyrene	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Dibenzofuran	ND	0.0185	0.0370	ug/L	1	06/11/24 10:12	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*06/11/24 10:12*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/11/24 10:12*	*EPA 8270E LVI*	
EMW-23S-240604 (A4F0920-33)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-240604 (A4F0920-33)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Acenaphthylene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Anthracene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Chrysene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Fluoranthene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Fluorene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00891	0.0178	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0356	0.0713	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0356	0.0713	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Naphthalene	**0.0379**	0.0356	0.0713	ug/L	1	06/11/24 20:57	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0356	0.0713	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Pyrene	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Dibenzofuran	ND	0.0178	0.0356	ug/L	1	06/11/24 20:57	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*	*Limits: 78-134 %*	*1*	*06/11/24 20:57*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/11/24 20:57*	*EPA 8270E LVI*	
EMW-26S-240604 (A4F0920-34)				**Matrix: Water**		**Batch: 24F0344**		
Acenaphthene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Acenaphthylene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Anthracene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Chrysene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-26S-240604 (A4F0920-34)				**Matrix: Water**		**Batch: 24F0344**		
Fluoranthene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Fluorene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00908	0.0182	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0363	0.0726	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0363	0.0726	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Naphthalene	**0.0463**	0.0363	0.0726	ug/L	1	06/11/24 21:30	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0363	0.0726	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Pyrene	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Dibenzofuran	ND	0.0182	0.0363	ug/L	1	06/11/24 21:30	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*06/11/24 21:30*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*06/11/24 21:30*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240604 (A4F0920-01)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**0.931**	0.360	0.720	ug/L	1	06/14/24 21:56	EPA 6020B	
Copper	**1.42**	0.360	0.720	ug/L	1	06/14/24 21:56	EPA 6020B	
CMW-2-240605 (A4F0920-02)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**86.8**	0.360	0.720	ug/L	1	06/14/24 22:00	EPA 6020B	
Copper	**4.59**	0.360	0.720	ug/L	1	06/14/24 22:00	EPA 6020B	
CMW-3-240604 (A4F0920-03)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**11.3**	0.360	0.720	ug/L	1	06/14/24 22:05	EPA 6020B	
Copper	**0.856**	0.360	0.720	ug/L	1	06/14/24 22:05	EPA 6020B	
CMW-4-240605 (A4F0920-04)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**56.0**	0.360	0.720	ug/L	1	06/14/24 22:10	EPA 6020B	
Copper	**12.5**	0.360	0.720	ug/L	1	06/14/24 22:10	EPA 6020B	
CMW-5-240605 (A4F0920-05)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**72.1**	0.360	0.720	ug/L	1	06/14/24 22:23	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/14/24 22:23	EPA 6020B	
CMW-6-240604 (A4F0920-06)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**55.7**	0.360	0.720	ug/L	1	06/14/24 22:28	EPA 6020B	
Copper	**18.9**	0.360	0.720	ug/L	1	06/14/24 22:28	EPA 6020B	
SLR-1-240604 (A4F0920-07)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**0.950**	0.360	0.720	ug/L	1	06/14/24 22:33	EPA 6020B	
Copper	**0.378**	0.360	0.720	ug/L	1	06/14/24 22:33	EPA 6020B	**J**
SLR-2-240605 (A4F0920-08)				**Matrix: Water**				
Batch: 24F0482								

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-2-240605 (A4F0920-08)				**Matrix: Water**				
Arsenic	**0.399**	0.360	0.720	ug/L	1	06/14/24 22:51	EPA 6020B	**J**
Copper	**2.65**	0.360	0.720	ug/L	1	06/14/24 22:51	EPA 6020B	
SLR-3-240605 (A4F0920-09)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**37.8**	0.360	0.720	ug/L	1	06/14/24 22:56	EPA 6020B	
Copper	**20.3**	0.360	0.720	ug/L	1	06/14/24 22:56	EPA 6020B	
SLR-6-240605 (A4F0920-10)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**2.06**	0.360	0.720	ug/L	1	06/14/24 23:00	EPA 6020B	
Copper	**16.7**	0.360	0.720	ug/L	1	06/14/24 23:00	EPA 6020B	
SLR-7-240604 (A4F0920-11)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**1.15**	0.360	0.720	ug/L	1	06/14/24 23:05	EPA 6020B	
Copper	**2.62**	0.360	0.720	ug/L	1	06/14/24 23:05	EPA 6020B	
DMW-2-240604 (A4F0920-12)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**32.7**	0.360	0.720	ug/L	1	06/14/24 23:19	EPA 6020B	
Copper	**0.371**	0.360	0.720	ug/L	1	06/14/24 23:19	EPA 6020B	**J**
DMW-3-240604 (A4F0920-13)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**2.71**	0.360	0.720	ug/L	1	06/14/24 23:23	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/14/24 23:23	EPA 6020B	
DMW-6B-240604 (A4F0920-14)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**22.8**	0.360	0.720	ug/L	1	06/14/24 23:28	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/14/24 23:28	EPA 6020B	
DMW-12-240604 (A4F0920-15)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**33.8**	0.360	0.720	ug/L	1	06/14/24 23:33	EPA 6020B	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-12-240604 (A4F0920-15)				**Matrix: Water**				
Copper	**0.429**	0.360	0.720	ug/L	1	06/14/24 23:33	EPA 6020B	**J**
HC-4-240605 (A4F0920-16)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**2.08**	0.360	0.720	ug/L	1	06/14/24 23:37	EPA 6020B	
Copper	**3.33**	0.360	0.720	ug/L	1	06/14/24 23:37	EPA 6020B	
HC-20-240604 (A4F0920-17)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**5.05**	0.360	0.720	ug/L	1	06/14/24 23:42	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/14/24 23:42	EPA 6020B	
EMW-1S-240604 (A4F0920-18)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**7.06**	0.360	0.720	ug/L	1	06/14/24 23:46	EPA 6020B	
Copper	**3.66**	0.360	0.720	ug/L	1	06/14/24 23:46	EPA 6020B	
EMW-2S-240605 (A4F0920-19)				**Matrix: Water**				
Batch: 24F0482								
Arsenic	**0.497**	0.360	0.720	ug/L	1	06/14/24 23:51	EPA 6020B	**J**
Copper	**0.377**	0.360	0.720	ug/L	1	06/14/24 23:51	EPA 6020B	**J**
EMW-4D-240604 (A4F0920-20)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	ND	0.360	0.720	ug/L	1	06/15/24 00:14	EPA 6020B	
Copper	**0.537**	0.360	0.720	ug/L	1	06/15/24 00:14	EPA 6020B	**J**
EMW-5SA-240605 (A4F0920-21)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**0.807**	0.360	0.720	ug/L	1	06/15/24 00:18	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/15/24 00:18	EPA 6020B	
EMW-6S-240604 (A4F0920-22)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**0.488**	0.360	0.720	ug/L	1	06/15/24 00:37	EPA 6020B	**J**
Copper	**0.656**	0.360	0.720	ug/L	1	06/15/24 00:37	EPA 6020B	**J**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-7S-240604 (A4F0920-23)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**1.52**	0.360	0.720	ug/L	1	06/15/24 00:41	EPA 6020B	
Copper	**2.25**	0.360	0.720	ug/L	1	06/15/24 00:41	EPA 6020B	
EMW-9SA-240605 (A4F0920-24)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**1.87**	0.360	0.720	ug/L	1	06/15/24 00:46	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/15/24 00:46	EPA 6020B	
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**14.8**	0.360	0.720	ug/L	1	06/15/24 00:51	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/15/24 00:51	EPA 6020B	
EMW-12S-240604 (A4F0920-26)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**0.966**	0.360	0.720	ug/L	1	06/15/24 00:55	EPA 6020B	
Copper	**1.69**	0.360	0.720	ug/L	1	06/15/24 00:55	EPA 6020B	
EMW-13S-240604 (A4F0920-27)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**147**	0.360	0.720	ug/L	1	06/15/24 01:09	EPA 6020B	
Copper	**13.2**	0.360	0.720	ug/L	1	06/15/24 01:09	EPA 6020B	
EMW-14D-240604 (A4F0920-28)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**0.695**	0.360	0.720	ug/L	1	06/15/24 01:14	EPA 6020B	**J**
Copper	ND	0.360	0.720	ug/L	1	06/15/24 01:14	EPA 6020B	
EMW-15D-240604 (A4F0920-29)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**2.55**	0.360	0.720	ug/L	1	06/15/24 01:18	EPA 6020B	
Copper	**6.35**	0.360	0.720	ug/L	1	06/15/24 01:18	EPA 6020B	
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**				

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	ND	0.360	0.720	ug/L	1	06/15/24 01:23	EPA 6020B	
Copper	**0.598**	0.360	0.720	ug/L	1	06/15/24 01:23	EPA 6020B	**J**
EMW-17S-240605 (A4F0920-31)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**0.559**	0.360	0.720	ug/L	1	06/15/24 01:27	EPA 6020B	**J**
Copper	**2.08**	0.360	0.720	ug/L	1	06/15/24 01:27	EPA 6020B	
EMW-18S-240604 (A4F0920-32)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	ND	0.360	0.720	ug/L	1	06/15/24 01:32	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/15/24 01:32	EPA 6020B	
EMW-23S-240604 (A4F0920-33)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**11.2**	0.360	0.720	ug/L	1	06/15/24 01:37	EPA 6020B	
Copper	**0.718**	0.360	0.720	ug/L	1	06/15/24 01:37	EPA 6020B	**J**
EMW-26S-240604 (A4F0920-34)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**0.477**	0.360	0.720	ug/L	1	06/15/24 01:41	EPA 6020B	**J**
Copper	**0.728**	0.360	0.720	ug/L	1	06/15/24 01:41	EPA 6020B	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240604 (A4F0920-01)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**0.935**	0.360	0.720	ug/L	2	06/14/24 20:01	EPA 6020B (Diss)	
Copper	**1.15**	0.360	0.720	ug/L	2	06/14/24 20:01	EPA 6020B (Diss)	
CMW-2-240605 (A4F0920-02)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**78.5**	0.360	0.720	ug/L	2	06/14/24 20:05	EPA 6020B (Diss)	
Copper	**0.806**	0.360	0.720	ug/L	2	06/14/24 20:05	EPA 6020B (Diss)	
CMW-3-240604 (A4F0920-03)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**9.05**	0.360	0.720	ug/L	2	06/14/24 20:10	EPA 6020B (Diss)	
Copper	**0.414**	0.360	0.720	ug/L	2	06/14/24 20:10	EPA 6020B (Diss)	**R-04,J**
CMW-4-240605 (A4F0920-04)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**43.5**	0.360	0.720	ug/L	2	06/14/24 20:15	EPA 6020B (Diss)	
Copper	**3.70**	0.360	0.720	ug/L	2	06/14/24 20:15	EPA 6020B (Diss)	
CMW-5-240605 (A4F0920-05)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**6.07**	0.360	0.720	ug/L	2	06/14/24 17:36	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 17:36	EPA 6020B (Diss)	R-04
CMW-6-240604 (A4F0920-06)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**46.7**	0.360	0.720	ug/L	2	06/14/24 20:42	EPA 6020B (Diss)	
Copper	**8.32**	0.360	0.720	ug/L	2	06/14/24 20:42	EPA 6020B (Diss)	
SLR-1-240604 (A4F0920-07)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**0.855**	0.360	0.720	ug/L	2	06/14/24 20:47	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 20:47	EPA 6020B (Diss)	R-04
SLR-2-240605 (A4F0920-08)				**Matrix: Water**				
Batch: 24F0320								

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-2-240605 (A4F0920-08)				**Matrix: Water**				
Arsenic	**0.386**	0.360	0.720	ug/L	2	06/14/24 20:51	EPA 6020B (Diss)	**R-04,J**
Copper	**1.84**	0.360	0.720	ug/L	2	06/14/24 20:51	EPA 6020B (Diss)	
SLR-3-240605 (A4F0920-09)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**36.2**	0.360	0.720	ug/L	2	06/14/24 17:41	EPA 6020B (Diss)	
Copper	**18.4**	0.360	0.720	ug/L	2	06/14/24 17:41	EPA 6020B (Diss)	**Q-42**
SLR-6-240605 (A4F0920-10)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 20:56	EPA 6020B (Diss)	R-04
Copper	**1.16**	0.360	0.720	ug/L	2	06/14/24 20:56	EPA 6020B (Diss)	
SLR-7-240604 (A4F0920-11)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**0.486**	0.360	0.720	ug/L	2	06/14/24 21:01	EPA 6020B (Diss)	**R-04,J**
Copper	**1.90**	0.360	0.720	ug/L	2	06/14/24 21:01	EPA 6020B (Diss)	
DMW-2-240604 (A4F0920-12)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**6.44**	0.360	0.720	ug/L	2	06/14/24 17:59	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 17:59	EPA 6020B (Diss)	R-04
DMW-3-240604 (A4F0920-13)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**0.372**	0.360	0.720	ug/L	2	06/14/24 18:05	EPA 6020B (Diss)	**R-04,J**
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:05	EPA 6020B (Diss)	R-04
DMW-6B-240604 (A4F0920-14)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**1.21**	0.360	0.720	ug/L	2	06/14/24 18:09	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:09	EPA 6020B (Diss)	R-04
DMW-12-240604 (A4F0920-15)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**8.26**	0.360	0.720	ug/L	2	06/14/24 18:14	EPA 6020B (Diss)	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-12-240604 (A4F0920-15)				**Matrix: Water**				
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:14	EPA 6020B (Diss)	R-04
HC-4-240605 (A4F0920-16)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**2.17**	0.360	0.720	ug/L	2	06/14/24 21:05	EPA 6020B (Diss)	
Copper	**3.07**	0.360	0.720	ug/L	2	06/14/24 21:05	EPA 6020B (Diss)	
HC-20-240604 (A4F0920-17)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**1.77**	0.360	0.720	ug/L	2	06/14/24 18:18	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:18	EPA 6020B (Diss)	R-04
EMW-1S-240604 (A4F0920-18)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**0.813**	0.360	0.720	ug/L	2	06/14/24 18:37	EPA 6020B (Diss)	
Copper	**0.879**	0.360	0.720	ug/L	2	06/14/24 18:37	EPA 6020B (Diss)	
EMW-2S-240605 (A4F0920-19)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 21:10	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 21:10	EPA 6020B (Diss)	R-04
EMW-4D-240604 (A4F0920-20)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 18:42	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:42	EPA 6020B (Diss)	R-04
EMW-5SA-240605 (A4F0920-21)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**0.618**	0.360	0.720	ug/L	2	06/14/24 18:46	EPA 6020B (Diss)	**R-04,J**
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:46	EPA 6020B (Diss)	R-04
EMW-6S-240604 (A4F0920-22)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**0.426**	0.360	0.720	ug/L	2	06/14/24 21:14	EPA 6020B (Diss)	**R-04,J**
Copper	**0.398**	0.360	0.720	ug/L	2	06/14/24 21:14	EPA 6020B (Diss)	**J**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-7S-240604 (A4F0920-23)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**0.732**	0.360	0.720	ug/L	2	06/14/24 21:28	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 21:28	EPA 6020B (Diss)	R-04
EMW-9SA-240605 (A4F0920-24)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**0.532**	0.360	0.720	ug/L	2	06/14/24 18:51	EPA 6020B (Diss)	**R-04,J**
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:51	EPA 6020B (Diss)	R-04
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**0.730**	0.360	0.720	ug/L	2	06/14/24 18:56	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 18:56	EPA 6020B (Diss)	R-04
EMW-12S-240604 (A4F0920-26)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 21:33	EPA 6020B (Diss)	R-04
Copper	**0.686**	0.360	0.720	ug/L	2	06/14/24 21:33	EPA 6020B (Diss)	**R-04,J**
EMW-13S-240604 (A4F0920-27)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**114**	0.360	0.720	ug/L	2	06/14/24 21:38	EPA 6020B (Diss)	
Copper	**1.87**	0.360	0.720	ug/L	2	06/14/24 21:38	EPA 6020B (Diss)	
EMW-14D-240604 (A4F0920-28)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 19:00	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 19:00	EPA 6020B (Diss)	R-04
EMW-15D-240604 (A4F0920-29)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**0.373**	0.360	0.720	ug/L	2	06/14/24 19:05	EPA 6020B (Diss)	**R-04,J**
Copper	ND	0.360	0.720	ug/L	2	06/14/24 19:05	EPA 6020B (Diss)	R-04
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**				

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 19:09	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 19:09	EPA 6020B (Diss)	R-04
EMW-17S-240605 (A4F0920-31)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 19:14	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 19:14	EPA 6020B (Diss)	R-04
EMW-18S-240604 (A4F0920-32)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 19:19	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 19:19	EPA 6020B (Diss)	R-04
EMW-23S-240604 (A4F0920-33)				**Matrix: Water**				
Batch: 24F0481								
Arsenic	**5.14**	0.360	0.720	ug/L	2	06/14/24 19:38	EPA 6020B (Diss)	
Copper	ND	0.360	0.720	ug/L	2	06/14/24 19:38	EPA 6020B (Diss)	R-04
EMW-26S-240604 (A4F0920-34)				**Matrix: Water**				
Batch: 24F0320								
Arsenic	**0.466**	0.360	0.720	ug/L	2	06/14/24 21:42	EPA 6020B (Diss)	**R-04,J**
Copper	**0.418**	0.360	0.720	ug/L	2	06/14/24 21:42	EPA 6020B (Diss)	**R-04,J**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240604 (A4F0920-01)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
CMW-2-240605 (A4F0920-02)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
CMW-3-240604 (A4F0920-03)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
CMW-4-240605 (A4F0920-04)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
CMW-5-240605 (A4F0920-05)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
CMW-6-240604 (A4F0920-06)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
SLR-1-240604 (A4F0920-07)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
SLR-2-240605 (A4F0920-08)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
SLR-3-240605 (A4F0920-09)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
SLR-6-240605 (A4F0920-10)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
SLR-7-240604 (A4F0920-11)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
DMW-2-240604 (A4F0920-12)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
DMW-3-240604 (A4F0920-13)				**Matrix: Water**		**Batch: 24F0249**		

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-3-240604 (A4F0920-13)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
DMW-6B-240604 (A4F0920-14)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
DMW-12-240604 (A4F0920-15)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
HC-4-240605 (A4F0920-16)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
HC-20-240604 (A4F0920-17)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-1S-240604 (A4F0920-18)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-2S-240605 (A4F0920-19)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
EMW-4D-240604 (A4F0920-20)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-5SA-240605 (A4F0920-21)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-6S-240604 (A4F0920-22)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
EMW-7S-240604 (A4F0920-23)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
EMW-9SA-240605 (A4F0920-24)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**		**Batch: 24F0249**		

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-11S-240604 (A4F0920-25)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-12S-240604 (A4F0920-26)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
EMW-13S-240604 (A4F0920-27)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12
EMW-14D-240604 (A4F0920-28)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-15D-240604 (A4F0920-29)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-16D-240605 (A4F0920-30)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-17S-240605 (A4F0920-31)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-18S-240604 (A4F0920-32)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-23S-240604 (A4F0920-33)				**Matrix: Water**		**Batch: 24F0249**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:40	NA	H-12
EMW-26S-240604 (A4F0920-34)				**Matrix: Water**		**Batch: 24F0246**		
Lab Filtration (prep only)	PREP			N/A	1	06/07/24 14:59	NA	H-12

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0258 - EPA 5030C							**Water**					
Blank (24F0258-BLK1)			Prepared: 06/10/24 09:00		Analyzed: 06/10/24 12:29							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				
LCS (24F0258-BS1)			Prepared: 06/10/24 09:00		Analyzed: 06/10/24 11:28							
EPA 8260D SIM												
Vinyl chloride	0.229	0.0100	0.0200	ug/L	1	0.200	---	115	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Duplicate (24F0258-DUP1)			Prepared: 06/10/24 09:00		Analyzed: 06/10/24 22:49							
QC Source Sample: EMW-4D-240604 (A4F0920-20)												
EPA 8260D SIM												
Vinyl chloride	**0.352**	0.0100	0.0200	ug/L	1	---	0.342	---	---	3	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Matrix Spike (24F0258-MS1)			Prepared: 06/10/24 09:00		Analyzed: 06/10/24 16:31							
QC Source Sample: SLR-2-240605 (A4F0920-08)												
EPA 8260D SIM												
Vinyl chloride	0.270	0.0100	0.0200	ug/L	1	0.200	ND	135	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Batch 24F0331 - EPA 5030C							**Water**					
Blank (24F0331-BLK1)			Prepared: 06/13/24 08:00		Analyzed: 06/13/24 22:43							
EPA 8260D SIM												

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0331 - EPA 5030C							**Water**					
Blank (24F0331-BLK1)			Prepared: 06/13/24 08:00		Analyzed: 06/13/24 22:43							
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*			*"*					
LCS (24F0331-BS1)			Prepared: 06/13/24 08:00		Analyzed: 06/13/24 21:49							
EPA 8260D SIM												
Vinyl chloride	0.166	0.0100	0.0200	ug/L	1	0.200	---	83	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*98 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*98 %*	*80-120 %*			*"*					
Duplicate (24F0331-DUP1)			Prepared: 06/13/24 08:00		Analyzed: 06/14/24 01:25							
QC Source Sample: EMW-11S-240604 (A4F0920-25)												
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*100 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*			*"*					
Matrix Spike (24F0331-MS1)			Prepared: 06/13/24 08:00		Analyzed: 06/14/24 08:40							
QC Source Sample: Non-SDG (A4F1009-05)												
EPA 8260D SIM												
Vinyl chloride	0.258	0.0100	0.0200	ug/L	1	0.200	ND	129	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*97 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*			*"*					

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0283 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24F0283-BLK1)			Prepared: 06/10/24 08:08	Analyzed: 06/10/24 12:54								
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 114 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*104 %*	*80-132 %*			*"*					
LCS (24F0283-BS1)			Prepared: 06/10/24 08:08	Analyzed: 06/10/24 13:26								
EPA 8270E LVI												
Acenaphthene	1.56	0.0160	0.0320	ug/L	1	1.60	---	97	80-120%	---	---	
Acenaphthylene	1.86	0.0160	0.0320	ug/L	1	1.60	---	116	80-124%	---	---	
Anthracene	1.65	0.0160	0.0320	ug/L	1	1.60	---	103	80-123%	---	---	
Benz(a)anthracene	1.75	0.00800	0.0160	ug/L	1	1.60	---	109	80-122%	---	---	
Benzo(a)pyrene	1.83	0.00800	0.0160	ug/L	1	1.60	---	114	80-129%	---	---	
Benzo(b)fluoranthene	1.81	0.00800	0.0160	ug/L	1	1.60	---	113	80-124%	---	---	
Benzo(k)fluoranthene	1.79	0.00800	0.0160	ug/L	1	1.60	---	112	80-125%	---	---	
Benzo(g,h,i)perylene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	80-120%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0283 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24F0283-BS1)			Prepared: 06/10/24 08:08		Analyzed: 06/10/24 13:26							
Chrysene	1.67	0.00800	0.0160	ug/L	1	1.60	---	105	80-120%	---	---	
Dibenz(a,h)anthracene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	80-120%	---	---	
Fluoranthene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	80-126%	---	---	
Fluorene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.73	0.00800	0.0160	ug/L	1	1.60	---	108	80-121%	---	---	
1-Methylnaphthalene	1.75	0.0320	0.0640	ug/L	1	1.60	---	109	53-148%	---	---	
2-Methylnaphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	48-150%	---	---	
Naphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	78-120%	---	---	
Phenanthrene	1.55	0.0320	0.0640	ug/L	1	1.60	---	97	80-120%	---	---	
Pyrene	1.88	0.0160	0.0320	ug/L	1	1.60	---	117	80-125%	---	---	
Carbazole	1.54	0.0160	0.0320	ug/L	1	1.60	---	96	65-141%	---	---	
Dibenzofuran	1.81	0.0160	0.0320	ug/L	1	1.60	---	113	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 107 %*		*Limits: 78-134 %*		*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*108 %*		*80-132 %*		*"*					
LCS Dup (24F0283-BSD1)			Prepared: 06/10/24 08:08		Analyzed: 06/10/24 13:59							**Q-19**
EPA 8270E LVI												
Acenaphthene	1.59	0.0160	0.0320	ug/L	1	1.60	---	100	80-120%	2	30%	
Acenaphthylene	1.91	0.0160	0.0320	ug/L	1	1.60	---	120	80-124%	3	30%	
Anthracene	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	80-123%	0.9	30%	
Benz(a)anthracene	1.80	0.00800	0.0160	ug/L	1	1.60	---	113	80-122%	3	30%	
Benzo(a)pyrene	1.86	0.00800	0.0160	ug/L	1	1.60	---	116	80-129%	1	30%	
Benzo(b)fluoranthene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-124%	0.7	30%	
Benzo(k)fluoranthene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-125%	1	30%	
Benzo(g,h,i)perylene	1.79	0.0160	0.0320	ug/L	1	1.60	---	112	80-120%	3	30%	
Chrysene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-120%	2	30%	
Dibenz(a,h)anthracene	1.70	0.00800	0.0160	ug/L	1	1.60	---	106	80-120%	3	30%	
Fluoranthene	1.86	0.0160	0.0320	ug/L	1	1.60	---	116	80-126%	1	30%	
Fluorene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	77-127%	4	30%	
Indeno(1,2,3-cd)pyrene	1.76	0.00800	0.0160	ug/L	1	1.60	---	110	80-121%	2	30%	
1-Methylnaphthalene	1.74	0.0320	0.0640	ug/L	1	1.60	---	109	53-148%	0.6	30%	
2-Methylnaphthalene	1.64	0.0320	0.0640	ug/L	1	1.60	---	102	48-150%	2	30%	
Naphthalene	1.68	0.0320	0.0640	ug/L	1	1.60	---	105	78-120%	5	30%	
Phenanthrene	1.53	0.0320	0.0640	ug/L	1	1.60	---	96	80-120%	1	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0283 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24F0283-BSD1)			Prepared: 06/10/24 08:08		Analyzed: 06/10/24 13:59							**Q-19**
Pyrene	1.89	0.0160	0.0320	ug/L	1	1.60	---	118	80-125%	0.6	30%	
Carbazole	1.62	0.0160	0.0320	ug/L	1	1.60	---	102	65-141%	6	30%	
Dibenzofuran	1.85	0.0160	0.0320	ug/L	1	1.60	---	116	76-121%	2	30%	

Surr: Acenaphthylene-d8 (Surr)	*Recovery: 107 %*	*Limits: 78-134 %*	*Dilution: 1x*	
Benzo(a)pyrene-d12 (Surr)	*109 %*	*80-132 %*	*"*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0344 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24F0344-BLK1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 12:19								
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 112 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*			*"*					
LCS (24F0344-BS1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 12:52								
EPA 8270E LVI												
Acenaphthene	1.54	0.0160	0.0320	ug/L	1	1.60	---	96	80-120%	---	---	
Acenaphthylene	1.94	0.0160	0.0320	ug/L	1	1.60	---	121	80-124%	---	---	
Anthracene	1.69	0.0160	0.0320	ug/L	1	1.60	---	105	80-123%	---	---	
Benz(a)anthracene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-122%	---	---	
Benzo(a)pyrene	1.92	0.00800	0.0160	ug/L	1	1.60	---	120	80-129%	---	---	
Benzo(b)fluoranthene	1.89	0.00800	0.0160	ug/L	1	1.60	---	118	80-124%	---	---	
Benzo(k)fluoranthene	1.87	0.00800	0.0160	ug/L	1	1.60	---	117	80-125%	---	---	
Benzo(g,h,i)perylene	1.81	0.0160	0.0320	ug/L	1	1.60	---	113	80-120%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: 8th Ave. Terminals	
155 NE 100th St #302	Project Number: 2175001.020.022	Report ID:
Seattle, WA 98125	Project Manager: Mike Staton	A4F0920 - 06 21 24 1740

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0344 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24F0344-BS1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 12:52								
Chrysene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-120%	---	---	
Dibenz(a,h)anthracene	1.71	0.00800	0.0160	ug/L	1	1.60	---	107	80-120%	---	---	
Fluoranthene	1.91	0.0160	0.0320	ug/L	1	1.60	---	120	80-126%	---	---	
Fluorene	1.72	0.0160	0.0320	ug/L	1	1.60	---	107	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.74	0.00800	0.0160	ug/L	1	1.60	---	109	80-121%	---	---	
1-Methylnaphthalene	1.94	0.0320	0.0640	ug/L	1	1.60	---	121	53-148%	---	---	
2-Methylnaphthalene	1.85	0.0320	0.0640	ug/L	1	1.60	---	116	48-150%	---	---	
Naphthalene	1.68	0.0320	0.0640	ug/L	1	1.60	---	105	78-120%	---	---	
Phenanthrene	1.57	0.0320	0.0640	ug/L	1	1.60	---	98	80-120%	---	---	
Pyrene	1.96	0.0160	0.0320	ug/L	1	1.60	---	123	80-125%	---	---	
Carbazole	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	65-141%	---	---	
Dibenzofuran	1.91	0.0160	0.0320	ug/L	1	1.60	---	119	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 109 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*			*"*					
LCS Dup (24F0344-BSD1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 13:24								Q-19
EPA 8270E LVI												
Acenaphthene	1.56	0.0160	0.0320	ug/L	1	1.60	---	97	80-120%	1	30%	
Acenaphthylene	1.98	0.0160	0.0320	ug/L	1	1.60	---	124	80-124%	2	30%	
Anthracene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-123%	0.6	30%	
Benz(a)anthracene	1.87	0.00800	0.0160	ug/L	1	1.60	---	117	80-122%	3	30%	
Benzo(a)pyrene	1.93	0.00800	0.0160	ug/L	1	1.60	---	121	80-129%	0.3	30%	
Benzo(b)fluoranthene	1.92	0.00800	0.0160	ug/L	1	1.60	---	120	80-124%	2	30%	
Benzo(k)fluoranthene	1.89	0.00800	0.0160	ug/L	1	1.60	---	118	80-125%	0.9	30%	
Benzo(g,h,i)perylene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	80-120%	1	30%	
Chrysene	1.74	0.00800	0.0160	ug/L	1	1.60	---	109	80-120%	1	30%	
Dibenz(a,h)anthracene	1.75	0.00800	0.0160	ug/L	1	1.60	---	109	80-120%	2	30%	
Fluoranthene	1.94	0.0160	0.0320	ug/L	1	1.60	---	121	80-126%	1	30%	
Fluorene	1.71	0.0160	0.0320	ug/L	1	1.60	---	107	77-127%	0.2	30%	
Indeno(1,2,3-cd)pyrene	1.81	0.00800	0.0160	ug/L	1	1.60	---	113	80-121%	4	30%	
1-Methylnaphthalene	1.92	0.0320	0.0640	ug/L	1	1.60	---	120	53-148%	1	30%	
2-Methylnaphthalene	1.83	0.0320	0.0640	ug/L	1	1.60	---	114	48-150%	1	30%	
Naphthalene	1.72	0.0320	0.0640	ug/L	1	1.60	---	107	78-120%	2	30%	
Phenanthrene	1.58	0.0320	0.0640	ug/L	1	1.60	---	99	80-120%	0.8	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0344 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24F0344-BSD1)			Prepared: 06/11/24 07:20		Analyzed: 06/11/24 13:24							**Q-19**
Pyrene	1.97	0.0160	0.0320	ug/L	1	1.60	---	123	80-125%	0.5	30%	
Carbazole	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	65-141%	2	30%	
Dibenzofuran	1.93	0.0160	0.0320	ug/L	1	1.60	---	121	76-121%	2	30%	

Surr: Acenaphthylene-d8 (Surr)	*Recovery: 110 %*	*Limits: 78-134 %*	*Dilution: 1x*
Benzo(a)pyrene-d12 (Surr)	*111 %*	*80-132 %*	*"*

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0393 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24F0393-BLK1)			Prepared: 06/12/24 08:07	Analyzed: 06/12/24 14:02								
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 91 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*			*"*					
LCS (24F0393-BS1)			Prepared: 06/12/24 08:07	Analyzed: 06/12/24 14:35								
EPA 8270E LVI												
Acenaphthene	1.69	0.0160	0.0320	ug/L	1	1.60	---	106	80-120%	---	---	
Acenaphthylene	1.69	0.0160	0.0320	ug/L	1	1.60	---	105	80-124%	---	---	
Anthracene	1.65	0.0160	0.0320	ug/L	1	1.60	---	103	80-123%	---	---	
Benz(a)anthracene	1.76	0.00800	0.0160	ug/L	1	1.60	---	110	80-122%	---	---	
Benzo(a)pyrene	1.83	0.00800	0.0160	ug/L	1	1.60	---	114	80-129%	---	---	
Benzo(b)fluoranthene	1.90	0.00800	0.0160	ug/L	1	1.60	---	119	80-124%	---	---	
Benzo(k)fluoranthene	1.84	0.00800	0.0160	ug/L	1	1.60	---	115	80-125%	---	---	
Benzo(g,h,i)perylene	1.94	0.0160	0.0320	ug/L	1	1.60	---	**121**	**80-120%**	---	---	Q-29

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0393 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24F0393-BS1)			Prepared: 06/12/24 08:07	Analyzed: 06/12/24 14:35								
Chrysene	1.69	0.00800	0.0160	ug/L	1	1.60	---	106	80-120%	---	---	
Dibenz(a,h)anthracene	1.69	0.00800	0.0160	ug/L	1	1.60	---	106	80-120%	---	---	
Fluoranthene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-126%	---	---	
Fluorene	1.79	0.0160	0.0320	ug/L	1	1.60	---	112	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-121%	---	---	
1-Methylnaphthalene	1.86	0.0320	0.0640	ug/L	1	1.60	---	116	53-148%	---	---	
2-Methylnaphthalene	1.75	0.0320	0.0640	ug/L	1	1.60	---	109	48-150%	---	---	
Naphthalene	1.68	0.0320	0.0640	ug/L	1	1.60	---	105	78-120%	---	---	
Phenanthrene	1.55	0.0320	0.0640	ug/L	1	1.60	---	97	80-120%	---	---	
Pyrene	1.76	0.0160	0.0320	ug/L	1	1.60	---	110	80-125%	---	---	
Carbazole	1.49	0.0160	0.0320	ug/L	1	1.60	---	93	65-141%	---	---	
Dibenzofuran	1.64	0.0160	0.0320	ug/L	1	1.60	---	103	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 92 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*106 %*	*80-132 %*			*"*					
LCS Dup (24F0393-BSD1)			Prepared: 06/12/24 08:07	Analyzed: 06/12/24 15:08								**Q-19**
EPA 8270E LVI												
Acenaphthene	1.65	0.0160	0.0320	ug/L	1	1.60	---	103	80-120%	2	30%	
Acenaphthylene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-124%	2	30%	
Anthracene	1.69	0.0160	0.0320	ug/L	1	1.60	---	106	80-123%	2	30%	
Benz(a)anthracene	1.80	0.00800	0.0160	ug/L	1	1.60	---	112	80-122%	2	30%	
Benzo(a)pyrene	1.87	0.00800	0.0160	ug/L	1	1.60	---	117	80-129%	2	30%	
Benzo(b)fluoranthene	1.89	0.00800	0.0160	ug/L	1	1.60	---	118	80-124%	0.5	30%	
Benzo(k)fluoranthene	1.86	0.00800	0.0160	ug/L	1	1.60	---	116	80-125%	1	30%	
Benzo(g,h,i)perylene	1.89	0.0160	0.0320	ug/L	1	1.60	---	118	80-120%	3	30%	
Chrysene	1.71	0.00800	0.0160	ug/L	1	1.60	---	107	80-120%	1	30%	
Dibenz(a,h)anthracene	1.79	0.00800	0.0160	ug/L	1	1.60	---	112	80-120%	6	30%	
Fluoranthene	1.75	0.0160	0.0320	ug/L	1	1.60	---	109	80-126%	1	30%	
Fluorene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	77-127%	3	30%	
Indeno(1,2,3-cd)pyrene	1.78	0.00800	0.0160	ug/L	1	1.60	---	112	80-121%	2	30%	
1-Methylnaphthalene	1.97	0.0320	0.0640	ug/L	1	1.60	---	123	53-148%	6	30%	
2-Methylnaphthalene	1.85	0.0320	0.0640	ug/L	1	1.60	---	116	48-150%	6	30%	
Naphthalene	1.67	0.0320	0.0640	ug/L	1	1.60	---	104	78-120%	1	30%	
Phenanthrene	1.56	0.0320	0.0640	ug/L	1	1.60	---	97	80-120%	0.9	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0393 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24F0393-BSD1)			Prepared: 06/12/24 08:07		Analyzed: 06/12/24 15:08							**Q-19**
Pyrene	1.80	0.0160	0.0320	ug/L	1	1.60	---	112	80-125%	2	30%	
Carbazole	1.58	0.0160	0.0320	ug/L	1	1.60	---	99	65-141%	6	30%	
Dibenzofuran	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	76-121%	1	30%	

Surr: Acenaphthylene-d8 (Surr)	*Recovery: 92 %*	*Limits: 78-134 %*	*Dilution: 1x*
Benzo(a)pyrene-d12 (Surr)	*108 %*	*80-132 %*	*"*

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0482 - EPA 3015A							**Water**					
Blank (24F0482-BLK1)			Prepared: 06/13/24 15:39		Analyzed: 06/14/24 21:47							
EPA 6020B												
Arsenic	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
LCS (24F0482-BS1)			Prepared: 06/13/24 15:39		Analyzed: 06/14/24 21:51							
EPA 6020B												
Arsenic	5.73	0.200	0.400	ug/L	1	5.56	---	103	80-120%	---	---	
Copper	5.83	0.200	0.400	ug/L	1	5.56	---	105	80-120%	---	---	
Duplicate (24F0482-DUP1)			Prepared: 06/13/24 15:39		Analyzed: 06/14/24 22:37							
QC Source Sample: SLR-1-240604 (A4F0920-07)												
EPA 6020B												
Arsenic	**0.968**	0.360	0.720	ug/L	1	---	0.950	---	---	2	20%	
Copper	**0.467**	0.360	0.720	ug/L	1	---	0.378	---	---	**21**	**20%**	J
Matrix Spike (24F0482-MS1)			Prepared: 06/13/24 15:39		Analyzed: 06/14/24 22:42							
QC Source Sample: SLR-1-240604 (A4F0920-07)												
EPA 6020B												
Arsenic	11.6	0.360	0.720	ug/L	1	10.0	0.950	107	75-125%	---	---	
Copper	10.9	0.360	0.720	ug/L	1	10.0	0.378	106	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0483 - EPA 3015A							**Water**					
Blank (24F0483-BLK1)			Prepared: 06/13/24 15:39		Analyzed: 06/14/24 23:55							
EPA 6020B												
Arsenic	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
LCS (24F0483-BS1)			Prepared: 06/13/24 15:39		Analyzed: 06/15/24 00:00							
EPA 6020B												
Arsenic	5.73	0.200	0.400	ug/L	1	5.56	---	103	80-120%	---	---	
Copper	5.83	0.200	0.400	ug/L	1	5.56	---	105	80-120%	---	---	
Duplicate (24F0483-DUP1)			Prepared: 06/13/24 15:39		Analyzed: 06/15/24 00:23							
QC Source Sample: EMW-5SA-240605 (A4F0920-21)												
EPA 6020B												
Arsenic	**0.766**	0.360	0.720	ug/L	1	---	0.807	---	---	5	20%	
Copper	ND	0.360	0.720	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (24F0483-MS1)			Prepared: 06/13/24 15:39		Analyzed: 06/15/24 00:28							
QC Source Sample: EMW-5SA-240605 (A4F0920-21)												
EPA 6020B												
Arsenic	11.0	0.360	0.720	ug/L	1	10.0	0.807	102	75-125%	---	---	
Copper	10.1	0.360	0.720	ug/L	1	10.0	ND	101	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0320 - Matrix Matched Direct Inject							**Water**					
Blank (24F0320-BLK1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 19:52							
EPA 6020B (Diss)												
Arsenic	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
LCS (24F0320-BS1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 19:56							
EPA 6020B (Diss)												
Arsenic	5.67	0.200	0.400	ug/L	1	5.56	---	102	80-120%	---	---	
Copper	5.90	0.200	0.400	ug/L	1	5.56	---	106	80-120%	---	---	
Duplicate (24F0320-DUP1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 20:19							
QC Source Sample: CMW-4-240605 (A4F0920-04)												
EPA 6020B (Diss)												
Arsenic	**42.3**	0.360	0.720	ug/L	2	---	43.5	---	---	3	20%	
Copper	**3.58**	0.360	0.720	ug/L	2	---	3.70	---	---	3	20%	
Matrix Spike (24F0320-MS1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 20:33							
QC Source Sample: CMW-4-240605 (A4F0920-04)												
EPA 6020B (Diss)												
Arsenic	47.1	0.360	0.720	ug/L	1	25.0	43.5	**14**	**75-125%**	---	---	Q-02
Copper	19.7	0.360	0.720	ug/L	1	25.0	3.70	**64**	**75-125%**	---	---	Q-02

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0481 - Matrix Matched Direct Inject							**Water**					
Blank (24F0481-BLK1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 17:18							
EPA 6020B (Diss)												
Arsenic	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
LCS (24F0481-BS1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 17:22							
EPA 6020B (Diss)												
Arsenic	5.47	0.200	0.400	ug/L	1	5.56	---	99	80-120%	---	---	
Copper	5.77	0.200	0.400	ug/L	1	5.56	---	104	80-120%	---	---	
Duplicate (24F0481-DUP2)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 19:47							
QC Source Sample: SLR-3-240605 (A4F0920-09)												
EPA 6020B (Diss)												
Arsenic	**34.5**	0.900	1.80	ug/L	2	---	36.2	---	---	5	20%	Q-16
Copper	**13.7**	1.80	3.60	ug/L	2	---	18.4	---	---	**29**	**20%**	Q-16, Q-17
Matrix Spike (24F0481-MS1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 17:50							
QC Source Sample: SLR-3-240605 (A4F0920-09)												
EPA 6020B (Diss)												
Arsenic	41.0	0.360	0.720	ug/L	1	25.0	36.2	**19**	**75-125%**	---	---	Q-02
Copper	27.5	0.360	0.720	ug/L	1	25.0	18.4	**36**	**75-125%**	---	---	Q-02

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

SAMPLE PREPARATION INFORMATION

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0258							
A4F0920-01	Water	EPA 8260D SIM	06/04/24 10:05	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-02	Water	EPA 8260D SIM	06/05/24 11:40	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-03	Water	EPA 8260D SIM	06/04/24 10:56	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-04	Water	EPA 8260D SIM	06/05/24 12:27	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-05	Water	EPA 8260D SIM	06/05/24 11:07	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-06	Water	EPA 8260D SIM	06/04/24 12:11	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-07	Water	EPA 8260D SIM	06/04/24 12:50	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-08	Water	EPA 8260D SIM	06/05/24 11:45	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-09	Water	EPA 8260D SIM	06/05/24 11:05	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-10	Water	EPA 8260D SIM	06/05/24 12:20	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-11	Water	EPA 8260D SIM	06/04/24 13:45	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-12	Water	EPA 8260D SIM	06/04/24 15:07	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-13	Water	EPA 8260D SIM	06/04/24 15:21	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-14	Water	EPA 8260D SIM	06/04/24 13:17	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-15	Water	EPA 8260D SIM	06/04/24 14:57	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-16	Water	EPA 8260D SIM	06/05/24 12:07	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-17	Water	EPA 8260D SIM	06/04/24 14:55	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-18	Water	EPA 8260D SIM	06/04/24 13:01	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-19	Water	EPA 8260D SIM	06/05/24 12:51	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
A4F0920-20	Water	EPA 8260D SIM	06/04/24 11:00	06/10/24 09:00	5mL/5mL	5mL/5mL	1.00
Batch: 24F0331							
A4F0920-21	Water	EPA 8260D SIM	06/05/24 12:17	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-22	Water	EPA 8260D SIM	06/04/24 13:46	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-23	Water	EPA 8260D SIM	06/04/24 13:57	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-24	Water	EPA 8260D SIM	06/05/24 11:01	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-25	Water	EPA 8260D SIM	06/04/24 14:47	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-26	Water	EPA 8260D SIM	06/04/24 11:37	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-27	Water	EPA 8260D SIM	06/04/24 11:32	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-28	Water	EPA 8260D SIM	06/04/24 10:47	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-29	Water	EPA 8260D SIM	06/04/24 11:57	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-30	Water	EPA 8260D SIM	06/05/24 11:10	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-31	Water	EPA 8260D SIM	06/05/24 13:47	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-32	Water	EPA 8260D SIM	06/04/24 13:17	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-33	Water	EPA 8260D SIM	06/04/24 11:50	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0920-34	Water	EPA 8260D SIM	06/04/24 16:00	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0283							
A4F0920-01	Water	EPA 8270E LVI	06/04/24 10:05	06/10/24 08:08	121.24mL/5mL	125mL/5mL	1.03
A4F0920-03	Water	EPA 8270E LVI	06/04/24 10:56	06/10/24 08:08	120.73mL/5mL	125mL/5mL	1.04
A4F0920-06	Water	EPA 8270E LVI	06/04/24 12:11	06/10/24 08:08	102.23mL/5mL	125mL/5mL	1.22
A4F0920-07	Water	EPA 8270E LVI	06/04/24 12:50	06/10/24 08:08	124.88mL/5mL	125mL/5mL	1.00
A4F0920-11	Water	EPA 8270E LVI	06/04/24 13:45	06/10/24 08:08	110.21mL/5mL	125mL/5mL	1.13
A4F0920-12	Water	EPA 8270E LVI	06/04/24 15:07	06/10/24 08:08	95.56mL/5mL	125mL/5mL	1.31
A4F0920-12RE1	Water	EPA 8270E LVI	06/04/24 15:07	06/10/24 08:08	95.56mL/5mL	125mL/5mL	1.31
A4F0920-13	Water	EPA 8270E LVI	06/04/24 15:21	06/10/24 08:08	120.34mL/5mL	125mL/5mL	1.04
A4F0920-14	Water	EPA 8270E LVI	06/04/24 13:17	06/10/24 08:08	107.82mL/5mL	125mL/5mL	1.16
A4F0920-15	Water	EPA 8270E LVI	06/04/24 14:57	06/10/24 08:08	105.39mL/5mL	125mL/5mL	1.19
A4F0920-15RE1	Water	EPA 8270E LVI	06/04/24 14:57	06/10/24 08:08	105.39mL/5mL	125mL/5mL	1.19
A4F0920-17	Water	EPA 8270E LVI	06/04/24 14:55	06/10/24 08:08	107.35mL/5mL	125mL/5mL	1.16
A4F0920-18	Water	EPA 8270E LVI	06/04/24 13:01	06/10/24 08:08	102.41mL/5mL	125mL/5mL	1.22
A4F0920-20	Water	EPA 8270E LVI	06/04/24 11:00	06/10/24 08:08	101.19mL/5mL	125mL/5mL	1.24
A4F0920-22	Water	EPA 8270E LVI	06/04/24 13:46	06/10/24 08:08	113.3mL/5mL	125mL/5mL	1.10
A4F0920-23	Water	EPA 8270E LVI	06/04/24 13:57	06/10/24 08:08	110.48mL/5mL	125mL/5mL	1.13
A4F0920-25	Water	EPA 8270E LVI	06/04/24 14:47	06/10/24 08:08	101.95mL/5mL	125mL/5mL	1.23
A4F0920-26	Water	EPA 8270E LVI	06/04/24 11:37	06/10/24 08:08	108.94mL/5mL	125mL/5mL	1.15
A4F0920-27	Water	EPA 8270E LVI	06/04/24 11:32	06/10/24 08:08	110.6mL/5mL	125mL/5mL	1.13
A4F0920-28	Water	EPA 8270E LVI	06/04/24 10:47	06/10/24 08:08	107.44mL/5mL	125mL/5mL	1.16
A4F0920-29	Water	EPA 8270E LVI	06/04/24 11:57	06/10/24 08:08	104.46mL/5mL	125mL/5mL	1.20
A4F0920-32	Water	EPA 8270E LVI	06/04/24 13:17	06/10/24 08:08	108.22mL/5mL	125mL/5mL	1.16
Batch: 24F0344							
A4F0920-02	Water	EPA 8270E LVI	06/05/24 11:40	06/11/24 07:20	98.37mL/5mL	125mL/5mL	1.27
A4F0920-04	Water	EPA 8270E LVI	06/05/24 12:27	06/11/24 07:20	113.57mL/5mL	125mL/5mL	1.10
A4F0920-05	Water	EPA 8270E LVI	06/05/24 11:07	06/11/24 07:20	93.72mL/5mL	125mL/5mL	1.33
A4F0920-08	Water	EPA 8270E LVI	06/05/24 11:45	06/11/24 07:20	124.78mL/5mL	125mL/5mL	1.00
A4F0920-10	Water	EPA 8270E LVI	06/05/24 12:20	06/11/24 07:20	102.04mL/5mL	125mL/5mL	1.23
A4F0920-16	Water	EPA 8270E LVI	06/05/24 12:07	06/11/24 07:20	118.97mL/5mL	125mL/5mL	1.05
A4F0920-19	Water	EPA 8270E LVI	06/05/24 12:51	06/11/24 07:20	111.12mL/5mL	125mL/5mL	1.12
A4F0920-21	Water	EPA 8270E LVI	06/05/24 12:17	06/11/24 07:20	119.77mL/5mL	125mL/5mL	1.04
A4F0920-24	Water	EPA 8270E LVI	06/05/24 11:01	06/11/24 07:20	112.9mL/5mL	125mL/5mL	1.11
A4F0920-30	Water	EPA 8270E LVI	06/05/24 11:10	06/11/24 07:20	111.82mL/5mL	125mL/5mL	1.12
A4F0920-31	Water	EPA 8270E LVI	06/05/24 13:47	06/11/24 07:20	112.68mL/5mL	125mL/5mL	1.11
A4F0920-33	Water	EPA 8270E LVI	06/04/24 11:50	06/11/24 07:20	112.22mL/5mL	125mL/5mL	1.11
A4F0920-34	Water	EPA 8270E LVI	06/04/24 16:00	06/11/24 07:20	110.12mL/5mL	125mL/5mL	1.14

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0393							
A4F0920-09RE1	Water	EPA 8270E LVI	06/05/24 11:05	06/12/24 13:03	122.07mL/5mL	125mL/5mL	1.02

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0482							
A4F0920-01	Water	EPA 6020B	06/04/24 10:05	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-02	Water	EPA 6020B	06/05/24 11:40	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-03	Water	EPA 6020B	06/04/24 10:56	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-04	Water	EPA 6020B	06/05/24 12:27	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-05	Water	EPA 6020B	06/05/24 11:07	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-06	Water	EPA 6020B	06/04/24 12:11	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-07	Water	EPA 6020B	06/04/24 12:50	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-08	Water	EPA 6020B	06/05/24 11:45	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-09	Water	EPA 6020B	06/05/24 11:05	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-10	Water	EPA 6020B	06/05/24 12:20	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-11	Water	EPA 6020B	06/04/24 13:45	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-12	Water	EPA 6020B	06/04/24 15:07	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-13	Water	EPA 6020B	06/04/24 15:21	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-14	Water	EPA 6020B	06/04/24 13:17	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-15	Water	EPA 6020B	06/04/24 14:57	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-16	Water	EPA 6020B	06/05/24 12:07	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-17	Water	EPA 6020B	06/04/24 14:55	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-18	Water	EPA 6020B	06/04/24 13:01	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-19	Water	EPA 6020B	06/05/24 12:51	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
Batch: 24F0483							
A4F0920-20	Water	EPA 6020B	06/04/24 11:00	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-21	Water	EPA 6020B	06/05/24 12:17	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-22	Water	EPA 6020B	06/04/24 13:46	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-23	Water	EPA 6020B	06/04/24 13:57	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-24	Water	EPA 6020B	06/05/24 11:01	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-25	Water	EPA 6020B	06/04/24 14:47	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-26	Water	EPA 6020B	06/04/24 11:37	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-27	Water	EPA 6020B	06/04/24 11:32	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4F0920-28	Water	EPA 6020B	06/04/24 10:47	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-29	Water	EPA 6020B	06/04/24 11:57	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-30	Water	EPA 6020B	06/05/24 11:10	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-31	Water	EPA 6020B	06/05/24 13:47	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-32	Water	EPA 6020B	06/04/24 13:17	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-33	Water	EPA 6020B	06/04/24 11:50	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80
A4F0920-34	Water	EPA 6020B	06/04/24 16:00	06/10/24 14:00	25mL/50mL	45mL/50mL	1.80

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0320							
A4F0920-01	Water	EPA 6020B (Diss)	06/04/24 10:05	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-02	Water	EPA 6020B (Diss)	06/05/24 11:40	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-03	Water	EPA 6020B (Diss)	06/04/24 10:56	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-04	Water	EPA 6020B (Diss)	06/05/24 12:27	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-06	Water	EPA 6020B (Diss)	06/04/24 12:11	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-07	Water	EPA 6020B (Diss)	06/04/24 12:50	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-08	Water	EPA 6020B (Diss)	06/05/24 11:45	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-10	Water	EPA 6020B (Diss)	06/05/24 12:20	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-11	Water	EPA 6020B (Diss)	06/04/24 13:45	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-16	Water	EPA 6020B (Diss)	06/05/24 12:07	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-19	Water	EPA 6020B (Diss)	06/05/24 12:51	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-22	Water	EPA 6020B (Diss)	06/04/24 13:46	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-23	Water	EPA 6020B (Diss)	06/04/24 13:57	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-26	Water	EPA 6020B (Diss)	06/04/24 11:37	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-27	Water	EPA 6020B (Diss)	06/04/24 11:32	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-34	Water	EPA 6020B (Diss)	06/04/24 16:00	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
Batch: 24F0481							
A4F0920-05	Water	EPA 6020B (Diss)	06/05/24 11:07	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-09	Water	EPA 6020B (Diss)	06/05/24 11:05	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-12	Water	EPA 6020B (Diss)	06/04/24 15:07	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-13	Water	EPA 6020B (Diss)	06/04/24 15:21	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-14	Water	EPA 6020B (Diss)	06/04/24 13:17	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-15	Water	EPA 6020B (Diss)	06/04/24 14:57	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-17	Water	EPA 6020B (Diss)	06/04/24 14:55	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4F0920-18	Water	EPA 6020B (Diss)	06/04/24 13:01	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-20	Water	EPA 6020B (Diss)	06/04/24 11:00	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-21	Water	EPA 6020B (Diss)	06/05/24 12:17	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-24	Water	EPA 6020B (Diss)	06/05/24 11:01	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-25	Water	EPA 6020B (Diss)	06/04/24 14:47	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-28	Water	EPA 6020B (Diss)	06/04/24 10:47	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-29	Water	EPA 6020B (Diss)	06/04/24 11:57	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-30	Water	EPA 6020B (Diss)	06/05/24 11:10	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-31	Water	EPA 6020B (Diss)	06/05/24 13:47	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-32	Water	EPA 6020B (Diss)	06/04/24 13:17	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0920-33	Water	EPA 6020B (Diss)	06/04/24 11:50	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0246							
A4F0920-01	Water	NA	06/04/24 10:05	06/07/24 14:30	30mL/30mL		NA
A4F0920-02	Water	NA	06/05/24 11:40	06/07/24 14:30	30mL/30mL		NA
A4F0920-03	Water	NA	06/04/24 10:56	06/07/24 14:30	30mL/30mL		NA
A4F0920-04	Water	NA	06/05/24 12:27	06/07/24 14:30	30mL/30mL		NA
A4F0920-06	Water	NA	06/04/24 12:11	06/07/24 14:30	30mL/30mL		NA
A4F0920-07	Water	NA	06/04/24 12:50	06/07/24 14:30	30mL/30mL		NA
A4F0920-08	Water	NA	06/05/24 11:45	06/07/24 14:30	30mL/30mL		NA
A4F0920-10	Water	NA	06/05/24 12:20	06/07/24 14:30	30mL/30mL		NA
A4F0920-11	Water	NA	06/04/24 13:45	06/07/24 14:30	30mL/30mL		NA
A4F0920-16	Water	NA	06/05/24 12:07	06/07/24 14:30	30mL/30mL		NA
A4F0920-19	Water	NA	06/05/24 12:51	06/07/24 14:30	30mL/30mL		NA
A4F0920-22	Water	NA	06/04/24 13:46	06/07/24 14:30	30mL/30mL		NA
A4F0920-23	Water	NA	06/04/24 13:57	06/07/24 14:30	30mL/30mL		NA
A4F0920-26	Water	NA	06/04/24 11:37	06/07/24 14:30	30mL/30mL		NA
A4F0920-27	Water	NA	06/04/24 11:32	06/07/24 14:30	30mL/30mL		NA
A4F0920-34	Water	NA	06/04/24 16:00	06/07/24 14:30	30mL/30mL		NA
Batch: 24F0249							
A4F0920-05	Water	NA	06/05/24 11:07	06/07/24 14:40	30mL/30mL		NA
A4F0920-09	Water	NA	06/05/24 11:05	06/07/24 14:40	30mL/30mL		NA
A4F0920-12	Water	NA	06/04/24 15:07	06/07/24 14:40	30mL/30mL		NA

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

SAMPLE PREPARATION INFORMATION

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4F0920-13	Water	NA	06/04/24 15:21	06/07/24 14:40	30mL/30mL		NA
A4F0920-14	Water	NA	06/04/24 13:17	06/07/24 14:40	30mL/30mL		NA
A4F0920-15	Water	NA	06/04/24 14:57	06/07/24 14:40	30mL/30mL		NA
A4F0920-17	Water	NA	06/04/24 14:55	06/07/24 14:40	30mL/30mL		NA
A4F0920-18	Water	NA	06/04/24 13:01	06/07/24 14:40	30mL/30mL		NA
A4F0920-20	Water	NA	06/04/24 11:00	06/07/24 14:40	30mL/30mL		NA
A4F0920-21	Water	NA	06/05/24 12:17	06/07/24 14:40	30mL/30mL		NA
A4F0920-24	Water	NA	06/05/24 11:01	06/07/24 14:40	30mL/30mL		NA
A4F0920-25	Water	NA	06/04/24 14:47	06/07/24 14:40	30mL/30mL		NA
A4F0920-28	Water	NA	06/04/24 10:47	06/07/24 14:40	30mL/30mL		NA
A4F0920-29	Water	NA	06/04/24 11:57	06/07/24 14:40	30mL/30mL		NA
A4F0920-30	Water	NA	06/05/24 11:10	06/07/24 14:40	30mL/30mL		NA
A4F0920-31	Water	NA	06/05/24 13:47	06/07/24 14:40	30mL/30mL		NA
A4F0920-32	Water	NA	06/04/24 13:17	06/07/24 14:40	30mL/30mL		NA
A4F0920-33	Water	NA	06/04/24 11:50	06/07/24 14:40	30mL/30mL		NA

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

DCNT	Sample decanted due to the presence of sediment. Sample bottle not rinsed with solvent.
H-12	Sample Analysis or Filtration was performed >15 minutes after sample collection. Consult regulator or permit manager to determine the usability of data for intended use.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-02	Spike recovery is outside of established control limits due to matrix interference.
Q-16	Reanalysis of an original Batch QC sample.
Q-17	RPD between original and duplicate sample, or spike duplicates, is outside of established control limits.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-29	Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
R-04	Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.
-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

ANALYTICAL REPORT

Project: **8th Ave. Terminals**
Project Number: **2175001.020.022**
Project Manager: **Mike Staton**

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Report ID:
A4F0920 - 06 21 24 1740

LANDAU ASSOCIATES

Chain-of-Custody Record

A4F0920

- [x] North Seattle (206) 631-8660
- [ ] Tacoma (253) 926-2493
- [ ] Olympia (360) 791-3178
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080

Date 6/5/24
Page 1 of 2

Turnaround Time:
Standard
Accelerated

Project Name: 8th Ave Terminals
Project No.: 2175001.020.022
Project Location/Event: Quarterly Groundwater Sampling Event
Sampler's Name: Spencer Lo, Ben Hecht, Emerson Cole, Graham Johnson, Devin Brandt
Project Contact: Mike Staton
Send Results To: Mike Staton - mstaton@landauinc.com

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Vinyl Chloride 8260D SIM	PAHs 8270E	Total Arsenic + Copper 6020B	Dissolved Arsenic + Copper 6020B
CMW-1-240604	6/4/24	1005	water	7	X	X	X	X
CMW-2-240605	6/5/24	1140	water	7	X	X	X	X
CMW-3-240604	6/4/24	1056	water	7	X	X	X	X
CMW-4-240605	6/5/24	1227	water	7	X	X	X	X
CMW-5-240605	6/5/24	1107	water	7	X	X	X	X
CMW-6-240604	6/4/24	1211	water	7	X	X	X	X
SLR-1-240604	6/4/24	1250	water	7	X	X	X	X
SLR-2-240605	6/5/24	1145	water	7	X	X	X	X
SLR-3-240605	6/5/24	1105	water	7	X	X	X	X
SLR-6-240605	6/5/24	1220	water	7	X	X	X	X
SLR-7-240604	6/4/24	1345	water	7	X	X	X	X
DMW2-240604	6/4/24	1507	water	7	X	X	X	X
DMW3-240604	6/4/24	1521	water	7	X	X	X	X
DMW-6B-240604	6/4/24	1317	water	7	X	X	X	X
DMW12-240604	6/4/24	1457	water	7	X	X	X	X
HC-4-240605	6/5/24	1207	water	7	X	X	X	X
HC-20-240604	6/4/24	1455	water	7	X	X	X	X
EMW-1S-240604	6/4/24	1301	water	7	X	X	X	X
EMW-2S-240605	6/5/24	1251	water	7	X	X	X	X
EMW-4D-240604	6/4/24	1100	water	7	X	X	X	X
EMW-5SA-240605	6/5/24	1217	water	7	X	X	X	X
EMW-6S-240604	6/4/24	1346	water	7	X	X	X	X

Observations/Comments

- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other: Laboratory to filter dissolved samples in lab

Relinquished by	Received by	Relinquished by	Received by
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Printed Name: Spencer Lo	Printed Name: [illegible]	Printed Name:	Printed Name:
Company: LAI	Company: Apex	Company:	Company:
Date: 6/5/24 Time: 1530	Date: 6/6/24 Time: 1138	Date: Time:	Date: Time:

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative 10/2018

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Philip Nerenberg, Lab Director

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

A4F0920

LANDAU ASSOCIATES

Chain-of-Custody Record

☒ North Seattle (206) 631-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178 ☐

Date 6/5/24
Page 1 of 1

Turnaround Time: Standard / Accelerated

Project Name 8th Ave Terminals
Project No. 2175001.020.022
Project Location/Event
Sampler's Name
Project Contact
Send Results To

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx Diesel 8760D SIM	NWTPH-Dx Oil	Total Arsenic	Dissolved Arsenic + Copper Lab	Observations/Comments
EMW-7S-240604	6/4/24	1357	water	7	X	X	X	X	
EMW-9SA-240605	6/5/24	1101	water	7	X	X	X	X	
EMW-11S-240604	6/4/24	1447	water	7	X	X	X	X	
EMW-12S-240604	6/4/24	1137	water	7	X	X	X	X	
EMW-13S-240604	6/4/24	1132	water	7	X	X	X	X	
EMW-14-240604	6/4/24	1047	water	7	X	X	X	X	
EMW-15D-240604	6/4/24	1157	water	7	X	X	X	X	
EMW-16D-240605	6/5/24	1110	water	7	X	X	X	X	
EMW-17S-240605	6/5/24	1347	water	7	X	X	X	X	
EMW-18S-240604	6/4/24	1317	water	7	X	X	X	X	
EMW-23S-240604	6/4/24	1150	water	7	X	X	X	X	
EMW-26S-240604	6/4/24	1600	water	7	X	X	X	X	

Observations/Comments:
- ___ Allow water samples to settle, collect aliquot from clear portion ☐
- ___ NWTPH-Dx - Acid wash cleanup ☐ - Silica gel cleanup ☐
- ___ Dissolved metal samples were field filtered

Other Filter dissolved samples in Lab

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Spencer Lo	Printed Name [signature]	Printed Name	Printed Name
Company LAI	Company Apex	Company	Company
Date 6/5/24 Time 1530	Date 6/4/24 Time 1138	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

WO# A4F0920

COC/Container Discrepancies

COC Reads	Container Reads/Comments
EMW-14-240604	EMW-14D-240604
EMW-15D-240604	Sample IDs vary.
D on EMW-15D-240604 6/4/24	6/5/24

Form Y-004 R-00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0920 - 06 21 24 1740**

APEX LABS COOLER RECEIPT FORM

Client: Landau Element WO#: A4F0920

Project/Project #: 8th Ave Terminals / 2175001.020.022

Delivery Info:

Date/time received: 6/6/24 @ 1138 By: KRS

Delivered by: Apex__Client__ESS__FedEx X UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ___ No X

Cooler Inspection Date/time inspected: 6/6/24 @ 1138 By: KRS

Chain of Custody included? Yes X No ___

Signed/dated by client? Yes X No ___

Contains USDA Reg. Soils? Yes ___ No X Unsure (email RegSoils) ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.3	3.4	2.1	0.1	3.4	4.3	2.9
Custody seals? (Y/N)	N	→	→	→	→	→	→
Received on ice? (Y/N)	Y	→	→	→	→	→	→
Temp. blanks? (Y/N)	Y	→	→	→	→	→	→
Ice type: (Gel/Real/Other)	Real	→	→	→	→	→	→
Condition (In/Out):	In	→	→	→	→	→	→

Cooler out of temp? (Y/N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 6/6/24 @ 1330 By: APW / KM

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes ___ No X Comments: DMW-2-240604 ½ 125ml amber cont. IDs read DMW-2-240608. DMW-115-240604 All cont. state T = 1457, COC = 1447; ½ 250 ml poly DMW-6B-240604 has no time

COC/container discrepancies form initiated? Yes X No ___

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No X NA ___

Comments ___

Water samples: pH checked: Yes X No ___ NA ___ pH appropriate? Yes X No ___ NA ___ pH ID: A23I172

Comments: ___

2755 6430 2293

Labeled by: APW Witness: [illegible] Cooler Inspected by: APW

Form Y-003 R-02

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Friday, June 21, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4F0988 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4F0988, which was received by the laboratory on 6/7/2024 at 10:46:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.
(See Cooler Receipt Form for details)
Default Cooler 2.5 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CMW-7-240606	A4F0988-01	Water	06/06/24 12:54	06/07/24 10:46
EMW-3S-240606	A4F0988-02	Water	06/06/24 12:38	06/07/24 10:46
EMW-10D-240606	A4F0988-03	Water	06/06/24 12:12	06/07/24 10:46

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-7-240606 (A4F0988-01)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	**0.0484**	0.0100	0.0200	ug/L	1	06/14/24 05:54	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/14/24 05:54*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/14/24 05:54*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 05:54*	*EPA 8260D SIM*	
EMW-3S-240606 (A4F0988-02)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 06:21	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*06/14/24 06:21*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*06/14/24 06:21*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/14/24 06:21*	*EPA 8260D SIM*	
EMW-10D-240606 (A4F0988-03)				**Matrix: Water**		**Batch: 24F0331**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	06/14/24 06:48	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*06/14/24 06:48*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*06/14/24 06:48*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/14/24 06:48*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-7-240606 (A4F0988-01)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Acenaphthylene	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Anthracene	**0.0429**	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Chrysene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Fluoranthene	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Fluorene	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00953	0.0191	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0381	0.0762	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0381	0.0762	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Naphthalene	**0.0424**	0.0381	0.0762	ug/L	1	06/11/24 22:02	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0381	0.0762	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Pyrene	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Dibenzofuran	ND	0.0191	0.0381	ug/L	1	06/11/24 22:02	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*06/11/24 22:02*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*06/11/24 22:02*	*EPA 8270E LVI*	
EMW-3S-240606 (A4F0988-02)				**Matrix: Water**		**Batch: 24F0344**		
Acenaphthene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Acenaphthylene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Anthracene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Chrysene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-3S-240606 (A4F0988-02)				**Matrix: Water**		**Batch: 24F0344**		
Fluoranthene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Fluorene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00890	0.0178	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0356	0.0712	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0356	0.0712	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Naphthalene	**0.0512**	0.0356	0.0712	ug/L	1	06/11/24 22:35	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0356	0.0712	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Pyrene	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Dibenzofuran	ND	0.0178	0.0356	ug/L	1	06/11/24 22:35	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*105 %*	*Limits: 78-134 %*	*1*	*06/11/24 22:35*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*06/11/24 22:35*	*EPA 8270E LVI*	
EMW-10D-240606 (A4F0988-03)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Acenaphthene	**3.27**	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Acenaphthylene	**0.288**	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Anthracene	ND	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Chrysene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Fluoranthene	ND	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Fluorene	**0.0778**	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00932	0.0186	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
1-Methylnaphthalene	**0.0778**	0.0373	0.0745	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0373	0.0745	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Naphthalene	**0.0540**	0.0373	0.0745	ug/L	1	06/11/24 23:07	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0373	0.0745	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Pyrene	ND	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Dibenzofuran	ND	0.0186	0.0373	ug/L	1	06/11/24 23:07	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*101 %*	*Limits: 78-134 %*	*1*	*06/11/24 23:07*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-10D-240606 (A4F0988-03)				**Matrix: Water**		**Batch: 24F0344**		**DCNT**
Surrogate: Benzo(a)pyrene-d12 (Surr)		*Recovery:*	*109 %*	*Limits: 80-132 %*	*1*	*06/11/24 23:07*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-7-240606 (A4F0988-01)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**3.26**	0.360	0.720	ug/L	1	06/15/24 01:46	EPA 6020B	
Copper	**15.1**	0.360	0.720	ug/L	1	06/15/24 01:46	EPA 6020B	
EMW-3S-240606 (A4F0988-02)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	**5.66**	0.360	0.720	ug/L	1	06/15/24 01:50	EPA 6020B	
Copper	**2.10**	0.360	0.720	ug/L	1	06/15/24 01:50	EPA 6020B	
EMW-10D-240606 (A4F0988-03)				**Matrix: Water**				
Batch: 24F0483								
Arsenic	ND	0.360	0.720	ug/L	1	06/15/24 02:04	EPA 6020B	
Copper	ND	0.360	0.720	ug/L	1	06/15/24 02:04	EPA 6020B	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-7-240606 (A4F0988-01)				**Matrix: Water**				
Batch: 24F0488								
Arsenic	**0.469**	0.360	0.720	ug/L	2	06/14/24 16:49	EPA 6020B (Diss)	**R-04,J**
Copper	ND	0.360	0.720	ug/L	2	06/14/24 16:49	EPA 6020B (Diss)	R-04
EMW-3S-240606 (A4F0988-02)				**Matrix: Water**				
Batch: 24F0488								
Arsenic	**4.78**	0.360	0.720	ug/L	2	06/14/24 16:54	EPA 6020B (Diss)	
Copper	**1.77**	0.360	0.720	ug/L	2	06/14/24 16:54	EPA 6020B (Diss)	
EMW-10D-240606 (A4F0988-03)				**Matrix: Water**				
Batch: 24F0488								
Arsenic	ND	0.360	0.720	ug/L	2	06/14/24 16:59	EPA 6020B (Diss)	R-04
Copper	ND	0.360	0.720	ug/L	2	06/14/24 16:59	EPA 6020B (Diss)	R-04

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0331 - EPA 5030C							**Water**					
Blank (24F0331-BLK1)			Prepared: 06/13/24 08:00		Analyzed: 06/13/24 22:43							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
LCS (24F0331-BS1)			Prepared: 06/13/24 08:00		Analyzed: 06/13/24 21:49							
EPA 8260D SIM												
Vinyl chloride	0.166	0.0100	0.0200	ug/L	1	0.200	---	83	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 95 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*98 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*			*"*				
Duplicate (24F0331-DUP1)			Prepared: 06/13/24 08:00		Analyzed: 06/14/24 01:25							
QC Source Sample: Non-SDG (A4F0920-25)												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Matrix Spike (24F0331-MS1)			Prepared: 06/13/24 08:00		Analyzed: 06/14/24 08:40							
QC Source Sample: Non-SDG (A4F1009-05)												
EPA 8260D SIM												
Vinyl chloride	0.258	0.0100	0.0200	ug/L	1	0.200	ND	129	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*			*"*				

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0344 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24F0344-BLK1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 12:19								
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 112 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*			*"*					
LCS (24F0344-BS1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 12:52								
EPA 8270E LVI												
Acenaphthene	1.54	0.0160	0.0320	ug/L	1	1.60	---	96	80-120%	---	---	
Acenaphthylene	1.94	0.0160	0.0320	ug/L	1	1.60	---	121	80-124%	---	---	
Anthracene	1.69	0.0160	0.0320	ug/L	1	1.60	---	105	80-123%	---	---	
Benz(a)anthracene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-122%	---	---	
Benzo(a)pyrene	1.92	0.00800	0.0160	ug/L	1	1.60	---	120	80-129%	---	---	
Benzo(b)fluoranthene	1.89	0.00800	0.0160	ug/L	1	1.60	---	118	80-124%	---	---	
Benzo(k)fluoranthene	1.87	0.00800	0.0160	ug/L	1	1.60	---	117	80-125%	---	---	
Benzo(g,h,i)perylene	1.81	0.0160	0.0320	ug/L	1	1.60	---	113	80-120%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0344 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24F0344-BS1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 12:52								
Chrysene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-120%	---	---	
Dibenz(a,h)anthracene	1.71	0.00800	0.0160	ug/L	1	1.60	---	107	80-120%	---	---	
Fluoranthene	1.91	0.0160	0.0320	ug/L	1	1.60	---	120	80-126%	---	---	
Fluorene	1.72	0.0160	0.0320	ug/L	1	1.60	---	107	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.74	0.00800	0.0160	ug/L	1	1.60	---	109	80-121%	---	---	
1-Methylnaphthalene	1.94	0.0320	0.0640	ug/L	1	1.60	---	121	53-148%	---	---	
2-Methylnaphthalene	1.85	0.0320	0.0640	ug/L	1	1.60	---	116	48-150%	---	---	
Naphthalene	1.68	0.0320	0.0640	ug/L	1	1.60	---	105	78-120%	---	---	
Phenanthrene	1.57	0.0320	0.0640	ug/L	1	1.60	---	98	80-120%	---	---	
Pyrene	1.96	0.0160	0.0320	ug/L	1	1.60	---	123	80-125%	---	---	
Carbazole	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	65-141%	---	---	
Dibenzofuran	1.91	0.0160	0.0320	ug/L	1	1.60	---	119	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 109 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*			*"*					
LCS Dup (24F0344-BSD1)			Prepared: 06/11/24 07:20	Analyzed: 06/11/24 13:24								**Q-19**
EPA 8270E LVI												
Acenaphthene	1.56	0.0160	0.0320	ug/L	1	1.60	---	97	80-120%	1	30%	
Acenaphthylene	1.98	0.0160	0.0320	ug/L	1	1.60	---	124	80-124%	2	30%	
Anthracene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-123%	0.6	30%	
Benz(a)anthracene	1.87	0.00800	0.0160	ug/L	1	1.60	---	117	80-122%	3	30%	
Benzo(a)pyrene	1.93	0.00800	0.0160	ug/L	1	1.60	---	121	80-129%	0.3	30%	
Benzo(b)fluoranthene	1.92	0.00800	0.0160	ug/L	1	1.60	---	120	80-124%	2	30%	
Benzo(k)fluoranthene	1.89	0.00800	0.0160	ug/L	1	1.60	---	118	80-125%	0.9	30%	
Benzo(g,h,i)perylene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	80-120%	1	30%	
Chrysene	1.74	0.00800	0.0160	ug/L	1	1.60	---	109	80-120%	1	30%	
Dibenz(a,h)anthracene	1.75	0.00800	0.0160	ug/L	1	1.60	---	109	80-120%	2	30%	
Fluoranthene	1.94	0.0160	0.0320	ug/L	1	1.60	---	121	80-126%	1	30%	
Fluorene	1.71	0.0160	0.0320	ug/L	1	1.60	---	107	77-127%	0.2	30%	
Indeno(1,2,3-cd)pyrene	1.81	0.00800	0.0160	ug/L	1	1.60	---	113	80-121%	4	30%	
1-Methylnaphthalene	1.92	0.0320	0.0640	ug/L	1	1.60	---	120	53-148%	1	30%	
2-Methylnaphthalene	1.83	0.0320	0.0640	ug/L	1	1.60	---	114	48-150%	1	30%	
Naphthalene	1.72	0.0320	0.0640	ug/L	1	1.60	---	107	78-120%	2	30%	
Phenanthrene	1.58	0.0320	0.0640	ug/L	1	1.60	---	99	80-120%	0.8	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0344 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24F0344-BSD1)			Prepared: 06/11/24 07:20		Analyzed: 06/11/24 13:24							**Q-19**
Pyrene	1.97	0.0160	0.0320	ug/L	1	1.60	---	123	80-125%	0.5	30%	
Carbazole	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	65-141%	2	30%	
Dibenzofuran	1.93	0.0160	0.0320	ug/L	1	1.60	---	121	76-121%	2	30%	

Surr: Acenaphthylene-d8 (Surr)	*Recovery: 110 %*	*Limits: 78-134 %*	*Dilution: 1x*
Benzo(a)pyrene-d12 (Surr)	*111 %*	*80-132 %*	*"*

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0483 - EPA 3015A							**Water**					
Blank (24F0483-BLK1)			Prepared: 06/13/24 15:39		Analyzed: 06/14/24 23:55							
EPA 6020B												
Arsenic	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
LCS (24F0483-BS1)			Prepared: 06/13/24 15:39		Analyzed: 06/15/24 00:00							
EPA 6020B												
Arsenic	5.73	0.200	0.400	ug/L	1	5.56	---	103	80-120%	---	---	
Copper	5.83	0.200	0.400	ug/L	1	5.56	---	105	80-120%	---	---	
Duplicate (24F0483-DUP1)			Prepared: 06/13/24 15:39		Analyzed: 06/15/24 00:23							
QC Source Sample: Non-SDG (A4F0920-21)												
Arsenic	**0.766**	0.360	0.720	ug/L	1	---	0.807	---	---	5	20%	
Copper	ND	0.360	0.720	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (24F0483-MS1)			Prepared: 06/13/24 15:39		Analyzed: 06/15/24 00:28							
QC Source Sample: Non-SDG (A4F0920-21)												
EPA 6020B												
Arsenic	11.0	0.360	0.720	ug/L	1	10.0	0.807	102	75-125%	---	---	
Copper	10.1	0.360	0.720	ug/L	1	10.0	ND	101	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24F0488 - Matrix Matched Direct Inject							**Water**					
Blank (24F0488-BLK1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 16:40							
EPA 6020B (Diss)												
Arsenic	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
LCS (24F0488-BS1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 16:45							
EPA 6020B (Diss)												
Arsenic	5.14	0.200	0.400	ug/L	1	5.56	---	92	80-120%	---	---	
Copper	5.69	0.200	0.400	ug/L	1	5.56	---	102	80-120%	---	---	
Duplicate (24F0488-DUP1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 17:03							
QC Source Sample: EMW-10D-240606 (A4F0988-03)												
EPA 6020B (Diss)												
Arsenic	ND	0.360	0.720	ug/L	2	---	ND	---	---	---	20%	R-04
Copper	ND	0.360	0.720	ug/L	2	---	ND	---	---	---	20%	R-04
Matrix Spike (24F0488-MS1)			Prepared: 06/14/24 12:00		Analyzed: 06/14/24 17:08							
QC Source Sample: EMW-10D-240606 (A4F0988-03)												
EPA 6020B (Diss)												
Arsenic	18.3	0.360	0.720	ug/L	1	25.0	ND	**73**	**75-125%**	---	---	Q-02
Copper	16.7	0.360	0.720	ug/L	1	25.0	ND	**67**	**75-125%**	---	---	Q-02

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

SAMPLE PREPARATION INFORMATION

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0331							
A4F0988-01	Water	EPA 8260D SIM	06/06/24 12:54	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0988-02	Water	EPA 8260D SIM	06/06/24 12:38	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00
A4F0988-03	Water	EPA 8260D SIM	06/06/24 12:12	06/13/24 08:00	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0344							
A4F0988-01	Water	EPA 8270E LVI	06/06/24 12:54	06/11/24 07:23	104.92mL/5mL	125mL/5mL	1.19
A4F0988-02	Water	EPA 8270E LVI	06/06/24 12:38	06/11/24 07:23	112.35mL/5mL	125mL/5mL	1.11
A4F0988-03	Water	EPA 8270E LVI	06/06/24 12:12	06/11/24 07:23	107.34mL/5mL	125mL/5mL	1.16

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0483							
A4F0988-01	Water	EPA 6020B	06/06/24 12:54	06/13/24 11:01	25mL/50mL	45mL/50mL	1.80
A4F0988-02	Water	EPA 6020B	06/06/24 12:38	06/13/24 11:01	25mL/50mL	45mL/50mL	1.80
A4F0988-03	Water	EPA 6020B	06/06/24 12:12	06/13/24 11:01	25mL/50mL	45mL/50mL	1.80

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24F0488							
A4F0988-01	Water	EPA 6020B (Diss)	06/06/24 12:54	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0988-02	Water	EPA 6020B (Diss)	06/06/24 12:38	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90
A4F0988-03	Water	EPA 6020B (Diss)	06/06/24 12:12	06/14/24 12:00	30mL/30mL	45mL/50mL	0.90

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

DCNT	Sample decanted due to the presence of sediment. Sample bottle not rinsed with solvent.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-02	Spike recovery is outside of established control limits due to matrix interference.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
R-04	Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.
-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

A4F0988

LANDAU ASSOCIATES

Chain-of-Custody Record

☑ North Seattle (206) 631-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178 ☐ ____

Date 06/21/24
Page 1 of 1

Turnaround Time: (Standard) Accelerated ____

Project Name: 8th Ave Terminals
Project No.: 2175001.020.022
Project Location/Event: Quarterly Groundwater Sampling Event
Sampler's Name: Spencer Lo, Emerson Cole
Project Contact: Mike Staton
Send Results To: Mike.Staton@landauinc.com

Special Handling Requirements:
Shipment Method: ____
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Total Chloride	PHC 8270E SIM	Tot. Arsenic	Dissolved Arsenic (after 0.45 filter)	Observations/Comments
CMW-7-240606	6/6/24	1254	water	7	X	X	X	X	
EMW-35-240606	6/6/24	1238	water	7	X	X	X	X	
EMW-10D-240606	6/6/24	1212	water	7	X	X	X	X	

Observations/Comments:
- ___ Allow water samples to settle, collect aliquot from clear portion ☐
- ___ NWTPH-Dx - Acid wash cleanup ☐
- ___ - Silica gel cleanup ☐
- ___ Dissolved metal samples were field filtered

Other: Dissolved Samples to be filter in lab

Relinquished by	Received by	Relinquished by	Received by
Signature: [signature]	Signature: [signature]	Signature: ____	Signature: ____
Printed Name: Spencer Lo	Printed Name: K. Burger	Printed Name: ____	Printed Name: ____
Company: LAI	Company: Apex	Company: ____	Company: ____
Date: 6/6/24 Time: 1400	Date: 6/7/24 Time: 1040	Date: ____ Time: ____	Date: ____ Time: ____

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4F0988 - 06 21 24 1433**

APEX LABS COOLER RECEIPT FORM

Client: Landau Associates AKC for KAB 6/17/24 Element WO#: A4F0988

Project/Project #: 8th Ave. Terminals 2175001.020.022

Delivery Info:

Date/time received: 6/17/24 @ 1046 By: KAB

Delivered by: Apex__Client__ESS__FedEx X UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ____ No X AKC for KAB 6/17/24

Cooler Inspection Date/time inspected: 6/17/24 @ 1047 By: KAB

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.5						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	IN						

Cooler out of temp? (Y/N) Possible reason why:____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 6/17/24 @ 1029 By: KAB

All samples intact? Yes X No ___ Comments:____

Bottle labels/COCs agree? Yes X No ___ Comments: ____

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ____

Do VOA vials have visible headspace? Yes ___ No X NA ____

Comments____

Water samples: pH checked: Yes X No___NA___ pH appropriate? Yes X No___NA___ pH ID: A235172

Comments: ____

2756 1132 9130

Labeled by: KAB Witness: Cooler Inspected by: KAB

Form Y-003 R-02

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Tuesday, October 22, 2024

Mike Staton
Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

RE: A4I1323 - 8th Ave. Terminals - 2175001.020.022

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4I1323, which was received by the laboratory on 9/19/2024 at 10:18:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.

(See Cooler Receipt Form for details)

Cooler #1	1.6	degC	Cooler #2	2.4	degC
Cooler #3	4.9	degC	Cooler #4	3.1	degC
Cooler #5	3.9	degC	Cooler #6	2.6	degC
Cooler #7	4.2	degC	Cooler #8	0.2	degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CMW-1-240916	A4I1323-01	Water	09/16/24 10:19	09/19/24 10:18
CMW-2-240918	A4I1323-02	Water	09/18/24 12:59	09/19/24 10:18
CMW-3-240918	A4I1323-03	Water	09/18/24 11:59	09/19/24 10:18
CMW-4-240916	A4I1323-04	Water	09/16/24 10:55	09/19/24 10:18
CMW-5-240917	A4I1323-05	Water	09/17/24 12:42	09/19/24 10:18
CMW-6-240916	A4I1323-06	Water	09/16/24 10:34	09/19/24 10:18
CMW-7-240916	A4I1323-07	Water	09/16/24 11:50	09/19/24 10:18
SLR-1-240916	A4I1323-08	Water	09/16/24 13:19	09/19/24 10:18
SLR-2-240917	A4I1323-09	Water	09/17/24 12:43	09/19/24 10:18
SLR-3-240917	A4I1323-10	Water	09/17/24 10:49	09/19/24 10:18
SLR-6-240917	A4I1323-11	Water	09/17/24 10:53	09/19/24 10:18
SLR-7-240916	A4I1323-12	Water	09/16/24 14:29	09/19/24 10:18
DMW-2-240917	A4I1323-13	Water	09/17/24 10:05	09/19/24 10:18
DMW-3-240917	A4I1323-14	Water	09/17/24 13:30	09/19/24 10:18
DMW-12-240917	A4I1323-15	Water	09/17/24 10:45	09/19/24 10:18
DMW-6B-240916	A4I1323-16	Water	09/16/24 13:24	09/19/24 10:18
HC-4-240918	A4I1323-17	Water	09/18/24 12:25	09/19/24 10:18
HC-20-240917	A4I1323-18	Water	09/17/24 13:12	09/19/24 10:18
EMW-1S-240916	A4I1323-19	Water	09/16/24 13:17	09/19/24 10:18
EMW-2S-240917	A4I1323-20	Water	09/17/24 11:43	09/19/24 10:18
EMW-3S-240918	A4I1323-21	Water	09/18/24 11:47	09/19/24 10:18
EMW-4D-240916	A4I1323-22	Water	09/16/24 11:29	09/19/24 10:18
EMW-5SA-240917	A4I1323-23	Water	09/17/24 11:24	09/19/24 10:18
EMW-6S-240917	A4I1323-24	Water	09/17/24 13:59	09/19/24 10:18
EMW-7S-240916	A4I1323-25	Water	09/16/24 14:01	09/19/24 10:18
EMW-9SA-240917	A4I1323-26	Water	09/17/24 12:02	09/19/24 10:18
EMW-10D-240917	A4I1323-27	Water	09/17/24 12:20	09/19/24 10:18
EMW-11S-240916	A4I1323-28	Water	09/16/24 14:29	09/19/24 10:18
EMW-12S-240917	A4I1323-29	Water	09/17/24 12:13	09/19/24 10:18
EMW-13S-240916	A4I1323-30	Water	09/16/24 12:07	09/19/24 10:18
EMW-14D-240916	A4I1323-31	Water	09/16/24 11:19	09/19/24 10:18
EMW-15D-240916	A4I1323-32	Water	09/16/24 11:35	09/19/24 10:18
EMW-16D-240917	A4I1323-33	Water	09/17/24 11:08	09/19/24 10:18

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EMW-17S-240916	A4I1323-34	Water	09/16/24 14:35	09/19/24 10:18
EMW-18S-240916	A4I1323-35	Water	09/16/24 13:35	09/19/24 10:18
EMW-23S-240917	A4I1323-36	Water	09/17/24 11:15	09/19/24 10:18
EMW-26S-240917	A4I1323-37	Water	09/17/24 08:00	09/19/24 10:18

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL CASE NARRATIVE

A4I1323 **Apex Laboratories**

Amended Report Revision 1:

This report supersedes all previous reports.

Results for total and dissolved copper were not available when the previous report version had been completed, but are included in this report.

Philip Nerenberg
Lab Director
10/22/24

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240916 (A4I1323-01)				**Matrix: Water**		**Batch: 24I0674**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/21/24 03:19	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*	*1*	*09/21/24 03:19*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*104 %*	*80-120 %*	*1*	*09/21/24 03:19*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*102 %*	*80-120 %*	*1*	*09/21/24 03:19*	*EPA 8260D SIM*	
CMW-2-240918 (A4I1323-02)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 15:14	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/23/24 15:14*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 15:14*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/23/24 15:14*	*EPA 8260D SIM*	
CMW-3-240918 (A4I1323-03)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 15:41	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/23/24 15:41*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 15:41*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*09/23/24 15:41*	*EPA 8260D SIM*	
CMW-4-240916 (A4I1323-04)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 16:08	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*09/23/24 16:08*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 16:08*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*09/23/24 16:08*	*EPA 8260D SIM*	
CMW-5-240917 (A4I1323-05)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	**0.200**	0.0100	0.0200	ug/L	1	09/23/24 16:35	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*09/23/24 16:35*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 16:35*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/23/24 16:35*	*EPA 8260D SIM*	
CMW-6-240916 (A4I1323-06)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 17:02	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/23/24 17:02*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*104 %*	*80-120 %*	*1*	*09/23/24 17:02*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*09/23/24 17:02*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-7-240916 (A4I1323-07)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	**0.269**	0.0100	0.0200	ug/L	1	09/23/24 17:29	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/23/24 17:29*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/23/24 17:29*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/23/24 17:29*	*EPA 8260D SIM*	
SLR-1-240916 (A4I1323-08)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 17:56	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*09/23/24 17:56*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*104 %*	*80-120 %*	*1*	*09/23/24 17:56*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/23/24 17:56*	*EPA 8260D SIM*	
SLR-2-240917 (A4I1323-09)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 18:23	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/23/24 18:23*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/23/24 18:23*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/23/24 18:23*	*EPA 8260D SIM*	
SLR-3-240917 (A4I1323-10)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 01:08	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	*1*	*09/24/24 01:08*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*104 %*	*80-120 %*	*1*	*09/24/24 01:08*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/24/24 01:08*	*EPA 8260D SIM*	
SLR-6-240917 (A4I1323-11)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 18:50	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/23/24 18:50*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/23/24 18:50*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*09/23/24 18:50*	*EPA 8260D SIM*	
SLR-7-240916 (A4I1323-12)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 19:17	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*09/23/24 19:17*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/23/24 19:17*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*09/23/24 19:17*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-2-240917 (A4I1323-13)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 19:44	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits: 80-120 %*	*1*	*09/23/24 19:44*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 19:44*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*93 %*	*80-120 %*	*1*	*09/23/24 19:44*	*EPA 8260D SIM*	
DMW-3-240917 (A4I1323-14)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 20:11	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits: 80-120 %*	*1*	*09/23/24 20:11*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 20:11*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*94 %*	*80-120 %*	*1*	*09/23/24 20:11*	*EPA 8260D SIM*	
DMW-12-240917 (A4I1323-15)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 20:38	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits: 80-120 %*	*1*	*09/23/24 20:38*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/23/24 20:38*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*94 %*	*80-120 %*	*1*	*09/23/24 20:38*	*EPA 8260D SIM*	
DMW-6B-240916 (A4I1323-16)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	**0.268**	0.0100	0.0200	ug/L	1	09/23/24 21:05	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*101 %*	*Limits: 80-120 %*	*1*	*09/23/24 21:05*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*104 %*	*80-120 %*	*1*	*09/23/24 21:05*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/23/24 21:05*	*EPA 8260D SIM*	
HC-4-240918 (A4I1323-17)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 21:59	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits: 80-120 %*	*1*	*09/23/24 21:59*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 21:59*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*09/23/24 21:59*	*EPA 8260D SIM*	
HC-20-240917 (A4I1323-18)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 22:26	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits: 80-120 %*	*1*	*09/23/24 22:26*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/23/24 22:26*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/23/24 22:26*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-1S-240916 (A4I1323-19)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 22:53	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits:*	*80-120 %*	*1*	*09/23/24 22:53*	*EPA 8260D SIM*
Toluene-d8 (Surr)			*104 %*		*80-120 %*	*1*	*09/23/24 22:53*	*EPA 8260D SIM*
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*	*1*	*09/23/24 22:53*	*EPA 8260D SIM*
EMW-2S-240917 (A4I1323-20)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	**0.186**	0.0100	0.0200	ug/L	1	09/23/24 23:20	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits:*	*80-120 %*	*1*	*09/23/24 23:20*	*EPA 8260D SIM*
Toluene-d8 (Surr)			*102 %*		*80-120 %*	*1*	*09/23/24 23:20*	*EPA 8260D SIM*
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*	*1*	*09/23/24 23:20*	*EPA 8260D SIM*
EMW-3S-240918 (A4I1323-21)				**Matrix: Water**		**Batch: 24I0706**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/23/24 23:47	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*101 %*	*Limits:*	*80-120 %*	*1*	*09/23/24 23:47*	*EPA 8260D SIM*
Toluene-d8 (Surr)			*103 %*		*80-120 %*	*1*	*09/23/24 23:47*	*EPA 8260D SIM*
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*	*1*	*09/23/24 23:47*	*EPA 8260D SIM*
EMW-4D-240916 (A4I1323-22)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	**0.352**	0.0100	0.0200	ug/L	1	09/24/24 17:10	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits:*	*80-120 %*	*1*	*09/24/24 17:10*	*EPA 8260D SIM*
Toluene-d8 (Surr)			*104 %*		*80-120 %*	*1*	*09/24/24 17:10*	*EPA 8260D SIM*
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*	*1*	*09/24/24 17:10*	*EPA 8260D SIM*
EMW-5SA-240917 (A4I1323-23)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 18:04	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits:*	*80-120 %*	*1*	*09/24/24 18:04*	*EPA 8260D SIM*
Toluene-d8 (Surr)			*106 %*		*80-120 %*	*1*	*09/24/24 18:04*	*EPA 8260D SIM*
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*	*1*	*09/24/24 18:04*	*EPA 8260D SIM*
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 18:31	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits:*	*80-120 %*	*1*	*09/24/24 18:31*	*EPA 8260D SIM*
Toluene-d8 (Surr)			*101 %*		*80-120 %*	*1*	*09/24/24 18:31*	*EPA 8260D SIM*
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*	*1*	*09/24/24 18:31*	*EPA 8260D SIM*

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-7S-240916 (A4I1323-25)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 18:58	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	*1*	*09/24/24 18:58*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/24/24 18:58*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 18:58*	*EPA 8260D SIM*	
EMW-9SA-240917 (A4I1323-26)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 19:25	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/24/24 19:25*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*09/24/24 19:25*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 19:25*	*EPA 8260D SIM*	
EMW-10D-240917 (A4I1323-27)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 19:52	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*09/24/24 19:52*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*09/24/24 19:52*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 19:52*	*EPA 8260D SIM*	
EMW-11S-240916 (A4I1323-28)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 20:19	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/24/24 20:19*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/24/24 20:19*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 20:19*	*EPA 8260D SIM*	
EMW-12S-240917 (A4I1323-29)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 20:46	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/24/24 20:46*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*09/24/24 20:46*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 20:46*	*EPA 8260D SIM*	
EMW-13S-240916 (A4I1323-30)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 21:13	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*09/24/24 21:13*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*09/24/24 21:13*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 21:13*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-14D-240916 (A4I1323-31)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	**0.0167**	0.0100	0.0200	ug/L	1	09/24/24 21:40	EPA 8260D SIM	**J**
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits: 80-120 %*	*1*	*09/24/24 21:40*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/24/24 21:40*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 21:40*	*EPA 8260D SIM*	
EMW-15D-240916 (A4I1323-32)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 22:07	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*09/24/24 22:07*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*09/24/24 22:07*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 22:07*	*EPA 8260D SIM*	
EMW-16D-240917 (A4I1323-33)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 22:34	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*09/24/24 22:34*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*09/24/24 22:34*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/24/24 22:34*	*EPA 8260D SIM*	
EMW-17S-240916 (A4I1323-34)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 23:01	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*09/24/24 23:01*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*09/24/24 23:01*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*09/24/24 23:01*	*EPA 8260D SIM*	
EMW-18S-240916 (A4I1323-35)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/24/24 23:28	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits: 80-120 %*	*1*	*09/24/24 23:28*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/24/24 23:28*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/24/24 23:28*	*EPA 8260D SIM*	
EMW-23S-240917 (A4I1323-36)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	**0.0155**	0.0100	0.0200	ug/L	1	09/24/24 23:55	EPA 8260D SIM	**J**
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*98 %*	*Limits: 80-120 %*	*1*	*09/24/24 23:55*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*103 %*	*80-120 %*	*1*	*09/24/24 23:55*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/24/24 23:55*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**		**Batch: 24I0763**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	09/25/24 00:22	EPA 8260D SIM	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	*1*	*09/25/24 00:22*	*EPA 8260D SIM*	
Toluene-d8 (Surr)			*104 %*	*80-120 %*	*1*	*09/25/24 00:22*	*EPA 8260D SIM*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*09/25/24 00:22*	*EPA 8260D SIM*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240916 (A4I1323-01RE1)				**Matrix: Water**		**Batch: 24I0717**		
Acenaphthene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Acenaphthylene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Anthracene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Chrysene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Fluoranthene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Fluorene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0100	0.0201	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0402	0.0804	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0402	0.0804	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Naphthalene	ND	0.0402	0.0804	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Phenanthrene	ND	0.0402	0.0804	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Pyrene	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Dibenzofuran	ND	0.0201	0.0402	ug/L	1	09/24/24 16:48	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*09/24/24 16:48*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 16:48*	*EPA 8270E LVI*	
CMW-2-240918 (A4I1323-02)				**Matrix: Water**		**Batch: 24I0680**		
Acenaphthene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Acenaphthylene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Anthracene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Chrysene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-2-240918 (A4I1323-02)				**Matrix: Water**		**Batch: 24I0680**		
Fluoranthene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Fluorene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00976	0.0195	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0390	0.0780	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0390	0.0780	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Naphthalene	**0.0390**	0.0390	0.0780	ug/L	1	09/23/24 16:38	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0390	0.0780	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Pyrene	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Dibenzofuran	ND	0.0195	0.0390	ug/L	1	09/23/24 16:38	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*09/23/24 16:38*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*09/23/24 16:38*	*EPA 8270E LVI*	
CMW-3-240918 (A4I1323-03)				**Matrix: Water**		**Batch: 24I0680**		
Acenaphthene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Acenaphthylene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Anthracene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Chrysene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Fluoranthene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Fluorene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00821	0.0164	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0328	0.0657	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0328	0.0657	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Naphthalene	**0.0620**	0.0328	0.0657	ug/L	1	09/23/24 17:13	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0328	0.0657	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Pyrene	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Dibenzofuran	ND	0.0164	0.0328	ug/L	1	09/23/24 17:13	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*104 %*	*Limits: 78-134 %*	*1*	*09/23/24 17:13*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-3-240918 (A4I1323-03)				**Matrix: Water**		**Batch: 24I0680**		
Surrogate: Benzo(a)pyrene-d12 (Surr)			*Recovery: 110 %*	*Limits: 80-132 %*	*1*	*09/23/24 17:13*	*EPA 8270E LVI*	
CMW-4-240916 (A4I1323-04RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Acenaphthylene	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Anthracene	**0.0250**	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Chrysene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Fluoranthene	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Fluorene	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00981	0.0196	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0392	0.0785	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0392	0.0785	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Naphthalene	**0.0495**	0.0392	0.0785	ug/L	1	09/24/24 19:42	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0392	0.0785	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Pyrene	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Dibenzofuran	ND	0.0196	0.0392	ug/L	1	09/24/24 19:42	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*	*Limits: 78-134 %*	*1*	*09/24/24 19:42*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/24/24 19:42*	*EPA 8270E LVI*	
CMW-5-240917 (A4I1323-05RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Acenaphthylene	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Anthracene	**0.0693**	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-5-240917 (A4I1323-05RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Chrysene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Fluoranthene	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Fluorene	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0102	0.0204	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0408	0.0815	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0408	0.0815	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Naphthalene	ND	0.0408	0.0815	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Phenanthrene	ND	0.0408	0.0815	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Pyrene	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Dibenzofuran	ND	0.0204	0.0408	ug/L	1	09/24/24 20:16	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*	*Limits: 78-134 %*	*1*	*09/24/24 20:16*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 20:16*	*EPA 8270E LVI*	
CMW-6-240916 (A4I1323-06RE2)				**Matrix: Water**		**Batch: 24I0717**		
Acenaphthene	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Acenaphthylene	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Anthracene	**0.0160**	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Chrysene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Fluoranthene	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Fluorene	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00799	0.0160	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0319	0.0639	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0319	0.0639	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Naphthalene	ND	0.0319	0.0639	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Phenanthrene	ND	0.0319	0.0639	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Pyrene	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-6-240916 (A4I1323-06RE2)				**Matrix: Water**		**Batch: 24I0717**		
Dibenzofuran	ND	0.0160	0.0319	ug/L	1	09/25/24 13:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*	*Limits: 78-134 %*	*1*	*09/25/24 13:29*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*113 %*	*80-132 %*	*1*	*09/25/24 13:29*	*EPA 8270E LVI*	
CMW-7-240916 (A4I1323-07RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Acenaphthylene	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Anthracene	**0.0570**	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Chrysene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Fluoranthene	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Fluorene	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00912	0.0182	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0365	0.0730	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0365	0.0730	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Naphthalene	ND	0.0365	0.0730	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Phenanthrene	ND	0.0365	0.0730	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Pyrene	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Dibenzofuran	ND	0.0182	0.0365	ug/L	1	09/25/24 14:04	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*	*Limits: 78-134 %*	*1*	*09/25/24 14:04*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 14:04*	*EPA 8270E LVI*	
SLR-1-240916 (A4I1323-08RE1)				**Matrix: Water**		**Batch: 24I0717**		
Acenaphthene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Acenaphthylene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Anthracene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-1-240916 (A4I1323-08RE1)				**Matrix: Water**		**Batch: 24I0717**		
Benzo(k)fluoranthene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Chrysene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Fluoranthene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Fluorene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00808	0.0162	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0323	0.0647	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0323	0.0647	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Naphthalene	ND	0.0323	0.0647	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Phenanthrene	ND	0.0323	0.0647	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Pyrene	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Dibenzofuran	ND	0.0162	0.0323	ug/L	1	09/25/24 14:39	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*	*1*	*09/25/24 14:39*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/25/24 14:39*	*EPA 8270E LVI*	
SLR-2-240917 (A4I1323-09RE1)				**Matrix: Water**		**Batch: 24I0717**		
Acenaphthene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Acenaphthylene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Anthracene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Chrysene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Fluoranthene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Fluorene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00805	0.0161	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0322	0.0644	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0322	0.0644	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Naphthalene	ND	0.0322	0.0644	ug/L	1	09/25/24 15:15	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-2-240917 (A4I1323-09RE1)				**Matrix: Water**		**Batch: 24I0717**		
Phenanthrene	ND	0.0322	0.0644	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Pyrene	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Dibenzofuran	ND	0.0161	0.0322	ug/L	1	09/25/24 15:15	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*09/25/24 15:15*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 15:15*	*EPA 8270E LVI*	
SLR-3-240917 (A4I1323-10)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0569	0.0569	ug/L	1	09/23/24 17:47	EPA 8270E LVI	R-02
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Anthracene	ND	0.0182	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Chrysene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Fluorene	ND	0.0364	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00911	0.0182	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0364	0.0729	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0364	0.0729	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Naphthalene	**0.0446**	0.0364	0.0729	ug/L	1	09/23/24 17:47	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0364	0.0729	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Pyrene	ND	0.0182	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Dibenzofuran	ND	0.0182	0.0364	ug/L	1	09/23/24 17:47	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*110 %*	*Limits: 78-134 %*	*1*	*09/23/24 17:47*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/23/24 17:47*	*EPA 8270E LVI*	
SLR-6-240917 (A4I1323-11)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Acenaphthylene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Anthracene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-6-240917 (A4I1323-11)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Benzo(a)pyrene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Chrysene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Fluoranthene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Fluorene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00933	0.0187	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0373	0.0747	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0373	0.0747	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Naphthalene	ND	0.0373	0.0747	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Phenanthrene	ND	0.0373	0.0747	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Pyrene	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Dibenzofuran	ND	0.0187	0.0373	ug/L	1	09/23/24 18:22	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*09/23/24 18:22*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/23/24 18:22*	*EPA 8270E LVI*	
SLR-7-240916 (A4I1323-12RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Acenaphthylene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Anthracene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Chrysene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Fluoranthene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Fluorene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00928	0.0186	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0371	0.0742	ug/L	1	09/25/24 15:49	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-7-240916 (A4I1323-12RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
2-Methylnaphthalene	ND	0.0371	0.0742	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Naphthalene	ND	0.0371	0.0742	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Phenanthrene	ND	0.0371	0.0742	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Pyrene	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Dibenzofuran	ND	0.0186	0.0371	ug/L	1	09/25/24 15:49	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*09/25/24 15:49*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 15:49*	*EPA 8270E LVI*	
DMW-2-240917 (A4I1323-13)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	**77.4**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Acenaphthylene	**2.88**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Anthracene	**1.26**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Chrysene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Fluoranthene	**0.536**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Fluorene	**16.3**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0949	0.190	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
1-Methylnaphthalene	**52.8**	0.380	0.759	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
2-Methylnaphthalene	**8.07**	0.380	0.759	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Naphthalene	**1.48**	0.380	0.759	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Phenanthrene	**8.58**	0.380	0.759	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Pyrene	**0.356**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	**J**
Dibenzofuran	**6.02**	0.190	0.380	ug/L	10	09/23/24 14:55	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*59 %*	*Limits: 78-134 %*	*10*	*09/23/24 14:55*	*EPA 8270E LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*113 %*	*80-132 %*	*10*	*09/23/24 14:55*	*EPA 8270E LVI*	*S-05*
DMW-3-240917 (A4I1323-14)				**Matrix: Water**		**Batch: 24I0680**		
Acenaphthene	**185**	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Acenaphthylene	ND	7.36	7.36	ug/L	20	09/23/24 15:29	EPA 8270E LVI	R-02

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-3-240917 (A4I1323-14)				**Matrix: Water**		**Batch: 24I0680**		
Anthracene	**10.3**	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Benz(a)anthracene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Chrysene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Fluoranthene	**7.03**	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Fluorene	**107**	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.159	0.318	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
1-Methylnaphthalene	**100**	0.637	1.27	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
2-Methylnaphthalene	**38.6**	0.637	1.27	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Naphthalene	**24.9**	0.637	1.27	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Phenanthrene	**85.4**	0.637	1.27	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Pyrene	**4.87**	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Dibenzofuran	**55.0**	0.318	0.637	ug/L	20	09/23/24 15:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*46 %*	*Limits: 78-134 %*	*20*	*09/23/24 15:29*	*EPA 8270E LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*132 %*	*80-132 %*	*20*	*09/23/24 15:29*	*EPA 8270E LVI*	*S-05*
DMW-12-240917 (A4I1323-15)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	**84.7**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Acenaphthylene	**3.34**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Anthracene	**1.38**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Chrysene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Fluoranthene	**0.571**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Fluorene	**18.1**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-12-240917 (A4I1323-15)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Indeno(1,2,3-cd)pyrene	ND	0.0922	0.184	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
1-Methylnaphthalene	**60.9**	0.369	0.737	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
2-Methylnaphthalene	**9.22**	0.369	0.737	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Naphthalene	**1.71**	0.369	0.737	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Phenanthrene	**9.44**	0.369	0.737	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Pyrene	**0.396**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Dibenzofuran	**6.62**	0.184	0.369	ug/L	10	09/23/24 16:04	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*57 %*	*Limits: 78-134 %*	*10*	*09/23/24 16:04*	*EPA 8270E LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*106 %*	*80-132 %*	*10*	*09/23/24 16:04*	*EPA 8270E LVI*	*S-05*
DMW-6B-240916 (A4I1323-16RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	**9.50**	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Acenaphthylene	**0.128**	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Anthracene	**0.0342**	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Chrysene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Fluoranthene	ND	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Fluorene	ND	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0104	0.0207	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0414	0.0828	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0414	0.0828	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Naphthalene	ND	0.0414	0.0828	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Phenanthrene	ND	0.0414	0.0828	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Pyrene	ND	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Dibenzofuran	ND	0.0207	0.0414	ug/L	1	09/25/24 16:58	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*09/25/24 16:58*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 16:58*	*EPA 8270E LVI*	
HC-4-240918 (A4I1323-17)				**Matrix: Water**		**Batch: 24I0680**		

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC-4-240918 (A4I1323-17)				**Matrix: Water**		**Batch: 24I0680**		
Acenaphthene	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Acenaphthylene	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Anthracene	**0.0366**	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Chrysene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Fluoranthene	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Fluorene	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00814	0.0163	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0325	0.0651	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0325	0.0651	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Naphthalene	**0.0488**	0.0325	0.0651	ug/L	1	09/24/24 09:50	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0325	0.0651	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Pyrene	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Dibenzofuran	ND	0.0163	0.0325	ug/L	1	09/24/24 09:50	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*101 %*	*Limits: 78-134 %*	*1*	*09/24/24 09:50*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/24/24 09:50*	*EPA 8270E LVI*	
HC-20-240917 (A4I1323-18)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Acenaphthylene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Anthracene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Chrysene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC-20-240917 (A4I1323-18)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Fluoranthene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Fluorene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00896	0.0179	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0358	0.0716	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0358	0.0716	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Naphthalene	**0.0690**	0.0358	0.0716	ug/L	1	09/24/24 10:25	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0358	0.0716	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Pyrene	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Dibenzofuran	ND	0.0179	0.0358	ug/L	1	09/24/24 10:25	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*09/24/24 10:25*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*109 %*	*80-132 %*	*1*	*09/24/24 10:25*	*EPA 8270E LVI*	
EMW-1S-240916 (A4I1323-19RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Acenaphthylene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Anthracene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Chrysene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Fluoranthene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Fluorene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0102	0.0205	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0409	0.0818	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0409	0.0818	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Naphthalene	**0.0471**	0.0409	0.0818	ug/L	1	09/25/24 17:33	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0409	0.0818	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Pyrene	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Dibenzofuran	ND	0.0205	0.0409	ug/L	1	09/25/24 17:33	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*91 %*	*Limits: 78-134 %*	*1*	*09/25/24 17:33*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-1S-240916 (A4I1323-19RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Surrogate: Benzo(a)pyrene-d12 (Surr)			*Recovery: 111 %*	*Limits: 80-132 %*	*1*	*09/25/24 17:33*	*EPA 8270E LVI*	
EMW-2S-240917 (A4I1323-20)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Acenaphthylene	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Anthracene	**0.0324**	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Chrysene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Fluoranthene	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Fluorene	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00899	0.0180	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0360	0.0719	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0360	0.0719	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Naphthalene	**0.0499**	0.0360	0.0719	ug/L	1	09/24/24 11:00	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0360	0.0719	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Pyrene	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Dibenzofuran	ND	0.0180	0.0360	ug/L	1	09/24/24 11:00	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 97 %*	*Limits: 78-134 %*	*1*	*09/24/24 11:00*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/24/24 11:00*	*EPA 8270E LVI*	
EMW-3S-240918 (A4I1323-21)				**Matrix: Water**		**Batch: 24I0680**		
Acenaphthene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Acenaphthylene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Anthracene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-3S-240918 (A4I1323-21)				**Matrix: Water**		**Batch: 24I0680**		
Chrysene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Fluoranthene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Fluorene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00839	0.0168	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0336	0.0671	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0336	0.0671	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Naphthalene	ND	0.0336	0.0671	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Phenanthrene	ND	0.0336	0.0671	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Pyrene	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Dibenzofuran	ND	0.0168	0.0336	ug/L	1	09/24/24 11:34	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*102 %*	*Limits: 78-134 %*	*1*	*09/24/24 11:34*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 11:34*	*EPA 8270E LVI*	
EMW-4D-240916 (A4I1323-22RE1)				**Matrix: Water**		**Batch: 24I0717**		
Acenaphthene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Acenaphthylene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Anthracene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Chrysene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Fluoranthene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Fluorene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0111	0.0222	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0445	0.0889	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0445	0.0889	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Naphthalene	ND	0.0445	0.0889	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Phenanthrene	ND	0.0445	0.0889	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Pyrene	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-4D-240916 (A4I1323-22RE1)				**Matrix: Water**		**Batch: 24I0717**		
Dibenzofuran	ND	0.0222	0.0445	ug/L	1	09/25/24 18:08	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*09/25/24 18:08*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 18:08*	*EPA 8270E LVI*	
EMW-5SA-240917 (A4I1323-23)				**Matrix: Water**		**Batch: 24I0680**		
Acenaphthene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Acenaphthylene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Anthracene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Chrysene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Fluoranthene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Fluorene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00823	0.0165	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0329	0.0659	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0329	0.0659	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Naphthalene	**0.0358**	0.0329	0.0659	ug/L	1	09/24/24 12:09	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0329	0.0659	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Pyrene	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Dibenzofuran	ND	0.0165	0.0329	ug/L	1	09/24/24 12:09	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*100 %*	*Limits: 78-134 %*	*1*	*09/24/24 12:09*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/24/24 12:09*	*EPA 8270E LVI*	
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Acenaphthylene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Anthracene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Benzo(k)fluoranthene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Chrysene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Fluoranthene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Fluorene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00975	0.0195	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0390	0.0780	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0390	0.0780	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Naphthalene	**0.0522**	0.0390	0.0780	ug/L	1	09/24/24 12:44	EPA 8270E LVI	**J**
Phenanthrene	ND	0.0390	0.0780	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Pyrene	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Dibenzofuran	ND	0.0195	0.0390	ug/L	1	09/24/24 12:44	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 98 %*	*Limits: 78-134 %*	*1*	*09/24/24 12:44*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 12:44*	*EPA 8270E LVI*	
EMW-7S-240916 (A4I1323-25RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Acenaphthylene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Anthracene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Chrysene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Fluoranthene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Fluorene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00978	0.0196	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0391	0.0783	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0391	0.0783	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Naphthalene	ND	0.0391	0.0783	ug/L	1	09/25/24 18:44	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-7S-240916 (A4I1323-25RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Phenanthrene	ND	0.0391	0.0783	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Pyrene	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Dibenzofuran	ND	0.0196	0.0391	ug/L	1	09/25/24 18:44	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*93 %*	*Limits: 78-134 %*	*1*	*09/25/24 18:44*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 18:44*	*EPA 8270E LVI*	
EMW-9SA-240917 (A4I1323-26)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Acenaphthylene	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Anthracene	**0.0337**	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Chrysene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Fluoranthene	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Fluorene	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00922	0.0184	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0369	0.0738	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0369	0.0738	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Naphthalene	ND	0.0369	0.0738	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Phenanthrene	ND	0.0369	0.0738	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Pyrene	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Dibenzofuran	ND	0.0184	0.0369	ug/L	1	09/24/24 13:19	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*96 %*	*Limits: 78-134 %*	*1*	*09/24/24 13:19*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/24/24 13:19*	*EPA 8270E LVI*	
EMW-10D-240917 (A4I1323-27)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	**3.79**	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Acenaphthylene	**0.0936**	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Anthracene	ND	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-10D-240917 (A4I1323-27)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Benzo(a)pyrene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Chrysene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Fluorene	**0.106**	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00909	0.0182	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
1-Methylnaphthalene	**0.0545**	0.0364	0.0727	ug/L	1	09/24/24 13:54	EPA 8270E LVI	**J**
2-Methylnaphthalene	ND	0.0364	0.0727	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Naphthalene	ND	0.0364	0.0727	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Phenanthrene	ND	0.0364	0.0727	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Pyrene	ND	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Dibenzofuran	ND	0.0182	0.0364	ug/L	1	09/24/24 13:54	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)			*Recovery: 99 %*	*Limits: 78-134 %*	*1*	*09/24/24 13:54*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/24/24 13:54*	*EPA 8270E LVI*	
EMW-11S-240916 (A4I1323-28RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	**0.730**	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Acenaphthylene	**0.0245**	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	**J**
Anthracene	**0.0734**	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Chrysene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Fluoranthene	ND	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Fluorene	ND	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0104	0.0208	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0417	0.0833	ug/L	1	09/25/24 19:19	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-11S-240916 (A4I1323-28RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
2-Methylnaphthalene	ND	0.0417	0.0833	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Naphthalene	ND	0.0417	0.0833	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Phenanthrene	ND	0.0417	0.0833	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Pyrene	ND	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Dibenzofuran	ND	0.0208	0.0417	ug/L	1	09/25/24 19:19	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*09/25/24 19:19*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/25/24 19:19*	*EPA 8270E LVI*	
EMW-12S-240917 (A4I1323-29)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Acenaphthylene	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Anthracene	**0.0208**	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Chrysene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Fluoranthene	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Fluorene	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00946	0.0189	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0378	0.0757	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0378	0.0757	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Naphthalene	ND	0.0378	0.0757	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Phenanthrene	ND	0.0378	0.0757	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Pyrene	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Dibenzofuran	ND	0.0189	0.0378	ug/L	1	09/24/24 14:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*98 %*	*Limits: 78-134 %*	*1*	*09/24/24 14:29*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 14:29*	*EPA 8270E LVI*	
EMW-13S-240916 (A4I1323-30RE1)				**Matrix: Water**		**Batch: 24I0717**		
Acenaphthene	**0.238**	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Acenaphthylene	ND	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-13S-240916 (A4I1323-30RE1)				**Matrix: Water**		**Batch: 24I0717**		
Anthracene	**0.0281**	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**J**
Benz(a)anthracene	ND	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Benzo(b)fluoranthene	**0.00950**	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**J**
Benzo(k)fluoranthene	ND	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Chrysene	ND	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Fluoranthene	**0.0248**	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**J**
Fluorene	**0.103**	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**AMEND, Q-29**
Indeno(1,2,3-cd)pyrene	ND	0.00826	0.0165	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0330	0.0661	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0330	0.0661	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Naphthalene	**0.0462**	0.0330	0.0661	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**J**
Phenanthrene	**0.0557**	0.0330	0.0661	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**J**
Pyrene	**0.0198**	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	**J**
Dibenzofuran	**0.0925**	0.0165	0.0330	ug/L	1	09/25/24 19:54	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*95 %*	*Limits: 78-134 %*	*1*	*09/25/24 19:54*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/25/24 19:54*	*EPA 8270E LVI*	
EMW-14D-240916 (A4I1323-31RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Acenaphthylene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Anthracene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Chrysene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Fluoranthene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Fluorene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-14D-240916 (A4I1323-31RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Indeno(1,2,3-cd)pyrene	ND	0.00998	0.0200	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0399	0.0798	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0399	0.0798	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Naphthalene	ND	0.0399	0.0798	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Phenanthrene	ND	0.0399	0.0798	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Pyrene	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Dibenzofuran	ND	0.0200	0.0399	ug/L	1	09/25/24 20:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*94 %*	*Limits: 78-134 %*	*1*	*09/25/24 20:29*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*110 %*	*80-132 %*	*1*	*09/25/24 20:29*	*EPA 8270E LVI*	
EMW-15D-240916 (A4I1323-32RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Acenaphthylene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Anthracene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Benz(a)anthracene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Chrysene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Fluoranthene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Fluorene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.0104	0.0208	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0417	0.0834	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0417	0.0834	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Naphthalene	ND	0.0417	0.0834	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Phenanthrene	ND	0.0417	0.0834	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Pyrene	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Dibenzofuran	ND	0.0208	0.0417	ug/L	1	09/25/24 21:03	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*93 %*	*Limits: 78-134 %*	*1*	*09/25/24 21:03*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/25/24 21:03*	*EPA 8270E LVI*	
EMW-16D-240917 (A4I1323-33)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-16D-240917 (A4I1323-33)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Acenaphthylene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Anthracene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Chrysene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Fluoranthene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Fluorene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00855	0.0171	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0342	0.0684	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0342	0.0684	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Naphthalene	ND	0.0342	0.0684	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Phenanthrene	ND	0.0342	0.0684	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Pyrene	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Dibenzofuran	ND	0.0171	0.0342	ug/L	1	09/24/24 15:04	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*103 %*	*Limits: 78-134 %*	*1*	*09/24/24 15:04*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 15:04*	*EPA 8270E LVI*	
EMW-17S-240916 (A4I1323-34RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Acenaphthylene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Anthracene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Chrysene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-17S-240916 (A4I1323-34RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Fluoranthene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Fluorene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00886	0.0177	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0354	0.0709	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0354	0.0709	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Naphthalene	ND	0.0354	0.0709	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Phenanthrene	ND	0.0354	0.0709	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Pyrene	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Dibenzofuran	ND	0.0177	0.0354	ug/L	1	09/25/24 21:39	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*96 %*	*Limits: 78-134 %*	*1*	*09/25/24 21:39*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*112 %*	*80-132 %*	*1*	*09/25/24 21:39*	*EPA 8270E LVI*	
EMW-18S-240916 (A4I1323-35RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
Acenaphthene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Acenaphthylene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Anthracene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Chrysene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Fluoranthene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Fluorene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00923	0.0185	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0369	0.0738	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0369	0.0738	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Naphthalene	ND	0.0369	0.0738	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Phenanthrene	ND	0.0369	0.0738	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Pyrene	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Dibenzofuran	ND	0.0185	0.0369	ug/L	1	09/25/24 22:14	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*95 %*	*Limits: 78-134 %*	*1*	*09/25/24 22:14*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*113 %*	*80-132 %*	*1*	*09/25/24 22:14*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-18S-240916 (A4I1323-35RE1)				**Matrix: Water**		**Batch: 24I0717**		**DCNT**
EMW-23S-240917 (A4I1323-36)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Acenaphthylene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Anthracene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Chrysene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Fluoranthene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Fluorene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00898	0.0180	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0359	0.0719	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0359	0.0719	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Naphthalene	ND	0.0359	0.0719	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Phenanthrene	ND	0.0359	0.0719	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Pyrene	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Dibenzofuran	ND	0.0180	0.0359	ug/L	1	09/24/24 15:38	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*101 %*	*Limits: 78-134 %*	*1*	*09/24/24 15:38*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 15:38*	*EPA 8270E LVI*	
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Acenaphthene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Acenaphthylene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Anthracene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Chrysene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**		**Batch: 24I0680**		**DCNT**
Dibenz(a,h)anthracene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Fluoranthene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Fluorene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00955	0.0191	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
1-Methylnaphthalene	ND	0.0382	0.0764	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
2-Methylnaphthalene	ND	0.0382	0.0764	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Naphthalene	ND	0.0382	0.0764	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Phenanthrene	ND	0.0382	0.0764	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Pyrene	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Dibenzofuran	ND	0.0191	0.0382	ug/L	1	09/24/24 16:13	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*101 %*	*Limits: 78-134 %*	*1*	*09/24/24 16:13*	*EPA 8270E LVI*	
Benzo(a)pyrene-d12 (Surr)			*111 %*	*80-132 %*	*1*	*09/24/24 16:13*	*EPA 8270E LVI*	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240916 (A4I1323-01)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**0.939**	0.180	0.360	ug/L	1	10/02/24 21:08	EPA 6020B	
Copper	**1.45**	0.900	1.80	ug/L	1	10/02/24 21:08	EPA 6020B	**J**
CMW-2-240918 (A4I1323-02)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**75.4**	0.180	0.360	ug/L	1	10/02/24 21:27	EPA 6020B	
Copper	**3.67**	0.900	1.80	ug/L	1	10/02/24 21:27	EPA 6020B	
CMW-3-240918 (A4I1323-03)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**10.4**	0.900	1.80	ug/L	1	10/02/24 21:32	EPA 6020B	
Copper	**1.07**	0.900	1.80	ug/L	1	10/02/24 21:32	EPA 6020B	**J**
CMW-4-240916 (A4I1323-04)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**73.8**	0.180	0.360	ug/L	1	10/02/24 21:37	EPA 6020B	
Copper	**3.89**	0.900	1.80	ug/L	1	10/02/24 21:37	EPA 6020B	
CMW-5-240917 (A4I1323-05)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**74.6**	0.180	0.360	ug/L	1	10/02/24 21:42	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 21:42	EPA 6020B	
CMW-6-240916 (A4I1323-06)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**43.4**	0.180	0.360	ug/L	1	10/02/24 21:56	EPA 6020B	
Copper	**14.1**	0.900	1.80	ug/L	1	10/02/24 21:56	EPA 6020B	
CMW-7-240916 (A4I1323-07)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**1.95**	0.180	0.360	ug/L	1	10/02/24 22:01	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 22:01	EPA 6020B	
SLR-1-240916 (A4I1323-08)				**Matrix: Water**				
Batch: 24I0774								

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-1-240916 (A4I1323-08)				**Matrix: Water**				
Arsenic	**1.71**	0.180	0.360	ug/L	1	10/02/24 22:06	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 22:06	EPA 6020B	
SLR-2-240917 (A4I1323-09)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**0.953**	0.180	0.360	ug/L	1	10/02/24 22:11	EPA 6020B	
Copper	**3.73**	0.900	1.80	ug/L	1	10/02/24 22:11	EPA 6020B	
SLR-3-240917 (A4I1323-10)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**42.4**	0.180	0.360	ug/L	1	10/02/24 22:16	EPA 6020B	
Copper	**24.9**	0.900	1.80	ug/L	1	10/02/24 22:16	EPA 6020B	
SLR-6-240917 (A4I1323-11)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**0.216**	0.180	0.360	ug/L	1	10/02/24 22:20	EPA 6020B	**J**
Copper	**2.02**	0.900	1.80	ug/L	1	10/02/24 22:20	EPA 6020B	
SLR-7-240916 (A4I1323-12)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**1.51**	0.180	0.360	ug/L	1	10/02/24 22:25	EPA 6020B	
Copper	**3.31**	0.900	1.80	ug/L	1	10/02/24 22:25	EPA 6020B	
DMW-2-240917 (A4I1323-13)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**66.1**	0.180	0.360	ug/L	1	10/02/24 22:30	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 22:30	EPA 6020B	
DMW-3-240917 (A4I1323-14)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**1.83**	0.180	0.360	ug/L	1	10/02/24 22:35	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 22:35	EPA 6020B	
DMW-12-240917 (A4I1323-15)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**67.1**	0.180	0.360	ug/L	1	10/02/24 22:40	EPA 6020B	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-12-240917 (A4I1323-15)				**Matrix: Water**				
Copper	ND	0.900	1.80	ug/L	1	10/02/24 22:40	EPA 6020B	
DMW-6B-240916 (A4I1323-16)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**25.7**	0.180	0.360	ug/L	1	10/02/24 22:54	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 22:54	EPA 6020B	
HC-4-240918 (A4I1323-17)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**1.74**	0.180	0.360	ug/L	1	10/02/24 22:59	EPA 6020B	
Copper	**3.80**	0.900	1.80	ug/L	1	10/02/24 22:59	EPA 6020B	
HC-20-240917 (A4I1323-18)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**7.39**	0.180	0.360	ug/L	1	10/02/24 23:04	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 23:04	EPA 6020B	
EMW-1S-240916 (A4I1323-19)				**Matrix: Water**				
Batch: 24I0774								
Arsenic	**13.9**	0.180	0.360	ug/L	1	10/02/24 23:09	EPA 6020B	
Copper	**9.94**	0.900	1.80	ug/L	1	10/02/24 23:09	EPA 6020B	
EMW-2S-240917 (A4I1323-20)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.446**	0.180	0.360	ug/L	1	10/02/24 23:23	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 23:23	EPA 6020B	
EMW-3S-240918 (A4I1323-21)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**3.52**	0.180	0.360	ug/L	1	10/02/24 23:52	EPA 6020B	
Copper	**2.76**	0.900	1.80	ug/L	1	10/02/24 23:52	EPA 6020B	
EMW-4D-240916 (A4I1323-22)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	ND	0.180	0.360	ug/L	1	10/02/24 23:57	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/02/24 23:57	EPA 6020B	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-5SA-240917 (A4I1323-23)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.671**	0.180	0.360	ug/L	1	10/03/24 00:02	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:02	EPA 6020B	
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.603**	0.180	0.360	ug/L	1	10/03/24 00:07	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:07	EPA 6020B	
EMW-7S-240916 (A4I1323-25)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.211**	0.180	0.360	ug/L	1	10/03/24 00:11	EPA 6020B	**J**
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:11	EPA 6020B	
EMW-9SA-240917 (A4I1323-26)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.808**	0.180	0.360	ug/L	1	10/03/24 00:16	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:16	EPA 6020B	
EMW-10D-240917 (A4I1323-27)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 00:21	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:21	EPA 6020B	
EMW-11S-240916 (A4I1323-28)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**16.7**	0.180	0.360	ug/L	1	10/03/24 00:26	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:26	EPA 6020B	
EMW-12S-240917 (A4I1323-29)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**1.05**	0.180	0.360	ug/L	1	10/03/24 00:31	EPA 6020B	
Copper	**1.12**	0.900	1.80	ug/L	1	10/03/24 00:31	EPA 6020B	**J**
EMW-13S-240916 (A4I1323-30)				**Matrix: Water**				

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-13S-240916 (A4I1323-30)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**232**	0.180	0.360	ug/L	1	10/03/24 00:36	EPA 6020B	
Copper	**10.3**	0.900	1.80	ug/L	1	10/03/24 00:36	EPA 6020B	
EMW-14D-240916 (A4I1323-31)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.643**	0.180	0.360	ug/L	1	10/03/24 00:50	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:50	EPA 6020B	
EMW-15D-240916 (A4I1323-32)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.782**	0.180	0.360	ug/L	1	10/03/24 00:55	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 00:55	EPA 6020B	
EMW-16D-240917 (A4I1323-33)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 01:00	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 01:00	EPA 6020B	
EMW-17S-240916 (A4I1323-34)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.373**	0.180	0.360	ug/L	1	10/03/24 01:05	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 01:05	EPA 6020B	
EMW-18S-240916 (A4I1323-35)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**0.540**	0.180	0.360	ug/L	1	10/03/24 01:09	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 01:09	EPA 6020B	
EMW-23S-240917 (A4I1323-36)				**Matrix: Water**				
Batch: 24I0775								
Arsenic	**19.3**	0.180	0.360	ug/L	1	10/03/24 01:14	EPA 6020B	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 01:14	EPA 6020B	
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**				
Batch: 24I0775								

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**				
Arsenic	**0.594**	0.180	0.360	ug/L	1	10/03/24 01:19	EPA 6020B	
Copper	**1.23**	0.900	1.80	ug/L	1	10/03/24 01:19	EPA 6020B	**J**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240916 (A4I1323-01)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**0.922**	0.180	0.360	ug/L	1	10/03/24 01:34	EPA 6020B (Diss)	
Copper	**1.46**	0.900	1.80	ug/L	1	10/03/24 01:34	EPA 6020B (Diss)	**J**
CMW-2-240918 (A4I1323-02)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**63.0**	0.180	0.360	ug/L	1	10/03/24 01:53	EPA 6020B (Diss)	**Q-42**
Copper	**1.74**	0.900	1.80	ug/L	1	10/03/24 01:53	EPA 6020B (Diss)	**J**
CMW-3-240918 (A4I1323-03)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**10.2**	0.180	0.360	ug/L	1	10/03/24 02:07	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 02:07	EPA 6020B (Diss)	
CMW-4-240916 (A4I1323-04)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**74.2**	0.180	0.360	ug/L	1	10/03/24 02:12	EPA 6020B (Diss)	
Copper	**2.17**	0.900	1.80	ug/L	1	10/03/24 02:12	EPA 6020B (Diss)	
CMW-5-240917 (A4I1323-05)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**3.96**	0.180	0.360	ug/L	1	10/03/24 02:17	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 02:17	EPA 6020B (Diss)	
CMW-6-240916 (A4I1323-06)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**42.2**	0.180	0.360	ug/L	1	10/03/24 02:22	EPA 6020B (Diss)	
Copper	**9.80**	0.900	1.80	ug/L	1	10/03/24 02:22	EPA 6020B (Diss)	
CMW-7-240916 (A4I1323-07)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**0.352**	0.180	0.360	ug/L	1	10/03/24 02:27	EPA 6020B (Diss)	**J**
Copper	ND	0.900	1.80	ug/L	1	10/03/24 02:27	EPA 6020B (Diss)	
SLR-1-240916 (A4I1323-08)				**Matrix: Water**				
Batch: 24I0770								

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SLR-1-240916 (A4I1323-08)				**Matrix: Water**				
Arsenic	**1.75**	0.180	0.360	ug/L	1	10/03/24 02:31	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 02:31	EPA 6020B (Diss)	
SLR-2-240917 (A4I1323-09)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**0.652**	0.180	0.360	ug/L	1	10/03/24 02:46	EPA 6020B (Diss)	
Copper	**1.90**	0.900	1.80	ug/L	1	10/03/24 02:46	EPA 6020B (Diss)	
SLR-3-240917 (A4I1323-10)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**41.5**	0.180	0.360	ug/L	1	10/03/24 02:51	EPA 6020B (Diss)	
Copper	**19.8**	0.900	1.80	ug/L	1	10/03/24 02:51	EPA 6020B (Diss)	
SLR-6-240917 (A4I1323-11)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 02:56	EPA 6020B (Diss)	
Copper	**1.04**	0.900	1.80	ug/L	1	10/03/24 02:56	EPA 6020B (Diss)	**J**
SLR-7-240916 (A4I1323-12)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**0.486**	0.180	0.360	ug/L	1	10/03/24 03:00	EPA 6020B (Diss)	
Copper	**2.58**	0.900	1.80	ug/L	1	10/03/24 03:00	EPA 6020B (Diss)	
DMW-2-240917 (A4I1323-13)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**13.4**	0.180	0.360	ug/L	1	10/03/24 03:05	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 03:05	EPA 6020B (Diss)	
DMW-3-240917 (A4I1323-14)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**0.810**	0.180	0.360	ug/L	1	10/03/24 03:10	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 03:10	EPA 6020B (Diss)	
DMW-12-240917 (A4I1323-15)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**17.1**	0.180	0.360	ug/L	1	10/03/24 03:15	EPA 6020B (Diss)	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-12-240917 (A4I1323-15)				**Matrix: Water**				
Copper	ND	0.900	1.80	ug/L	1	10/03/24 03:15	EPA 6020B (Diss)	
DMW-6B-240916 (A4I1323-16)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**1.10**	0.180	0.360	ug/L	1	10/03/24 03:20	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 03:20	EPA 6020B (Diss)	
HC-4-240918 (A4I1323-17)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**1.76**	0.180	0.360	ug/L	1	10/03/24 03:25	EPA 6020B (Diss)	
Copper	**3.78**	0.900	1.80	ug/L	1	10/03/24 03:25	EPA 6020B (Diss)	
HC-20-240917 (A4I1323-18)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**2.28**	0.180	0.360	ug/L	1	10/03/24 03:29	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 03:29	EPA 6020B (Diss)	
EMW-1S-240916 (A4I1323-19)				**Matrix: Water**				
Batch: 24I0770								
Arsenic	**0.461**	0.180	0.360	ug/L	1	10/03/24 03:44	EPA 6020B (Diss)	
Copper	**1.15**	0.900	1.80	ug/L	1	10/03/24 03:44	EPA 6020B (Diss)	**J**
EMW-2S-240917 (A4I1323-20)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 03:58	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 03:58	EPA 6020B (Diss)	
EMW-3S-240918 (A4I1323-21)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**3.36**	0.180	0.360	ug/L	1	10/03/24 04:08	EPA 6020B (Diss)	
Copper	**2.86**	0.900	1.80	ug/L	1	10/03/24 04:08	EPA 6020B (Diss)	
EMW-4D-240916 (A4I1323-22)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 04:22	EPA 6020B (Diss)	

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-4D-240916 (A4I1323-22RE3)				**Matrix: Water**				
Batch: 24J0686								
Copper	ND	1.80	3.60	ug/L	1	10/16/24 21:40	EPA 6020B (Diss)	R-01
EMW-5SA-240917 (A4I1323-23)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.303**	0.180	0.360	ug/L	1	10/03/24 04:27	EPA 6020B (Diss)	**J**
Copper	ND	0.900	1.80	ug/L	1	10/03/24 04:27	EPA 6020B (Diss)	
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.336**	0.180	0.360	ug/L	1	10/03/24 04:42	EPA 6020B (Diss)	**J**
Copper	**1.20**	0.900	1.80	ug/L	1	10/03/24 04:42	EPA 6020B (Diss)	**J**
EMW-7S-240916 (A4I1323-25)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 04:47	EPA 6020B (Diss)	
Copper	**0.932**	0.900	1.80	ug/L	1	10/03/24 04:47	EPA 6020B (Diss)	**J**
EMW-9SA-240917 (A4I1323-26)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 04:51	EPA 6020B (Diss)	
Copper	**1.19**	0.900	1.80	ug/L	1	10/03/24 04:51	EPA 6020B (Diss)	**J**
EMW-10D-240917 (A4I1323-27)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 04:56	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 04:56	EPA 6020B (Diss)	
EMW-11S-240916 (A4I1323-28)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.724**	0.180	0.360	ug/L	1	10/03/24 05:01	EPA 6020B (Diss)	
EMW-11S-240916 (A4I1323-28RE3)				**Matrix: Water**				
Batch: 24J0686								
Copper	ND	1.80	3.60	ug/L	1	10/16/24 21:50	EPA 6020B (Diss)	R-01

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-12S-240917 (A4I1323-29)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.193**	0.180	0.360	ug/L	1	10/03/24 05:06	EPA 6020B (Diss)	**J**
Copper	**1.01**	0.900	1.80	ug/L	1	10/03/24 05:06	EPA 6020B (Diss)	**J**
EMW-13S-240916 (A4I1323-30)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**222**	0.180	0.360	ug/L	1	10/03/24 05:11	EPA 6020B (Diss)	
Copper	**3.59**	0.900	1.80	ug/L	1	10/03/24 05:11	EPA 6020B (Diss)	
EMW-14D-240916 (A4I1323-31)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 05:16	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:16	EPA 6020B (Diss)	
EMW-15D-240916 (A4I1323-32)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.217**	0.180	0.360	ug/L	1	10/03/24 05:20	EPA 6020B (Diss)	**J**
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:20	EPA 6020B (Diss)	
EMW-16D-240917 (A4I1323-33)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 05:25	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:25	EPA 6020B (Diss)	
EMW-17S-240916 (A4I1323-34)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.288**	0.180	0.360	ug/L	1	10/03/24 05:40	EPA 6020B (Diss)	**J**
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:40	EPA 6020B (Diss)	
EMW-18S-240916 (A4I1323-35)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	ND	0.180	0.360	ug/L	1	10/03/24 05:45	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:45	EPA 6020B (Diss)	
EMW-23S-240917 (A4I1323-36)				**Matrix: Water**				
Batch: 24I0771								

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-23S-240917 (A4I1323-36)				**Matrix: Water**				
Arsenic	**4.59**	0.180	0.360	ug/L	1	10/03/24 05:49	EPA 6020B (Diss)	
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:49	EPA 6020B (Diss)	
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**				
Batch: 24I0771								
Arsenic	**0.284**	0.180	0.360	ug/L	1	10/03/24 05:54	EPA 6020B (Diss)	**J**
Copper	ND	0.900	1.80	ug/L	1	10/03/24 05:54	EPA 6020B (Diss)	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
CMW-1-240916 (A4I1323-01)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:15	NA	H-12
CMW-2-240918 (A4I1323-02)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:16	NA	H-12
CMW-3-240918 (A4I1323-03)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:17	NA	H-12
CMW-4-240916 (A4I1323-04)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:18	NA	H-12
CMW-5-240917 (A4I1323-05)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:20	NA	H-12
CMW-6-240916 (A4I1323-06)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:21	NA	H-12
CMW-7-240916 (A4I1323-07)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:22	NA	H-12
SLR-1-240916 (A4I1323-08)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:23	NA	H-12
SLR-2-240917 (A4I1323-09)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:25	NA	H-12
SLR-3-240917 (A4I1323-10)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:26	NA	H-12
SLR-6-240917 (A4I1323-11)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:27	NA	H-12
SLR-7-240916 (A4I1323-12)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:28	NA	H-12
DMW-2-240917 (A4I1323-13)				**Matrix: Water**		**Batch: 24I0722**		

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DMW-2-240917 (A4I1323-13)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:29	NA	H-12
DMW-3-240917 (A4I1323-14)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:30	NA	H-12
DMW-12-240917 (A4I1323-15)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:31	NA	H-12
DMW-6B-240916 (A4I1323-16)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:32	NA	H-12
HC-4-240918 (A4I1323-17)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:48	NA	H-12
HC-20-240917 (A4I1323-18)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:49	NA	H-12
EMW-1S-240916 (A4I1323-19)				**Matrix: Water**		**Batch: 24I0722**		
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:50	NA	H-12
EMW-2S-240917 (A4I1323-20)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:51	NA	
EMW-3S-240918 (A4I1323-21)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:53	NA	
EMW-4D-240916 (A4I1323-22)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:54	NA	
EMW-4D-240916 (A4I1323-22RE1)				**Matrix: Water**		**Batch: 24J0632**		
Lab Filtration (prep only)	PREP			N/A	1	10/15/24 16:02	NA	H-12
EMW-5SA-240917 (A4I1323-23)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:55	NA	
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**		**Batch: 24I0767**		**H-12**

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-6S-240917 (A4I1323-24)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:56	NA	
EMW-7S-240916 (A4I1323-25)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:58	NA	
EMW-9SA-240917 (A4I1323-26)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 17:59	NA	
EMW-10D-240917 (A4I1323-27)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:00	NA	
EMW-11S-240916 (A4I1323-28)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:02	NA	
EMW-11S-240916 (A4I1323-28RE1)				**Matrix: Water**		**Batch: 24J0632**		
Lab Filtration (prep only)	PREP			N/A	1	10/15/24 16:02	NA	H-12
EMW-12S-240917 (A4I1323-29)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:03	NA	
EMW-13S-240916 (A4I1323-30)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:04	NA	
EMW-14D-240916 (A4I1323-31)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:06	NA	
EMW-15D-240916 (A4I1323-32)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:07	NA	
EMW-16D-240917 (A4I1323-33)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:08	NA	
EMW-17S-240916 (A4I1323-34)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:09	NA	
EMW-18S-240916 (A4I1323-35)				**Matrix: Water**		**Batch: 24I0767**		**H-12**

Apex Laboratories

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EMW-18S-240916 (A4I1323-35)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:10	NA	
EMW-23S-240917 (A4I1323-36)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:11	NA	
EMW-26S-240917 (A4I1323-37)				**Matrix: Water**		**Batch: 24I0767**		**H-12**
Lab Filtration (prep only)	PREP			N/A	1	09/23/24 18:12	NA	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0674 - EPA 5030C							**Water**					
Blank (24I0674-BLK1)			Prepared: 09/20/24 15:29		Analyzed: 09/20/24 18:20							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*104 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				
LCS (24I0674-BS1)			Prepared: 09/20/24 15:29		Analyzed: 09/20/24 17:21							
EPA 8260D SIM												
Vinyl chloride	0.205	0.0100	0.0200	ug/L	1	0.200	---	103	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*103 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Duplicate (24I0674-DUP1)			Prepared: 09/20/24 15:29		Analyzed: 09/21/24 01:04							
QC Source Sample: Non-SDG (A4I1284-04)												
Vinyl chloride	**0.725**	0.0100	0.0200	ug/L	1	---	0.727	---	---	0.2	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*104 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*			*"*				
Matrix Spike (24I0674-MS1)			Prepared: 09/20/24 15:29		Analyzed: 09/20/24 21:01							
QC Source Sample: Non-SDG (A4I0998-04)												
EPA 8260D SIM												
Vinyl chloride	0.245	0.0100	0.0200	ug/L	1	0.200	ND	123	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*103 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Batch 24I0706 - EPA 5030C							**Water**					
Blank (24I0706-BLK1)			Prepared: 09/23/24 11:11		Analyzed: 09/23/24 14:47							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0706 - EPA 5030C							**Water**					
Blank (24I0706-BLK1)				Prepared: 09/23/24 11:11		Analyzed: 09/23/24 14:47						
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*103 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*			*"*					
LCS (24I0706-BS1)				Prepared: 09/23/24 11:11		Analyzed: 09/23/24 13:40						
EPA 8260D SIM												
Vinyl chloride	0.224	0.0100	0.0200	ug/L	1	0.200	---	112	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*102 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*98 %*	*80-120 %*			*"*					
Duplicate (24I0706-DUP1)				Prepared: 09/23/24 11:11		Analyzed: 09/23/24 21:32						
QC Source Sample: DMW-6B-240916 (A4I1323-16)												
EPA 8260D SIM												
Vinyl chloride	**0.277**	0.0100	0.0200	ug/L	1	---	0.268	---	---	3	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*104 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*			*"*					
Matrix Spike (24I0706-MS1)				Prepared: 09/23/24 11:11		Analyzed: 09/24/24 00:14						
QC Source Sample: EMW-3S-240918 (A4I1323-21)												
EPA 8260D SIM												
Vinyl chloride	0.273	0.0100	0.0200	ug/L	1	0.200	ND	136	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*102 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*			*"*					

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0763 - EPA 5030C							**Water**					
Blank (24I0763-BLK1)			Prepared: 09/24/24 14:02		Analyzed: 09/24/24 16:43							
EPA 8260D SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*102 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*			*"*				
LCS (24I0763-BS1)			Prepared: 09/24/24 14:02		Analyzed: 09/24/24 15:47							
EPA 8260D SIM												
Vinyl chloride	0.228	0.0100	0.0200	ug/L	1	0.200	---	114	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 96 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*101 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*97 %*		*80-120 %*			*"*				
Duplicate (24I0763-DUP1)			Prepared: 09/24/24 14:02		Analyzed: 09/24/24 17:37							
QC Source Sample: EMW-4D-240916 (A4I1323-22)												
EPA 8260D SIM												
Vinyl chloride	**0.346**	0.0100	0.0200	ug/L	1	---	0.352	---	---	2	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*101 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				
Matrix Spike (24I0763-MS1)			Prepared: 09/24/24 14:02		Analyzed: 09/25/24 00:49							
QC Source Sample: EMW-26S-240917 (A4I1323-37)												
EPA 8260D SIM												
Vinyl chloride	0.302	0.0100	0.0200	ug/L	1	0.200	ND	**151**	**58-137%**	---	---	Q-01
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*103 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*			*"*				

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0637 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24I0637-BLK1)			Prepared: 09/20/24 08:05		Analyzed: 09/20/24 18:12							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	Q-30
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 93 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*105 %*		*80-132 %*			*"*				
LCS (24I0637-BS1)			Prepared: 09/20/24 08:05		Analyzed: 09/20/24 18:45							
EPA 8270E LVI												
Acenaphthene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-120%	---	---	
Acenaphthylene	1.71	0.0160	0.0320	ug/L	1	1.60	---	107	80-124%	---	---	
Anthracene	1.61	0.0160	0.0320	ug/L	1	1.60	---	101	80-123%	---	---	
Benz(a)anthracene	1.61	0.00800	0.0160	ug/L	1	1.60	---	101	80-122%	---	---	
Benzo(a)pyrene	1.81	0.00800	0.0160	ug/L	1	1.60	---	113	80-129%	---	---	
Benzo(b)fluoranthene	1.70	0.00800	0.0160	ug/L	1	1.60	---	107	80-124%	---	---	
Benzo(k)fluoranthene	1.71	0.00800	0.0160	ug/L	1	1.60	---	107	80-125%	---	---	
Benzo(g,h,i)perylene	1.48	0.0160	0.0320	ug/L	1	1.60	---	92	80-120%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0637 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24I0637-BS1)			Prepared: 09/20/24 08:05	Analyzed: 09/20/24 18:45								
Chrysene	1.53	0.00800	0.0160	ug/L	1	1.60	---	96	80-120%	---	---	
Dibenz(a,h)anthracene	1.52	0.00800	0.0160	ug/L	1	1.60	---	95	80-120%	---	---	
Fluoranthene	1.81	0.0160	0.0320	ug/L	1	1.60	---	113	80-126%	---	---	
Fluorene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.41	0.00800	0.0160	ug/L	1	1.60	---	88	80-121%	---	---	
1-Methylnaphthalene	1.96	0.0320	0.0640	ug/L	1	1.60	---	122	53-148%	---	---	
2-Methylnaphthalene	2.00	0.0320	0.0640	ug/L	1	1.60	---	125	48-150%	---	---	
Naphthalene	1.68	0.0320	0.0640	ug/L	1	1.60	---	105	78-120%	---	---	
Phenanthrene	1.48	0.0320	0.0640	ug/L	1	1.60	---	92	80-120%	---	---	
Pyrene	1.77	0.0160	0.0320	ug/L	1	1.60	---	110	80-125%	---	---	
Carbazole	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	65-141%	---	---	
Dibenzofuran	1.76	0.0160	0.0320	ug/L	1	1.60	---	110	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*108 %*	*80-132 %*			*"*					
LCS Dup (24I0637-BSD1)			Prepared: 09/20/24 08:05	Analyzed: 09/20/24 19:19								**Q-19**
EPA 8270E LVI												
Acenaphthene	1.51	0.0160	0.0320	ug/L	1	1.60	---	94	80-120%	8	30%	
Acenaphthylene	1.56	0.0160	0.0320	ug/L	1	1.60	---	98	80-124%	9	30%	
Anthracene	1.45	0.0160	0.0320	ug/L	1	1.60	---	91	80-123%	11	30%	
Benz(a)anthracene	1.51	0.00800	0.0160	ug/L	1	1.60	---	94	80-122%	7	30%	
Benzo(a)pyrene	1.62	0.00800	0.0160	ug/L	1	1.60	---	102	80-129%	11	30%	
Benzo(b)fluoranthene	1.53	0.00800	0.0160	ug/L	1	1.60	---	95	80-124%	11	30%	
Benzo(k)fluoranthene	1.57	0.00800	0.0160	ug/L	1	1.60	---	98	80-125%	9	30%	
Benzo(g,h,i)perylene	1.33	0.0160	0.0320	ug/L	1	1.60	---	83	80-120%	10	30%	
Chrysene	1.43	0.00800	0.0160	ug/L	1	1.60	---	90	80-120%	7	30%	
Dibenz(a,h)anthracene	1.40	0.00800	0.0160	ug/L	1	1.60	---	87	80-120%	8	30%	
Fluoranthene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-126%	11	30%	
Fluorene	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	77-127%	9	30%	
Indeno(1,2,3-cd)pyrene	1.27	0.00800	0.0160	ug/L	1	1.60	---	**79**	**80-121%**	11	30%	Q-30
1-Methylnaphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	53-148%	20	30%	
2-Methylnaphthalene	1.67	0.0320	0.0640	ug/L	1	1.60	---	104	48-150%	18	30%	
Naphthalene	1.52	0.0320	0.0640	ug/L	1	1.60	---	95	78-120%	10	30%	
Phenanthrene	1.33	0.0320	0.0640	ug/L	1	1.60	---	83	80-120%	11	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0637 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24I0637-BSD1)			Prepared: 09/20/24 08:05		Analyzed: 09/20/24 19:19							**Q-19**
Pyrene	1.60	0.0160	0.0320	ug/L	1	1.60	---	100	80-125%	10	30%	
Carbazole	1.68	0.0160	0.0320	ug/L	1	1.60	---	105	65-141%	9	30%	
Dibenzofuran	1.60	0.0160	0.0320	ug/L	1	1.60	---	100	76-121%	9	30%	

Surr: Acenaphthylene-d8 (Surr) *Recovery: 95 %* *Limits: 78-134 %* *Dilution: 1x*
Benzo(a)pyrene-d12 (Surr) *108 %* *80-132 %* *"*

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0680 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24I0680-BLK1)			Prepared: 09/23/24 05:22		Analyzed: 09/23/24 10:54							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 94 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*110 %*		*80-132 %*			*"*				
LCS (24I0680-BS1)			Prepared: 09/23/24 05:22		Analyzed: 09/23/24 11:28							
EPA 8270E LVI												
Acenaphthene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-120%	---	---	
Acenaphthylene	1.74	0.0160	0.0320	ug/L	1	1.60	---	109	80-124%	---	---	
Anthracene	1.70	0.0160	0.0320	ug/L	1	1.60	---	106	80-123%	---	---	
Benz(a)anthracene	1.75	0.00800	0.0160	ug/L	1	1.60	---	109	80-122%	---	---	
Benzo(a)pyrene	1.92	0.00800	0.0160	ug/L	1	1.60	---	120	80-129%	---	---	
Benzo(b)fluoranthene	1.83	0.00800	0.0160	ug/L	1	1.60	---	114	80-124%	---	---	
Benzo(k)fluoranthene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-125%	---	---	
Benzo(g,h,i)perylene	1.58	0.0160	0.0320	ug/L	1	1.60	---	99	80-120%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0680 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24I0680-BS1)			Prepared: 09/23/24 05:22		Analyzed: 09/23/24 11:28							
Chrysene	1.61	0.00800	0.0160	ug/L	1	1.60	---	101	80-120%	---	---	
Dibenz(a,h)anthracene	1.61	0.00800	0.0160	ug/L	1	1.60	---	101	80-120%	---	---	
Fluoranthene	1.84	0.0160	0.0320	ug/L	1	1.60	---	115	80-126%	---	---	
Fluorene	1.96	0.0160	0.0320	ug/L	1	1.60	---	123	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.50	0.00800	0.0160	ug/L	1	1.60	---	94	80-121%	---	---	
1-Methylnaphthalene	1.91	0.0320	0.0640	ug/L	1	1.60	---	120	53-148%	---	---	
2-Methylnaphthalene	1.97	0.0320	0.0640	ug/L	1	1.60	---	123	48-150%	---	---	
Naphthalene	1.68	0.0320	0.0640	ug/L	1	1.60	---	105	78-120%	---	---	
Phenanthrene	1.57	0.0320	0.0640	ug/L	1	1.60	---	98	80-120%	---	---	
Pyrene	1.81	0.0160	0.0320	ug/L	1	1.60	---	113	80-125%	---	---	
Carbazole	1.97	0.0160	0.0320	ug/L	1	1.60	---	123	65-141%	---	---	
Dibenzofuran	1.83	0.0160	0.0320	ug/L	1	1.60	---	114	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*		*Limits: 78-134 %*		*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*110 %*		*80-132 %*		*"*					
LCS Dup (24I0680-BSD1)			Prepared: 09/23/24 05:22		Analyzed: 09/23/24 12:02							**Q-19**
EPA 8270E LVI												
Acenaphthene	1.61	0.0160	0.0320	ug/L	1	1.60	---	101	80-120%	5	30%	
Acenaphthylene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-124%	5	30%	
Anthracene	1.61	0.0160	0.0320	ug/L	1	1.60	---	101	80-123%	5	30%	
Benz(a)anthracene	1.62	0.00800	0.0160	ug/L	1	1.60	---	101	80-122%	8	30%	
Benzo(a)pyrene	1.77	0.00800	0.0160	ug/L	1	1.60	---	110	80-129%	9	30%	
Benzo(b)fluoranthene	1.70	0.00800	0.0160	ug/L	1	1.60	---	106	80-124%	7	30%	
Benzo(k)fluoranthene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	80-125%	10	30%	
Benzo(g,h,i)perylene	1.45	0.0160	0.0320	ug/L	1	1.60	---	91	80-120%	9	30%	
Chrysene	1.49	0.00800	0.0160	ug/L	1	1.60	---	93	80-120%	7	30%	
Dibenz(a,h)anthracene	1.50	0.00800	0.0160	ug/L	1	1.60	---	94	80-120%	7	30%	
Fluoranthene	1.77	0.0160	0.0320	ug/L	1	1.60	---	110	80-126%	4	30%	
Fluorene	1.89	0.0160	0.0320	ug/L	1	1.60	---	118	77-127%	4	30%	
Indeno(1,2,3-cd)pyrene	1.38	0.00800	0.0160	ug/L	1	1.60	---	86	80-121%	8	30%	
1-Methylnaphthalene	1.89	0.0320	0.0640	ug/L	1	1.60	---	118	53-148%	1	30%	
2-Methylnaphthalene	1.97	0.0320	0.0640	ug/L	1	1.60	---	123	48-150%	0	30%	
Naphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	78-120%	5	30%	
Phenanthrene	1.47	0.0320	0.0640	ug/L	1	1.60	---	92	80-120%	7	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0680 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24I0680-BSD1)			Prepared: 09/23/24 05:22		Analyzed: 09/23/24 12:02							**Q-19**
Pyrene	1.74	0.0160	0.0320	ug/L	1	1.60	---	109	80-125%	4	30%	
Carbazole	1.88	0.0160	0.0320	ug/L	1	1.60	---	118	65-141%	5	30%	
Dibenzofuran	1.80	0.0160	0.0320	ug/L	1	1.60	---	112	76-121%	2	30%	

Surr: Acenaphthylene-d8 (Surr) — *Recovery: 96 %* — *Limits: 78-134 %* — *Dilution: 1x*
Benzo(a)pyrene-d12 (Surr) — *109 %* — *80-132 %* — *"*

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0717 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (24I0717-BLK1)			Prepared: 09/23/24 14:39		Analyzed: 09/23/24 18:57							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 96 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*109 %*		*80-132 %*			*"*				
LCS (24I0717-BS1)			Prepared: 09/23/24 14:39		Analyzed: 09/23/24 19:31							
EPA 8270E LVI												
Acenaphthene	1.60	0.0160	0.0320	ug/L	1	1.60	---	100	80-120%	---	---	
Acenaphthylene	1.68	0.0160	0.0320	ug/L	1	1.60	---	105	80-124%	---	---	
Anthracene	1.64	0.0160	0.0320	ug/L	1	1.60	---	102	80-123%	---	---	
Benz(a)anthracene	1.68	0.00800	0.0160	ug/L	1	1.60	---	105	80-122%	---	---	
Benzo(a)pyrene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-129%	---	---	
Benzo(b)fluoranthene	1.73	0.00800	0.0160	ug/L	1	1.60	---	108	80-124%	---	---	
Benzo(k)fluoranthene	1.72	0.00800	0.0160	ug/L	1	1.60	---	107	80-125%	---	---	
Benzo(g,h,i)perylene	1.49	0.0160	0.0320	ug/L	1	1.60	---	93	80-120%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0717 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (24I0717-BS1)			Prepared: 09/23/24 14:39	Analyzed: 09/23/24 19:31								
Chrysene	1.57	0.00800	0.0160	ug/L	1	1.60	---	98	80-120%	---	---	
Dibenz(a,h)anthracene	1.54	0.00800	0.0160	ug/L	1	1.60	---	96	80-120%	---	---	
Fluoranthene	1.78	0.0160	0.0320	ug/L	1	1.60	---	111	80-126%	---	---	
Fluorene	2.06	0.0160	0.0320	ug/L	1	1.60	---	**129**	**77-127%**	---	---	Q-29
Indeno(1,2,3-cd)pyrene	1.44	0.00800	0.0160	ug/L	1	1.60	---	90	80-121%	---	---	
1-Methylnaphthalene	1.91	0.0320	0.0640	ug/L	1	1.60	---	119	53-148%	---	---	
2-Methylnaphthalene	1.98	0.0320	0.0640	ug/L	1	1.60	---	124	48-150%	---	---	
Naphthalene	1.62	0.0320	0.0640	ug/L	1	1.60	---	101	78-120%	---	---	
Phenanthrene	1.50	0.0320	0.0640	ug/L	1	1.60	---	94	80-120%	---	---	
Pyrene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-125%	---	---	
Carbazole	1.87	0.0160	0.0320	ug/L	1	1.60	---	117	65-141%	---	---	
Dibenzofuran	1.93	0.0160	0.0320	ug/L	1	1.60	---	121	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*	*Limits: 78-134 %*			*Dilution: 1x*					
Benzo(a)pyrene-d12 (Surr)			*107 %*	*80-132 %*			*"*					
LCS Dup (24I0717-BSD1)			Prepared: 09/23/24 14:39	Analyzed: 09/23/24 20:06								**Q-19**
EPA 8270E LVI												
Acenaphthene	1.60	0.0160	0.0320	ug/L	1	1.60	---	100	80-120%	0.1	30%	
Acenaphthylene	1.67	0.0160	0.0320	ug/L	1	1.60	---	105	80-124%	0.3	30%	
Anthracene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	80-123%	1	30%	
Benz(a)anthracene	1.70	0.00800	0.0160	ug/L	1	1.60	---	106	80-122%	2	30%	
Benzo(a)pyrene	1.85	0.00800	0.0160	ug/L	1	1.60	---	116	80-129%	1	30%	
Benzo(b)fluoranthene	1.75	0.00800	0.0160	ug/L	1	1.60	---	110	80-124%	1	30%	
Benzo(k)fluoranthene	1.75	0.00800	0.0160	ug/L	1	1.60	---	109	80-125%	2	30%	
Benzo(g,h,i)perylene	1.51	0.0160	0.0320	ug/L	1	1.60	---	94	80-120%	1	30%	
Chrysene	1.54	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	1	30%	
Dibenz(a,h)anthracene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	0.8	30%	
Fluoranthene	1.77	0.0160	0.0320	ug/L	1	1.60	---	111	80-126%	0.7	30%	
Fluorene	2.04	0.0160	0.0320	ug/L	1	1.60	---	**128**	**77-127%**	0.9	30%	Q-29
Indeno(1,2,3-cd)pyrene	1.47	0.00800	0.0160	ug/L	1	1.60	---	92	80-121%	2	30%	
1-Methylnaphthalene	1.97	0.0320	0.0640	ug/L	1	1.60	---	123	53-148%	3	30%	
2-Methylnaphthalene	2.03	0.0320	0.0640	ug/L	1	1.60	---	127	48-150%	3	30%	
Naphthalene	1.64	0.0320	0.0640	ug/L	1	1.60	---	102	78-120%	1	30%	
Phenanthrene	1.48	0.0320	0.0640	ug/L	1	1.60	---	93	80-120%	1	30%	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0717 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (24I0717-BSD1)			Prepared: 09/23/24 14:39		Analyzed: 09/23/24 20:06							**Q-19**
Pyrene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-125%	0.4	30%	
Carbazole	1.87	0.0160	0.0320	ug/L	1	1.60	---	117	65-141%	0.04	30%	
Dibenzofuran	1.92	0.0160	0.0320	ug/L	1	1.60	---	120	76-121%	0.6	30%	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 95 %*		*Limits: 78-134 %*			*Dilution: 1x*				
Benzo(a)pyrene-d12 (Surr)			*110 %*		*80-132 %*			*"*				

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0774 - EPA 3015A							**Water**					
Blank (24I0774-BLK1)			Prepared: 09/23/24 13:59		Analyzed: 10/02/24 20:57							
EPA 6020B												
Arsenic	ND	0.180	0.360	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.900	1.80	ug/L	1	---	---	---	---	---	---	
LCS (24I0774-BS1)			Prepared: 09/23/24 13:59		Analyzed: 10/02/24 21:02							
EPA 6020B												
Arsenic	10.3	0.180	0.360	ug/L	1	10.0	---	103	80-120%	---	---	
Copper	11.1	0.900	1.80	ug/L	1	10.0	---	111	80-120%	---	---	
Duplicate (24I0774-DUP1)			Prepared: 09/23/24 13:59		Analyzed: 10/02/24 21:13							
QC Source Sample: CMW-1-240916 (A4I1323-01)												
EPA 6020B												
Arsenic	**1.01**	0.180	0.360	ug/L	1	---	0.939	---	---	7	20%	
Copper	**1.45**	0.900	1.80	ug/L	1	---	1.45	---	---	0.4	20%	J
Matrix Spike (24I0774-MS1)			Prepared: 09/23/24 13:59		Analyzed: 10/02/24 21:18							
QC Source Sample: CMW-1-240916 (A4I1323-01)												
EPA 6020B												
Arsenic	10.6	0.180	0.360	ug/L	1	10.0	0.939	96	75-125%	---	---	
Copper	10.4	0.900	1.80	ug/L	1	10.0	1.45	89	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0775 - EPA 3015A							**Water**					
Blank (24I0775-BLK1)			Prepared: 09/30/24 14:00		Analyzed: 10/02/24 23:14							
EPA 6020B												
Arsenic	ND	0.180	0.360	ug/L	1	---	---	---	---	---	---	
Copper	ND	0.900	1.80	ug/L	1	---	---	---	---	---	---	
LCS (24I0775-BS1)			Prepared: 09/30/24 14:00		Analyzed: 10/02/24 23:18							
EPA 6020B												
Arsenic	9.46	0.0360	0.0720	ug/L	1	10.0	---	95	80-120%	---	---	
Copper	9.95	0.0900	0.180	ug/L	1	10.0	---	99	80-120%	---	---	
Duplicate (24I0775-DUP1)			Prepared: 09/30/24 14:00		Analyzed: 10/02/24 23:28							
QC Source Sample: EMW-2S-240917 (A4I1323-20)												
EPA 6020B												
Arsenic	**0.475**	0.180	0.360	ug/L	1	---	0.446	---	---	6	20%	
Copper	**0.921**	0.900	1.80	ug/L	1	---	ND	---	---		**20%**	J
Matrix Spike (24I0775-MS1)			Prepared: 09/30/24 14:00		Analyzed: 10/02/24 23:33							
QC Source Sample: EMW-2S-240917 (A4I1323-20)												
EPA 6020B												
Arsenic	10.3	0.0360	0.0720	ug/L	1	10.0	0.446	99	75-125%	---	---	
Copper	10.2	0.0900	0.180	ug/L	1	10.0	ND	98	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0770 - Matrix Matched Direct Inject							**Water**					
Blank (24I0770-BLK1)			Prepared: 09/30/24 15:52		Analyzed: 10/03/24 01:24							
EPA 6020B (Diss)												
Arsenic	ND	0.180	0.360	ug/L	1	---	---	---	---	---	---	FILT3
Copper	ND	0.900	1.80	ug/L	1	---	---	---	---	---	---	FILT3
LCS (24I0770-BS1)			Prepared: 09/30/24 15:52		Analyzed: 10/03/24 01:29							
EPA 6020B (Diss)												
Arsenic	17.7	0.180	0.360	ug/L	1	20.0	---	89	80-120%	---	---	
Copper	18.7	0.900	1.80	ug/L	1	20.0	---	94	80-120%	---	---	
Duplicate (24I0770-DUP1)			Prepared: 09/30/24 15:52		Analyzed: 10/03/24 01:48							
QC Source Sample: CMW-1-240916 (A4I1323-01)												
EPA 6020B (Diss)												
Arsenic	**0.968**	0.180	0.360	ug/L	1	---	0.922	---	---	5	20%	
Copper	**1.09**	0.900	1.80	ug/L	1	---	1.46	---	---	**28**	**20%**	J
Matrix Spike (24I0770-MS1)			Prepared: 09/30/24 15:52		Analyzed: 10/03/24 01:58							
QC Source Sample: CMW-2-240918 (A4I1323-02)												
EPA 6020B (Diss)												
Arsenic	74.9	0.180	0.360	ug/L	1	20.0	63.0	**59**	**75-125%**	---	---	Q-02
Copper	18.6	0.900	1.80	ug/L	1	20.0	1.74	84	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24I0771 - Matrix Matched Direct Inject							**Water**					
Blank (24I0771-BLK1)			Prepared: 09/30/24 15:49	Analyzed: 10/03/24 03:49								
EPA 6020B (Diss)												
Arsenic	ND	0.180	0.360	ug/L	1	---	---	---	---	---	---	FILT3a
Copper	ND	0.900	1.80	ug/L	1	---	---	---	---	---	---	FILT3a
LCS (24I0771-BS1)			Prepared: 09/30/24 15:49	Analyzed: 10/03/24 03:54								
EPA 6020B (Diss)												
Arsenic	17.9	0.0360	0.0720	ug/L	1	20.0	---	90	80-120%	---	---	
Copper	19.3	0.0900	0.180	ug/L	1	20.0	---	97	80-120%	---	---	
Duplicate (24I0771-DUP1)			Prepared: 09/30/24 15:49	Analyzed: 10/03/24 04:03								
QC Source Sample: EMW-2S-240917 (A4I1323-20)												
EPA 6020B (Diss)												
Arsenic	ND	0.180	0.360	ug/L	1	---	ND	---	---	---	20%	
Copper	ND	0.900	1.80	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (24I0771-MS1)			Prepared: 09/30/24 15:49	Analyzed: 10/03/24 04:13								
QC Source Sample: EMW-3S-240918 (A4I1323-21)												
EPA 6020B (Diss)												
Arsenic	21.2	0.0360	0.0720	ug/L	1	20.0	3.36	89	75-125%	---	---	
Copper	20.0	0.0900	0.180	ug/L	1	20.0	2.86	86	75-125%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24J0686 - Matrix Matched Direct Inject							**Water**					
Blank (24J0686-BLK1)			Prepared: 10/16/24 19:50		Analyzed: 10/16/24 21:30							
EPA 6020B (Diss)												
Copper	ND	1.80	3.60	ug/L	1	---	---	---	---	---	---	FILT3b
LCS (24J0686-BS1)			Prepared: 10/16/24 19:50		Analyzed: 10/16/24 21:35							
EPA 6020B (Diss)												
Copper	21.1	1.98	3.96	ug/L	1	20.0	---	106	80-120%	---	---	
Duplicate (24J0686-DUP1)			Prepared: 10/16/24 19:50		Analyzed: 10/16/24 21:45							
QC Source Sample: EMW-4D-240916 (A4I1323-22RE3)												
EPA 6020B (Diss)												
Copper	ND	1.80	3.60	ug/L	1	---	ND	---	---	---	20%	R-01
Matrix Spike (24J0686-MS1)			Prepared: 10/16/24 19:50		Analyzed: 10/16/24 21:54							
QC Source Sample: EMW-11S-240916 (A4I1323-28RE3)												
EPA 6020B (Diss)												
Copper	20.1	1.98	3.96	ug/L	1	20.0	ND	100	75-125%	---	---	R-01

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24I0674							
A4I1323-01	Water	EPA 8260D SIM	09/16/24 10:19	09/20/24 15:29	5mL/5mL	5mL/5mL	1.00
Batch: 24I0706							
A4I1323-02	Water	EPA 8260D SIM	09/18/24 12:59	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-03	Water	EPA 8260D SIM	09/18/24 11:59	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-04	Water	EPA 8260D SIM	09/16/24 10:55	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-05	Water	EPA 8260D SIM	09/17/24 12:42	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-06	Water	EPA 8260D SIM	09/16/24 10:34	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-07	Water	EPA 8260D SIM	09/16/24 11:50	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-08	Water	EPA 8260D SIM	09/16/24 13:19	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-09	Water	EPA 8260D SIM	09/17/24 12:43	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-10	Water	EPA 8260D SIM	09/17/24 10:49	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-11	Water	EPA 8260D SIM	09/17/24 10:53	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-12	Water	EPA 8260D SIM	09/16/24 14:29	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-13	Water	EPA 8260D SIM	09/17/24 10:05	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-14	Water	EPA 8260D SIM	09/17/24 13:30	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-15	Water	EPA 8260D SIM	09/17/24 10:45	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-16	Water	EPA 8260D SIM	09/16/24 13:24	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-17	Water	EPA 8260D SIM	09/18/24 12:25	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-18	Water	EPA 8260D SIM	09/17/24 13:12	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-19	Water	EPA 8260D SIM	09/16/24 13:17	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-20	Water	EPA 8260D SIM	09/17/24 11:43	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
A4I1323-21	Water	EPA 8260D SIM	09/18/24 11:47	09/23/24 11:11	5mL/5mL	5mL/5mL	1.00
Batch: 24I0763							
A4I1323-22	Water	EPA 8260D SIM	09/16/24 11:29	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-23	Water	EPA 8260D SIM	09/17/24 11:24	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-24	Water	EPA 8260D SIM	09/17/24 13:59	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-25	Water	EPA 8260D SIM	09/16/24 14:01	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-26	Water	EPA 8260D SIM	09/17/24 12:02	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-27	Water	EPA 8260D SIM	09/17/24 12:20	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-28	Water	EPA 8260D SIM	09/16/24 14:29	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-29	Water	EPA 8260D SIM	09/17/24 12:13	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-30	Water	EPA 8260D SIM	09/16/24 12:07	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-31	Water	EPA 8260D SIM	09/16/24 11:19	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-32	Water	EPA 8260D SIM	09/16/24 11:35	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-33	Water	EPA 8260D SIM	09/17/24 11:08	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Vinyl Chloride by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4I1323-34	Water	EPA 8260D SIM	09/16/24 14:35	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-35	Water	EPA 8260D SIM	09/16/24 13:35	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-36	Water	EPA 8260D SIM	09/17/24 11:15	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00
A4I1323-37	Water	EPA 8260D SIM	09/17/24 08:00	09/24/24 14:02	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24I0680							
A4I1323-02	Water	EPA 8270E LVI	09/18/24 12:59	09/23/24 07:29	102.5mL/5mL	125mL/5mL	1.22
A4I1323-03	Water	EPA 8270E LVI	09/18/24 11:59	09/23/24 07:29	121.8mL/5mL	125mL/5mL	1.03
A4I1323-10	Water	EPA 8270E LVI	09/17/24 10:49	09/23/24 05:22	109.8mL/5mL	125mL/5mL	1.14
A4I1323-11	Water	EPA 8270E LVI	09/17/24 10:53	09/23/24 05:22	107.13mL/5mL	125mL/5mL	1.17
A4I1323-13	Water	EPA 8270E LVI	09/17/24 10:05	09/23/24 05:22	105.34mL/5mL	125mL/5mL	1.19
A4I1323-14	Water	EPA 8270E LVI	09/17/24 13:30	09/23/24 05:22	125.62mL/5mL	125mL/5mL	1.00
A4I1323-15	Water	EPA 8270E LVI	09/17/24 10:45	09/23/24 05:22	108.51mL/5mL	125mL/5mL	1.15
A4I1323-17	Water	EPA 8270E LVI	09/18/24 12:25	09/23/24 07:29	122.9mL/5mL	125mL/5mL	1.02
A4I1323-18	Water	EPA 8270E LVI	09/17/24 13:12	09/23/24 05:22	111.66mL/5mL	125mL/5mL	1.12
A4I1323-20	Water	EPA 8270E LVI	09/17/24 11:43	09/23/24 05:22	111.23mL/5mL	125mL/5mL	1.12
A4I1323-21	Water	EPA 8270E LVI	09/18/24 11:47	09/23/24 07:29	119.16mL/5mL	125mL/5mL	1.05
A4I1323-23	Water	EPA 8270E LVI	09/17/24 11:24	09/23/24 05:22	121.45mL/5mL	125mL/5mL	1.03
A4I1323-24	Water	EPA 8270E LVI	09/17/24 13:59	09/23/24 05:22	102.57mL/5mL	125mL/5mL	1.22
A4I1323-26	Water	EPA 8270E LVI	09/17/24 12:02	09/23/24 05:22	108.46mL/5mL	125mL/5mL	1.15
A4I1323-27	Water	EPA 8270E LVI	09/17/24 12:20	09/23/24 05:22	110.03mL/5mL	125mL/5mL	1.14
A4I1323-29	Water	EPA 8270E LVI	09/17/24 12:13	09/23/24 05:22	105.74mL/5mL	125mL/5mL	1.18
A4I1323-33	Water	EPA 8270E LVI	09/17/24 11:08	09/23/24 05:22	116.97mL/5mL	125mL/5mL	1.07
A4I1323-36	Water	EPA 8270E LVI	09/17/24 11:15	09/23/24 05:22	111.34mL/5mL	125mL/5mL	1.12
A4I1323-37	Water	EPA 8270E LVI	09/17/24 08:00	09/23/24 05:22	104.7mL/5mL	125mL/5mL	1.19
Batch: 24I0717							
A4I1323-01RE1	Water	EPA 8270E LVI	09/16/24 10:19	09/23/24 14:39	99.56mL/5mL	125mL/5mL	1.26
A4I1323-04RE1	Water	EPA 8270E LVI	09/16/24 10:55	09/23/24 14:39	101.92mL/5mL	125mL/5mL	1.23
A4I1323-05RE1	Water	EPA 8270E LVI	09/17/24 12:42	09/23/24 14:39	98.11mL/5mL	125mL/5mL	1.27
A4I1323-06RE2	Water	EPA 8270E LVI	09/16/24 10:34	09/23/24 14:39	125.21mL/5mL	125mL/5mL	1.00
A4I1323-07RE1	Water	EPA 8270E LVI	09/16/24 11:50	09/23/24 14:39	109.61mL/5mL	125mL/5mL	1.14
A4I1323-08RE1	Water	EPA 8270E LVI	09/16/24 13:19	09/23/24 14:39	123.73mL/5mL	125mL/5mL	1.01
A4I1323-09RE1	Water	EPA 8270E LVI	09/17/24 12:43	09/23/24 14:39	124.28mL/5mL	125mL/5mL	1.01

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4I1323-12RE1	Water	EPA 8270E LVI	09/16/24 14:29	09/23/24 14:39	107.79mL/5mL	125mL/5mL	1.16
A4I1323-16RE1	Water	EPA 8270E LVI	09/16/24 13:24	09/23/24 14:39	96.57mL/5mL	125mL/5mL	1.29
A4I1323-19RE1	Water	EPA 8270E LVI	09/16/24 13:17	09/23/24 14:39	97.75mL/5mL	125mL/5mL	1.28
A4I1323-22RE1	Water	EPA 8270E LVI	09/16/24 11:29	09/23/24 14:39	89.98mL/5mL	125mL/5mL	1.39
A4I1323-25RE1	Water	EPA 8270E LVI	09/16/24 14:01	09/23/24 14:39	102.21mL/5mL	125mL/5mL	1.22
A4I1323-28RE1	Water	EPA 8270E LVI	09/16/24 14:29	09/23/24 14:39	95.99mL/5mL	125mL/5mL	1.30
A4I1323-30RE1	Water	EPA 8270E LVI	09/16/24 12:07	09/23/24 14:39	121.11mL/5mL	125mL/5mL	1.03
A4I1323-31RE1	Water	EPA 8270E LVI	09/16/24 11:19	09/23/24 14:39	100.2mL/5mL	125mL/5mL	1.25
A4I1323-32RE1	Water	EPA 8270E LVI	09/16/24 11:35	09/23/24 14:39	95.94mL/5mL	125mL/5mL	1.30
A4I1323-34RE1	Water	EPA 8270E LVI	09/16/24 14:35	09/23/24 14:39	112.84mL/5mL	125mL/5mL	1.11
A4I1323-35RE1	Water	EPA 8270E LVI	09/16/24 13:35	09/23/24 14:39	108.39mL/5mL	125mL/5mL	1.15

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24I0774							
A4I1323-01	Water	EPA 6020B	09/16/24 10:19	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-02	Water	EPA 6020B	09/18/24 12:59	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-03	Water	EPA 6020B	09/18/24 11:59	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-04	Water	EPA 6020B	09/16/24 10:55	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-05	Water	EPA 6020B	09/17/24 12:42	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-06	Water	EPA 6020B	09/16/24 10:34	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-07	Water	EPA 6020B	09/16/24 11:50	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-08	Water	EPA 6020B	09/16/24 13:19	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-09	Water	EPA 6020B	09/17/24 12:43	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-10	Water	EPA 6020B	09/17/24 10:49	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-11	Water	EPA 6020B	09/17/24 10:53	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-12	Water	EPA 6020B	09/16/24 14:29	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-13	Water	EPA 6020B	09/17/24 10:05	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-14	Water	EPA 6020B	09/17/24 13:30	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-15	Water	EPA 6020B	09/17/24 10:45	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-16	Water	EPA 6020B	09/16/24 13:24	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-17	Water	EPA 6020B	09/18/24 12:25	09/30/24 13:59	25mL/50mL	45mL/50mL	1.80
A4I1323-18	Water	EPA 6020B	09/17/24 13:12	09/24/24 15:56	25mL/50mL	45mL/50mL	1.80
A4I1323-19	Water	EPA 6020B	09/16/24 13:17	09/24/24 15:56	25mL/50mL	45mL/50mL	1.80
Batch: 24I0775							

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4I1323-20	Water	EPA 6020B	09/17/24 11:43	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-21	Water	EPA 6020B	09/18/24 11:47	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-22	Water	EPA 6020B	09/16/24 11:29	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-23	Water	EPA 6020B	09/17/24 11:24	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-24	Water	EPA 6020B	09/17/24 13:59	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-25	Water	EPA 6020B	09/16/24 14:01	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-26	Water	EPA 6020B	09/17/24 12:02	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-27	Water	EPA 6020B	09/17/24 12:20	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-28	Water	EPA 6020B	09/16/24 14:29	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-29	Water	EPA 6020B	09/17/24 12:13	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-30	Water	EPA 6020B	09/16/24 12:07	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-31	Water	EPA 6020B	09/16/24 11:19	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-32	Water	EPA 6020B	09/16/24 11:35	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-33	Water	EPA 6020B	09/17/24 11:08	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-34	Water	EPA 6020B	09/16/24 14:35	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-35	Water	EPA 6020B	09/16/24 13:35	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-36	Water	EPA 6020B	09/17/24 11:15	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80
A4I1323-37	Water	EPA 6020B	09/17/24 08:00	09/30/24 14:00	25mL/50mL	45mL/50mL	1.80

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24I0770							
A4I1323-01	Water	EPA 6020B (Diss)	09/16/24 10:19	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-02	Water	EPA 6020B (Diss)	09/18/24 12:59	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-03	Water	EPA 6020B (Diss)	09/18/24 11:59	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-04	Water	EPA 6020B (Diss)	09/16/24 10:55	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-05	Water	EPA 6020B (Diss)	09/17/24 12:42	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-06	Water	EPA 6020B (Diss)	09/16/24 10:34	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-07	Water	EPA 6020B (Diss)	09/16/24 11:50	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-08	Water	EPA 6020B (Diss)	09/16/24 13:19	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-09	Water	EPA 6020B (Diss)	09/17/24 12:43	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-10	Water	EPA 6020B (Diss)	09/17/24 10:49	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-11	Water	EPA 6020B (Diss)	09/17/24 10:53	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-12	Water	EPA 6020B (Diss)	09/16/24 14:29	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-13	Water	EPA 6020B (Diss)	09/17/24 10:05	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4I1323-14	Water	EPA 6020B (Diss)	09/17/24 13:30	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-15	Water	EPA 6020B (Diss)	09/17/24 10:45	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-16	Water	EPA 6020B (Diss)	09/16/24 13:24	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-17	Water	EPA 6020B (Diss)	09/18/24 12:25	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-18	Water	EPA 6020B (Diss)	09/17/24 13:12	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
A4I1323-19	Water	EPA 6020B (Diss)	09/16/24 13:17	09/30/24 15:52	10mL/20mL	45mL/50mL	1.80
Batch: 24I0771							
A4I1323-20	Water	EPA 6020B (Diss)	09/17/24 11:43	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-21	Water	EPA 6020B (Diss)	09/18/24 11:47	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-22	Water	EPA 6020B (Diss)	09/16/24 11:29	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-23	Water	EPA 6020B (Diss)	09/17/24 11:24	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-24	Water	EPA 6020B (Diss)	09/17/24 13:59	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-25	Water	EPA 6020B (Diss)	09/16/24 14:01	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-26	Water	EPA 6020B (Diss)	09/17/24 12:02	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-27	Water	EPA 6020B (Diss)	09/17/24 12:20	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-28	Water	EPA 6020B (Diss)	09/16/24 14:29	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-29	Water	EPA 6020B (Diss)	09/17/24 12:13	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-30	Water	EPA 6020B (Diss)	09/16/24 12:07	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-31	Water	EPA 6020B (Diss)	09/16/24 11:19	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-32	Water	EPA 6020B (Diss)	09/16/24 11:35	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-33	Water	EPA 6020B (Diss)	09/17/24 11:08	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-34	Water	EPA 6020B (Diss)	09/16/24 14:35	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-35	Water	EPA 6020B (Diss)	09/16/24 13:35	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-36	Water	EPA 6020B (Diss)	09/17/24 11:15	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
A4I1323-37	Water	EPA 6020B (Diss)	09/17/24 08:00	09/30/24 15:49	10mL/20mL	45mL/50mL	1.80
Batch: 24J0686							
A4I1323-22RE3	Water	EPA 6020B (Diss)	09/16/24 11:29	10/16/24 19:50	10mL/20mL	45mL/50mL	1.80
A4I1323-28RE3	Water	EPA 6020B (Diss)	09/16/24 14:29	10/16/24 19:50	10mL/20mL	45mL/50mL	1.80

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24I0722							
A4I1323-01	Water	NA	09/16/24 10:19	09/23/24 17:15	25mL/25mL		NA
A4I1323-02	Water	NA	09/18/24 12:59	09/23/24 17:16	25mL/25mL		NA

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4I1323-03	Water	NA	09/18/24 11:59	09/23/24 17:17	25mL/25mL		NA
A4I1323-04	Water	NA	09/16/24 10:55	09/23/24 17:18	25mL/25mL		NA
A4I1323-05	Water	NA	09/17/24 12:42	09/23/24 17:20	25mL/25mL		NA
A4I1323-06	Water	NA	09/16/24 10:34	09/23/24 17:21	25mL/25mL		NA
A4I1323-07	Water	NA	09/16/24 11:50	09/23/24 17:22	25mL/25mL		NA
A4I1323-08	Water	NA	09/16/24 13:19	09/23/24 17:23	25mL/25mL		NA
A4I1323-09	Water	NA	09/17/24 12:43	09/23/24 17:25	25mL/25mL		NA
A4I1323-10	Water	NA	09/17/24 10:49	09/23/24 17:26	25mL/25mL		NA
A4I1323-11	Water	NA	09/17/24 10:53	09/23/24 17:27	25mL/25mL		NA
A4I1323-12	Water	NA	09/16/24 14:29	09/23/24 17:28	25mL/25mL		NA
A4I1323-13	Water	NA	09/17/24 10:05	09/23/24 17:29	25mL/25mL		NA
A4I1323-14	Water	NA	09/17/24 13:30	09/23/24 17:30	25mL/25mL		NA
A4I1323-15	Water	NA	09/17/24 10:45	09/23/24 17:31	25mL/25mL		NA
A4I1323-16	Water	NA	09/16/24 13:24	09/23/24 17:32	25mL/25mL		NA
A4I1323-17	Water	NA	09/18/24 12:25	09/23/24 17:48	25mL/25mL		NA
A4I1323-18	Water	NA	09/17/24 13:12	09/23/24 17:49	25mL/25mL		NA
A4I1323-19	Water	NA	09/16/24 13:17	09/23/24 17:50	25mL/25mL		NA
Batch: 24I0767							
A4I1323-20	Water	NA	09/17/24 11:43	09/23/24 17:51	25mL/25mL		NA
A4I1323-21	Water	NA	09/18/24 11:47	09/23/24 17:53	25mL/25mL		NA
A4I1323-22	Water	NA	09/16/24 11:29	09/23/24 17:54	25mL/25mL		NA
A4I1323-23	Water	NA	09/17/24 11:24	09/23/24 17:55	25mL/25mL		NA
A4I1323-24	Water	NA	09/17/24 13:59	09/23/24 17:56	25mL/25mL		NA
A4I1323-25	Water	NA	09/16/24 14:01	09/23/24 17:58	25mL/25mL		NA
A4I1323-26	Water	NA	09/17/24 12:02	09/23/24 17:59	25mL/25mL		NA
A4I1323-27	Water	NA	09/17/24 12:20	09/23/24 18:00	25mL/25mL		NA
A4I1323-28	Water	NA	09/16/24 14:29	09/23/24 18:02	25mL/25mL		NA
A4I1323-29	Water	NA	09/17/24 12:13	09/23/24 18:03	25mL/25mL		NA
A4I1323-30	Water	NA	09/16/24 12:07	09/23/24 18:04	25mL/25mL		NA
A4I1323-31	Water	NA	09/16/24 11:19	09/23/24 18:06	25mL/25mL		NA
A4I1323-32	Water	NA	09/16/24 11:35	09/23/24 18:07	25mL/25mL		NA
A4I1323-33	Water	NA	09/17/24 11:08	09/23/24 18:08	25mL/25mL		NA
A4I1323-34	Water	NA	09/16/24 14:35	09/23/24 18:09	25mL/25mL		NA
A4I1323-35	Water	NA	09/16/24 13:35	09/23/24 18:10	25mL/25mL		NA
A4I1323-36	Water	NA	09/17/24 11:15	09/23/24 18:11	25mL/25mL		NA
A4I1323-37	Water	NA	09/17/24 08:00	09/23/24 18:12	25mL/25mL		NA

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

SAMPLE PREPARATION INFORMATION

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24J0632							
A4I1323-22RE1	Water	NA	09/16/24 11:29	10/15/24 16:02	50mL/50mL		NA
A4I1323-28RE1	Water	NA	09/16/24 14:29	10/15/24 16:02	50mL/50mL		NA

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

AMEND	The Result, Reporting Level, Recovery and/or RPD has changed. Note: Batch QC marked as AMENDED may or may not have been issued prior to the change. Case Narrative included if client data is affected.
DCNT	Sample decanted due to the presence of sediment. Sample bottle not rinsed with solvent.
FILT3	This is a laboratory filtration blank, associated with filtration batch 24I0722. See Prep page of report for associated samples.
FILT3a	This is a laboratory filtration blank, associated with filtration batch 24I0767. See Prep page of report for associated samples.
FILT3b	This is a laboratory filtration blank, associated with filtration batch 24J0632. See Prep page of report for associated samples.
H-12	Sample Analysis or Filtration was performed >15 minutes after sample collection. Consult regulator or permit manager to determine the usability of data for intended use.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-02	Spike recovery is outside of established control limits due to matrix interference.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-29	Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
Q-30	Recovery for Lab Control Spike (LCS) is below the lower control limit. Data may be biased low.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Validated Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.
-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)
155 NE 100th St #302
Seattle, WA 98125

Project: **8th Ave. Terminals**
Project Number: **2175001.020.022**
Project Manager: **Mike Staton**

Report ID:
A4I1323 - 10 22 24 1338

LANDAU ASSOCIATES

Chain-of-Custody Record

☐ North Seattle (206) 631-8660 ☐ Tacoma (253) 926-2493 ☐ Olympia (360) 791-3178 ☐ Spokane (509) 327-9737 ☐ Portland (503) 542-1080

Date 9/18/24 Page 1 of 2

Turnaround Time: (Standard) Accelerated

A4I1323

Project Name 8th Ave Terminal Project No. 2175001.020.022
Project Location/Event Quarterly Groundwater Sampling
Sampler's Name Spencer L. Davis, Whitney Graham, Johnson, Emerson Cole
Project Contact Mike Staton
Send Results To Mike Staton, mstaton@landaoinc.com

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Total and Dissolved Metals	VOAs Chloride 8260B	8270E	8260B SIM	Observations/Comments
CMW-1-240916	9/16/24	1019	water	10	X	X			
CMW-2-240918	9/18/24	1259	water	10	X	X	X		
CMW-3-240918	9/18/24	1159	water	10	X	X	X		
CMW-4-240916	9/16/24	1055	water	10	X	X	X		
CMW-5-240917	9/17/24	1242	water	10	X	X	X		
CMW-6-240916	9/16/24	1034	water	10	X	X	X		
CMW-7-240916	9/16/24	1150	water	10	X	X	X		
SLR-1-240916	9/16/24	1319	water	10	X	X	X		
SLR-2-240917	9/17/24	1243	water	10	X	X	X		
SLR-3-240917	9/17/24	1049	water	10	X	X	X		
SLR-6-240917	9/17/24	1053	water	10	X	X	X		
SLR-7-240916	9/16/24	1429	water	10	X	X	X		
DMW-2-240917	9/17/24	1005	water	10	X	X	X		
DMW-3-240917	9/17/24	1330	water	10	X	X	X		
DMW-12-240917	9/17/24	1015	water	10	X	X	X		
DMW-6B-240916	9/16/24	1324	water	10	X	X	X		
HC-4-240918	9/18/24	1225	water	10	X	X	X		
HC-20-240917	9/17/24	1312	water	10	X	X	X		
EMW-1S-240916	9/16/24	1317	water	10	X	X	X		
EMW-2S-240917	9/17/24	1143	water	10	X	X	X		
EMW-3S-240918	9/18/24	1147	water	10	X	X	X		
EMW-4D-240916	9/16/24	1129	water	10	X	X	X		

Observations/Comments
☐ Allow water samples to settle, collect aliquot from clear portion
☐ NWTPH-Dx - Acid wash cleanup
☐ - Silica gel cleanup
☐ Dissolved metal samples were field filtered

Other: Dissolved Metals samples to be filtered in lab

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Spencer L	Printed Name	Printed Name	Printed Name
Company LAI	Company	Company	Company
Date 9/18/24 Time 1600	Date Time	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

APEX LABORATORIES

ANALYTICAL REPORT

AMENDED REPORT

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

A4I1323 9/18/24

LANDAU ASSOCIATES

Chain-of-Custody Record

☒ North Seattle (206) 631-8660 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ Olympia (360) 791-3178 ☐ _____

Date 9/18/24
Page 2 of 2

Turnaround Time: (Standard) Accelerated

Project Name 8th Ave Terminal Project No. 2175001.020.022
Project Location/Event Quarterly Groundwater Sampling
Sampler's Name Spencer L., Darius Wilkins, Graham Johnson, Emryan Cole
Project Contact Mike Staton
Send Results To Mike Staton, mstaton@landauinc.com

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Total Arsenic, Dissolved Metals, Boron, Total Metals	Vinyl Chloride 8270E 8260D SIM	Observations/Comments
EMW-5SA-240917	9/17/24	1124	water	10	X	X	
EMW-6S-240917	9/17/24	1359	water	10	X	X	
EMW-7S-240916	9/16/24	1401	water	10	X	X	
EMW-9SA-240917	9/17/24	1202	water	10	X	X	
EMW-10D-240917	9/17/24	1220	water	10	X	X	
EMW-11S-240916	9/16/24	1429	water	10	X	X	
EMW-12S-240917	9/17/24	1213	water	10	X	X	
EMW-13S-240916	9/16/24	1207	water	10	X	X	
EMW-14D-240916	9/16/24	1119	water	10	X	X	
EMW-15D-240916	9/16/24	1135	water	10	X	X	
EMW-16D-240917	9/17/24	1108	water	10	X	X	
EMW-17S-240916	9/16/24	1435	water	10	X	X	
EMW-18S-240916	9/16/24	1335	water	10	X	X	
EMW-23S-240917	9/17/24	1115	water	10	X	X	
EMW-26S-240917	9/17/24	800	water	10	X	X	

Observations/Comments
__ Allow water samples to settle, collect aliquot from clear portion ☐
__ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
__ Dissolved metal samples were field filtered

Other Dissolved metals samples to be filtered in lab

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Spencer L.	Printed Name	Printed Name	Printed Name
Company LAI	Company Apex	Company	Company
Date 9/18/24 Time 1600	Date 9/18/24 Time 1018	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Landau Associates (Northgate)	Project: **8th Ave. Terminals**	
155 NE 100th St #302	Project Number: **2175001.020.022**	**Report ID:**
Seattle, WA 98125	Project Manager: **Mike Staton**	**A4I1323 - 10 22 24 1338**

APEX LABS COOLER RECEIPT FORM

Client: Landau Element WO#: A4I1323

Project/Project #: 8th Ave Terminal / 2175001.020.022

Delivery Info:

Date/time received: 9/19/24 @ 1018 By: KKS

Delivered by: Apex__ Client__ ESS__ FedEx__ UPS X Radio__ Morgan__ SDS__ Evergreen__ Other__

From USDA Regulated Origin? Yes ____ No X

Cooler Inspection Date/time inspected: 9/19/24 @ 1018 By: KKS

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7	Cooler #8
Temperature (°C)	1.6	2.4	4.9	3.1	3.9	2.6	4.2	0.2
Custody seals? (Y/N)	N							
Received on ice? (Y/N)	Y							
Temp. blanks? (Y/N)	Y							
Ice type: (Gel/Real/Other)	Real							
Condition (In/Out):	In							

Cooler out of temp? (Y/N) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 9/19/24 @ 1220 By: KKS

All samples intact? Yes X No ___ Comments: ____

Bottle labels/COCs agree? Yes ___ No X Comments: EMW-14D cont. T reads read 1120

No D on 1/6 VOA for EMW-23S

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ____

Do VOA vials have visible headspace? Yes ___ No X NA ____

Comments ____

Water samples: pH checked: Yes X No___ NA___ pH appropriate? Yes X No___ NA____ pH ID: A23I172

Comments: ____

Labeled by: KKS Witness: AAW / KKS Cooler Inspected by: AAW

Form Y-003 R-02

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Landau Inc.

8th Ave Terminals; WA

2175001.030.034

SGS Job Number: FC26776

Sampling Date: 08/06/25

Report to:

Landau Inc.
155 NE 100th St Suite 302
Seattle, WA 98152
mstaton@landauinc.com

ATTN: Mike Staton

Total number of pages in report: 54

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Norm Farmer
Technical Director

Client Service contact: Karen Avila 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Summary of Hits **4**
Section 3: Sample Results **6**
3.1: FC26776-1: EMW-9SA-250806 7
3.2: FC26776-2: CMW-4-250806 10
3.3: FC26776-3: EMW-1S-250806 13
3.4: FC26776-4: DMW-6B-250806 16
3.5: FC26776-5: EMW-6S-250806 19
3.6: FC26776-6: EMW-7S-250806 22
3.7: FC26776-7: EQUIPMENT BLANK-250806 25
3.8: FC26776-8: DUP-1-250806 28
Section 4: Misc. Forms **31**
4.1: Chain of Custody 32
Section 5: MS Semi-volatiles - QC Data Summaries **34**
5.1: Method Blank Summary 35
5.2: Blank Spike Summary 47
5.3: Matrix Spike Summary 51
5.4: Duplicate Summary 53

SGS North America Inc.

Sample Summary

Landau Inc.

Job No: FC26776

8th Ave Terminals; WA
Project No: 2175001.030.034

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC26776-1	08/06/25	10:00	PLN	08/07/25	AQ	Water	EMW-9SA-250806
FC26776-2	08/06/25	10:30	PLN	08/07/25	AQ	Water	CMW-4-250806
FC26776-3	08/06/25	12:06	PLN	08/07/25	AQ	Water	EMW-1S-250806
FC26776-4	08/06/25	12:15	PLN	08/07/25	AQ	Water	DMW-6B-250806
FC26776-5	08/06/25	13:22	PLN	08/07/25	AQ	Water	EMW-6S-250806
FC26776-6	08/06/25	13:40	PLN	08/07/25	AQ	Water	EMW-7S-250806
FC26776-7	08/06/25	14:00	PLN	08/07/25	AQ	Equipment Blank	EQUIPMENT BLANK-250806
FC26776-8	08/06/25	08:00	PLN	08/07/25	AQ	Water	DUP-1-250806

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

2

Summary of Hits

Job Number: FC26776
Account: Landau Inc.
Project: 8th Ave Terminals; WA
Collected: 08/06/25

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FC26776-1	**EMW-9SA-250806**					
Perfluorobutanoic acid		0.0112	0.0074	0.0037	ug/l	EPA 1633
Perfluoropentanoic acid		0.0157	0.0037	0.00093	ug/l	EPA 1633
Perfluorohexanoic acid		0.0150	0.0019	0.00046	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0043	0.0019	0.00046	ug/l	EPA 1633
Perfluorooctanoic acid		0.0099	0.0019	0.00046	ug/l	EPA 1633
Perfluorononanoic acid		0.0052	0.0019	0.00056	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0060	0.0019	0.00093	ug/l	EPA 1633
Perfluoropentanesulfonic acid		0.0013 J	0.0019	0.0010	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0101	0.0019	0.00093	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0066	0.0019	0.00093	ug/l	EPA 1633
FC26776-2	**CMW-4-250806**					
Perfluorobutanoic acid		0.0310	0.0073	0.0036	ug/l	EPA 1633
Perfluoropentanoic acid		0.0957	0.0036	0.00091	ug/l	EPA 1633
Perfluorohexanoic acid		0.0856	0.0018	0.00045	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0271	0.0018	0.00045	ug/l	EPA 1633
Perfluorooctanoic acid		0.0069	0.0018	0.00045	ug/l	EPA 1633
Perfluorononanoic acid		0.0014 J	0.0018	0.00055	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0058	0.0018	0.00091	ug/l	EPA 1633
Perfluoropentanesulfonic acid		0.0074	0.0018	0.0010	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.135	0.0018	0.00091	ug/l	EPA 1633
Perfluoroheptanesulfonic acid		0.0014 J	0.0018	0.00091	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0830	0.0018	0.00091	ug/l	EPA 1633
FC26776-3	**EMW-1S-250806**					
Perfluorobutanoic acid		0.0150	0.0082	0.0041	ug/l	EPA 1633
Perfluoropentanoic acid		0.0079	0.0041	0.0010	ug/l	EPA 1633
Perfluorohexanoic acid		0.0060	0.0020	0.00051	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0026	0.0020	0.00051	ug/l	EPA 1633
Perfluorooctanoic acid		0.0041	0.0020	0.00051	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0025	0.0020	0.0010	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0023	0.0020	0.0010	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0045	0.0020	0.0010	ug/l	EPA 1633
FC26776-4	**DMW-6B-250806**					
Perfluorobutanoic acid		0.0135	0.0074	0.0037	ug/l	EPA 1633
Perfluoropentanoic acid		0.0308	0.0037	0.00093	ug/l	EPA 1633
Perfluorohexanoic acid		0.0318	0.0019	0.00046	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0104	0.0019	0.00046	ug/l	EPA 1633
Perfluorooctanoic acid		0.0178	0.0019	0.00046	ug/l	EPA 1633

Summary of Hits

Job Number: FC26776
Account: Landau Inc.
Project: 8th Ave Terminals; WA
Collected: 08/06/25

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Perfluorononanoic acid		0.0016 J	0.0019	0.00056	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0126	0.0019	0.00093	ug/l	EPA 1633
Perfluoropentanesulfonic acid		0.0020	0.0019	0.0010	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0145	0.0019	0.00093	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0114	0.0019	0.00093	ug/l	EPA 1633
FC26776-5	**EMW-6S-250806**					
Perfluorobutanoic acid		0.0188	0.0075	0.0038	ug/l	EPA 1633
Perfluoropentanoic acid		0.0073	0.0038	0.00094	ug/l	EPA 1633
Perfluorohexanoic acid		0.0085	0.0019	0.00047	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0036	0.0019	0.00047	ug/l	EPA 1633
Perfluorooctanoic acid		0.0062	0.0019	0.00047	ug/l	EPA 1633
Perfluorononanoic acid		0.0019	0.0019	0.00058	ug/l	EPA 1633
Perfluorodecanoic acid		0.0044	0.0019	0.00047	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0021	0.0019	0.00094	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0020	0.0019	0.00094	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0287	0.0019	0.00094	ug/l	EPA 1633
FC26776-6	**EMW-7S-250806**					
Perfluorobutanoic acid		0.0371	0.0078	0.0039	ug/l	EPA 1633
Perfluoropentanoic acid		0.0970	0.0039	0.00098	ug/l	EPA 1633
Perfluorohexanoic acid		0.0544	0.0020	0.00049	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0121	0.0020	0.00049	ug/l	EPA 1633
Perfluorooctanoic acid		0.0089	0.0020	0.00049	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0032	0.0020	0.00098	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0028	0.0020	0.00098	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0054	0.0020	0.00098	ug/l	EPA 1633
FC26776-7	**EQUIPMENT BLANK-250806**					
No hits reported in this sample.						
FC26776-8	**DUP-1-250806**					
Perfluorobutanoic acid		0.0149	0.0074	0.0037	ug/l	EPA 1633
Perfluoropentanoic acid		0.0090	0.0037	0.00093	ug/l	EPA 1633
Perfluorohexanoic acid		0.0068	0.0019	0.00046	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0030	0.0019	0.00046	ug/l	EPA 1633
Perfluorooctanoic acid		0.0041	0.0019	0.00046	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0029	0.0019	0.00093	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0022	0.0019	0.00093	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0057	0.0019	0.00093	ug/l	EPA 1633

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	EMW-9SA-250806		
Lab Sample ID:	FC26776-1	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24050.D	1	08/26/25 17:14	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0112	0.0074	0.0037	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0157	0.0037	0.00093	ug/l	
307-24-4	Perfluorohexanoic acid	0.0150	0.0019	0.00046	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0043	0.0019	0.00046	ug/l	
335-67-1	Perfluorooctanoic acid	0.0099	0.0019	0.00046	ug/l	
375-95-1	Perfluorononanoic acid	0.0052	0.0019	0.00056	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0019	0.00046	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0019	0.00056	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0019	0.00056	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0019	0.00078	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0019	0.00046	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0060	0.0019	0.00093	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	0.0013	0.0019	0.0010	ug/l	J
355-46-4	Perfluorohexanesulfonic acid	0.0101	0.0019	0.00093	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0019	0.00093	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0066	0.0019	0.00093	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0019	0.00093	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0019	0.00093	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0019	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0074	0.0037	ug/l	
27619-97-2	6:2-FTS	ND	0.0074	0.0037	ug/l	
39108-34-4	8:2-FTS	ND	0.0074	0.0038	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0019	0.00093	ug/l	
31506-32-8	MeFOSA	ND	0.0037	0.00093	ug/l	
4151-50-2	EtFOSA	ND	0.0037	0.00093	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-9SA-250806		
Lab Sample ID:	FC26776-1	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0019	0.00093	ug/l	
2991-50-6	EtFOSAA	ND	0.0019	0.0012	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.019	0.0093	ug/l	
1691-99-2	EtFOSE	ND	0.019	0.0093	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0037	0.00093	ug/l	
919005-14-4	ADONA	ND	0.0074	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0037	0.00093	ug/l	
863090-89-5	PFMBA	ND	0.0037	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0037	0.0011	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0074	0.0019	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0074	0.0019	ug/l	
113507-82-7	PFEESA	ND	0.0037	0.00093	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0093	0.0046	ug/l	
914637-49-3	5:3-FTCA	ND	0.046	0.0093	ug/l	
812-70-4	7:3-FTCA	ND	0.046	0.0093	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	99%		10-130%
	13C5-PFPeA	98%		40-130%
	13C5-PFHxA	100%		40-130%
	13C4-PFHpA	98%		40-130%
	13C8-PFOA	97%		40-130%
	13C9-PFNA	98%		40-130%
	13C6-PFDA	96%		40-130%
	13C7-PFUnDA	97%		30-130%
	13C2-PFDoDA	84%		10-130%
	13C2-PFTeDA	69%		10-130%
	13C3-PFBS	100%		40-135%
	13C3-PFHxS	100%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-9SA-250806		
Lab Sample ID:	FC26776-1	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	98%		40-130%
	13C8-FOSA	90%		40-130%
	d3-MeFOSA	79%		10-130%
	d5-EtFOSA	76%		10-130%
	d3-MeFOSAA	86%		40-170%
	d5-EtFOSAA	84%		25-135%
	d7-MeFOSE	70%		10-130%
	d9-EtFOSE	51%		10-130%
	13C2-4:2FTS	86%		40-200%
	13C2-6:2FTS	77%		40-200%
	13C2-8:2FTS	75%		40-300%
	13C3-HFPO-DA	101%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CMW-4-250806		
Lab Sample ID:	FC26776-2	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24051.D	1	08/26/25 17:28	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0310	0.0073	0.0036	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0957	0.0036	0.00091	ug/l	
307-24-4	Perfluorohexanoic acid	0.0856	0.0018	0.00045	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0271	0.0018	0.00045	ug/l	
335-67-1	Perfluorooctanoic acid	0.0069	0.0018	0.00045	ug/l	
375-95-1	Perfluorononanoic acid	0.0014	0.0018	0.00055	ug/l	J
335-76-2	Perfluorodecanoic acid	ND	0.0018	0.00045	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0018	0.00055	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0018	0.00055	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0018	0.00076	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0018	0.00045	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0058	0.0018	0.00091	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	0.0074	0.0018	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.135	0.0018	0.00091	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	0.0014	0.0018	0.00091	ug/l	J
1763-23-1	Perfluorooctanesulfonic acid	0.0830	0.0018	0.00091	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0018	0.00091	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0018	0.00091	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0018	0.0010	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0073	0.0036	ug/l	
27619-97-2	6:2-FTS	ND	0.0073	0.0036	ug/l	
39108-34-4	8:2-FTS	ND	0.0073	0.0037	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0018	0.00091	ug/l	
31506-32-8	MeFOSA	ND	0.0036	0.00091	ug/l	
4151-50-2	EtFOSA	ND	0.0036	0.00091	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CMW-4-250806		
Lab Sample ID:	FC26776-2	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0018	0.00091	ug/l	
2991-50-6	EtFOSAA	ND	0.0018	0.0012	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.018	0.0091	ug/l	
1691-99-2	EtFOSE	ND	0.018	0.0091	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0036	0.00091	ug/l	
919005-14-4	ADONA	ND	0.0073	0.0018	ug/l	
377-73-1	PFMPA	ND	0.0036	0.00091	ug/l	
863090-89-5	PFMBA	ND	0.0036	0.0010	ug/l	
151772-58-6	NFDHA	ND	0.0036	0.0011	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0073	0.0018	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0073	0.0018	ug/l	
113507-82-7	PFEESA	ND	0.0036	0.00091	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0091	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.045	0.0091	ug/l	
812-70-4	7:3-FTCA	ND	0.045	0.0091	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	93%		10-130%
	13C5-PFPeA	100%		40-130%
	13C5-PFHxA	97%		40-130%
	13C4-PFHpA	99%		40-130%
	13C8-PFOA	94%		40-130%
	13C9-PFNA	95%		40-130%
	13C6-PFDA	96%		40-130%
	13C7-PFUnDA	88%		30-130%
	13C2-PFDoDA	77%		10-130%
	13C2-PFTeDA	66%		10-130%
	13C3-PFBS	92%		40-135%
	13C3-PFHxS	92%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CMW-4-250806		
Lab Sample ID:	FC26776-2	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	86%		40-130%
	13C8-FOSA	86%		40-130%
	d3-MeFOSA	72%		10-130%
	d5-EtFOSA	72%		10-130%
	d3-MeFOSAA	72%		40-170%
	d5-EtFOSAA	70%		25-135%
	d7-MeFOSE	70%		10-130%
	d9-EtFOSE	66%		10-130%
	13C2-4:2FTS	79%		40-200%
	13C2-6:2FTS	83%		40-200%
	13C2-8:2FTS	81%		40-300%
	13C3-HFPO-DA	100%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-1S-250806		
Lab Sample ID:	FC26776-3	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24052.D	1	08/26/25 17:42	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	490 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0150	0.0082	0.0041	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0079	0.0041	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	0.0060	0.0020	0.00051	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0026	0.0020	0.00051	ug/l	
335-67-1	Perfluorooctanoic acid	0.0041	0.0020	0.00051	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00062	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00051	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00061	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00061	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00086	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00051	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0025	0.0020	0.0010	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0023	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0045	0.0020	0.0010	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0012	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0082	0.0041	ug/l	
27619-97-2	6:2-FTS	ND	0.0082	0.0041	ug/l	
39108-34-4	8:2-FTS	ND	0.0082	0.0042	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0020	0.0010	ug/l	
31506-32-8	MeFOSA	ND	0.0041	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0041	0.0010	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-1S-250806		
Lab Sample ID:	FC26776-3	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0020	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0014	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.020	0.010	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.010	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0041	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0082	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0041	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0041	0.0012	ug/l	
151772-58-6	NFDHA	ND	0.0041	0.0012	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0082	0.0020	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0082	0.0020	ug/l	
113507-82-7	PFEESA	ND	0.0041	0.0010	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.010	0.0051	ug/l	
914637-49-3	5:3-FTCA	ND	0.051	0.010	ug/l	
812-70-4	7:3-FTCA	ND	0.051	0.010	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	81%		10-130%
	13C5-PFPeA	77%		40-130%
	13C5-PFHxA	75%		40-130%
	13C4-PFHpA	70%		40-130%
	13C8-PFOA	69%		40-130%
	13C9-PFNA	63%		40-130%
	13C6-PFDA	66%		40-130%
	13C7-PFUnDA	62%		30-130%
	13C2-PFDoDA	59%		10-130%
	13C2-PFTeDA	51%		10-130%
	13C3-PFBS	69%		40-135%
	13C3-PFHxS	65%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-1S-250806		
Lab Sample ID:	FC26776-3	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	57%		40-130%
	13C8-FOSA	66%		40-130%
	d3-MeFOSA	52%		10-130%
	d5-EtFOSA	51%		10-130%
	d3-MeFOSAA	52%		40-170%
	d5-EtFOSAA	50%		25-135%
	d7-MeFOSE	44%		10-130%
	d9-EtFOSE	37%		10-130%
	13C2-4:2FTS	65%		40-200%
	13C2-6:2FTS	55%		40-200%
	13C2-8:2FTS	51%		40-300%
	13C3-HFPO-DA	79%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DMW-6B-250806		
Lab Sample ID:	FC26776-4	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24055.D	1	08/26/25 18:24	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0135	0.0074	0.0037	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0308	0.0037	0.00093	ug/l	
307-24-4	Perfluorohexanoic acid	0.0318	0.0019	0.00046	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0104	0.0019	0.00046	ug/l	
335-67-1	Perfluorooctanoic acid	0.0178	0.0019	0.00046	ug/l	
375-95-1	Perfluorononanoic acid	0.0016	0.0019	0.00056	ug/l	J
335-76-2	Perfluorodecanoic acid	ND	0.0019	0.00046	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0019	0.00056	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0019	0.00056	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0019	0.00078	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0019	0.00046	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0126	0.0019	0.00093	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	0.0020	0.0019	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0145	0.0019	0.00093	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0019	0.00093	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0114	0.0019	0.00093	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0019	0.00093	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0019	0.00093	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0019	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0074	0.0037	ug/l	
27619-97-2	6:2-FTS	ND	0.0074	0.0037	ug/l	
39108-34-4	8:2-FTS	ND	0.0074	0.0038	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0019	0.00093	ug/l	
31506-32-8	MeFOSA	ND	0.0037	0.00093	ug/l	
4151-50-2	EtFOSA	ND	0.0037	0.00093	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DMW-6B-250806		
Lab Sample ID:	FC26776-4	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0019	0.00093	ug/l	
2991-50-6	EtFOSAA	ND	0.0019	0.0012	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.019	0.0093	ug/l	
1691-99-2	EtFOSE	ND	0.019	0.0093	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0037	0.00093	ug/l	
919005-14-4	ADONA	ND	0.0074	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0037	0.00093	ug/l	
863090-89-5	PFMBA	ND	0.0037	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0037	0.0011	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0074	0.0019	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0074	0.0019	ug/l	
113507-82-7	PFEESA	ND	0.0037	0.00093	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0093	0.0046	ug/l	
914637-49-3	5:3-FTCA	ND	0.046	0.0093	ug/l	
812-70-4	7:3-FTCA	ND	0.046	0.0093	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	97%		10-130%
	13C5-PFPeA	96%		40-130%
	13C5-PFHxA	100%		40-130%
	13C4-PFHpA	99%		40-130%
	13C8-PFOA	96%		40-130%
	13C9-PFNA	101%		40-130%
	13C6-PFDA	104%		40-130%
	13C7-PFUnDA	101%		30-130%
	13C2-PFDoDA	90%		10-130%
	13C2-PFTeDA	78%		10-130%
	13C3-PFBS	102%		40-135%
	13C3-PFHxS	102%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DMW-6B-250806		
Lab Sample ID:	FC26776-4	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	101%		40-130%
	13C8-FOSA	97%		40-130%
	d3-MeFOSA	88%		10-130%
	d5-EtFOSA	85%		10-130%
	d3-MeFOSAA	91%		40-170%
	d5-EtFOSAA	89%		25-135%
	d7-MeFOSE	88%		10-130%
	d9-EtFOSE	80%		10-130%
	13C2-4:2FTS	90%		40-200%
	13C2-6:2FTS	74%		40-200%
	13C2-8:2FTS	76%		40-300%
	13C3-HFPO-DA	101%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-6S-250806		
Lab Sample ID:	FC26776-5	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24056.D	1	08/26/25 18:38	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	530 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0188	0.0075	0.0038	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0073	0.0038	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	0.0085	0.0019	0.00047	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0036	0.0019	0.00047	ug/l	
335-67-1	Perfluorooctanoic acid	0.0062	0.0019	0.00047	ug/l	
375-95-1	Perfluorononanoic acid	0.0019	0.0019	0.00058	ug/l	
335-76-2	Perfluorodecanoic acid	0.0044	0.0019	0.00047	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0019	0.00057	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0019	0.00057	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0019	0.00079	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0019	0.00047	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0021	0.0019	0.00094	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0019	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0020	0.0019	0.00094	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0019	0.00094	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0287	0.0019	0.00094	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0019	0.00094	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0019	0.00094	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0019	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0075	0.0038	ug/l	
27619-97-2	6:2-FTS	ND	0.0075	0.0038	ug/l	
39108-34-4	8:2-FTS	ND	0.0075	0.0039	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0019	0.00094	ug/l	
31506-32-8	MeFOSA	ND	0.0038	0.00094	ug/l	
4151-50-2	EtFOSA	ND	0.0038	0.00094	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-6S-250806		
Lab Sample ID:	FC26776-5	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0019	0.00094	ug/l	
2991-50-6	EtFOSAA	ND	0.0019	0.0013	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.019	0.0094	ug/l	
1691-99-2	EtFOSE	ND	0.019	0.0094	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0038	0.00094	ug/l	
919005-14-4	ADONA	ND	0.0075	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0038	0.00094	ug/l	
863090-89-5	PFMBA	ND	0.0038	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0038	0.0011	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0075	0.0019	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0075	0.0019	ug/l	
113507-82-7	PFEESA	ND	0.0038	0.00094	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0094	0.0047	ug/l	
914637-49-3	5:3-FTCA	ND	0.047	0.0094	ug/l	
812-70-4	7:3-FTCA	ND	0.047	0.0094	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	101%		10-130%
	13C5-PFPeA	101%		40-130%
	13C5-PFHxA	103%		40-130%
	13C4-PFHpA	100%		40-130%
	13C8-PFOA	100%		40-130%
	13C9-PFNA	101%		40-130%
	13C6-PFDA	98%		40-130%
	13C7-PFUnDA	92%		30-130%
	13C2-PFDoDA	81%		10-130%
	13C2-PFTeDA	62%		10-130%
	13C3-PFBS	104%		40-135%
	13C3-PFHxS	101%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-6S-250806		
Lab Sample ID:	FC26776-5	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	94%		40-130%
	13C8-FOSA	89%		40-130%
	d3-MeFOSA	79%		10-130%
	d5-EtFOSA	78%		10-130%
	d3-MeFOSAA	83%		40-170%
	d5-EtFOSAA	79%		25-135%
	d7-MeFOSE	73%		10-130%
	d9-EtFOSE	63%		10-130%
	13C2-4:2FTS	86%		40-200%
	13C2-6:2FTS	83%		40-200%
	13C2-8:2FTS	82%		40-300%
	13C3-HFPO-DA	103%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-7S-250806		
Lab Sample ID:	FC26776-6	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24057.D	1	08/26/25 18:52	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	510 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0371	0.0078	0.0039	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0970	0.0039	0.00098	ug/l	
307-24-4	Perfluorohexanoic acid	0.0544	0.0020	0.00049	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0121	0.0020	0.00049	ug/l	
335-67-1	Perfluorooctanoic acid	0.0089	0.0020	0.00049	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00060	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00049	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00059	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00059	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00082	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00049	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0032	0.0020	0.00098	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0028	0.0020	0.00098	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.00098	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0054	0.0020	0.00098	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.00098	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.00098	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0078	0.0039	ug/l	
27619-97-2	6:2-FTS	ND	0.0078	0.0039	ug/l	
39108-34-4	8:2-FTS	ND	0.0078	0.0040	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0020	0.00098	ug/l	
31506-32-8	MeFOSA	ND	0.0039	0.00098	ug/l	
4151-50-2	EtFOSA	ND	0.0039	0.00098	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-7S-250806		
Lab Sample ID:	FC26776-6	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0020	0.00098	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.020	0.0098	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.0098	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0039	0.00098	ug/l	
919005-14-4	ADONA	ND	0.0078	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0039	0.00098	ug/l	
863090-89-5	PFMBA	ND	0.0039	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0039	0.0012	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0078	0.0020	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0078	0.0020	ug/l	
113507-82-7	PFEESA	ND	0.0039	0.00098	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0098	0.0049	ug/l	
914637-49-3	5:3-FTCA	ND	0.049	0.0098	ug/l	
812-70-4	7:3-FTCA	ND	0.049	0.0098	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	100%		10-130%
	13C5-PFPeA	101%		40-130%
	13C5-PFHxA	101%		40-130%
	13C4-PFHpA	100%		40-130%
	13C8-PFOA	94%		40-130%
	13C9-PFNA	96%		40-130%
	13C6-PFDA	92%		40-130%
	13C7-PFUnDA	91%		30-130%
	13C2-PFDoDA	78%		10-130%
	13C2-PFTeDA	65%		10-130%
	13C3-PFBS	101%		40-135%
	13C3-PFHxS	100%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EMW-7S-250806		
Lab Sample ID:	FC26776-6	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	93%		40-130%
	13C8-FOSA	92%		40-130%
	d3-MeFOSA	84%		10-130%
	d5-EtFOSA	81%		10-130%
	d3-MeFOSAA	84%		40-170%
	d5-EtFOSAA	81%		25-135%
	d7-MeFOSE	74%		10-130%
	d9-EtFOSE	57%		10-130%
	13C2-4:2FTS	86%		40-200%
	13C2-6:2FTS	85%		40-200%
	13C2-8:2FTS	84%		40-300%
	13C3-HFPO-DA	105%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK-250806		
Lab Sample ID:	FC26776-7	**Date Sampled:**	08/06/25
Matrix:	AQ - Equipment Blank	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24058.D	1	08/26/25 19:06	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	510 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	0.0078	0.0039	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0039	0.00098	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00049	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00049	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00049	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00060	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00049	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00059	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00059	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00082	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00049	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.00098	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.00098	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.00098	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.00098	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.00098	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.00098	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0078	0.0039	ug/l	
27619-97-2	6:2-FTS	ND	0.0078	0.0039	ug/l	
39108-34-4	8:2-FTS	ND	0.0078	0.0040	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0020	0.00098	ug/l	
31506-32-8	MeFOSA	ND	0.0039	0.00098	ug/l	
4151-50-2	EtFOSA	ND	0.0039	0.00098	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK-250806		
Lab Sample ID:	FC26776-7	**Date Sampled:**	08/06/25
Matrix:	AQ - Equipment Blank	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0020	0.00098	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.020	0.0098	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.0098	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0039	0.00098	ug/l	
919005-14-4	ADONA	ND	0.0078	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0039	0.00098	ug/l	
863090-89-5	PFMBA	ND	0.0039	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0039	0.0012	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0078	0.0020	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0078	0.0020	ug/l	
113507-82-7	PFEESA	ND	0.0039	0.00098	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0098	0.0049	ug/l	
914637-49-3	5:3-FTCA	ND	0.049	0.0098	ug/l	
812-70-4	7:3-FTCA	ND	0.049	0.0098	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	98%		10-130%
	13C5-PFPeA	100%		40-130%
	13C5-PFHxA	102%		40-130%
	13C4-PFHpA	97%		40-130%
	13C8-PFOA	97%		40-130%
	13C9-PFNA	94%		40-130%
	13C6-PFDA	100%		40-130%
	13C7-PFUnDA	95%		30-130%
	13C2-PFDoDA	76%		10-130%
	13C2-PFTeDA	71%		10-130%
	13C3-PFBS	100%		40-135%
	13C3-PFHxS	100%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK-250806		
Lab Sample ID:	FC26776-7	**Date Sampled:**	08/06/25
Matrix:	AQ - Equipment Blank	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	94%		40-130%
	13C8-FOSA	83%		40-130%
	d3-MeFOSA	76%		10-130%
	d5-EtFOSA	74%		10-130%
	d3-MeFOSAA	88%		40-170%
	d5-EtFOSAA	78%		25-135%
	d7-MeFOSE	73%		10-130%
	d9-EtFOSE	72%		10-130%
	13C2-4:2FTS	122%		40-200%
	13C2-6:2FTS	114%		40-200%
	13C2-8:2FTS	106%		40-300%
	13C3-HFPO-DA	100%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1-250806		
Lab Sample ID:	FC26776-8	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Q24059.D	1	08/26/25 19:20	MV	08/24/25 19:00	OP11151	S7Q355
Run #2							

	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0149	0.0074	0.0037	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0090	0.0037	0.00093	ug/l	
307-24-4	Perfluorohexanoic acid	0.0068	0.0019	0.00046	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0030	0.0019	0.00046	ug/l	
335-67-1	Perfluorooctanoic acid	0.0041	0.0019	0.00046	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0019	0.00056	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0019	0.00046	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0019	0.00056	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0019	0.00056	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0019	0.00078	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0019	0.00046	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0029	0.0019	0.00093	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0019	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0022	0.0019	0.00093	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0019	0.00093	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0057	0.0019	0.00093	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0019	0.00093	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0019	0.00093	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0019	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0074	0.0037	ug/l	
27619-97-2	6:2-FTS	ND	0.0074	0.0037	ug/l	
39108-34-4	8:2-FTS	ND	0.0074	0.0038	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0019	0.00093	ug/l	
31506-32-8	MeFOSA	ND	0.0037	0.00093	ug/l	
4151-50-2	EtFOSA	ND	0.0037	0.00093	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1-250806		
Lab Sample ID:	FC26776-8	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0019	0.00093	ug/l	
2991-50-6	EtFOSAA	ND	0.0019	0.0012	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.019	0.0093	ug/l	
1691-99-2	EtFOSE	ND	0.019	0.0093	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0037	0.00093	ug/l	
919005-14-4	ADONA	ND	0.0074	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0037	0.00093	ug/l	
863090-89-5	PFMBA	ND	0.0037	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0037	0.0011	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0074	0.0019	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0074	0.0019	ug/l	
113507-82-7	PFEESA	ND	0.0037	0.00093	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA	ND	0.0093	0.0046	ug/l	
914637-49-3	5:3-FTCA	ND	0.046	0.0093	ug/l	
812-70-4	7:3-FTCA	ND	0.046	0.0093	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	96%		10-130%
	13C5-PFPeA	102%		40-130%
	13C5-PFHxA	103%		40-130%
	13C4-PFHpA	99%		40-130%
	13C8-PFOA	99%		40-130%
	13C9-PFNA	96%		40-130%
	13C6-PFDA	96%		40-130%
	13C7-PFUnDA	92%		30-130%
	13C2-PFDoDA	80%		10-130%
	13C2-PFTeDA	47%		10-130%
	13C3-PFBS	98%		40-135%
	13C3-PFHxS	96%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1-250806		
Lab Sample ID:	FC26776-8	**Date Sampled:**	08/06/25
Matrix:	AQ - Water	**Date Received:**	08/07/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	101%		40-130%
	13C8-FOSA	95%		40-130%
	d3-MeFOSA	84%		10-130%
	d5-EtFOSA	73%		10-130%
	d3-MeFOSAA	88%		40-170%
	d5-EtFOSAA	87%		25-135%
	d7-MeFOSE	38%		10-130%
	d9-EtFOSE	19%		10-130%
	13C2-4:2FTS	92%		40-200%
	13C2-6:2FTS	77%		40-200%
	13C2-8:2FTS	71%		40-300%
	13C3-HFPO-DA	108%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LANDAU ASSOCIATES

Chain-of-Custody Record

- [x] North Seattle (206) 631-8660
- [ ] Tacoma (253) 926-2493
- [ ] Olympia (360) 791-3178
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080

Date 08/06/2025
Page 1 of

Turnaround Time: Standard X Accelerated

FC26776

Project Name 8th Ave Terminals Site Project No. 217501.050.034
Project Location/Event Seattle, WA / August PFAS Sampling
Sampler's Name Kalpana Prasad, Spencer Lo, and Sarah Newport
Project Contact Mike Staton
Send Results To M. Staton, ~~date@landauinc.com~~ mstaton@landauinc.com

Special Handling Requirements:

Shipment Method: Ship
Stored on ice: (Yes) No

Testing Parameters: PFAS (EPA 1633)

	Sample I.D.	Date	Time	Matrix	No. of Containers	PFAS (EPA 1633)
1	EMW-9A-250806	8/6/2025	1000	AQ	3	X
2	CMW-4-250806		1030		3	X
3	EMW-1S-250806		1206		3	X
4	DMW-6B-250806		1215		3	X
5	EMW-6S-250806		1322		3	X
6	EMW-7S-250806		1340		3	X
7	Equipment Blank-250806		1400		3	X
8	DUP-1-250806		0800		3	X

Observations/Comments

- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other Samples in 2 coolers.

INITIAL ASSESSMENT
LABEL VERIFICATION
3.2, 3.4 IRH1

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Kalpana Prasad	Printed Name	Printed Name	Printed Name HALEIGH ROSADO
Company Landau Associates	Company	Company	Company
Date ~~1530~~ 8/6/25 Time 1530	Date Time	Date Time	Date 8/7/25 Time 0930

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

FC26776: Chain of Custody
Page 1 of 2

SGS - Orlando Sample Receipt Summary

Job Number: fc26776 **Client:** LANDAU ASSOCIATES **Project:** 8TH AVE TERMINALS SITE

Date / Time Received: 8/7/2025 9:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 883373350369

Cooler Temps (Raw Measured) °C: Cooler 1: (3.2); Cooler 2: (3.4);

Cooler Temps (Corrected) °C: Cooler 1: (3.2); Cooler 2: (3.4);

Cooler Informatio	Y	or	N
1. Custody Seals Present:	☑		☐
2. Custody Seals Intact:	☑		☐
3. Temp criteria achieved:	☑		☐
4. Cooler temp verification:		IR Gun	
5. Cooler media:		Ice (Bag)	

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐

	W	or	S	N/A
3. Type of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles:	☑		☐	
2. Samples presented properly	☑		☐	
3. Sufficient volume/containers recv'd for analysi	☑		☐	
4. Condition of sample:	Intact			
5. Sample recv'd within HT	☑		☐	
6. Dates/Times/IDs on COC match sample labe	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar Received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc Information

Number of Encores: 25 Gram 5 Gram

Number of Lab Filtered Metals

Test Strip Lot #s: pH 0-3: 226422 pH 10-12: Other: (Specify) 0-14 210224

Residual Chlorine Test Strip Lot

Comments

Sample Receipt Summary 112723 EK Technician: HALEIGHR Date: 8/7/2025 11:10:15 AM Reviewer: Date:

FC26776: Chain of Custody
Page 2 of 2

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-MB	7Q24033.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0040	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.0010	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.0010	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.0080	0.0040	ug/l	
27619-97-2	6:2-FTS	ND	0.0080	0.0040	ug/l	
39108-34-4	8:2-FTS	ND	0.0080	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0020	0.0010	ug/l	
31506-32-8	MeFOSA	ND	0.0040	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0040	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0020	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.020	0.010	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.010	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0040	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0040	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0040	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0020	ug/l	

Method Blank Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-MB	7Q24033.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0040	0.0010	ug/l	
356-02-5	3:3-FTCA	ND	0.010	0.0050	ug/l	
914637-49-3	5:3-FTCA	ND	0.050	0.010	ug/l	
812-70-4	7:3-FTCA	ND	0.050	0.010	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	98%	10-130%
	13C5-PFPeA	98%	40-130%
	13C5-PFHxA	99%	40-130%
	13C4-PFHpA	96%	40-130%
	13C8-PFOA	97%	40-130%
	13C9-PFNA	96%	40-130%
	13C6-PFDA	100%	40-130%
	13C7-PFUnDA	92%	30-130%
	13C2-PFDoDA	80%	10-130%
	13C2-PFTeDA	77%	10-130%
	13C3-PFBS	100%	40-135%
	13C3-PFHxS	93%	40-130%
	13C8-PFOS	93%	40-130%
	13C8-FOSA	86%	40-130%
	d3-MeFOSA	68%	10-130%
	d5-EtFOSA	70%	10-130%
	d3-MeFOSAA	89%	40-170%
	d5-EtFOSAA	84%	25-135%
	d7-MeFOSE	76%	10-130%
	d9-EtFOSE	74%	10-130%
	13C2-4:2FTS	125%	40-200%
	13C2-6:2FTS	112%	40-200%
	13C2-8:2FTS	106%	40-300%
	13C3-HFPO-DA	96%	40-130%

Instrument Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q354-IBLK	7Q23974.D	1	08/25/25	MV	n/a	n/a	S7Q354

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q354-IBLK	7Q23974.D	1	08/25/25	MV	n/a	n/a	S7Q354

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	100%	10-130%
	13C5-PFPeA	100%	40-130%
	13C5-PFHxA	99%	40-130%
	13C4-PFHpA	100%	40-130%
	13C8-PFOA	101%	40-130%
	13C9-PFNA	103%	40-130%
	13C6-PFDA	95%	40-130%
	13C7-PFUnDA	100%	30-130%
	13C2-PFDoDA	98%	10-130%
	13C2-PFTeDA	97%	10-130%
	13C3-PFBS	108%	40-135%
	13C3-PFHxS	108%	40-130%
	13C8-PFOS	102%	40-130%
	13C8-FOSA	98%	40-130%
	d3-MeFOSA	96%	10-130%
	d5-EtFOSA	102%	10-130%
	d3-MeFOSAA	101%	40-170%
	d5-EtFOSAA	99%	25-135%
	d7-MeFOSE	99%	10-130%
	d9-EtFOSE	100%	10-130%
	13C2-4:2FTS	117%	40-200%
	13C2-6:2FTS	117%	40-200%
	13C2-8:2FTS	121%	40-300%
	13C3-HFPO-DA	99%	40-130%

Instrument Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-IBLK	7Q24028.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	0.00052	0.0040	0.00050	ug/l	J
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-IBLK	7Q24028.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	98%	10-130%
	13C5-PFPeA	99%	40-130%
	13C5-PFHxA	97%	40-130%
	13C4-PFHpA	98%	40-130%
	13C8-PFOA	102%	40-130%
	13C9-PFNA	99%	40-130%
	13C6-PFDA	105%	40-130%
	13C7-PFUnDA	106%	30-130%
	13C2-PFDoDA	103%	10-130%
	13C2-PFTeDA	107%	10-130%
	13C3-PFBS	99%	40-135%
	13C3-PFHxS	96%	40-130%
	13C8-PFOS	99%	40-130%
	13C8-FOSA	99%	40-130%
	d3-MeFOSA	92%	10-130%
	d5-EtFOSA	96%	10-130%
	d3-MeFOSAA	97%	40-170%
	d5-EtFOSAA	98%	25-135%
	d7-MeFOSE	98%	10-130%
	d9-EtFOSE	100%	10-130%
	13C2-4:2FTS	111%	40-200%
	13C2-6:2FTS	108%	40-200%
	13C2-8:2FTS	110%	40-300%
	13C3-HFPO-DA	96%	40-130%

Continuing Calibration Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-ICCB	7Q24042.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-ICCB	7Q24042.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	99%	10-130%
	13C5-PFPeA	101%	40-130%
	13C5-PFHxA	101%	40-130%
	13C4-PFHpA	100%	40-130%
	13C8-PFOA	101%	40-130%
	13C9-PFNA	100%	40-130%
	13C6-PFDA	99%	40-130%
	13C7-PFUnDA	103%	30-130%
	13C2-PFDoDA	97%	10-130%
	13C2-PFTeDA	92%	10-130%
	13C3-PFBS	105%	40-135%
	13C3-PFHxS	100%	40-130%
	13C8-PFOS	98%	40-130%
	13C8-FOSA	95%	40-130%
	d3-MeFOSA	90%	10-130%
	d5-EtFOSA	97%	10-130%
	d3-MeFOSAA	96%	40-170%
	d5-EtFOSAA	98%	25-135%
	d7-MeFOSE	96%	10-130%
	d9-EtFOSE	97%	10-130%
	13C2-4:2FTS	118%	40-200%
	13C2-6:2FTS	120%	40-200%
	13C2-8:2FTS	113%	40-300%
	13C3-HFPO-DA	100%	40-130%

Continuing Calibration Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-ICCB	7Q24054.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-ICCB	7Q24054.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	99%	10-130%
	13C5-PFPeA	100%	40-130%
	13C5-PFHxA	102%	40-130%
	13C4-PFHpA	98%	40-130%
	13C8-PFOA	99%	40-130%
	13C9-PFNA	101%	40-130%
	13C6-PFDA	104%	40-130%
	13C7-PFUnDA	103%	30-130%
	13C2-PFDoDA	104%	10-130%
	13C2-PFTeDA	97%	10-130%
	13C3-PFBS	103%	40-135%
	13C3-PFHxS	102%	40-130%
	13C8-PFOS	106%	40-130%
	13C8-FOSA	101%	40-130%
	d3-MeFOSA	96%	10-130%
	d5-EtFOSA	99%	10-130%
	d3-MeFOSAA	101%	40-170%
	d5-EtFOSAA	99%	25-135%
	d7-MeFOSE	99%	10-130%
	d9-EtFOSE	98%	10-130%
	13C2-4:2FTS	115%	40-200%
	13C2-6:2FTS	109%	40-200%
	13C2-8:2FTS	104%	40-300%
	13C3-HFPO-DA	96%	40-130%

Continuing Calibration Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-ICCB	7Q24062.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S7Q355-ICCB	7Q24062.D	1	08/26/25	MV	n/a	n/a	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	99%	10-130%
	13C5-PFPeA	100%	40-130%
	13C5-PFHxA	99%	40-130%
	13C4-PFHpA	96%	40-130%
	13C8-PFOA	102%	40-130%
	13C9-PFNA	99%	40-130%
	13C6-PFDA	104%	40-130%
	13C7-PFUnDA	113%	30-130%
	13C2-PFDoDA	107%	10-130%
	13C2-PFTeDA	97%	10-130%
	13C3-PFBS	106%	40-135%
	13C3-PFHxS	104%	40-130%
	13C8-PFOS	104%	40-130%
	13C8-FOSA	102%	40-130%
	d3-MeFOSA	93%	10-130%
	d5-EtFOSA	100%	10-130%
	d3-MeFOSAA	104%	40-170%
	d5-EtFOSAA	101%	25-135%
	d7-MeFOSE	102%	10-130%
	d9-EtFOSE	100%	10-130%
	13C2-4:2FTS	121%	40-200%
	13C2-6:2FTS	116%	40-200%
	13C2-8:2FTS	106%	40-300%
	13C3-HFPO-DA	99%	40-130%

Blank Spike Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-LLBS	7Q24032.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.016	0.0168	105	70-140
2706-90-3	Perfluoropentanoic acid	0.008	0.0083	104	65-135
307-24-4	Perfluorohexanoic acid	0.004	0.0043	108	70-145
375-85-9	Perfluoroheptanoic acid	0.004	0.0043	108	70-150
335-67-1	Perfluorooctanoic acid	0.004	0.0045	113	70-150
375-95-1	Perfluorononanoic acid	0.004	0.0044	110	70-150
335-76-2	Perfluorodecanoic acid	0.004	0.0046	115	70-140
2058-94-8	Perfluoroundecanoic acid	0.004	0.0040	100	70-145
307-55-1	Perfluorododecanoic acid	0.004	0.0040	100	70-140
72629-94-8	Perfluorotridecanoic acid	0.004	0.0041	103	65-140
376-06-7	Perfluorotetradecanoic acid	0.004	0.0044	110	60-140
375-73-5	Perfluorobutanesulfonic acid	0.00355	0.0038	107	60-145
2706-91-4	Perfluoropentanesulfonic acid	0.00376	0.0038	101	65-140
355-46-4	Perfluorohexanesulfonic acid	0.00366	0.0040	109	65-145
375-92-8	Perfluoroheptanesulfonic acid	0.00381	0.0045	118	70-150
1763-23-1	Perfluorooctanesulfonic acid	0.00371	0.0041	110	55-150
68259-12-1	Perfluorononanesulfonic acid	0.00385	0.0040	104	65-145
335-77-3	Perfluorodecanesulfonic acid	0.00386	0.0038	98	60-145
79780-39-5	Perfluorododecanesulfonic aci	0.00388	0.0032	82	50-145
757124-72-4	4:2-FTS	0.015	0.0154	103	70-145
27619-97-2	6:2-FTS	0.0152	0.0170	112	65-155
39108-34-4	8:2-FTS	0.0154	0.0172	112	60-150
754-91-6	PFOSA	0.004	0.0043	108	70-145
31506-32-8	MeFOSA	0.008	0.0093	116	60-150
4151-50-2	EtFOSA	0.008	0.0082	103	65-145
2355-31-9	MeFOSAA	0.004	0.0044	110	50-140
2991-50-6	EtFOSAA	0.004	0.0042	105	70-145
24448-09-7	MeFOSE	0.02	0.0214	107	70-145
1691-99-2	EtFOSE	0.02	0.0201	101	70-135
13252-13-6	HFPO-DA (GenX)	0.008	0.0082	103	70-140
919005-14-4	ADONA	0.00756	0.0081	107	65-145
377-73-1	PFMPA	0.008	0.0084	105	55-140
863090-89-5	PFMBA	0.008	0.0084	105	60-150
151772-58-6	NFDHA	0.008	0.0087	109	50-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.00748	0.0080	107	70-155
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.00756	0.0071	94	55-160

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-LLBS	7Q24032.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.00712	0.0077	108	70-140
356-02-5	3:3-FTCA	0.02	0.0184	92	65-130
914637-49-3	5:3-FTCA	0.1	0.107	107	70-135
812-70-4	7:3-FTCA	0.1	0.104	104	50-145

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	102%	10-130%
	13C5-PFPeA	104%	40-130%
	13C5-PFHxA	102%	40-130%
	13C4-PFHpA	102%	40-130%
	13C8-PFOA	106%	40-130%
	13C9-PFNA	102%	40-130%
	13C6-PFDA	104%	40-130%
	13C7-PFUnDA	102%	30-130%
	13C2-PFDoDA	95%	10-130%
	13C2-PFTeDA	89%	10-130%
	13C3-PFBS	108%	40-135%
	13C3-PFHxS	101%	40-130%
	13C8-PFOS	104%	40-130%
	13C8-FOSA	97%	40-130%
	d3-MeFOSA	72%	10-130%
	d5-EtFOSA	77%	10-130%
	d3-MeFOSAA	103%	40-170%
	d5-EtFOSAA	99%	25-135%
	d7-MeFOSE	82%	10-130%
	d9-EtFOSE	82%	10-130%
	13C2-4:2FTS	134%	40-200%
	13C2-6:2FTS	117%	40-200%
	13C2-8:2FTS	114%	40-300%
	13C3-HFPO-DA	101%	40-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-BS	7Q24031.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.112	112	70-140
2706-90-3	Perfluoropentanoic acid	0.05	0.0552	110	65-135
307-24-4	Perfluorohexanoic acid	0.025	0.0274	110	70-145
375-85-9	Perfluoroheptanoic acid	0.025	0.0278	111	70-150
335-67-1	Perfluorooctanoic acid	0.025	0.0279	112	70-150
375-95-1	Perfluorononanoic acid	0.025	0.0284	114	70-150
335-76-2	Perfluorodecanoic acid	0.025	0.0273	109	70-140
2058-94-8	Perfluoroundecanoic acid	0.025	0.0273	109	70-145
307-55-1	Perfluorododecanoic acid	0.025	0.0279	112	70-140
72629-94-8	Perfluorotridecanoic acid	0.025	0.0266	106	65-140
376-06-7	Perfluorotetradecanoic acid	0.025	0.0281	112	60-140
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0229	103	60-145
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0266	113	65-140
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0255	112	65-145
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0268	112	70-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0257	111	55-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0272	113	65-145
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0272	113	60-145
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0247	102	50-145
757124-72-4	4:2-FTS	0.0938	0.103	110	70-145
27619-97-2	6:2-FTS	0.095	0.111	117	65-155
39108-34-4	8:2-FTS	0.096	0.112	117	60-150
754-91-6	PFOSA	0.025	0.0293	117	70-145
31506-32-8	MeFOSA	0.05	0.0546	109	60-150
4151-50-2	EtFOSA	0.05	0.0529	106	65-145
2355-31-9	MeFOSAA	0.025	0.0279	112	50-140
2991-50-6	EtFOSAA	0.025	0.0276	110	70-145
24448-09-7	MeFOSE	0.125	0.133	106	70-145
1691-99-2	EtFOSE	0.125	0.129	103	70-135
13252-13-6	HFPO-DA (GenX)	0.05	0.0580	116	70-140
919005-14-4	ADONA	0.0473	0.0537	114	65-145
377-73-1	PFMPA	0.05	0.0564	113	55-140
863090-89-5	PFMBA	0.05	0.0567	113	60-150
151772-58-6	NFDHA	0.05	0.0530	106	50-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0540	116	70-155
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0529	112	55-160

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-BS	7Q24031.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0496	111	70-140
356-02-5	3:3-FTCA	0.125	0.116	93	65-130
914637-49-3	5:3-FTCA	0.625	0.688	110	70-135
812-70-4	7:3-FTCA	0.625	0.670	107	50-145

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	100%	10-130%
	13C5-PFPeA	98%	40-130%
	13C5-PFHxA	100%	40-130%
	13C4-PFHpA	101%	40-130%
	13C8-PFOA	98%	40-130%
	13C9-PFNA	97%	40-130%
	13C6-PFDA	99%	40-130%
	13C7-PFUnDA	100%	30-130%
	13C2-PFDoDA	97%	10-130%
	13C2-PFTeDA	86%	10-130%
	13C3-PFBS	102%	40-135%
	13C3-PFHxS	96%	40-130%
	13C8-PFOS	95%	40-130%
	13C8-FOSA	96%	40-130%
	d3-MeFOSA	89%	10-130%
	d5-EtFOSA	84%	10-130%
	d3-MeFOSAA	96%	40-170%
	d5-EtFOSAA	97%	25-135%
	d7-MeFOSE	75%	10-130%
	d9-EtFOSE	73%	10-130%
	13C2-4:2FTS	129%	40-200%
	13C2-6:2FTS	113%	40-200%
	13C2-8:2FTS	110%	40-300%
	13C3-HFPO-DA	97%	40-130%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-MS	7Q24037.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355
FC26749-3	7Q24036.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	FC26749-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.0067	J	0.0943	0.115	115	70-140
2706-90-3	Perfluoropentanoic acid	0.0040		0.0472	0.0559	110	65-135
307-24-4	Perfluorohexanoic acid	0.0023		0.0236	0.0284	111	70-145
375-85-9	Perfluoroheptanoic acid	0.0027		0.0236	0.0303	117	70-150
335-67-1	Perfluorooctanoic acid	0.0189		0.0236	0.0443	108	70-150
375-95-1	Perfluorononanoic acid	ND		0.0236	0.0257	109	70-150
335-76-2	Perfluorodecanoic acid	ND		0.0236	0.0269	114	70-140
2058-94-8	Perfluoroundecanoic acid	ND		0.0236	0.0261	111	70-145
307-55-1	Perfluorododecanoic acid	ND		0.0236	0.0280	119	70-140
72629-94-8	Perfluorotridecanoic acid	ND		0.0236	0.0249	106	65-140
376-06-7	Perfluorotetradecanoic acid	ND		0.0236	0.0267	113	60-140
375-73-5	Perfluorobutanesulfonic acid	0.00098	J	0.0209	0.0235	108	60-145
2706-91-4	Perfluoropentanesulfonic acid	ND		0.0222	0.0248	112	65-140
355-46-4	Perfluorohexanesulfonic acid	0.0026		0.0216	0.0253	105	65-145
375-92-8	Perfluoroheptanesulfonic acid	ND		0.0225	0.0262	117	70-150
1763-23-1	Perfluorooctanesulfonic acid	0.0381		0.0219	0.0690	141	55-150
68259-12-1	Perfluorononanesulfonic acid	ND		0.0227	0.0243	107	65-145
335-77-3	Perfluorodecanesulfonic acid	ND		0.0228	0.0194	85	60-145
79780-39-5	Perfluorododecanesulfonic aci	ND		0.0229	0.0168	73	50-145
757124-72-4	4:2-FTS	ND		0.0884	0.101	114	70-145
27619-97-2	6:2-FTS	ND		0.0896	0.104	116	65-155
39108-34-4	8:2-FTS	ND		0.0906	0.103	114	60-150
754-91-6	PFOSA	0.0167		0.0236	0.0445	118	70-145
31506-32-8	MeFOSA	ND		0.0472	0.0542	115	60-150
4151-50-2	EtFOSA	ND		0.0472	0.0513	109	65-145
2355-31-9	MeFOSAA	ND		0.0236	0.0277	117	50-140
2991-50-6	EtFOSAA	ND		0.0236	0.0285	121	70-145
24448-09-7	MeFOSE	ND		0.118	0.131	111	70-145
1691-99-2	EtFOSE	ND		0.118	0.126	107	70-135
13252-13-6	HFPO-DA (GenX)	ND		0.0472	0.0527	112	70-140
919005-14-4	ADONA	ND		0.0446	0.0494	111	65-145
377-73-1	PFMPA	ND		0.0472	0.0527	112	55-140
863090-89-5	PFMBA	ND		0.0472	0.0545	116	60-150
151772-58-6	NFDHA	ND		0.0472	0.0504	107	50-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0441	0.0459	104	70-155
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND		0.0446	0.0354	79	55-160

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-MS	7Q24037.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355
FC26749-3	7Q24036.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	FC26749-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	ND		0.042	0.0460	110	70-140
356-02-5	3:3-FTCA	ND		0.118	0.112	95	65-130
914637-49-3	5:3-FTCA	ND		0.59	0.643	109	70-135
812-70-4	7:3-FTCA	ND		0.59	0.618	105	50-145

CAS No.	ID Standard Recoveries	MS	FC26749-3	Limits
	13C4-PFBA	100%	99%	10-130%
	13C5-PFPeA	99%		40-130%
	13C5-PFHxA	101%	98%	40-130%
	13C4-PFHpA	98%		40-130%
	13C8-PFOA	101%	96%	40-130%
	13C9-PFNA	96%		40-130%
	13C6-PFDA	92%		40-130%
	13C7-PFUnDA	85%		30-130%
	13C2-PFDoDA	71%		10-130%
	13C2-PFTeDA	64%		10-130%
	13C3-PFBS	100%	94%	40-135%
	13C3-PFHxS	100%	92%	40-130%
	13C8-PFOS	95%	91%	40-130%
	13C8-FOSA	98%		40-130%
	d3-MeFOSA	77%		10-130%
	d5-EtFOSA	72%		10-130%
	d3-MeFOSAA	82%		40-170%
	d5-EtFOSAA	77%		25-135%
	d7-MeFOSE	64%		10-130%
	d9-EtFOSE	59%		10-130%
	13C2-4:2FTS	98%		40-200%
	13C2-6:2FTS	94%	93%	40-200%
	13C2-8:2FTS	93%		40-300%
	13C3-HFPO-DA	98%		40-130%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-DUP	7Q24044.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355
DA74243-3	7Q24043.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	DA74243-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.182		0.164		10	21
2706-90-3	Perfluoropentanoic acid	0.0320		0.0292		9	23
307-24-4	Perfluorohexanoic acid	0.0739		0.0700		5	24
375-85-9	Perfluoroheptanoic acid	0.0103		0.0091		12	28
335-67-1	Perfluorooctanoic acid	0.0101		0.0102		1	27
375-95-1	Perfluorononanoic acid	ND		ND		nc	28
335-76-2	Perfluorodecanoic acid	ND		ND		nc	26
2058-94-8	Perfluoroundecanoic acid	ND		ND		nc	29
307-55-1	Perfluorododecanoic acid	ND		ND		nc	21
72629-94-8	Perfluorotridecanoic acid	ND		ND		nc	29
376-06-7	Perfluorotetradecanoic acid	ND		ND		nc	27
375-73-5	Perfluorobutanesulfonic acid	0.491		0.452		8	23
2706-91-4	Perfluoropentanesulfonic acid	0.0438		0.0397		10	25
355-46-4	Perfluorohexanesulfonic acid	0.0425		0.0403		5	27
375-92-8	Perfluoroheptanesulfonic acid	ND		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	ND		ND		nc	29
68259-12-1	Perfluorononanesulfonic acid	ND		ND		nc	29
335-77-3	Perfluorodecanesulfonic acid	ND		ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	ND		ND		nc	35
757124-72-4	4:2-FTS	ND		ND		nc	27
27619-97-2	6:2-FTS	ND		ND		nc	32
39108-34-4	8:2-FTS	ND		ND		nc	33
754-91-6	PFOSA	ND		ND		nc	22
31506-32-8	MeFOSA	ND		ND		nc	30
4151-50-2	EtFOSA	ND		ND		nc	26
2355-31-9	MeFOSAA	ND		ND		nc	32
2991-50-6	EtFOSAA	ND		ND		nc	28
24448-09-7	MeFOSE	ND		ND		nc	29
1691-99-2	EtFOSE	ND		ND		nc	21
13252-13-6	HFPO-DA (GenX)	0.0305		0.0275		10	23
919005-14-4	ADONA	ND		ND		nc	23
377-73-1	PFMPA	ND		ND		nc	23
863090-89-5	PFMBA	ND		ND		nc	27
151772-58-6	NFDHA	ND		ND		nc	37
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		ND		nc	30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND		ND		nc	35

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC26776
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11151-DUP	7Q24044.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355
DA74243-3	7Q24043.D	1	08/26/25	MV	08/24/25	OP11151	S7Q355

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26776-1, FC26776-2, FC26776-3, FC26776-4, FC26776-5, FC26776-6, FC26776-7, FC26776-8

CAS No.	Compound	DA74243-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
113507-82-7	PFEESA	ND		ND		nc	25
356-02-5	3:3-FTCA	ND		ND		nc	23
914637-49-3	5:3-FTCA	ND		ND		nc	24
812-70-4	7:3-FTCA	ND		ND		nc	34

CAS No.	ID Standard Recoveries	DUP	DA74243-3	Limits
	13C4-PFBA	77%	72%	10-130%
	13C5-PFPeA	102%	104%	40-130%
	13C5-PFHxA	99%	104%	40-130%
	13C4-PFHpA	99%	101%	40-130%
	13C8-PFOA	96%	98%	40-130%
	13C9-PFNA	93%	102%	40-130%
	13C6-PFDA	94%	94%	40-130%
	13C7-PFUnDA	87%	90%	30-130%
	13C2-PFDoDA	79%	80%	10-130%
	13C2-PFTeDA	73%	83%	10-130%
	13C3-PFBS	92%	100%	40-135%
	13C3-PFHxS	90%	98%	40-130%
	13C8-PFOS	90%	103%	40-130%
	13C8-FOSA	96%	99%	40-130%
	d3-MeFOSA	77%	80%	10-130%
	d5-EtFOSA	82%	80%	10-130%
	d3-MeFOSAA	78%	89%	40-170%
	d5-EtFOSAA	76%	83%	25-135%
	d7-MeFOSE	80%	77%	10-130%
	d9-EtFOSE	78%	75%	10-130%
	13C2-4:2FTS	85%	86%	40-200%
	13C2-6:2FTS	88%	92%	40-200%
	13C2-8:2FTS	81%	92%	40-300%
	13C3-HFPO-DA	104%	102%	40-130%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Landau Inc.

8th Ave Terminals; WA

2175001.030.034

SGS Job Number: FC26850

Sampling Date: 08/07/25

Report to:

Landau Inc.
155 NE 100th St Suite 302
Seattle, WA 98152
mstaton@landauinc.com

ATTN: Mike Staton

Total number of pages in report: 47

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Norm Farmer
Technical Director

Client Service contact: Karen Avila 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.

Test results relate only to samples analyzed.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Summary of Hits **4**
Section 3: Sample Results **5**
3.1: FC26850-1: SLR-2-250807 6
3.2: FC26850-2: CMW-6-250807 9
Section 4: Misc. Forms **12**
4.1: Chain of Custody 13
Section 5: MS Semi-volatiles - QC Data Summaries **15**
5.1: Method Blank Summary 16
5.2: Blank Spike Summary 40
5.3: Matrix Spike Summary 44
5.4: Duplicate Summary 46

SGS North America Inc.

Sample Summary

Landau Inc.

Job No: FC26850

8th Ave Terminals; WA
Project No: 2175001.030.034

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC26850-1	08/07/25	10:40	SLKP	08/08/25	AQ	Water	SLR-2-250807
FC26850-2	08/07/25	10:42	SLKP	08/08/25	AQ	Water	CMW-6-250807

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Summary of Hits

Job Number: FC26850
Account: Landau Inc.
Project: 8th Ave Terminals; WA
Collected: 08/07/25

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FC26850-1	**SLR-2-250807**					
Perfluorobutanoic acid		0.0088	0.0075	0.0038	ug/l	EPA 1633
Perfluoropentanoic acid		0.0246	0.0038	0.00094	ug/l	EPA 1633
Perfluorohexanoic acid		0.0110	0.0019	0.00047	ug/l	EPA 1633
Perfluoroheptanoic acid		0.0045	0.0019	0.00047	ug/l	EPA 1633
Perfluorooctanoic acid		0.0026	0.0019	0.00047	ug/l	EPA 1633
Perfluorodecanoic acid		0.0013 J	0.0019	0.00047	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0014 J	0.0019	0.00094	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0033	0.0019	0.00094	ug/l	EPA 1633
FC26850-2	**CMW-6-250807**					
Perfluorohexanoic acid		0.00093 J	0.0020	0.00049	ug/l	EPA 1633
Perfluorooctanoic acid		0.0012 J	0.0020	0.00049	ug/l	EPA 1633
Perfluorobutanesulfonic acid		0.0011 J	0.0020	0.00098	ug/l	EPA 1633
Perfluorohexanesulfonic acid		0.0029	0.0020	0.00098	ug/l	EPA 1633
Perfluorooctanesulfonic acid		0.0061	0.0020	0.00098	ug/l	EPA 1633

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SLR-2-250807		
Lab Sample ID:	FC26850-1	**Date Sampled:**	08/07/25
Matrix:	AQ - Water	**Date Received:**	08/08/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8Q26851.D	1	08/27/25 21:27	JL	08/26/25 09:00	OP11186	S8Q406
Run #2							

	Initial Volume	Final Volume
Run #1	530 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	0.0088	0.0075	0.0038	ug/l	
2706-90-3	Perfluoropentanoic acid	0.0246	0.0038	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	0.0110	0.0019	0.00047	ug/l	
375-85-9	Perfluoroheptanoic acid	0.0045	0.0019	0.00047	ug/l	
335-67-1	Perfluorooctanoic acid	0.0026	0.0019	0.00047	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0019	0.00058	ug/l	
335-76-2	Perfluorodecanoic acid	0.0013	0.0019	0.00047	ug/l	J
2058-94-8	Perfluoroundecanoic acid	ND	0.0019	0.00057	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0019	0.00057	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0019	0.00079	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0019	0.00047	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	ND	0.0019	0.00094	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0019	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0014	0.0019	0.00094	ug/l	J
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0019	0.00094	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0033	0.0019	0.00094	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0019	0.00094	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0019	0.00094	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0019	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0075	0.0038	ug/l	
27619-97-2	6:2-FTS	ND	0.0075	0.0038	ug/l	
39108-34-4	8:2-FTS	ND	0.0075	0.0039	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0019	0.00094	ug/l	
31506-32-8	MeFOSA	ND	0.0038	0.00094	ug/l	
4151-50-2	EtFOSA	ND	0.0038	0.00094	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SLR-2-250807		
Lab Sample ID:	FC26850-1	**Date Sampled:**	08/07/25
Matrix:	AQ - Water	**Date Received:**	08/08/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0019	0.00094	ug/l	
2991-50-6	EtFOSAA	ND	0.0019	0.0013	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.019	0.0094	ug/l	
1691-99-2	EtFOSE	ND	0.019	0.0094	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0038	0.00094	ug/l	
919005-14-4	ADONA	ND	0.0075	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0038	0.00094	ug/l	
863090-89-5	PFMBA	ND	0.0038	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0038	0.0011	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0075	0.0019	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0075	0.0019	ug/l	
113507-82-7	PFEESA	ND	0.0038	0.00094	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA [a]	ND	0.0094	0.0047	ug/l	
914637-49-3	5:3-FTCA	ND	0.047	0.0094	ug/l	
812-70-4	7:3-FTCA	ND	0.047	0.0094	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	106%		10-130%
	13C5-PFPeA	104%		40-130%
	13C5-PFHxA	104%		40-130%
	13C4-PFHpA	105%		40-130%
	13C8-PFOA	104%		40-130%
	13C9-PFNA	100%		40-130%
	13C6-PFDA	106%		40-130%
	13C7-PFUnDA	98%		30-130%
	13C2-PFDoDA	92%		10-130%
	13C2-PFTeDA	88%		10-130%
	13C3-PFBS	107%		40-135%
	13C3-PFHxS	103%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SLR-2-250807		
Lab Sample ID:	FC26850-1	**Date Sampled:**	08/07/25
Matrix:	AQ - Water	**Date Received:**	08/08/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	94%		40-130%
	13C8-FOSA	90%		40-130%
	d3-MeFOSA	73%		10-130%
	d5-EtFOSA	72%		10-130%
	d3-MeFOSAA	99%		40-170%
	d5-EtFOSAA	93%		25-135%
	d7-MeFOSE	79%		10-130%
	d9-EtFOSE	77%		10-130%
	13C2-4:2FTS	128%		40-200%
	13C2-6:2FTS	124%		40-200%
	13C2-8:2FTS	114%		40-300%
	13C3-HFPO-DA	102%		40-130%

(a) Associated ICV outside control limits high,sample ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CMW-6-250807		
Lab Sample ID:	FC26850-2	**Date Sampled:**	08/07/25
Matrix:	AQ - Water	**Date Received:**	08/08/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8Q26852.D	1	08/27/25 21:41	JL	08/26/25 09:00	OP11186	S8Q406
Run #2							

	Initial Volume	Final Volume
Run #1	510 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS						
375-22-4	Perfluorobutanoic acid	ND	0.0078	0.0039	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0039	0.00098	ug/l	
307-24-4	Perfluorohexanoic acid	0.00093	0.0020	0.00049	ug/l	J
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00049	ug/l	
335-67-1	Perfluorooctanoic acid	0.0012	0.0020	0.00049	ug/l	J
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00060	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00049	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00059	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00059	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00082	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00049	ug/l	
PERFLUOROALKYL SULFONIC ACIDS						
375-73-5	Perfluorobutanesulfonic acid	0.0011	0.0020	0.00098	ug/l	J
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0029	0.0020	0.00098	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.00098	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0061	0.0020	0.00098	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.00098	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.00098	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
FLUOROTELOMER SULFONIC ACIDS						
757124-72-4	4:2-FTS	ND	0.0078	0.0039	ug/l	
27619-97-2	6:2-FTS	ND	0.0078	0.0039	ug/l	
39108-34-4	8:2-FTS	ND	0.0078	0.0040	ug/l	
PERFLUOROOCTANE SULFONAMIDES						
754-91-6	PFOSA	ND	0.0020	0.00098	ug/l	
31506-32-8	MeFOSA	ND	0.0039	0.00098	ug/l	
4151-50-2	EtFOSA	ND	0.0039	0.00098	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CMW-6-250807		
Lab Sample ID:	FC26850-2	**Date Sampled:**	08/07/25
Matrix:	AQ - Water	**Date Received:**	08/08/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	Compound	Result	RL	MDL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS						
2355-31-9	MeFOSAA	ND	0.0020	0.00098	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS						
24448-09-7	MeFOSE	ND	0.020	0.0098	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.0098	ug/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS						
13252-13-6	HFPO-DA (GenX)	ND	0.0039	0.00098	ug/l	
919005-14-4	ADONA	ND	0.0078	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0039	0.00098	ug/l	
863090-89-5	PFMBA	ND	0.0039	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0039	0.0012	ug/l	
PER and POLYFLUOROETHER SULFONIC ACIDS						
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0078	0.0020	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0078	0.0020	ug/l	
113507-82-7	PFEESA	ND	0.0039	0.00098	ug/l	
FLUOROTELOMER CARBOXYLIC ACIDS						
356-02-5	3:3-FTCA [a]	ND	0.0098	0.0049	ug/l	
914637-49-3	5:3-FTCA	ND	0.049	0.0098	ug/l	
812-70-4	7:3-FTCA	ND	0.049	0.0098	ug/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	81%		10-130%
	13C5-PFPeA	103%		40-130%
	13C5-PFHxA	105%		40-130%
	13C4-PFHpA	104%		40-130%
	13C8-PFOA	102%		40-130%
	13C9-PFNA	100%		40-130%
	13C6-PFDA	101%		40-130%
	13C7-PFUnDA	89%		30-130%
	13C2-PFDoDA	80%		10-130%
	13C2-PFTeDA	81%		10-130%
	13C3-PFBS	103%		40-135%
	13C3-PFHxS	101%		40-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CMW-6-250807		
Lab Sample ID:	FC26850-2	**Date Sampled:**	08/07/25
Matrix:	AQ - Water	**Date Received:**	08/08/25
Method:	EPA 1633 EPA 1633	**Percent Solids:**	n/a
Project:	8th Ave Terminals; WA		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	97%		40-130%
	13C8-FOSA	93%		40-130%
	d3-MeFOSA	77%		10-130%
	d5-EtFOSA	74%		10-130%
	d3-MeFOSAA	85%		40-170%
	d5-EtFOSAA	82%		25-135%
	d7-MeFOSE	80%		10-130%
	d9-EtFOSE	77%		10-130%
	13C2-4:2FTS	120%		40-200%
	13C2-6:2FTS	105%		40-200%
	13C2-8:2FTS	104%		40-300%
	13C3-HFPO-DA	102%		40-130%

(a) Associated ICV outside control limits high,sample ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FC26850

LANDAU ASSOCIATES

Chain-of-Custody Record

- [x] North Seattle (206) 631-8660
- [ ] Tacoma (253) 926-2493
- [ ] Olympia (360) 791-3178
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ]

Date 8/7/25

Page 1 of 1

Turnaround Time: Standard / Accelerated

Project Name 8th Ave Terminal

Project No. 2175001.030.034

Project Location/Event Seattle, WA

Sampler's Name Spencer Lo, Kalpana Prasad

Project Contact Mike Staton

Send Results To Mike Staton- mstaton@landauinc.com

Special Handling Requirements:

Shipment Method:

Stored on ice: Yes / No

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	PFAS - 40 Analyte List 1633
1	SLR-2-250807	8/7/25	1040	Water	3	X
2	CMW-6-250807	8/7/25	1042	water	3	X

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion ☐

___ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐

___ Dissolved metal samples were field filtered

Other

INITIAL ASSESSMENT
LABEL VERIFICATION
2.8.1[illegible]

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Spencer Lo	Printed Name Zane Bentham	Printed Name	Printed Name
Company LAA	Company SGS	Company	Company
Date 8/7/25 Time 1500	Date 8/8/25 Time 930	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative 10/2018

4.1

4

FC26850: Chain of Custody
Page 1 of 2

SGS - Orlando Sample Receipt Summary

Job Number: fc26850 **Client:** LANDAU ASSOCIATES **Project:** 8TH AVE TERMINAL

Date / Time Received: 8/8/2025 9:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 883401272206

Cooler Temps (Raw Measured) °C: Cooler 1: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.8);

Cooler Informatio	Y	or	N
1. Custody Seals Present:	☑		☐
2. Custody Seals Intact:	☑		☐
3. Temp criteria achieved:	☑		☐
4. Cooler temp verification:			IR Gun
5. Cooler media:			Ice (Bag)

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑

	W	or	S	N/A
3. Type of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles:	☑		☐	
2. Samples presented properly	☑		☐	
3. Sufficient volume/containers recv'd for analysi	☑		☐	
4. Condition of sample:	Intact			
5. Sample recv'd within HT	☑		☐	
6. Dates/Times/IDs on COC match sample labe	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar Received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc Information

Number of Encores: 25 Gram 5 Gram

Number of Lab Filtered Metals

Test Strip Lot #s: pH 0-3: 226422 pH 10-12: Other: (Specify) 0-14 210224

Residual Chlorine Test Strip Lot

Comments

Sample Receipt Summary 112723 EK Technician: ZANEB Date: 8/8/2025 4:33:55 PM Reviewer: Date:

FC26850: Chain of Custody
Page 2 of 2

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-MB	8Q26849.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0040	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.0010	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.0010	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.0080	0.0040	ug/l	
27619-97-2	6:2-FTS	ND	0.0080	0.0040	ug/l	
39108-34-4	8:2-FTS	ND	0.0080	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0020	0.0010	ug/l	
31506-32-8	MeFOSA	ND	0.0040	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0040	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0020	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.020	0.010	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.010	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0040	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0040	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0040	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0020	ug/l	

Method Blank Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-MB	8Q26849.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0040	0.0010	ug/l	
356-02-5	3:3-FTCA	ND	0.010	0.0050	ug/l	
914637-49-3	5:3-FTCA	ND	0.050	0.010	ug/l	
812-70-4	7:3-FTCA	ND	0.050	0.010	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	104%	10-130%
	13C5-PFPeA	102%	40-130%
	13C5-PFHxA	103%	40-130%
	13C4-PFHpA	101%	40-130%
	13C8-PFOA	99%	40-130%
	13C9-PFNA	101%	40-130%
	13C6-PFDA	107%	40-130%
	13C7-PFUnDA	99%	30-130%
	13C2-PFDoDA	89%	10-130%
	13C2-PFTeDA	95%	10-130%
	13C3-PFBS	106%	40-135%
	13C3-PFHxS	101%	40-130%
	13C8-PFOS	97%	40-130%
	13C8-FOSA	90%	40-130%
	d3-MeFOSA	77%	10-130%
	d5-EtFOSA	75%	10-130%
	d3-MeFOSAA	92%	40-170%
	d5-EtFOSAA	85%	25-135%
	d7-MeFOSE	86%	10-130%
	d9-EtFOSE	84%	10-130%
	13C2-4:2FTS	101%	40-200%
	13C2-6:2FTS	104%	40-200%
	13C2-8:2FTS	98%	40-300%
	13C3-HFPO-DA	101%	40-130%

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q403-IBLK	8Q26659.D	1	08/25/25	JL	n/a	n/a	S8Q403

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	0.00057	0.0040	0.00050	ug/l	J
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	0.0014	0.0080	0.0010	ug/l	J
4151-50-2	EtFOSA	0.0020	0.0080	0.0020	ug/l	J
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q403-IBLK	8Q26659.D	1	08/25/25	JL	n/a	n/a	S8Q403

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	101%	10-130%
	13C5-PFPeA	100%	40-130%
	13C5-PFHxA	100%	40-130%
	13C4-PFHpA	99%	40-130%
	13C8-PFOA	99%	40-130%
	13C9-PFNA	99%	40-130%
	13C6-PFDA	100%	40-130%
	13C7-PFUnDA	103%	30-130%
	13C2-PFDoDA	100%	10-130%
	13C2-PFTeDA	102%	10-130%
	13C3-PFBS	99%	40-135%
	13C3-PFHxS	95%	40-130%
	13C8-PFOS	104%	40-130%
	13C8-FOSA	99%	40-130%
	d3-MeFOSA	96%	10-130%
	d5-EtFOSA	96%	10-130%
	d3-MeFOSAA	103%	40-170%
	d5-EtFOSAA	102%	25-135%
	d7-MeFOSE	100%	10-130%
	d9-EtFOSE	102%	10-130%
	13C2-4:2FTS	94%	40-200%
	13C2-6:2FTS	88%	40-200%
	13C2-8:2FTS	92%	40-300%
	13C3-HFPO-DA	99%	40-130%

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-IBLK	8Q26801.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	0.00055	0.0040	0.00050	ug/l	J
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-IBLK	8Q26801.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	98%	10-130%
	13C5-PFPeA	100%	40-130%
	13C5-PFHxA	99%	40-130%
	13C4-PFHpA	99%	40-130%
	13C8-PFOA	99%	40-130%
	13C9-PFNA	99%	40-130%
	13C6-PFDA	100%	40-130%
	13C7-PFUnDA	102%	30-130%
	13C2-PFDoDA	101%	10-130%
	13C2-PFTeDA	101%	10-130%
	13C3-PFBS	101%	40-135%
	13C3-PFHxS	99%	40-130%
	13C8-PFOS	104%	40-130%
	13C8-FOSA	99%	40-130%
	d3-MeFOSA	98%	10-130%
	d5-EtFOSA	97%	10-130%
	d3-MeFOSAA	97%	40-170%
	d5-EtFOSAA	94%	25-135%
	d7-MeFOSE	101%	10-130%
	d9-EtFOSE	101%	10-130%
	13C2-4:2FTS	96%	40-200%
	13C2-6:2FTS	96%	40-200%
	13C2-8:2FTS	90%	40-300%
	13C3-HFPO-DA	98%	40-130%

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-IBLK	8Q26834.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-IBLK	8Q26834.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	102%	10-130%
	13C5-PFPeA	103%	40-130%
	13C5-PFHxA	103%	40-130%
	13C4-PFHpA	105%	40-130%
	13C8-PFOA	100%	40-130%
	13C9-PFNA	98%	40-130%
	13C6-PFDA	102%	40-130%
	13C7-PFUnDA	105%	30-130%
	13C2-PFDoDA	100%	10-130%
	13C2-PFTeDA	106%	10-130%
	13C3-PFBS	103%	40-135%
	13C3-PFHxS	101%	40-130%
	13C8-PFOS	97%	40-130%
	13C8-FOSA	100%	40-130%
	d3-MeFOSA	94%	10-130%
	d5-EtFOSA	97%	10-130%
	d3-MeFOSAA	101%	40-170%
	d5-EtFOSAA	99%	25-135%
	d7-MeFOSE	98%	10-130%
	d9-EtFOSE	98%	10-130%
	13C2-4:2FTS	106%	40-200%
	13C2-6:2FTS	102%	40-200%
	13C2-8:2FTS	98%	40-300%
	13C3-HFPO-DA	102%	40-130%

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26846.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26846.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	101%	10-130%
	13C5-PFPeA	101%	40-130%
	13C5-PFHxA	102%	40-130%
	13C4-PFHpA	99%	40-130%
	13C8-PFOA	101%	40-130%
	13C9-PFNA	102%	40-130%
	13C6-PFDA	101%	40-130%
	13C7-PFUnDA	101%	30-130%
	13C2-PFDoDA	101%	10-130%
	13C2-PFTeDA	103%	10-130%
	13C3-PFBS	107%	40-135%
	13C3-PFHxS	104%	40-130%
	13C8-PFOS	101%	40-130%
	13C8-FOSA	96%	40-130%
	d3-MeFOSA	90%	10-130%
	d5-EtFOSA	96%	10-130%
	d3-MeFOSAA	97%	40-170%
	d5-EtFOSAA	95%	25-135%
	d7-MeFOSE	96%	10-130%
	d9-EtFOSE	95%	10-130%
	13C2-4:2FTS	89%	40-200%
	13C2-6:2FTS	101%	40-200%
	13C2-8:2FTS	97%	40-300%
	13C3-HFPO-DA	99%	40-130%

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q407-IBLK	8Q26870.D	1	08/28/25	JL	n/a	n/a	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q407-IBLK	8Q26870.D	1	08/28/25	JL	n/a	n/a	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	98%	10-130%
	13C5-PFPeA	101%	40-130%
	13C5-PFHxA	99%	40-130%
	13C4-PFHpA	102%	40-130%
	13C8-PFOA	100%	40-130%
	13C9-PFNA	101%	40-130%
	13C6-PFDA	108%	40-130%
	13C7-PFUnDA	102%	30-130%
	13C2-PFDoDA	100%	10-130%
	13C2-PFTeDA	106%	10-130%
	13C3-PFBS	102%	40-135%
	13C3-PFHxS	100%	40-130%
	13C8-PFOS	98%	40-130%
	13C8-FOSA	99%	40-130%
	d3-MeFOSA	93%	10-130%
	d5-EtFOSA	99%	10-130%
	d3-MeFOSAA	101%	40-170%
	d5-EtFOSAA	96%	25-135%
	d7-MeFOSE	98%	10-130%
	d9-EtFOSE	99%	10-130%
	13C2-4:2FTS	91%	40-200%
	13C2-6:2FTS	90%	40-200%
	13C2-8:2FTS	97%	40-300%
	13C3-HFPO-DA	99%	40-130%

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q407-IBLK	8Q26893.D	1	08/28/25	JL	n/a	n/a	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q407-IBLK	8Q26893.D	1	08/28/25	JL	n/a	n/a	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	101%	10-130%
	13C5-PFPeA	101%	40-130%
	13C5-PFHxA	102%	40-130%
	13C4-PFHpA	101%	40-130%
	13C8-PFOA	100%	40-130%
	13C9-PFNA	97%	40-130%
	13C6-PFDA	103%	40-130%
	13C7-PFUnDA	99%	30-130%
	13C2-PFDoDA	100%	10-130%
	13C2-PFTeDA	105%	10-130%
	13C3-PFBS	103%	40-135%
	13C3-PFHxS	101%	40-130%
	13C8-PFOS	99%	40-130%
	13C8-FOSA	96%	40-130%
	d3-MeFOSA	94%	10-130%
	d5-EtFOSA	96%	10-130%
	d3-MeFOSAA	106%	40-170%
	d5-EtFOSAA	104%	25-135%
	d7-MeFOSE	99%	10-130%
	d9-EtFOSE	99%	10-130%
	13C2-4:2FTS	96%	40-200%
	13C2-6:2FTS	103%	40-200%
	13C2-8:2FTS	104%	40-300%
	13C3-HFPO-DA	103%	40-130%

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q403-ICCB	8Q26655.D	1	08/25/25	JL	n/a	n/a	S8Q403

The QC reported here applies to the following samples: **Method:** EPA 1633

S8Q403-IBLK

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q403-ICCB	8Q26655.D	1	08/25/25	JL	n/a	n/a	S8Q403

The QC reported here applies to the following samples: **Method:** EPA 1633

S8Q403-IBLK

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	100%	10-130%
	13C5-PFPeA	101%	40-130%
	13C5-PFHxA	103%	40-130%
	13C4-PFHpA	101%	40-130%
	13C8-PFOA	96%	40-130%
	13C9-PFNA	103%	40-130%
	13C6-PFDA	98%	40-130%
	13C7-PFUnDA	100%	30-130%
	13C2-PFDoDA	103%	10-130%
	13C2-PFTeDA	101%	10-130%
	13C3-PFBS	103%	40-135%
	13C3-PFHxS	103%	40-130%
	13C8-PFOS	105%	40-130%
	13C8-FOSA	102%	40-130%
	d3-MeFOSA	98%	10-130%
	d5-EtFOSA	100%	10-130%
	d3-MeFOSAA	106%	40-170%
	d5-EtFOSAA	103%	25-135%
	d7-MeFOSE	104%	10-130%
	d9-EtFOSE	102%	10-130%
	13C2-4:2FTS	91%	40-200%
	13C2-6:2FTS	92%	40-200%
	13C2-8:2FTS	96%	40-300%
	13C3-HFPO-DA	99%	40-130%

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26830.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

S8Q406-IBLK, S8Q406-RT

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26830.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

S8Q406-IBLK, S8Q406-RT

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	102%	10-130%
	13C5-PFPeA	99%	40-130%
	13C5-PFHxA	99%	40-130%
	13C4-PFHpA	100%	40-130%
	13C8-PFOA	98%	40-130%
	13C9-PFNA	98%	40-130%
	13C6-PFDA	104%	40-130%
	13C7-PFUnDA	101%	30-130%
	13C2-PFDoDA	100%	10-130%
	13C2-PFTeDA	101%	10-130%
	13C3-PFBS	102%	40-135%
	13C3-PFHxS	98%	40-130%
	13C8-PFOS	99%	40-130%
	13C8-FOSA	98%	40-130%
	d3-MeFOSA	92%	10-130%
	d5-EtFOSA	96%	10-130%
	d3-MeFOSAA	101%	40-170%
	d5-EtFOSAA	99%	25-135%
	d7-MeFOSE	99%	10-130%
	d9-EtFOSE	96%	10-130%
	13C2-4:2FTS	93%	40-200%
	13C2-6:2FTS	99%	40-200%
	13C2-8:2FTS	101%	40-300%
	13C3-HFPO-DA	97%	40-130%

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26857.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-MS

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26857.D	1	08/27/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-MS

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	100%	10-130%
	13C5-PFPeA	101%	40-130%
	13C5-PFHxA	102%	40-130%
	13C4-PFHpA	103%	40-130%
	13C8-PFOA	101%	40-130%
	13C9-PFNA	101%	40-130%
	13C6-PFDA	105%	40-130%
	13C7-PFUnDA	105%	30-130%
	13C2-PFDoDA	102%	10-130%
	13C2-PFTeDA	103%	10-130%
	13C3-PFBS	98%	40-135%
	13C3-PFHxS	94%	40-130%
	13C8-PFOS	104%	40-130%
	13C8-FOSA	99%	40-130%
	d3-MeFOSA	96%	10-130%
	d5-EtFOSA	97%	10-130%
	d3-MeFOSAA	98%	40-170%
	d5-EtFOSAA	97%	25-135%
	d7-MeFOSE	100%	10-130%
	d9-EtFOSE	100%	10-130%
	13C2-4:2FTS	94%	40-200%
	13C2-6:2FTS	89%	40-200%
	13C2-8:2FTS	86%	40-300%
	13C3-HFPO-DA	99%	40-130%

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26864.D	1	08/28/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-MS

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q406-ICCB	8Q26864.D	1	08/28/25	JL	n/a	n/a	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-MS

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	100%	10-130%
	13C5-PFPeA	102%	40-130%
	13C5-PFHxA	103%	40-130%
	13C4-PFHpA	101%	40-130%
	13C8-PFOA	97%	40-130%
	13C9-PFNA	99%	40-130%
	13C6-PFDA	101%	40-130%
	13C7-PFUnDA	100%	30-130%
	13C2-PFDoDA	100%	10-130%
	13C2-PFTeDA	101%	10-130%
	13C3-PFBS	102%	40-135%
	13C3-PFHxS	99%	40-130%
	13C8-PFOS	94%	40-130%
	13C8-FOSA	97%	40-130%
	d3-MeFOSA	91%	10-130%
	d5-EtFOSA	94%	10-130%
	d3-MeFOSAA	99%	40-170%
	d5-EtFOSAA	96%	25-135%
	d7-MeFOSE	98%	10-130%
	d9-EtFOSE	97%	10-130%
	13C2-4:2FTS	108%	40-200%
	13C2-6:2FTS	98%	40-200%
	13C2-8:2FTS	86%	40-300%
	13C3-HFPO-DA	100%	40-130%

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q407-ICCB	8Q26883.D	1	08/28/25	JL	n/a	n/a	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2-FTS	ND	0.020	0.0032	ug/l	
27619-97-2	6:2-FTS	ND	0.020	0.0035	ug/l	
39108-34-4	8:2-FTS	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0020	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S8Q407-ICCB	8Q26883.D	1	08/28/25	JL	n/a	n/a	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

OP11186-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3-FTCA	ND	0.020	0.0045	ug/l	
914637-49-3	5:3-FTCA	ND	0.10	0.0087	ug/l	
812-70-4	7:3-FTCA	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	100%	10-130%
	13C5-PFPeA	102%	40-130%
	13C5-PFHxA	101%	40-130%
	13C4-PFHpA	99%	40-130%
	13C8-PFOA	100%	40-130%
	13C9-PFNA	96%	40-130%
	13C6-PFDA	107%	40-130%
	13C7-PFUnDA	103%	30-130%
	13C2-PFDoDA	102%	10-130%
	13C2-PFTeDA	107%	10-130%
	13C3-PFBS	103%	40-135%
	13C3-PFHxS	100%	40-130%
	13C8-PFOS	96%	40-130%
	13C8-FOSA	94%	40-130%
	d3-MeFOSA	91%	10-130%
	d5-EtFOSA	95%	10-130%
	d3-MeFOSAA	95%	40-170%
	d5-EtFOSAA	97%	25-135%
	d7-MeFOSE	95%	10-130%
	d9-EtFOSE	95%	10-130%
	13C2-4:2FTS	98%	40-200%
	13C2-6:2FTS	95%	40-200%
	13C2-8:2FTS	97%	40-300%
	13C3-HFPO-DA	99%	40-130%

Blank Spike Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-LLBS	8Q26848.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.016	0.0155	97	70-140
2706-90-3	Perfluoropentanoic acid	0.008	0.0076	95	65-135
307-24-4	Perfluorohexanoic acid	0.004	0.0039	98	70-145
375-85-9	Perfluoroheptanoic acid	0.004	0.0037	93	70-150
335-67-1	Perfluorooctanoic acid	0.004	0.0038	95	70-150
375-95-1	Perfluorononanoic acid	0.004	0.0039	98	70-150
335-76-2	Perfluorodecanoic acid	0.004	0.0035	88	70-140
2058-94-8	Perfluoroundecanoic acid	0.004	0.0037	93	70-145
307-55-1	Perfluorododecanoic acid	0.004	0.0037	93	70-140
72629-94-8	Perfluorotridecanoic acid	0.004	0.0037	93	65-140
376-06-7	Perfluorotetradecanoic acid	0.004	0.0038	95	60-140
375-73-5	Perfluorobutanesulfonic acid	0.00355	0.0034	96	60-145
2706-91-4	Perfluoropentanesulfonic acid	0.00376	0.0034	90	65-140
355-46-4	Perfluorohexanesulfonic acid	0.00366	0.0037	101	65-145
375-92-8	Perfluoroheptanesulfonic acid	0.00381	0.0038	100	70-150
1763-23-1	Perfluorooctanesulfonic acid	0.00371	0.0032	86	55-150
68259-12-1	Perfluorononanesulfonic acid	0.00385	0.0042	109	65-145
335-77-3	Perfluorodecanesulfonic acid	0.00386	0.0037	96	60-145
79780-39-5	Perfluorododecanesulfonic aci	0.00388	0.0033	85	50-145
757124-72-4	4:2-FTS	0.015	0.0150	100	70-145
27619-97-2	6:2-FTS	0.0152	0.0156	103	65-155
39108-34-4	8:2-FTS	0.0154	0.0153	100	60-150
754-91-6	PFOSA	0.004	0.0038	95	70-145
31506-32-8	MeFOSA	0.008	0.0084	105	60-150
4151-50-2	EtFOSA	0.008	0.0074	93	65-145
2355-31-9	MeFOSAA	0.004	0.0043	108	50-140
2991-50-6	EtFOSAA	0.004	0.0043	108	70-145
24448-09-7	MeFOSE	0.02	0.0193	97	70-145
1691-99-2	EtFOSE	0.02	0.0198	99	70-135
13252-13-6	HFPO-DA (GenX)	0.008	0.0078	98	70-140
919005-14-4	ADONA	0.00756	0.0074	98	65-145
377-73-1	PFMPA	0.008	0.0077	96	55-140
863090-89-5	PFMBA	0.008	0.0079	99	60-150
151772-58-6	NFDHA	0.008	0.0081	101	50-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.00748	0.0070	94	70-155
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.00756	0.0064	85	55-160

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-LLBS	8Q26848.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.00712	0.0069	97	70-140
356-02-5	3:3-FTCA	0.02	0.0205	103	65-130
914637-49-3	5:3-FTCA	0.1	0.0957	96	70-135
812-70-4	7:3-FTCA	0.1	0.0937	94	50-145

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	104%	10-130%
	13C5-PFPeA	106%	40-130%
	13C5-PFHxA	104%	40-130%
	13C4-PFHpA	105%	40-130%
	13C8-PFOA	102%	40-130%
	13C9-PFNA	102%	40-130%
	13C6-PFDA	105%	40-130%
	13C7-PFUnDA	105%	30-130%
	13C2-PFDoDA	94%	10-130%
	13C2-PFTeDA	92%	10-130%
	13C3-PFBS	106%	40-135%
	13C3-PFHxS	105%	40-130%
	13C8-PFOS	103%	40-130%
	13C8-FOSA	98%	40-130%
	d3-MeFOSA	76%	10-130%
	d5-EtFOSA	76%	10-130%
	d3-MeFOSAA	106%	40-170%
	d5-EtFOSAA	100%	25-135%
	d7-MeFOSE	89%	10-130%
	d9-EtFOSE	86%	10-130%
	13C2-4:2FTS	111%	40-200%
	13C2-6:2FTS	104%	40-200%
	13C2-8:2FTS	107%	40-300%
	13C3-HFPO-DA	103%	40-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-BS	8Q26847.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.101	101	70-140
2706-90-3	Perfluoropentanoic acid	0.05	0.0506	101	65-135
307-24-4	Perfluorohexanoic acid	0.025	0.0248	99	70-145
375-85-9	Perfluoroheptanoic acid	0.025	0.0253	101	70-150
335-67-1	Perfluorooctanoic acid	0.025	0.0259	104	70-150
375-95-1	Perfluorononanoic acid	0.025	0.0255	102	70-150
335-76-2	Perfluorodecanoic acid	0.025	0.0238	95	70-140
2058-94-8	Perfluoroundecanoic acid	0.025	0.0247	99	70-145
307-55-1	Perfluorododecanoic acid	0.025	0.0259	104	70-140
72629-94-8	Perfluorotridecanoic acid	0.025	0.0258	103	65-140
376-06-7	Perfluorotetradecanoic acid	0.025	0.0251	100	60-140
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0220	99	60-145
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0240	102	65-140
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0234	102	65-145
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0255	107	70-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0221	95	55-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0252	105	65-145
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0246	102	60-145
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0228	94	50-145
757124-72-4	4:2-FTS	0.0938	0.104	111	70-145
27619-97-2	6:2-FTS	0.095	0.0994	105	65-155
39108-34-4	8:2-FTS	0.096	0.0977	102	60-150
754-91-6	PFOSA	0.025	0.0247	99	70-145
31506-32-8	MeFOSA	0.05	0.0530	106	60-150
4151-50-2	EtFOSA	0.05	0.0471	94	65-145
2355-31-9	MeFOSAA	0.025	0.0251	100	50-140
2991-50-6	EtFOSAA	0.025	0.0257	103	70-145
24448-09-7	MeFOSE	0.125	0.124	99	70-145
1691-99-2	EtFOSE	0.125	0.122	98	70-135
13252-13-6	HFPO-DA (GenX)	0.05	0.0522	104	70-140
919005-14-4	ADONA	0.0473	0.0509	108	65-145
377-73-1	PFMPA	0.05	0.0489	98	55-140
863090-89-5	PFMBA	0.05	0.0498	100	60-150
151772-58-6	NFDHA	0.05	0.0497	99	50-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0484	104	70-155
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0478	101	55-160

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-BS	8Q26847.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0457	103	70-140
356-02-5	3:3-FTCA	0.125	0.123	98	65-130
914637-49-3	5:3-FTCA	0.625	0.630	101	70-135
812-70-4	7:3-FTCA	0.625	0.634	101	50-145

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	77%	10-130%
	13C5-PFPeA	107%	40-130%
	13C5-PFHxA	107%	40-130%
	13C4-PFHpA	106%	40-130%
	13C8-PFOA	103%	40-130%
	13C9-PFNA	101%	40-130%
	13C6-PFDA	108%	40-130%
	13C7-PFUnDA	108%	30-130%
	13C2-PFDoDA	102%	10-130%
	13C2-PFTeDA	97%	10-130%
	13C3-PFBS	106%	40-135%
	13C3-PFHxS	103%	40-130%
	13C8-PFOS	104%	40-130%
	13C8-FOSA	105%	40-130%
	d3-MeFOSA	89%	10-130%
	d5-EtFOSA	84%	10-130%
	d3-MeFOSAA	109%	40-170%
	d5-EtFOSAA	105%	25-135%
	d7-MeFOSE	88%	10-130%
	d9-EtFOSE	87%	10-130%
	13C2-4:2FTS	98%	40-200%
	13C2-6:2FTS	103%	40-200%
	13C2-8:2FTS	106%	40-300%
	13C3-HFPO-DA	103%	40-130%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-MS	8Q26859.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406
DA74283-4	8Q26858.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	DA74283-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	ND		0.0943	0.0991	105	70-140
2706-90-3	Perfluoropentanoic acid	ND		0.0472	0.0485	103	65-135
307-24-4	Perfluorohexanoic acid	ND		0.0236	0.0242	103	70-145
375-85-9	Perfluoroheptanoic acid	ND		0.0236	0.0238	101	70-150
335-67-1	Perfluorooctanoic acid	ND		0.0236	0.0250	106	70-150
375-95-1	Perfluorononanoic acid	ND		0.0236	0.0243	103	70-150
335-76-2	Perfluorodecanoic acid	ND		0.0236	0.0245	104	70-140
2058-94-8	Perfluoroundecanoic acid	ND		0.0236	0.0243	103	70-145
307-55-1	Perfluorododecanoic acid	ND		0.0236	0.0252	107	70-140
72629-94-8	Perfluorotridecanoic acid	ND		0.0236	0.0230	98	65-140
376-06-7	Perfluorotetradecanoic acid	ND		0.0236	0.0242	103	60-140
375-73-5	Perfluorobutanesulfonic acid	ND		0.0209	0.0222	106	60-145
2706-91-4	Perfluoropentanesulfonic acid	ND		0.0222	0.0239	108	65-140
355-46-4	Perfluorohexanesulfonic acid	ND		0.0216	0.0222	103	65-145
375-92-8	Perfluoroheptanesulfonic acid	ND		0.0225	0.0252	112	70-150
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0219	0.0228	104	55-150
68259-12-1	Perfluorononanesulfonic acid	ND		0.0227	0.0234	103	65-145
335-77-3	Perfluorodecanesulfonic acid	ND		0.0228	0.0217	95	60-145
79780-39-5	Perfluorododecanesulfonic aci	ND		0.0229	0.0181	79	50-145
757124-72-4	4:2-FTS	ND		0.0884	0.0861	97	70-145
27619-97-2	6:2-FTS	ND		0.0896	0.0941	105	65-155
39108-34-4	8:2-FTS	ND		0.0906	0.0898	99	60-150
754-91-6	PFOSA	ND		0.0236	0.0247	105	70-145
31506-32-8	MeFOSA	ND		0.0472	0.0482	102	60-150
4151-50-2	EtFOSA	ND		0.0472	0.0477	101	65-145
2355-31-9	MeFOSAA	ND		0.0236	0.0266	113	50-140
2991-50-6	EtFOSAA	ND		0.0236	0.0264	112	70-145
24448-09-7	MeFOSE	ND		0.118	0.122	103	70-145
1691-99-2	EtFOSE	ND		0.118	0.124	105	70-135
13252-13-6	HFPO-DA (GenX)	ND		0.0472	0.0491	104	70-140
919005-14-4	ADONA	ND		0.0446	0.0471	106	65-145
377-73-1	PFMPA	ND		0.0472	0.0408	86	55-140
863090-89-5	PFMBA	ND		0.0472	0.0483	102	60-150
151772-58-6	NFDHA	ND		0.0472	0.0503	107	50-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		0.0441	0.0418	95	70-155
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND		0.0446	0.0353	79	55-160

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-MS	8Q26859.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406
DA74283-4	8Q26858.D	1	08/27/25	JL	08/26/25	OP11186	S8Q406

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	DA74283-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	ND		0.042	0.0451	107	70-140
356-02-5	3:3-FTCA	ND		0.118	0.107	91	65-130
914637-49-3	5:3-FTCA	ND		0.59	0.600	102	70-135
812-70-4	7:3-FTCA	ND		0.59	0.544	92	50-145

CAS No.	ID Standard Recoveries	MS	DA74283-4	Limits
	13C4-PFBA	51%	50%	10-130%
	13C5-PFPeA	96%	103%	40-130%
	13C5-PFHxA	98%	107%	40-130%
	13C4-PFHpA	99%	104%	40-130%
	13C8-PFOA	99%	103%	40-130%
	13C9-PFNA	100%	98%	40-130%
	13C6-PFDA	100%	103%	40-130%
	13C7-PFUnDA	92%	91%	30-130%
	13C2-PFDoDA	85%	77%	10-130%
	13C2-PFTeDA	76%	77%	10-130%
	13C3-PFBS	105%	109%	40-135%
	13C3-PFHxS	101%	101%	40-130%
	13C8-PFOS	95%	94%	40-130%
	13C8-FOSA	96%	91%	40-130%
	d3-MeFOSA	82%	64%	10-130%
	d5-EtFOSA	74%	67%	10-130%
	d3-MeFOSAA	88%	85%	40-170%
	d5-EtFOSAA	81%	78%	25-135%
	d7-MeFOSE	73%	71%	10-130%
	d9-EtFOSE	61%	70%	10-130%
	13C2-4:2FTS	141%	132%	40-200%
	13C2-6:2FTS	110%	114%	40-200%
	13C2-8:2FTS	104%	104%	40-300%
	13C3-HFPO-DA	98%	105%	40-130%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-DUP	8Q26887.D	1	08/28/25	JL	08/26/25	OP11186	S8Q407
DA74283-5	8Q26886.D	1	08/28/25	JL	08/26/25	OP11186	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	DA74283-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.0089		0.0089		3	21
2706-90-3	Perfluoropentanoic acid	ND		ND		nc	23
307-24-4	Perfluorohexanoic acid	0.00063		0.00066	J	2	24
375-85-9	Perfluoroheptanoic acid	ND		ND		nc	28
335-67-1	Perfluorooctanoic acid	0.00082		0.00070	J	8	27
375-95-1	Perfluorononanoic acid	0.0016		0.0018	J	18	28
335-76-2	Perfluorodecanoic acid	ND		ND		nc	26
2058-94-8	Perfluoroundecanoic acid	ND		ND		nc	29
307-55-1	Perfluorododecanoic acid	ND		ND		nc	21
72629-94-8	Perfluorotridecanoic acid	ND		ND		nc	29
376-06-7	Perfluorotetradecanoic acid	ND		ND		nc	27
375-73-5	Perfluorobutanesulfonic acid	0.0018		0.0018	J	6	23
2706-91-4	Perfluoropentanesulfonic acid	ND		ND		nc	25
355-46-4	Perfluorohexanesulfonic acid	ND		ND		nc	27
375-92-8	Perfluoroheptanesulfonic acid	ND		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0276		0.0294		5	29
68259-12-1	Perfluorononanesulfonic acid	ND		ND		nc	29
335-77-3	Perfluorodecanesulfonic acid	ND		ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	ND		ND		nc	35
757124-72-4	4:2-FTS	ND		ND		nc	27
27619-97-2	6:2-FTS	ND		ND		nc	32
39108-34-4	8:2-FTS	ND		ND		nc	33
754-91-6	PFOSA	ND		ND		nc	22
31506-32-8	MeFOSA	ND		ND		nc	30
4151-50-2	EtFOSA	ND		ND		nc	26
2355-31-9	MeFOSAA	ND		ND		nc	32
2991-50-6	EtFOSAA	ND		ND		nc	28
24448-09-7	MeFOSE	ND		ND		nc	29
1691-99-2	EtFOSE	ND		ND		nc	21
13252-13-6	HFPO-DA (GenX)	ND		ND		nc	23
919005-14-4	ADONA	ND		ND		nc	23
377-73-1	PFMPA	ND		ND		nc	23
863090-89-5	PFMBA	ND		ND		nc	27
151772-58-6	NFDHA	ND		ND		nc	37
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND		ND		nc	30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND		ND		nc	35

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC26850
Account: LANWAT Landau Inc.
Project: 8th Ave Terminals; WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11186-DUP	8Q26887.D	1	08/28/25	JL	08/26/25	OP11186	S8Q407
DA74283-5	8Q26886.D	1	08/28/25	JL	08/26/25	OP11186	S8Q407

The QC reported here applies to the following samples: **Method:** EPA 1633

FC26850-1, FC26850-2

CAS No.	Compound	DA74283-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
113507-82-7	PFEESA	ND		ND		nc	25
356-02-5	3:3-FTCA	ND		ND		nc	23
914637-49-3	5:3-FTCA	ND		ND		nc	24
812-70-4	7:3-FTCA	ND		ND		nc	34

CAS No.	ID Standard Recoveries	DUP	DA74283-5	Limits
	13C4-PFBA	82%	87%	10-130%
	13C5-PFPeA	98%	101%	40-130%
	13C5-PFHxA	96%	102%	40-130%
	13C4-PFHpA	99%	101%	40-130%
	13C8-PFOA	98%	98%	40-130%
	13C9-PFNA	95%	97%	40-130%
	13C6-PFDA	100%	104%	40-130%
	13C7-PFUnDA	87%	87%	30-130%
	13C2-PFDoDA	80%	80%	10-130%
	13C2-PFTeDA	85%	80%	10-130%
	13C3-PFBS	99%	102%	40-135%
	13C3-PFHxS	96%	100%	40-130%
	13C8-PFOS	98%	99%	40-130%
	13C8-FOSA	98%	94%	40-130%
	d3-MeFOSA	79%	76%	10-130%
	d5-EtFOSA	79%	74%	10-130%
	d3-MeFOSAA	99%	94%	40-170%
	d5-EtFOSAA	102%	88%	25-135%
	d7-MeFOSE	83%	77%	10-130%
	d9-EtFOSE	85%	77%	10-130%
	13C2-4:2FTS	104%	113%	40-200%
	13C2-6:2FTS	110%	112%	40-200%
	13C2-8:2FTS	99%	102%	40-300%
	13C3-HFPO-DA	97%	99%	40-130%

* = Outside of Control Limits.

APPENDIX E

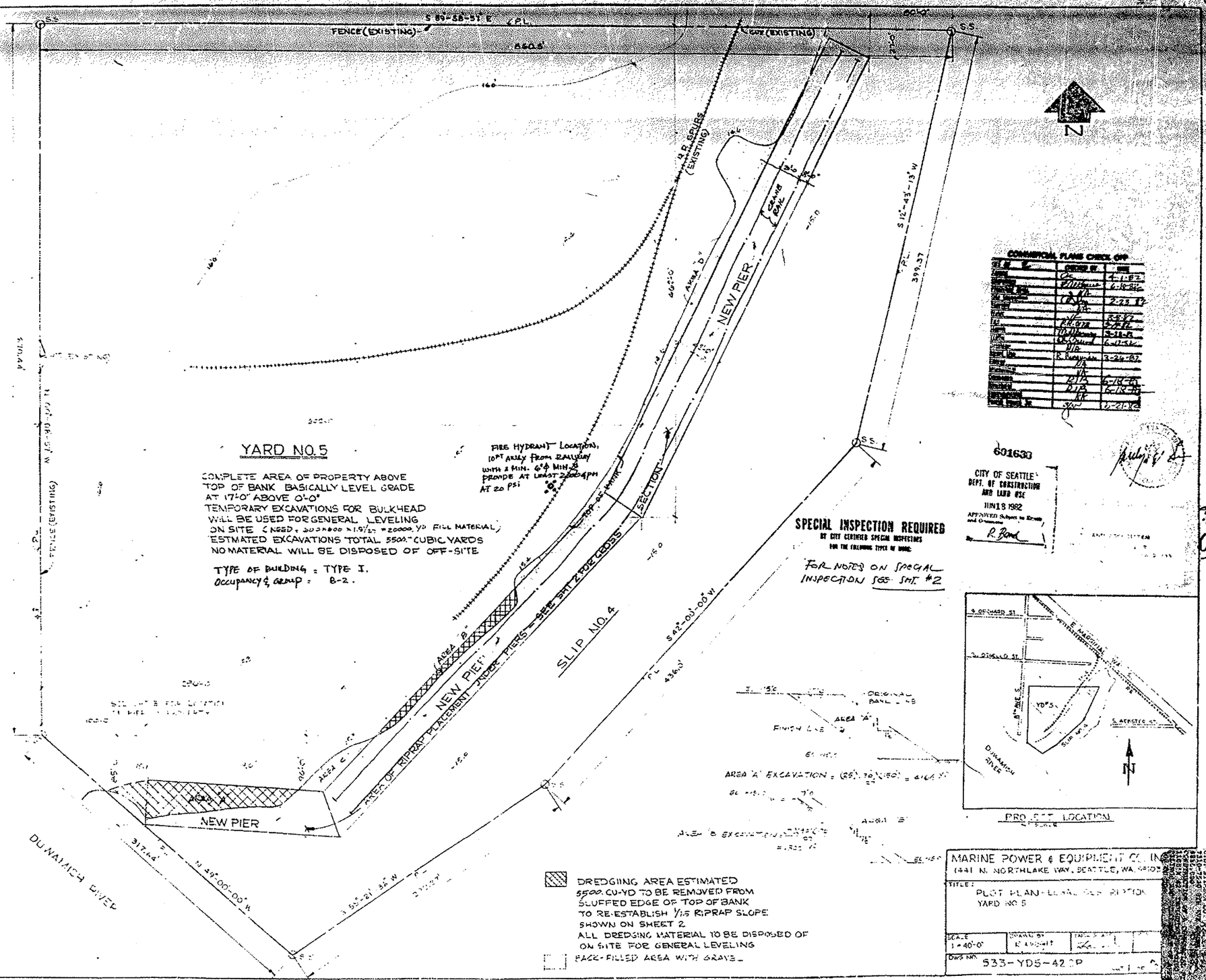
Design Drawings of Sheet Pile Seawall and Pier

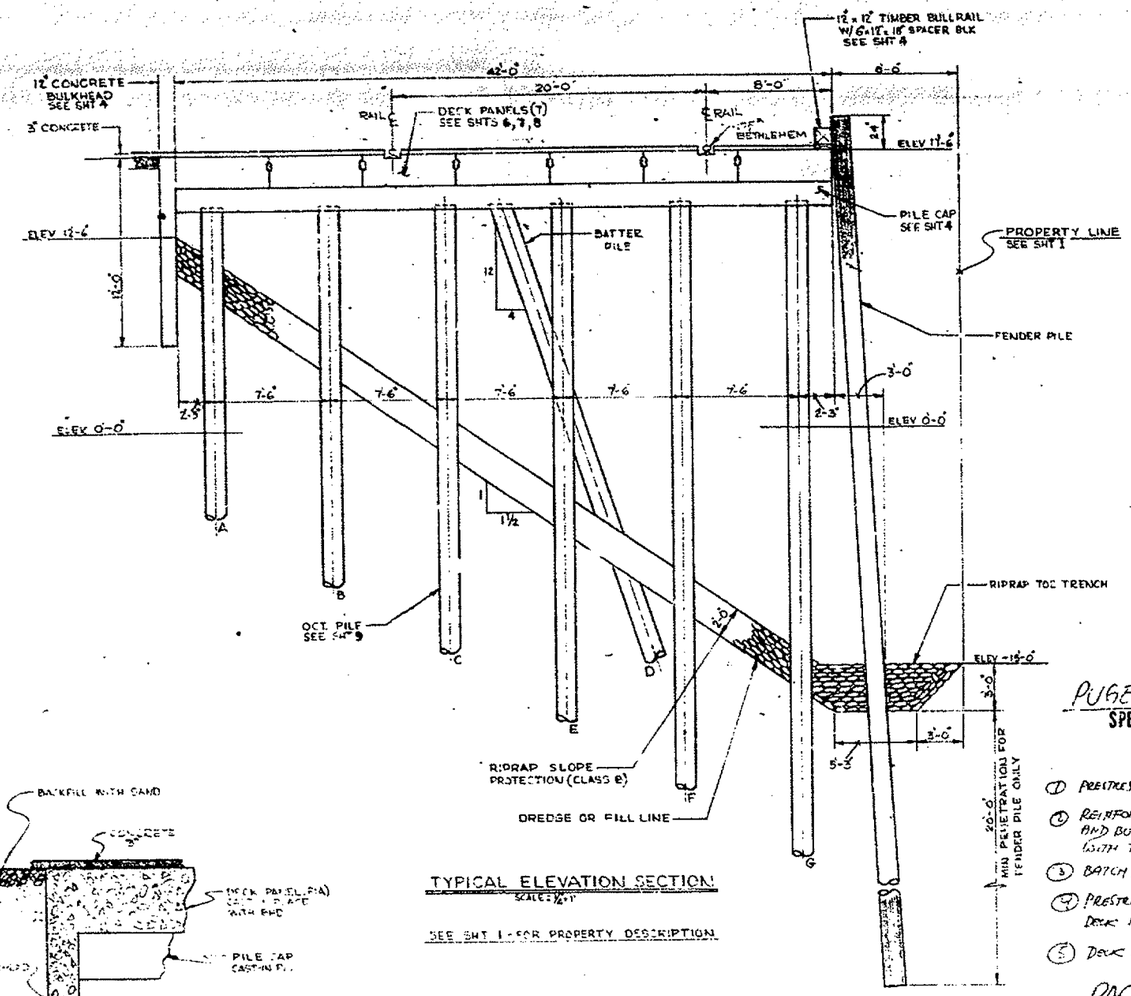
LEGAL DESCRIPTION:

THOSE PORTIONS OF LOTS 1, 2, 3, 4, 5, 9, 10, 11 AND 12 IN BLOCK 6 AND TRACTS 5, 6, 7, 8, 9, AND 10 AND VACATED SOUTH WEBSTER STREET AND VACATED SOUTH BOUTANELLE STREET, ALL IN DUWAMISH INDUSTRIAL ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT RECORDED IN VOLUME 21 OF PLATS, PAGE 21 OF PLATS, PAGE 55 IN KING COUNTY, WASHINGTON, AND

THAT PORTION OF SLIP NO. 4 OF THE ABANDONED BED OF THE DUWAMISH RIVER, ALL LYING WITHIN THE FOLLOWING DESCRIPTION:

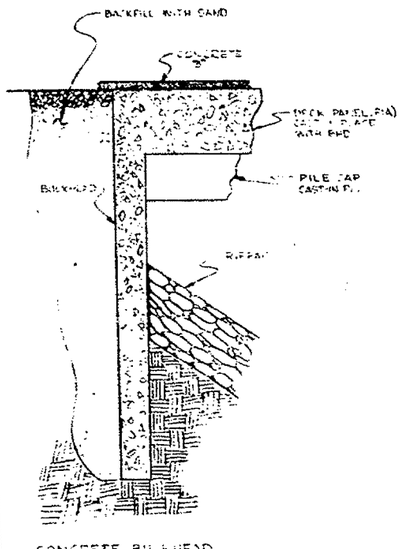
BEGINNING AT A POINT IN THE WEST LINE OF LOT 9 IN SAID BLOCK 6, SAID POINT BEING IN THE EAST MARGIN OF 8TH AVENUE SOUTH A DISTANCE OF 150.00 FEET SOUTH OF THE CENTERLINE OF SOUTH OTHELLO STREET, MEASURED AT RIGHT ANGLES FROM SAID CENTERLINE; THENCE SOUTH 89°58'57" EAST A DISTANCE OF 659.97 FEET TO THE MEDIAN LINE OF SLIP NO. 4 AS SAID MEDIAN LINE IS DESCRIBED IN INSTRUMENT RECORDED UNDER AUDITOR'S FILE NO. 8497307; THENCE SOUTH 12°43'13" WEST ALONG SAID MEDIAN LINE A DISTANCE OF 599.37 FEET; THENCE CONTINUING ALONG SAID MEDIAN LINE SOUTH 42°03'00" WEST A DISTANCE OF 436.00 FEET; THENCE CONTINUING ALONG SAID MEDIAN LINE SOUTH 55°21'36" WEST A DISTANCE OF 290.27 FEET TO THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE DUWAMISH WATERWAY; THENCE NORTH 49°00'00" WEST ALONG SAID NORTHEASTERLY LINE A DISTANCE OF 317.44 FEET TO THE EAST MARGIN OF 8TH AVENUE S. (FORMERLY CARLETON AVENUE, AS SHOWN ON SAID DUWAMISH INDUSTRIAL ADDITION PLAT);
THENCE NORTH 0°06'57" WEST ALONG SAID EAST MARGIN A DISTANCE OF 670.44 FEET TO THE POINT OF BEGINNING.





TYPICAL ELEVATION SECTION
SCALE: 1/4"=1'

SEE SHT 1 FOR PROPERTY DESCRIPTION



CONCRETE BULKHEAD
TYPICAL DETAIL

STRUCTURAL NOTES

Code: Uniform Building Code 1979 Edition & SEATTLE AMDT CODE SUPPLEMENT 1979

Supervision and Inspection:
All structural work shall be supervised and inspected during construction by inspection agency appointed by owner. Inspection report shall be prepared by inspector and submitted to engineer and Building Department.

Shop Drawings:
Shop drawings for all structural items shall be submitted to engineer for approval prior to fabrication. All submittals shall be complete, checked and approved by the general contractor prior to submission to the engineer. All shop drawings for prefabricated structural members shall be submitted to the Building Department after engineer's review.

Design Live Loads:
Uniform Load 1600 psf
Wind Load 20 psf
Seismic Load per UBC with K=1.0 and C=0.1 for Dead Load plus 25% of Live Load
Equivalent soil lateral pressure at 45 pcf

Concrete: All concrete shall have minimum 28 day strength as follows:
Class "A" f_c= 6000 psi f_c= 2700 psi for precast piling and panels
Class "B" f_c= 4000 psi f_c= 1800 psi for cast in place caps
Class "X" f_c= 3750 psi f_c= 1687 psi with "CHEM COMP" or "EMBECO" or equal to produce non-shrink for pile cap closures
Class "Y" f_c= 3000 psi f_c=1350 psi with "CHEM COMP" or "EMBECO" or equal to provide non-shrink mix with no large aggregate for shear keys between deck panels
Contractor shall submit mix design for approval. All structural concrete work shall conform to the requirements set by the ACI 318-77 specification. Forms design drawings shall be prepared to the ACI 318-77 specification. Forms design drawings shall be submitted to the Engineer for approval prior to the start of concrete work that are 100 days or more old.

Reinforcing Bars:
All reinforcing bars shall conform to the ASTM A615-76, grade 40 for all ties and stirrups and grade 60 for other straight bars. Grade 60 bars shall not be bent in field without engineer's approval. Splicing of re-bars shall be in accordance with ACI 318-77. Detailing of re-bars shall be done in accordance with ACI 318-77.
Concrete Cover: (Unless noted otherwise)
Beam - 2" clear
Prestressed panel - 1½" clear
Others - see detail
Prestressing wires for panels shall be ½" ø 170^k strands meeting ASTM A416-74.
All shop and field welding of re-bars shall be performed by ~~City of Seattle~~ AWS certified welders and in accordance with AWS Standard AWS D12.1-75.

Piling:
Timber Piles:
All timber fender piles shall be driven to 20' minimum penetration.
Piles shall be reused Class "B" treated D.F. in good condition.

Concrete Piles: MIN. PILE CONTRACTOR
Prestressed Precast Concrete Piles with 115 ton capacity. Contractor shall submit the complete design calculations and shop drawings for approval prior to fabrication. Contractor shall verify total length of pile, unsupported length of pile, etc. prior to design and fabrication. Pile lengths shown on pile schedule are approximate only for estimate, according to the soil exploration.
Piles driven to capacity utilizing single steam hammer and developing 32,500# per blow shall be determined by ENR formula:
P=2WH/(s+0.1) or P=2(W+AP)H/(s+0.1) Example = DIO Vulcan 115 Ton Blg = 67 Blows/ft
where: P=Pile Capacity
W=Weight of Hammer
H=Height of Hammer Fall in feet
s=Penetration per Blow in inches
All piles shall have location tolerance of not more than 3" and 2% for plumbness. No pile shall be pulled and redriven unless approved by the engineer. Inspector shall maintain complete pile driving log and submit the final report to the Seattle Building Department and engineer for approval.

Prestressed Precast Panels: WITH WASH. STATE LICENSED STRUCTURAL ENGINEER'S SEAL & SIGNATURE
Contractor shall submit complete shop drawings showing the location of pick-up and all details necessary to install panels. Fabrication and erection shall conform to the Prestressed Concrete Institute Specification "Guide Specification for Prestressed Concrete Construction for Building". BACK DRAWN CALCULATIONS & SHOP DWG.

Miscellaneous Steel: (Unsupervised)
All miscellaneous steel shall meet ASTM A36 with Yield Strength 36ksi. f_b=24ksi
Fabrication and erection shall conform to the 7th edition of AISC Specification. All shop and field welding shall be performed by ~~City of Seattle~~ AWS certified welders and in accordance with the AWS D1.1-76.
Do no paint any items embedded in concrete including bolts.

Timbers:
All lumber shall conform to WCLIB grading and dressing rules. All lumber shall be Douglas Fir #1 grade or better and shall have 2 coats of "Woodlife" or equal applied after cutting and before installation in the field. f_b=1200psi

Submit a piling driving record & creosoting certification to the Engineer and Seattle Building Department for approval prior to placing cap.

Submit concrete mix design to the Engineer and Seattle Building Department for approval prior to use.

PUGET SOUND TESTING ENGRS
SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK:

1. PRESTRESSED CONCRETE PILE DRIVING.
2. REINFORCED CONCRETE INCLUDING PILE CAPS AND BULKHEAD CAST IN PLACE TOGETHER WITH THE DECK PANELS.
3. BATCH PLANT INSPECTION OF DESIGN CONCRETE MIX.
4. PRESTRESSED PRECAST REINFORCED CONCRETE DECK PANELS ERECTION AND GROUTING
5. DECK PANELS CONCRETE TOPPING.

PACIFIC TESTING LAB
SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK:

#10 RE BAR SPLICE WELDING, DETAIL ON SHT #8
PER AWS 1.4-79 SPECS.

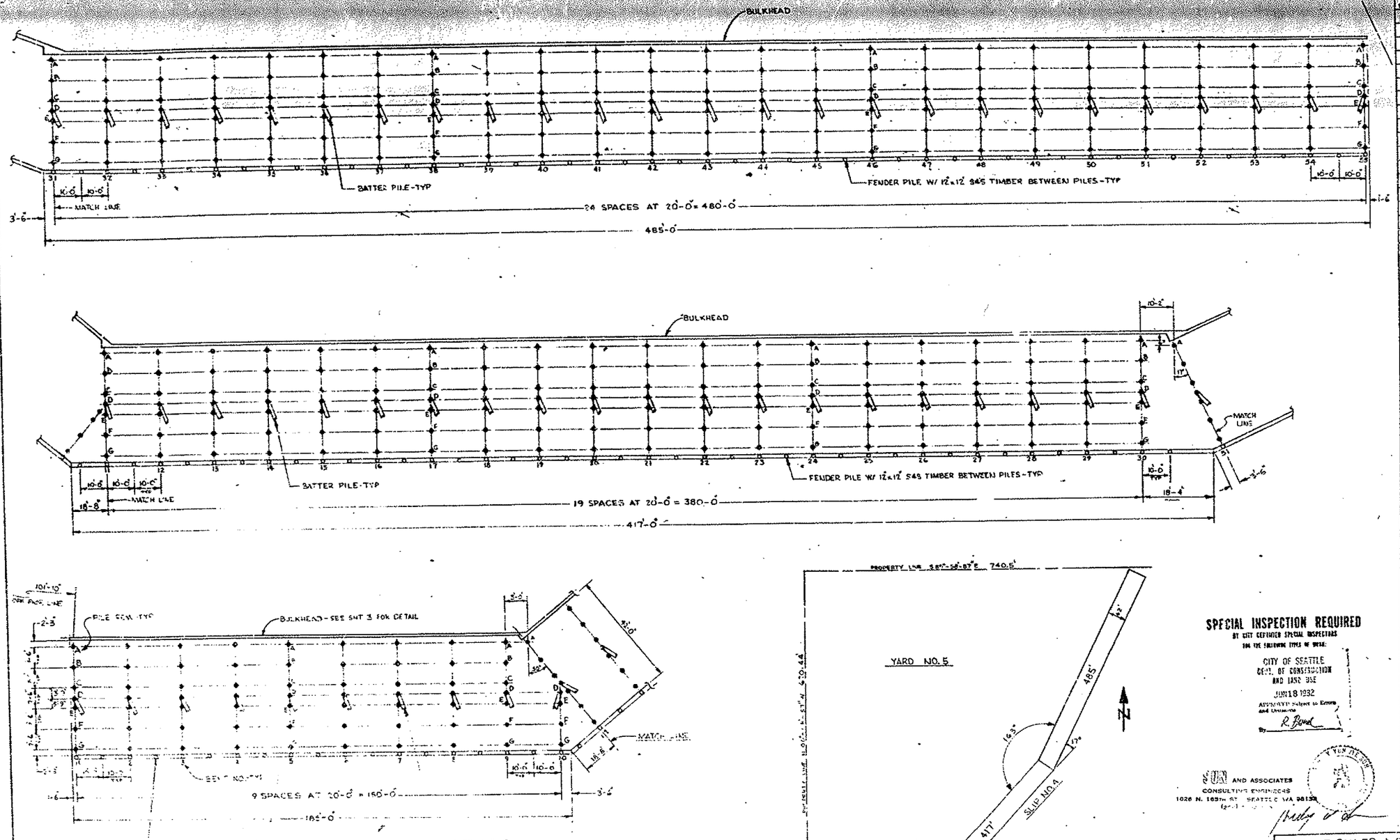
CRANE LOAD
46^k 46^k 46^k 46^k
1'-9" 3'-5" 3'-5" 1'-9"
23^k 46^k 46^k 46^k

CITY OF SEATTLE
DEPT. OF CONSTRUCTION AND LAND USE
JUN 18 1982
APPROVED Subject to Revision and Conditions
By R. Bond

MARINE POWER & EQUIPMENT CO. INC.
1441 N. NORTHLAKE WAY, SEATTLE, WA. 98103

TITLE: TYPICAL ELEVATION SECTION
42' PIER - YARD NO. 5

SCALE: 1/4"=1'-0" | DRAWN BY: [illegible] | DATE: 5-1-82 | WO# [illegible]
DWG. NO. 533-YD5-42 CP | SHT 5 OF 10 | REV



PILE SCHEDULE

LEVEL	PILE ROW A	B	C	D	E	F	G
1	105	110	110	110	115	120	120
2							
3							
4							
5							
6							
7							
8							
9	105	110	110	110	115	120	120
10	—	—	—	110	115	120	120
11	105	110	110	110	115	120	120
12							
13							
14							
15							
16							
17							
18							
19							
20	105	110	110	110	115	120	120
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31	105	110	110	110	115	120	120
32							
33							
34							
35							
36							
37							
38							
39							
40	105	110	110	110	115	120	120
41							
42							
43							
44							
45							
46							
47							
48							
49							
50	105	110	110	110	115	120	120
51							
52							
53							
54							
55	105	110	110	110	115	120	120

SEE PILE DETAIL-SHT 8

SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK:

CITY OF SEATTLE
DEPT. OF CONSTRUCTION
AND LAND USE
JUN 18 1982
APPROVED subject to Errors
and Omissions
By R. Bond

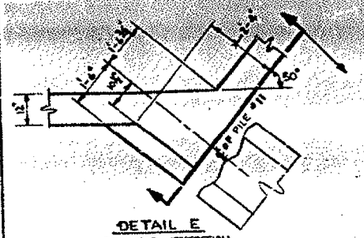
AND ASSOCIATES
CONSULTING ENGINEERS
1026 N. 165th ST. SEATTLE WA 98133

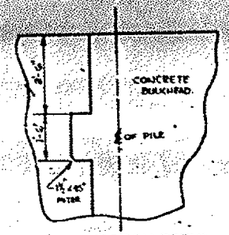
MARINE POWER & EQUIPMENT CO. INC
1441 N. NORTHLAKE WAY, SEATTLE, WA. 98103

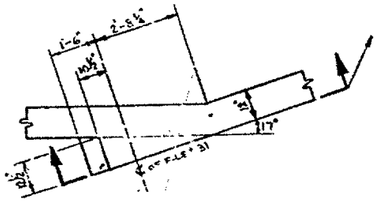
TITLE:
PILING PLAN & SCHEDULE
42' W PIER-YD NO.5

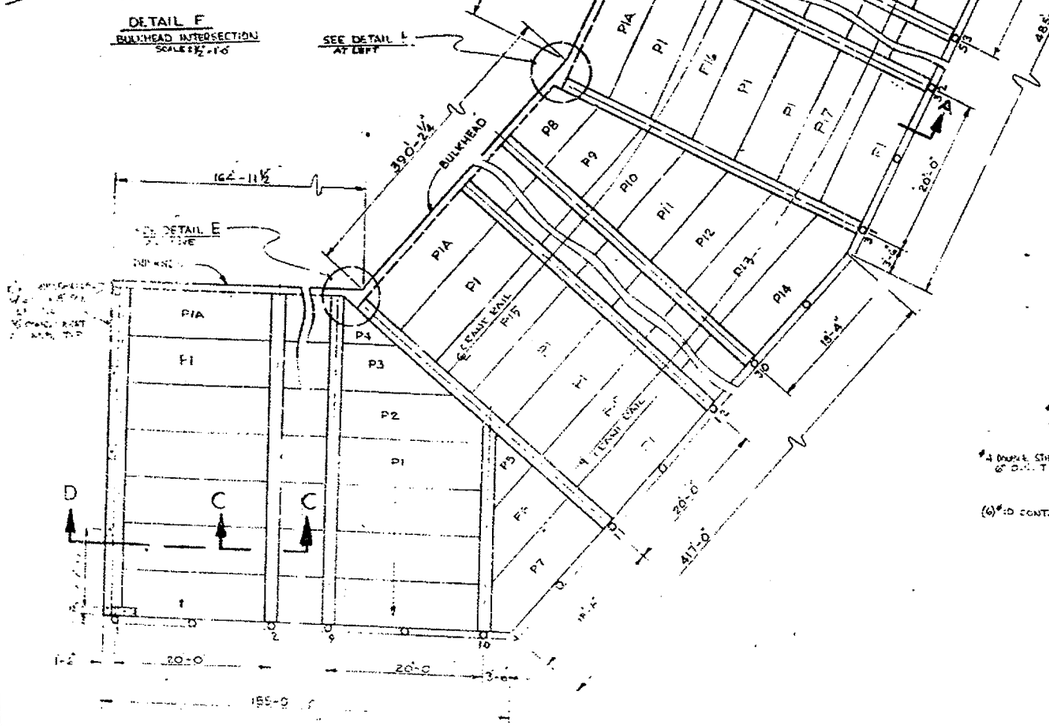
SCALE:	DRAWN BY	CHECKED BY	WKR APP
1/16"=1'-0"	R.A. Stewart	L.L.	

DWG NO. 537-YD5-42CP SHT 3 OF 10 REV

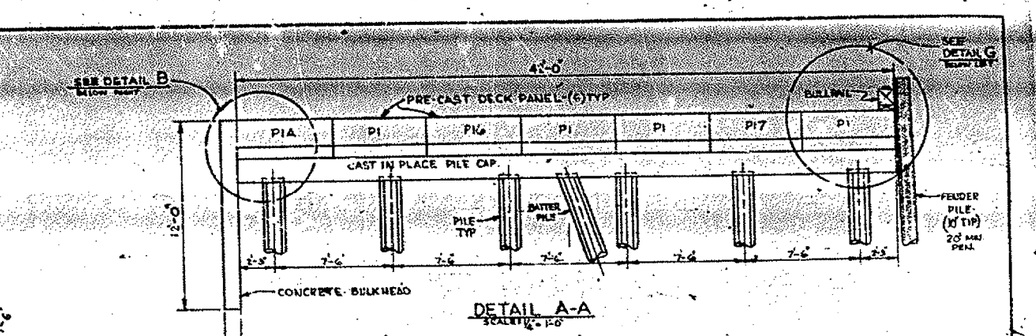




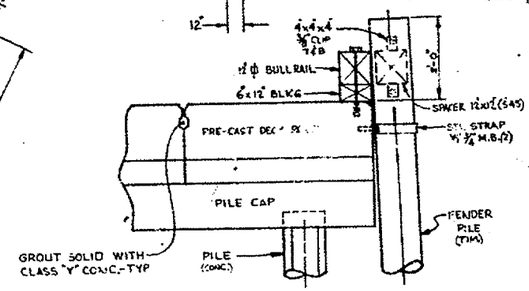




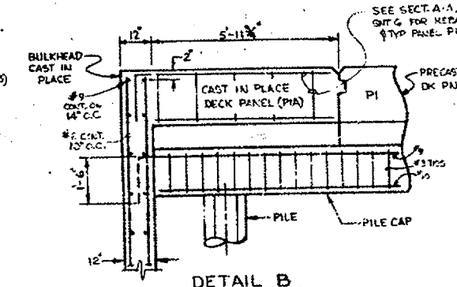
PLOT PLAN
SCALE: 1/8" = 1'-0"



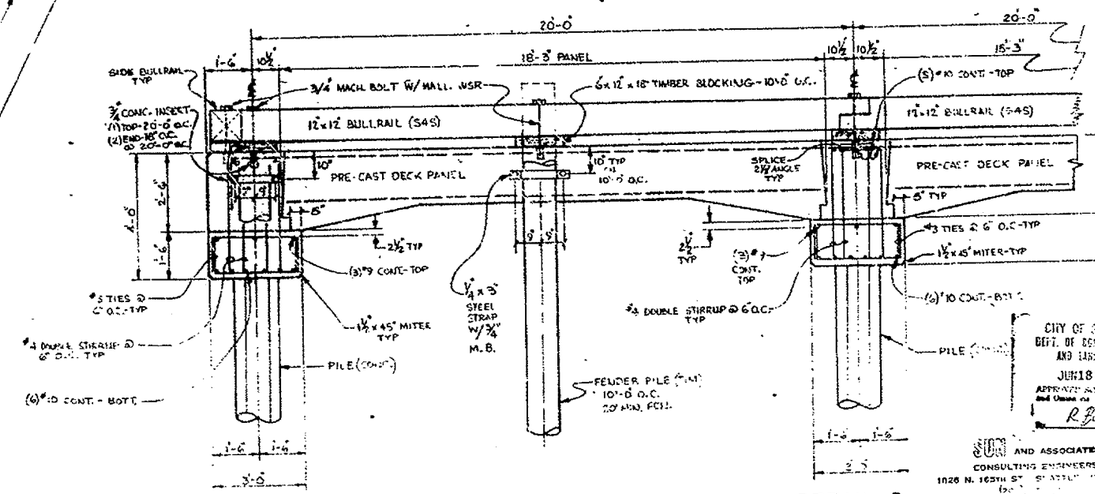
DETAIL A-A
SCALE: 1/4" = 1'-0"



DETAIL G
DECK PANEL / BULLRAIL & FENDER PILE DETAIL
SCALE: 1/2" = 1'-0"



DETAIL B
BULKHEAD / DECK PANEL & PILE CAP DETAIL
SCALE: 1/2" = 1'-0"



DETAIL D
END PILE CAP DETAIL
SCALE: 1/2" = 1'-0"

DETAIL C
TYPICAL INTERIOR PILE CAP SECTION
SCALE: 1/2" = 1'-0"

SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK:

CITY OF SEATTLE
DEPT. OF CONSTRUCTION AND LAND USE
JUN 18 1992
APPROVED

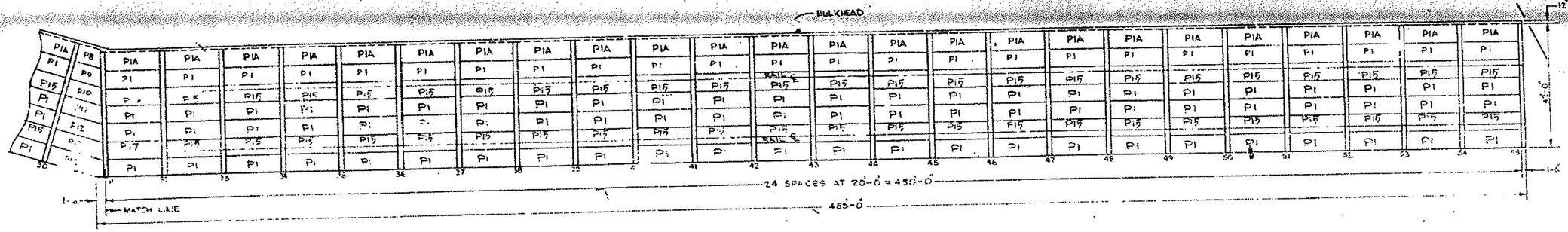
AND ASSOCIATES
CONSULTING ENGINEERS
1026 N. 165TH ST. SEATTLE, WA 98133

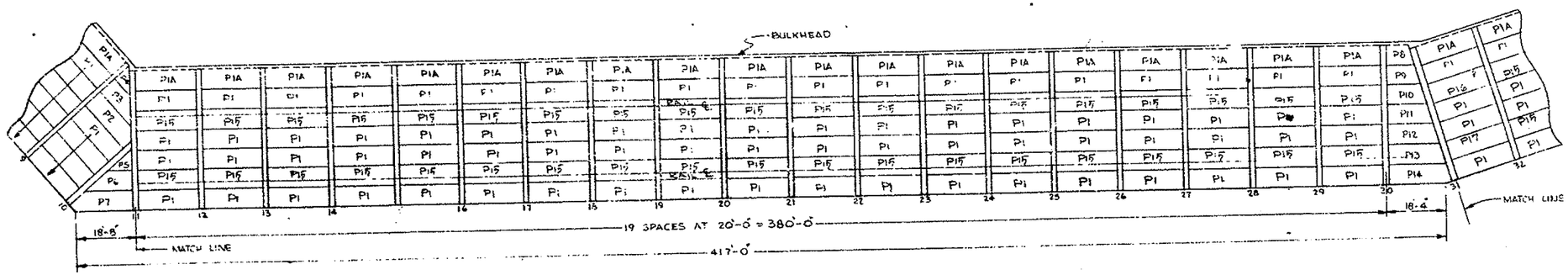
NOTES:
DECK PANELS PIA, P1, P5, & P8 ARE [illegible]

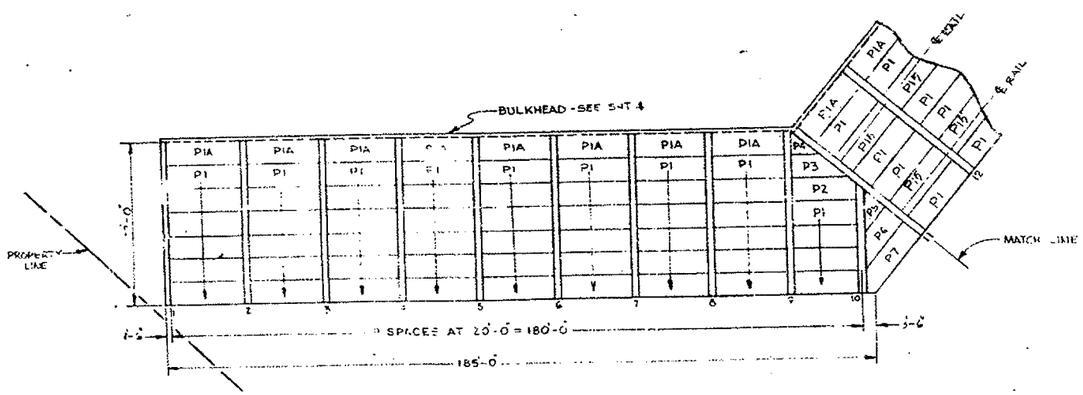
FOR DECK PANEL PLAN SEE SHT 5
FOR PILE PLAN SEE SHT 3

MARINE POWER & EQUIPMENT CO. INC
1441 N NORTHLAKE WAY, SEATTLE WA. 98103
TITLE: BULKHEAD / PILE CAP / ENCLOSURE DTL
4.2 ACRE - YARD NO. 5

DWG: 533-YD5-42CP SHT 4 OF 10





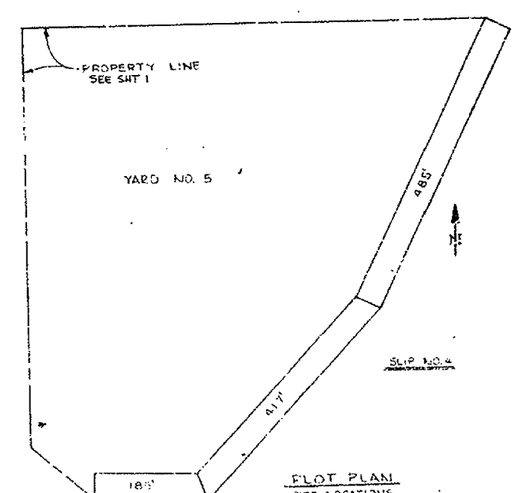


NOTES:

DECK PANEL P1A, P4 P5 & P8 ARE CAST IN PLACE WITH B.H.D.

FOR PANEL DETAILS P1 THRU P7 SEE SHT 6, 7 & 8 & 10

FOR PANEL DETAILS - SEE SHT 4



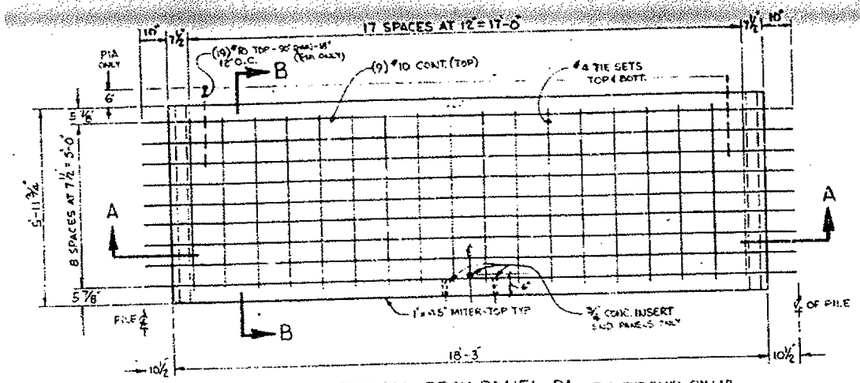
PLOT PLAN
PIER LOCATIONS
NO SCALE

CITY OF SEATTLE
DEPT OF CONSTRUCTION
AND LAND USE
JUNE 13 1982
APPROVED
SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK.

MARINE POWER & EQUIPMENT CO. INC.
1441 N. NORTHLAKE WAY, SEATTLE, WA 98103

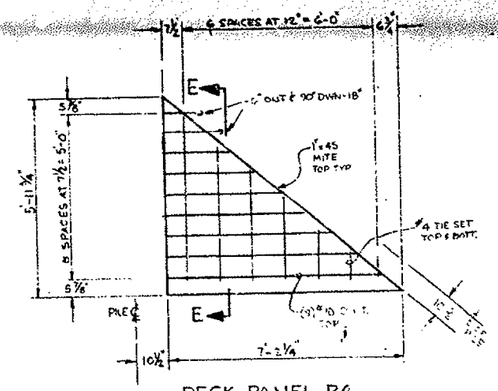
TITLE: DECK PANEL PLAN - 42' PIER - YARD NO 5

SCALE: 1/4"=1'-0"	DRAWN BY	DRAWING NO.	REV.
DWG NO. 533-Y05-42CP		SHT 5 OF 10	REV



TYPICAL DECK PANEL P1 - PIA END PANEL SIMILAR

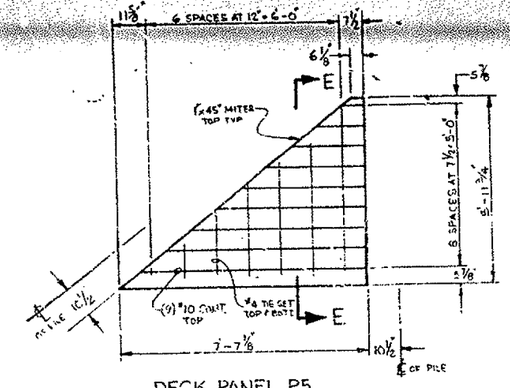
P1 QTY - 310 SCALE: ½" = 1'-0"
PIA QTY - 51



DECK PANEL P4

SCALE: ½" = 1'-0"

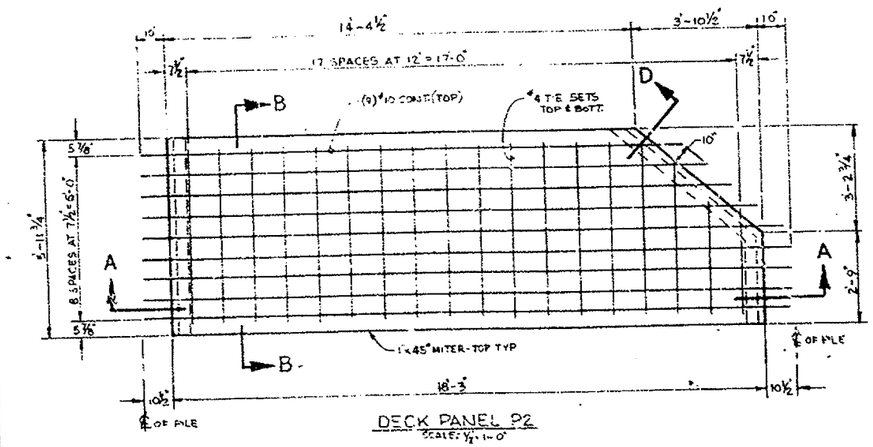
CAST IN PLACE WITH BULKHEAD



DECK PANEL P5

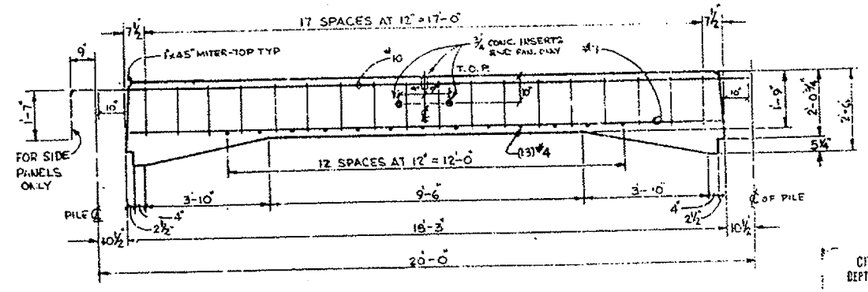
SCALE: ½" = 1'-0"

OPTIONAL - MAY BE CAST IN PLACE



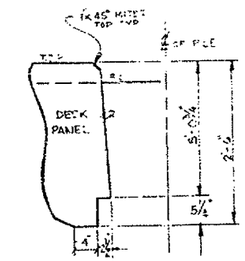
DECK PANEL P2

SCALE: ½" = 1'-0"



SECTION A-A

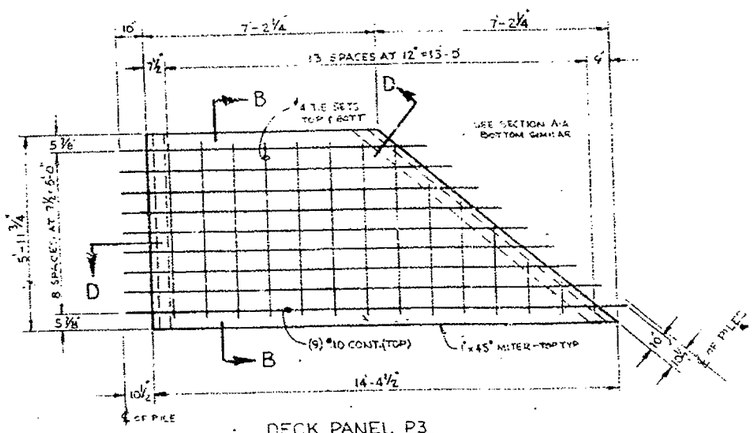
SCALE: ½" = 1'-0"



DETAIL D

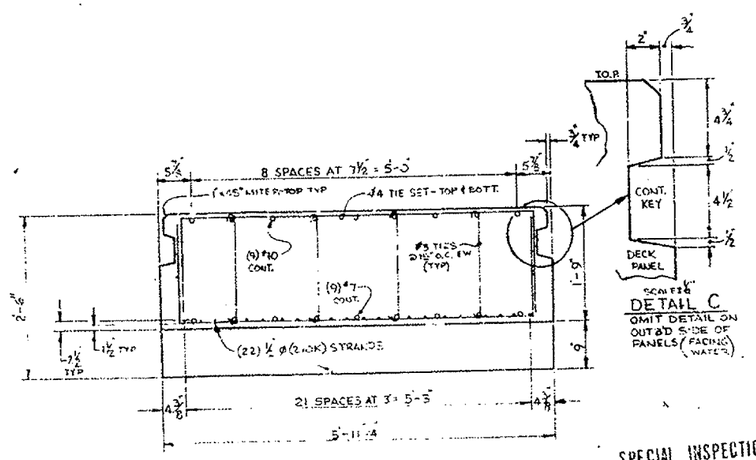
SCALE: ½" = 1'-0"

CITY OF SEATTLE
DEPT. OF CONSTRUCTION
AND LAND USE
APR 13 1992
APPROVED FOR ISSUANCE
By: R. Bird



DECK PANEL P3

SCALE: ½" = 1'-0"

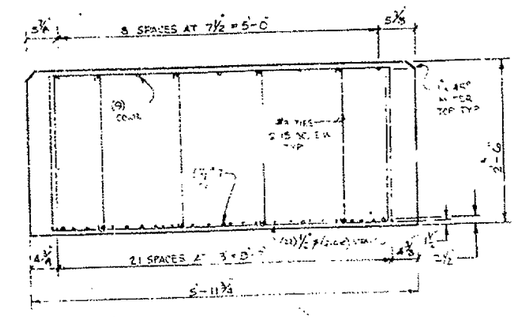


DETAIL C

OMIT DETAIL ON OUTSIDE OF PANELS (FACING WATER)

SECTION B-B

SCALE: 1" = 1'-0"



DETAIL E

SCALE: 1" = 1'-0"

SPECIAL INSPECTION REQUIRED

BY CITY CERTIFIED SPECIAL INSPECTORS FOR THE FOLLOWING TYPES OF WORK.

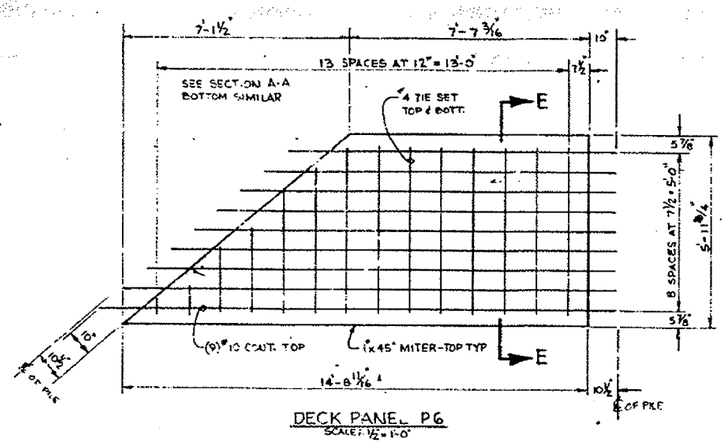
FOR DECK PANEL DESIGN DATA - SEE SHT 6
FOR DECK PANEL INSTALLATION - SEE SHT 3
FOR DECK PANEL SPICE WALL DETAIL - SEE SHT 7

MARINE POWER & EQUIPMENT CO. INC.
3441 N. NORTHLAKE WAY SEATTLE, WA. 98103

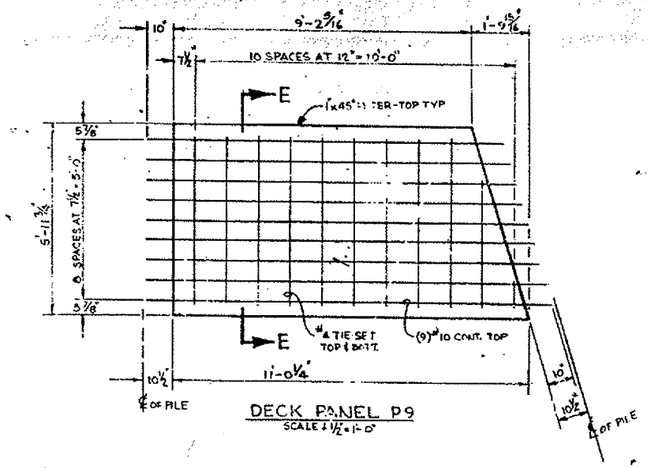
TITLE: PRE STRESSED DECK PANELS & DETAILS
42' PIER - YARD NO 5

SCALE: SHOWN	DRAWN BY:	DESIGN BY:	PER AN
			REV

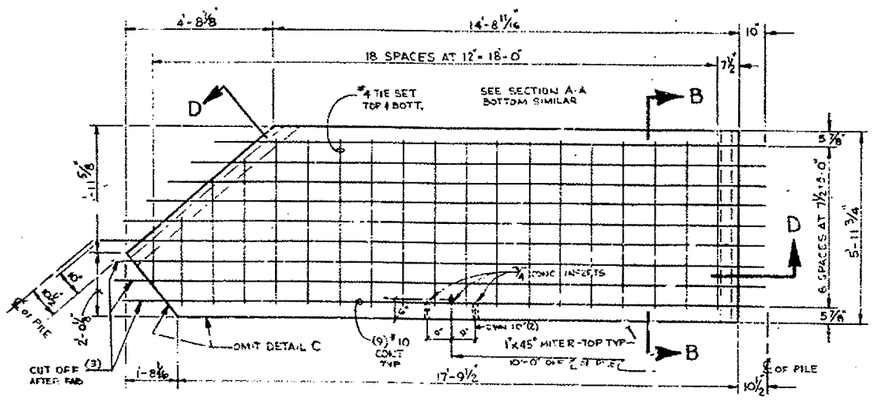
DWG NO. 53. YD5-42CP SHT 6 OF 10



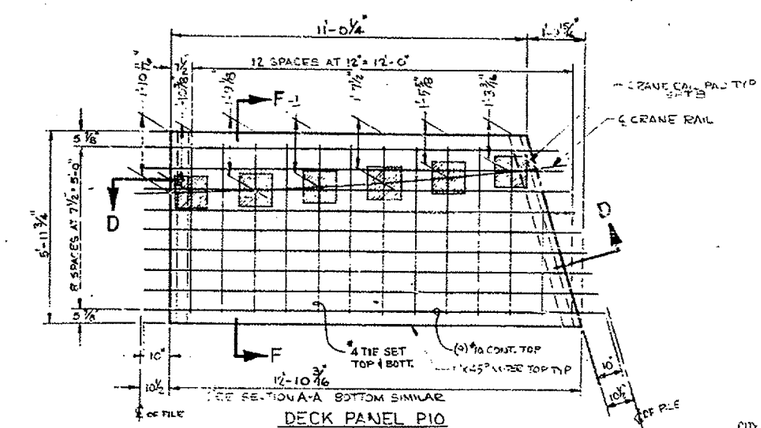
DECK PANEL P6
SCALE: ½" = 1'-0"



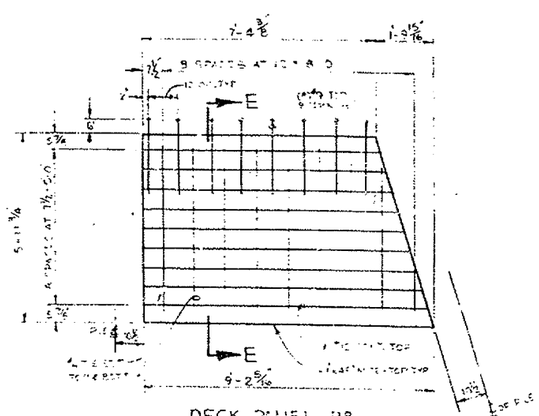
DECK PANEL P9
SCALE: ½" = 1'-0"



DECK PANEL P7
SCALE: ½" = 1'-0"



DECK PANEL P10
SCALE: ½" = 1'-0"



DECK PANEL P8
SCALE: ½" = 1'-0"

FOR DETAILS B-B, C-D & SECT. A-A, E-F SEE SHT. 6

DECK PANEL DESIGN DATA - P1		
PANEL TYPE CONSTRUCTION		PRE-CAST/PRE-STRESSED
SLAB THICKNESS @ MIDSPAN		9"
DESIGN PANEL WIDTH		5'-11¾"
CONCRETE COMP. STRENGTH		6000 PSI
TENSIONING UNITS PER PANEL		22 ½"ϕ (270K) STRANDS
STRESSING FORCES	INITIAL AT TRANSFER	660 K
	DESIGN	566 K
WEIGHT PER PANEL		33.6 K (P1)
REINFORCING STEEL ASTM A-615		STRAIGHT BARS - GR 60 STIRRUPS & TIES - GR 40

CITY OF SEATTLE
DEPT. OF CONSTRUCTION
AND ENGINEERING
JUN 13 1972
APPROVED Subject to Revisions
Red Line Corrections
By R. Bock

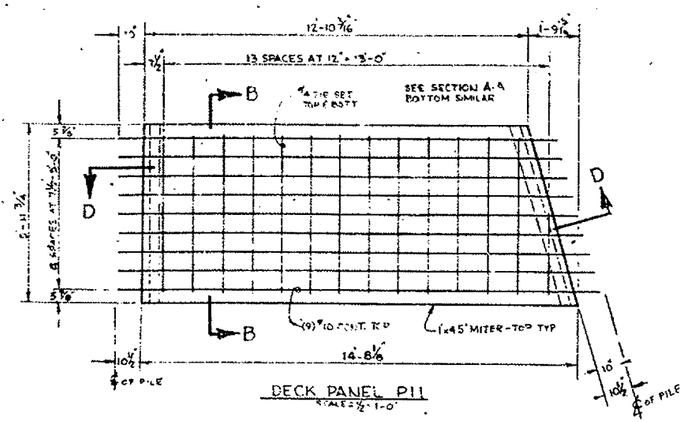
SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK

AND ASSOCIATES
CONSULTING ENGINEERS
1020 N. 35TH ST. SEATTLE WA 98103

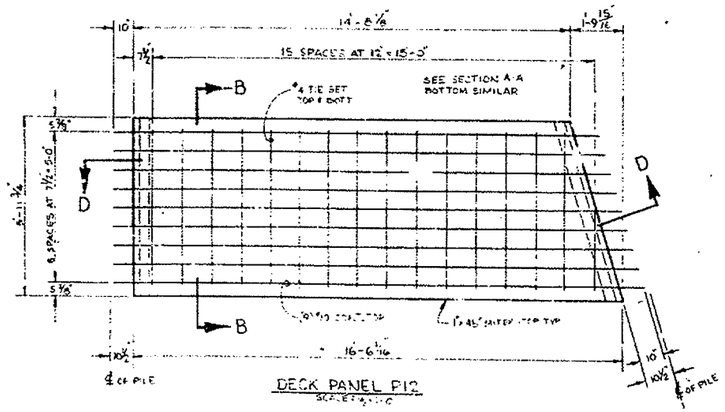
MARINE POWER & EQUIPMENT CO. INC.
1441 N. NORTHLAKE WAY, SEATTLE, WA. 98103

TITLE: PRE-STRESSED DECK PANEL
47 PIER - YARD 5

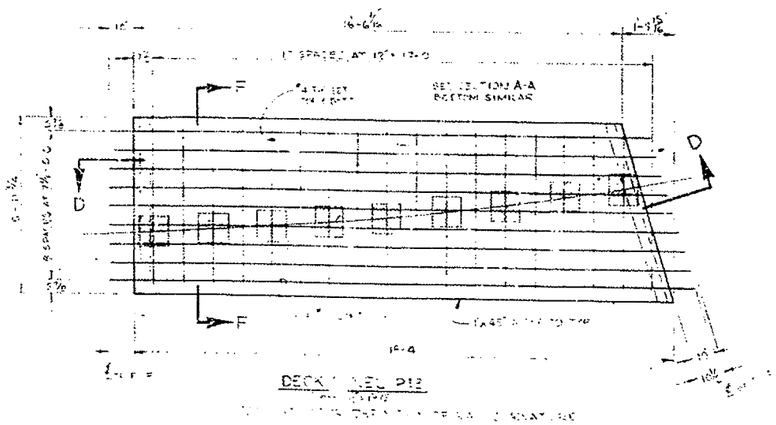
SCALE: ½"=1'-0"	DRAWN BY	PROJ'S APP.	MGR APP.
OWG NO. 533-YD5-42CP	SHT 7 OF 10		REV



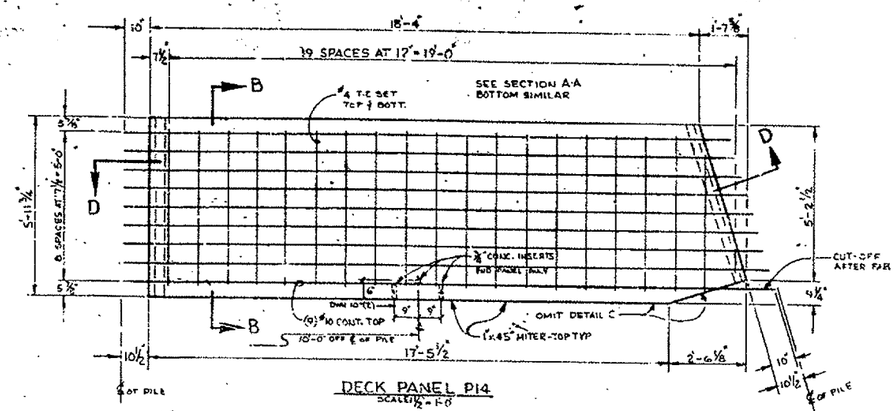
DECK PANEL P11
SCALE: 1/2" = 1'-0"



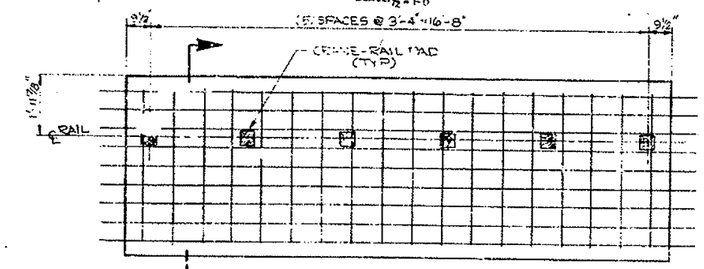
DECK PANEL P12



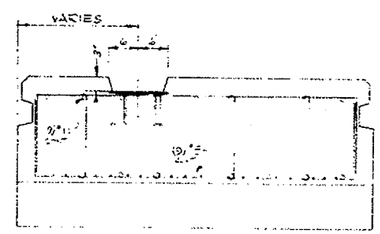
DECK PANEL P13



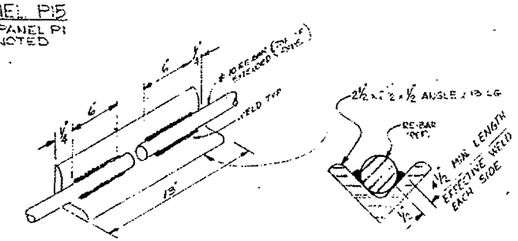
DECK PANEL P14
SCALE: 1/2" = 1'-0"



DECK PANEL P15
SIMILAR TO PANEL P1
EXCEPT AS NOTED



SECTION F-F
SIMILAR TO PANEL P1
EXCEPT AS NOTED



SPLICE WELD DETAIL
TYP FOR ALL PANELS
SEE SHT 4 DETAIL C
—NO SCALE—

SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
SEE THE FOLLOWING TYPES OF WORK

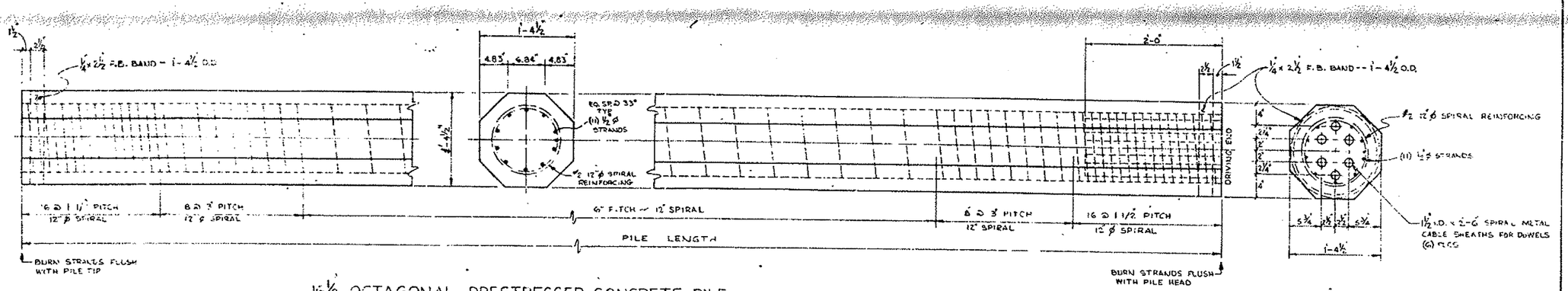
FOR DECK PANEL LAYOUTS SEE SHT 2

FOR DETAILS A, B, C, D & SECTION A-A SEE SHT 3

MARINE POWER & EQUIPMENT CO. INC.
1801 N. NORTHLAKE WAY SEATTLE WA 98103

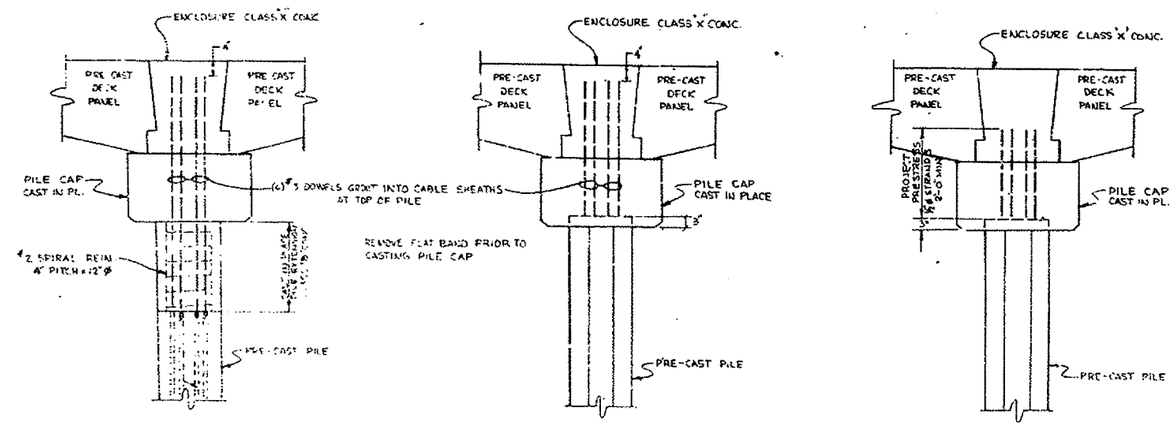
PRE-STRESSED DECK PANEL & DETAILS
-7' FIBER- YARD CRANE

533-YDE-42CP



16½ OCTAGONAL PRESTRESSED CONCRETE PILE

SCALE: 1 1/2" = 1'-0"



PILE TOP BELOW GRADE

PILE TOP AT GRADE

PILE TOP ABOVE GRADE

PILE CAP CONNECTION

SCALE: 3/4" = 1'-0"

PILE DATA	
SIZE	16½" OCTAGONAL
SECTION AREA	225.4 IN.²
WEIGHT	234 LBS/FT
SECTION MODULUS	495 IN.³
CONCRETE COMP. STRENGTH	6000 PSI CLASS "A"
TENSIONING UNIT	SEE NOTES 1 & 2
INITIAL PRESTRESS FORCE	346K
DESIGN PRESTRESS FORCE	288K
PRESTRESS IN CONCRETE	1280 PSI
DESIGN LOAD	150 TONS
STRANDS (270K)	(11) 1/2" ø
LENGTH OF PILE	SEE PILE SCHED.-SHT 2

NOTES:

1. PILE ~~MAY~~ SHALL BE STRESSED WITH ~~EITHER 250K OR~~ 270K STRAND OF ~~ANY SIZE~~ 1/2" PRESTRESSING FORCE SHALL NOT EXCEED 0.8 f's. STRAND SIZE & NUMBER SHALL BE DETERMINED BY MFR. PILES SHALL BE PRESTRESS CONCENTRICALLY.
2. SHOP DRAWINGS OF PRECAST OF PILING SHALL BE SUBMITTED ~~FOR APPROVAL FOR TO FABRICATION~~ TO PROJECT ENGINEER & THE DCLU FOR APPROVAL PRIOR TO FABRICATION
3. SEE STRUCTURAL NOTES SHT 2.

CITY OF SEATTLE
DEPT. OF CONSTRUCTION AND LAND USE
JUN 18 1982
APPROVED SUBJECT TO REVIEW AND CORRECTION
By R. Bond

SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK:

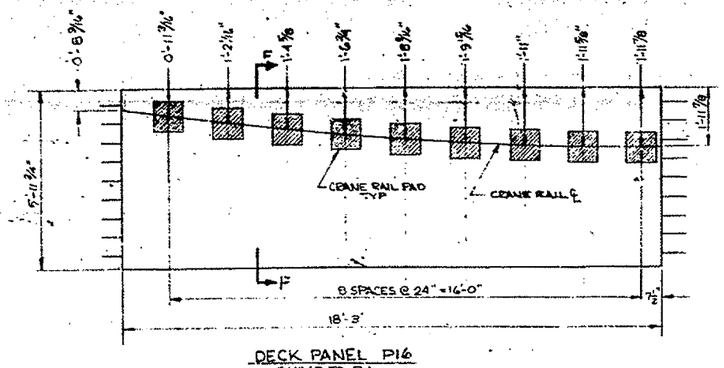
SEE PILING PLAN - SHT 3

MARLIE POWER & EQUIPMENT CO. INC.
1441 N. NORTHLAKE WAY, SEATTLE, WA. 98103

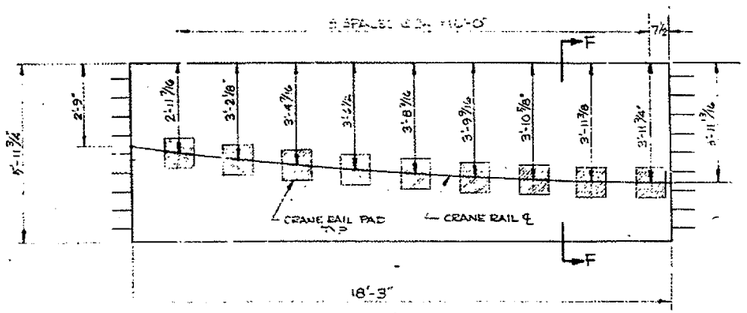
TITLE: 16½" OCTAGONAL CONCRETE PILING PRESTRESSED 42' PIER-YD NO. 5

SCALE: 1½" = 1'-0"	DRAWN BY: R.A. Dwight	ENGRS APP: Z.L.	MGR APP:

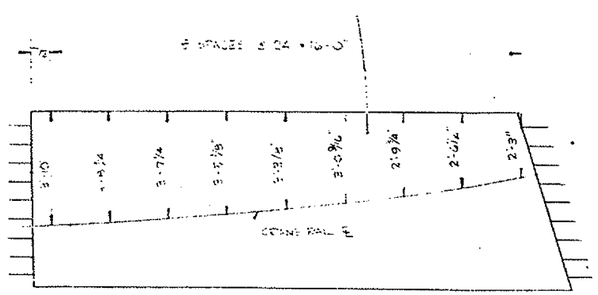
DWG NO. 533-YD5-42CP SHT 9 of 10 REV



DECK PANEL P16
SIMILAR TO P-1
EXCEPT AS SHOWN



DECK PANEL P17
SIMILAR TO P-1
EXCEPT AS SHOWN



DECK PANEL P18
[illegible] OF RAIL CURVATURE
SEE SHT 8 FOR PANEL DETAIL

SPECIAL INSPECTION REQUIRED
BY CITY CERTIFIED SPECIAL INSPECTORS
FOR THE FOLLOWING TYPES OF WORK

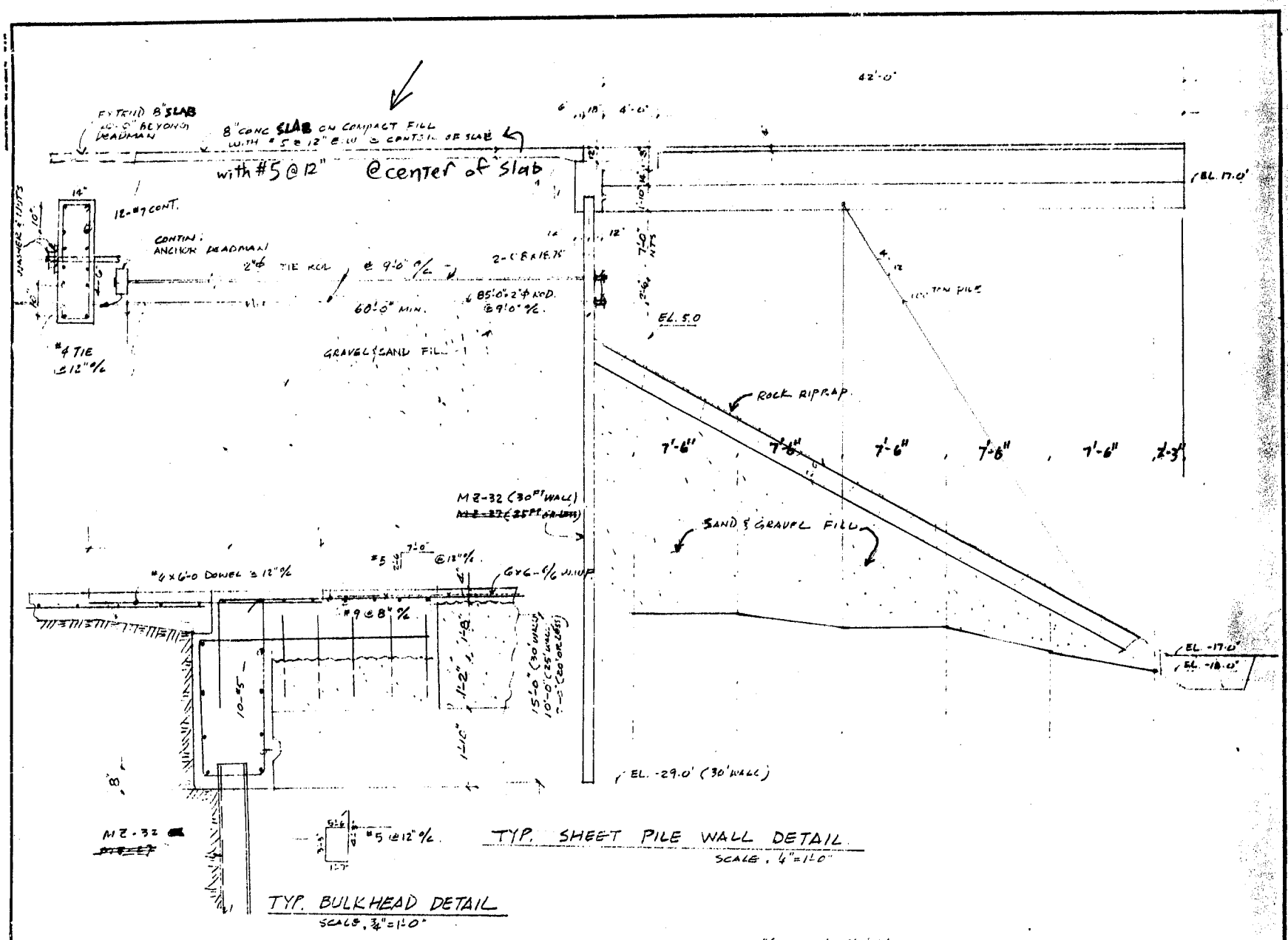
CITY OF SEATTLE
DEPT. OF CONSTRUCTION
AND LAND USE
JUN 13 1992
APPROVED [illegible]
AND CONFORM TO
R Ford

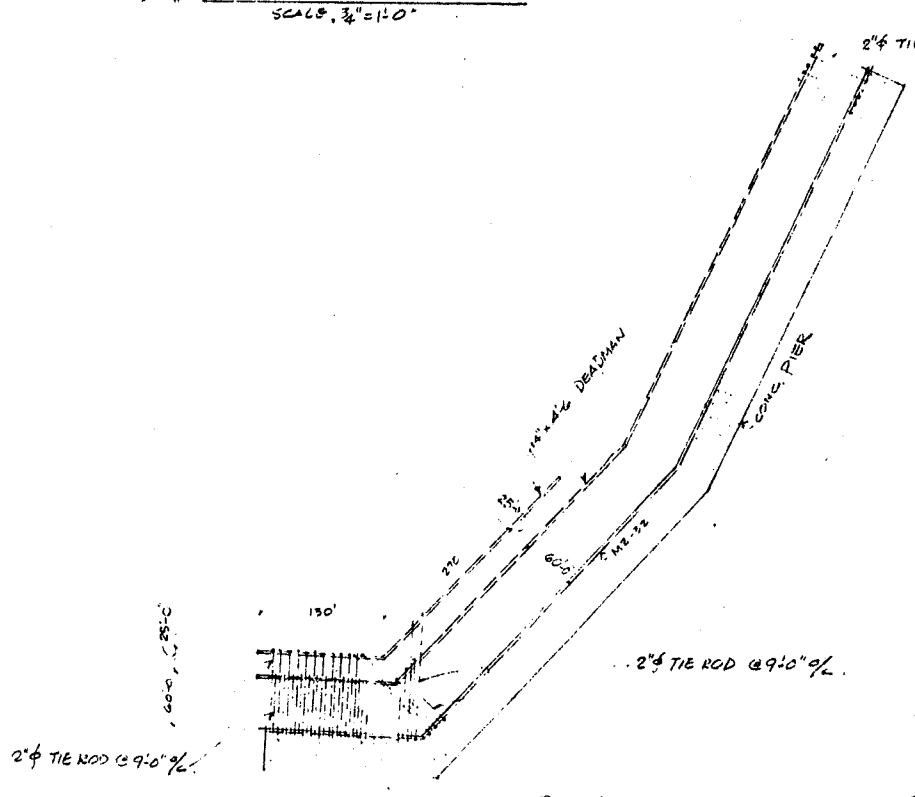
AND ASSOCIATES
CONSULTING ENGINEERS
1526 N 105TH SEATTLE WA 98133

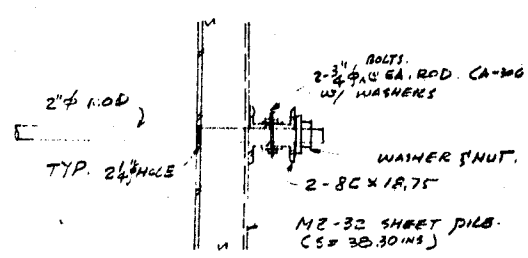
MARINE POWER & EQUIPMENT CO. INC.
4747 N. NORTHLAKE WAY SEATTLE WA 98103

[illegible] CRANE PANELS
[illegible] PER WARD NO.

SCALE NOTED	DRAWN BY N. PALMER	DATE [illegible]	DATE APP
DWG NO [illegible]-42CP			REV







NOTE: 1. ALL STEEL SHALL BE COATED WITH CORROSION PREVENT COATING
2. ALL STEEL SHALL BE A-36 OR BETTER
3. SHEET PILE: f_b = ~~32K~~ KSI, 24 KSI
4. CONC. f_c = 1350 PSI. (5% CEMENT MIX.)
5. USE GRADE USS EX-TEN ~~50~~ 36, F_y = ~~50,000~~ 36,000 PSI
6. SUBMIT SHEET PILE INSTALLATION SUPERVISION REPORTS TO THE DCLU FOR APPROVAL PRIOR TO CAPPING. INCLUDE SHEET PILE STEEL GRADE VERIFICATION

PUGET SOUND TESTING ENGINEERS

SPECIAL INSPECTION REQUIRED

BY CITY CERTIFIED SPECIAL INSPECTORS FOR THE FOLLOWING TYPES OF WORK:

1. SUPERVISE BULKHEAD SHEET PILE INSTALLATION
2. REINFORCED CONCRETE DEADMEN INCLUDING STEEL TIERODS INSTALLATION.

CITY OF SEATTLE
DEPT. OF CONSTRUCTION AND LAND USE
JAN 25 1983
APPROVED Subject to Review and Conditions
By R. Bond

601638

						MARINE POWER & EQUIPMENT YARD #5	SUN AND ASSOCIATES ENGINEERING AND DESIGN CONSULTANTS 1836 N. 105TH ST. SEATTLE, WA. 98133		SHEET PILE DETAIL						1/19/83

F/W 7310-7530 8TH AVE SOUTH #601638

APPENDIX F

Moffatt & Nichol's Sheet Pile Seawall Condition Assessment Report

moffatt & nichol

600 University St, Suite 610
Seattle, WA 98101

(206) 622-0222
www.moffattnichol.com

February 4, 2025

Crowley Maritime
705 5th Ave S, Suite 810
Seattle, WA 98104

Attn: Steven Gray, PE

Subject: Duwamish Slip No. 4 Bulkhead Condition Assessment Memo

1. Introduction

1.1. Scope of Work

Crowley Maritime (Crowley) has retained the services of Moffatt & Nichol (M&N) to provide a condition assessment of the steel sheet pile bulkhead and concrete cap at Slip No. 4 along the Duwamish Waterway in Seattle, WA. The scope of work includes an above-water routine level condition assessment of the primary structural components, including the steel sheet pile, tie-back wale, tie-rods and hardware, and the concrete cap. The observations noted in the field were evaluated to ascertain a general condition assessment rating for each primary element of the structure and inform the selection of recommended repairs and develop a rough order of magnitude cost estimate for the recommended repairs.

1.2. Facility Description

Slip No. 4 consists of an approximately 600-foot-long wharf with seven rows of 16.5-inch octagonal prestressed concrete piles spaced every 20-feet. Beginning at Bent 32, approximately 450-feet of the original wharf was demolished as part of the Lower Duwamish Waterway Slip 4 Early Action Remediation project. Only the steel sheet pile, tie-back wale, tie-rods and hardware, and the concrete cap remain at this location. The sheet pile bulkhead also extends approximately 100-feet west of Bent 1. The remaining original wharf structure has been modified to accommodate two barge transfer spans at Bents 7 and 23 by removing the deck panels, pile caps, and piles. An aerial image of Slip No. 4 is shown in Figure 1. A detailed site plan is provided in Appendix A.

Figure 1: Slip No. 4 Bulkhead (Source: Nearmap 7/1/2024)

1.3. Inspection Methodology

The routine investigation was based on the ASCE Manuals and Reports on Engineering Practice Number 130, "Waterfront Facilities Inspection and Assessment", 2015 Edition (ASCE 130). ASCE 130 describes the types of inspections and specific structure considerations depending on objectives, frequency of inspection, and the level of damage. The field investigation consisted of observing the steel sheet pile, tie-back wale, tie-rods and hardware, and concrete cap. Non-destructive testing (NDT) ultrasonic thickness measurements were taken approximately every 50-feet along the length of the bulkhead to estimate the remaining steel thickness. M&N conducted the field inspection during a low tide on December 30th and 31st, 2024. The bulkhead was accessed using a small work skiff and by walking the shoreline.

1.3.1. Rating System

Individual components and damage were categorized into six component condition ratings based on the observations: not inspected (NI), no damage (ND), minor (MN), moderate (MD), major (MJ), and severe (SV). Each component rating is defined by material type in Table B1 in Appendix B and are based on ASCE 130.

1.4. Inspection Limitations

The observations made and their findings have limitations in the types and level of detailed conclusions which can be drawn due to the heavy corrosion and aquatic growth present on a large portion of the sheet piles, and corrosion/debris/sediment covering the steel wale. Heavy pitting and corrosion in areas prevented multiple NDT thickness measurements. Therefore, the conditions reported in this report should be regarded as a reasonable best-case condition. Experience indicates it should be expected that additional deterioration will be discovered during maintenance or repairs. As the structure is cleaned and components removed for repair/replacement, discoveries of hidden conditions or damage often necessitate additional repairs.

2. Observations

The following section is a summary of the observations noted in the field. A complete compilation of the field notes is available in Appendix C, which includes the defect tables. Photographs of typical conditions and representative defects that are referenced below are presented in Appendix D. Representative views of the structure are shown in Photo 1 through Photo 5.

2.1. Concrete Cap

No significant defects were noted along the length of the concrete cap. Typical observed conditions included exposed reinforcing steel along the face from STA 0+00 to 4+50 where the original wharf was demolished, as shown in Photo 6. The ends of the reinforcement are flush with the concrete and had minor surface corrosion. Minor vertical hairline cracks along the face and soffit edge with efflorescence were typical for the full length of the cap, as shown in Photo 7.

2.2. Steel Sheet Piles

Heavy corrosion was observed in the splash zone throughout the full length of the bulkhead on the webs, flanges and joints, as shown in Photo 8. Moderate pitting of the sheet piles was observed once the corrosion by-product was removed with hand tools; up to approximately 1/8-inch deep on the flanges and 1/16-inch deep on the webs, as shown in Photo 9. At three locations, the tie-back rod closure plates were observed to be missing or have severe corrosion with up to 100-percent section loss as shown in Photo 10 and Photo 11. Weep holes with flowing water were observed intermittently throughout the full length of the bulkhead, as shown in Photo 12. At multiple locations along the length of the bulkhead the sheet pile section was observed to change, detailed location information of these changes can be found in Appendix C.

2.3. Steel Wale

The wale is buried from STA 0+00 to 0+50 and from Bent 1.6 to the west end of the bulkhead. Severe knife edging with section loss up to 100-percent was observed on the wale flanges throughout the full length of the bulkhead, as shown in Photo 13. Severe corrosion with section loss up to 100-percent was observed on the wale webs throughout the full length of the bulkhead, as shown in Photo 14.

2.4. Tie-Back Rods and Hardware

The tie-back rods and hardware were observed to have minor corrosion throughout the full length of the bulkhead, as shown in Photo 15.

3. Evaluation & Recommendations

An overall Condition Assessment Rating (CAR) is assigned to the steel sheet piles, wale, tie-back rods and hardware, and concrete cap. The CARs are based on the results of visual observations. The condition assessment scale includes six categories ranging from Good to Critical. The six CARs and descriptions are provided in Table B2 in Appendix B and are based on ASCE 130.

3.1. Evaluation

The overall structure is rated as “Fair.” This rating is primarily due to the moderate sheet pile corrosion throughout and the severe corrosion of the steel wale. The other primary structural elements are sound with areas of minor deterioration that does not significantly reduce the structural capacity. A summary of the CARs assigned to the major systems are provided in Table 1.

TABLE 1: CAR SUMMARY

Component	2024 CAR
Concrete Cap	Good
Steel Sheet Piles	Fair
Steel Wale	Poor
Tie-Rods and Hardware	Satisfactory
Overall	**Fair**

The following subsections describe the CAR for each major system along with the recommended repairs.

3.2. Concrete Cap

The concrete cap is in “Good” condition due to no significant level of defects or deterioration along its length. The exposed ends of reinforcement steel from STA 0+00 to STA 4+50 are not associated with corrosion spalling or delaminated concrete, indicating their exposure is not impacting the structural integrity of the cap. No repairs are recommended at this time.

3.3. Steel Sheet Piles

The sheet pile bulkhead is in “Fair” condition due to the moderate defects or deterioration observed throughout. Ultrasonic thickness measurements in areas with typical pitting indicate moderate section loss. It is recommended to replace the missing or corroded tie-back rod closure plates to prevent backfill material loss with moderate urgency (1-2 years). To slow the corrosion rate, it is recommended to coat the exposed sheet piles with a field applied epoxy coating. The coating repair can be considered low priority (5-10 years) and its implementation may be adjusted by monitoring to determine the rate of corrosion.

3.4. Steel Wale

The steel wale is in “Poor” condition due to widespread severe defects or deterioration with areas of up to 100-percent section loss in the web and flanges. It is recommended to replace the full length of the wale with moderate urgency (1-2 years).

3.5. Tie-Back Rods and Hardware

The tie-back rods and hardware are in “Satisfactory” condition due to limited minor defects or deterioration. Minor surface corrosion of the rods and hardware with minimal pitting indicate minor section loss. The tie-rod threads are visibly intact. No repairs are recommended at this time.

3.6. Recommended Inspection Cycle

A routine inspection of the bulkhead is recommended every 4-years due to the steel components having no protection from further corrosion or section loss, and to determine the rate of corrosion of the sheet piles.

4. Opinion of Probable Construction Cost

The rough order of magnitude (ROM) opinion of probable construction cost (OPCC) for the recommended repairs is approximately $3,307,500. This includes mobilization, demobilization, and general requirements; 50 percent contingency; and local sales tax. The unit costs include contractor overhead and profit. Engineering design, permitting, and constriction support are not included. Table 2 provides a cost summary of the recommended repairs.

TABLE 2: ROM OPCC SUMMARY (USD 2025)

Description	Approx. Quantity	Unit	Order of Magnitude	
			Unit Cost ($)	Extended Cost
Sheet Pile Epoxy Coating	10,125	SF	$180	$1,818,750
Replace Missing Tie-Rod Closure Plates	10	EA	$1,150	$11,500
Replace Steel Wale and Hardware	1,125	LF	$165	$185,875
Mobilization/Demobilization & General Requirements				$19,631
			Subtotal (Rounded)	**$2,000,000**
			Contingency (50%)	$1,000,000
			Construction Subtotal	$3,000,000
			Washington State Sales Tax (10.25%)	$307,500
			Total Project Cost (Rounded)	**$3,307,500**

We appreciate the opportunity to support Crowley with this inspection and condition assessment memorandum. Please do not hesitate to contact me with any questions at ncolson@moffattnichol.com or my office at (253) 237-5934.

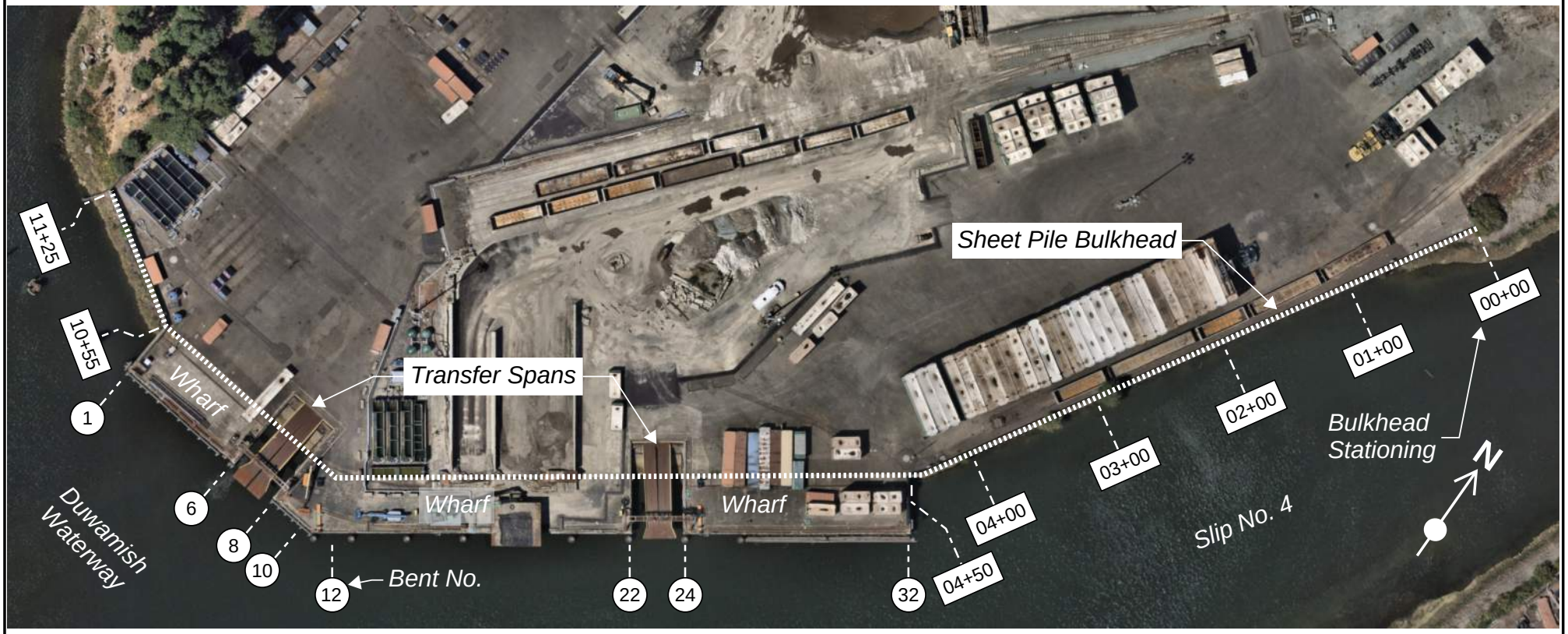
Nick Colson, PE
Senior Waterfront Engineer | Diver

NICHOLAS SCOTT COLSON
STATE OF WASHINGTON
55757
REGISTERED
PROFESSIONAL ENGINEER

2/4/2025

Appendix A

Inspection Site Plan



moffatt & nichol	**CLIENT:**	CROWLEY MARITIME	**DATE:**	DECEMBER 30, 2024
	PROJECT NAME:	SLIP NO. 4 BULKHEAD INSPECTION	**INSPECTION LEAD:**	NICK COLSON, PE
	LOCATION:	DUWAMISH WATERWAY, SEATTLE, WA	**INSPECTOR(S):**	W. WISE

Appendix B

Component Condition Rating Descriptions & Condition Assessment Rating (CAR) Descriptions

TABLE B1: COMPONENT CONDITION RATING DESCRIPTIONS (ASCE 130)

COMPONENT RATING	DESCRIPTION
Not Inspected (NI)	Component was inaccessible or not included in the scope.
No Damage (ND)	Component had a sound material surface.
Minor (MN)	*Timber:* Checks, splits, and gouges less than 0.5 inches wide. Evidence of marine borers or fungal decay. *Steel:* Less than 50 percent of perimeter or circumference affected by corrosion at any elevation or cross-section; loss of thickness up to 15 percent of nominal thickness at any location. *Concrete:* Mechanical abrasion or impact dents; general cracks up to 1/16 of an inch wide; occasional corrosion stain or small pop-out corrosion spall.
Moderate (MD)	*Timber:* Checks and splits wider than 0.5 inches; remaining diameter loss up to 15 percent; cross-section area loss up to 25 percent; corroded hardware; evidence of marine borers or fungal decay, with loss of section. *Steel:* Greater than 50 percent of surface at any elevation/cross-section affected by corrosion; 15 percent to 30 percent loss of nominal thickness at any location. *Concrete:* Structural cracks up to 1/16 of an inch wide; corrosion cracks up to ¼ of an inch wide; chemical deterioration; random cracks up to 1/16 of an inch wide; soft concrete and rounding corners up to 1 inch deep; frequent corrosion stain or medium pop-out corrosion spall.
Major (MJ)	*Timber:* Checks and splits through full depth of cross-section; diameter loss 15-30 percent; cross-section loss 25-50 percent; heavily corroded hardware; displacement and misalignments at connections. *Steel:* Partial loss of flange edges or visible reduction of wall thickness; 30 percent to 50 percent loss of nominal thickness, any location. *Concrete:* Structural cracks 1/16 of an inch to ¼ of an inch wide; partial breakage (spalls); corrosion cracks greater than ¼ of an inch wide; multiple cracking and disintegration of surface due to chemical deterioration.
Severe (SV)	*Timber:* Diameter loss more than 30 percent; cross-section area loss more than 50 percent; loss of connections and/or fully nonbearing; partial or complete breakage. *Steel:* Structural bends or buckling, breakage and displacement at supports, loose or lost connections; greater than 50 percent loss of nominal thickness, any location. *Concrete:* Structural cracks greater than ¼ of an inch wide; breakage; loss of bearing and displacement at connections; reinforcing steel with cover loss and greater than 30 percent diameter loss for any main bar; exposed steel due to chemical deterioration; cross section loss greater than 30 percent of any component for any reason.

TABLE B2: CONDITION ASSESSMENT RATING DESCRIPTIONS (ASCE 130 TABLE 2-14)

CAR Rating	Description
"Good"	No visible damage or only minor defects noted. Structural elements may show some very minor deterioration, but no overstressing observed. No Repairs are required.
"Satisfactory"	Limited minor to moderate defects or deterioration observed, but no overstressing observed. No repairs are required.
"Fair"	All primary structural elements are sound, but minor to moderate defects or deterioration observed. Localized areas of moderate to advanced deterioration may be present but do not significantly reduce the structural capacity. Repairs are recommended, but the priority of the recommended repairs is low.
"Poor"	Advanced deterioration or overstressing observed on widespread portions of the structure, but does not significantly reduce the load-bearing capacity of the structure. Repairs may need to be carried out with moderate urgency.
"Serious"	Advanced deterioration, overstressing or breakage may have significantly affected the load-bearing capacity of primary structural components. Local failures are possible, and loading restrictions may be necessary. Repairs may need to be carried out on a high-priority basis with urgency.
"Critical"	Very advanced deterioration, overstressing, or breakage has resulted in localized failure(s) of primary structural components. More widespread failures are possible or likely to occur, and load restrictions should be implemented as necessary. Repairs may need to be carried out on a very high priority basis with strong urgency.

Appendix C

Defect Tables

STEEL SHEET PILE INSPECTION RECORD

MOFFATT & NICHOL

LOCATION: Duwamish Waterway, Seattle, WA		DATE: 12/30-31/2024	INSPECTORS: N. Colson; W. Wise
STRUCTURE ID: Bulkhead at Slip No. 4		STEEL SHEET INFORMATION: TYPE: Varies	DEPTH OF DAMAGE: ☐ DATUM ☐ GAUGE ☐ TIDE
M&N JOB NO: 243346	TIME OF DAY: 2100 - 0200	NOTE KEEPER: W. Wise	Mudline used as datum for measurements (ML = 0')

STATION NO.	ML DEPTH	DEPTH DAMAGE	NI	SHEET CONDITION					DAMAGE SIZE			DAMAGE LOCATION				COMMENTS	Photo
				ND	MN	MD	MJ	SV	LGTH	WDTH	DEPTH	WALE	WEB	FLANGE	JOINT		
TYPICAL							X						X	X	X	HEAVY LAMELLAR CORROSION IN SPLASH ZONE.	1-17
TYPICAL						X							X	X	X	MODERATE PITTING OBSERVED WHEN CORROSION REMOVED.	1-17
TYPICAL								X				X				SEVERE CORROSION TYPICAL AT WALE; KNIFE EDGING OF FLANGES	25-26, 32
TYPICAL					X							X				RODS AND HARDWARE HAVE MINOR CORROSION	27-28
0+00 (EAST END)				X								X				WALE IS BURIED FROM 0+00 TO 0+50	18-20
STA 0+60								X				X				SEVERE KNIFE EDGING AT FLANGES	23-24
STA 0+68		2'		X										X		(3) 2" DIA. HOLES - LIKELY WEEP HOLES; WATER FLOWING	21-22
STA 1+42		3'						X	4"	4"				X		MISSING BULKHEAD CLOSURE PLATE AT TIE-ROD PENETRATION	29-30
STA 1+60		4'						X	2"	2"				X		MISSING BULKHEAD CLOSURE PLATE AT TIE-ROD PENETRATION	31
STA 2+08		1'		X										X		FLOWING WATER THROUGH BULKHEAD AT WEEP HOLE	33
STA 2+58				X												CHANGE IN SHEET PILE SECTION	-
STA 3+40		1'		X										X		FLOWING WATER THROUGH BULKHEAD AT WEEP HOLE	34-35
STA 3+50								X	36"	0.5"					X	OPENING AT INTERLOCK JOINT; BACKFILL MATERIAL VISIBLE	36-37
TYPICAL						X							X	X	X	TYPICAL LAMELLAR CORROSION UNDER WHARF IS MORE MODERATE	38-41
BENT 31.8								X				X				SEVERE CORROSION WITH HOLES IN WALE WEB	42-43
BENT 30		4'		X												FLOWING WATER THROUGH BULKHEAD AT WEEP HOLE	44
BENT 24.1		1'						X	3"	3"				X		MISSING BULKHEAD CLOSURE PLATE AT TIE-ROD PENETRATION	45
BENT 22.5			X													WATER LEAKING FROM UTLIITY PIPE - POSSIBLE PIPE CORROSION	-
TYPICAL				X												TRANSFER SPAN TYPICAL PHOTOS	46-48
BENT 16.2		1'		X												FLOWING WATER THROUGH BULKHEAD AT WEEP HOLE	49
BENT 14.9								X				X				SEVERE CORROSION WITH HOLES IN WALE WEB	50
BENT 14.2				X												CHANGE IN SHEET PILE SECTION	-
BENT 13.4								X								SEVERE CORROSION WITH HOLES IN WALE WEB	51
BENT 12.2								X								SEVERE CORROSION WITH HOLES IN WALE WEB	52
BENT 8.1								X								SEVERE CORROSION WITH HOLES IN WALE WEB	-
BENT 8.9								X								SEVERE CORROSION WITH HOLES IN WALE WEB	-

STEEL SHEET PILE INSPECTION RECORD

MOFFATT & NICHOL

LOCATION: Duwamish Waterway, Seattle, WA		DATE: 12/30-31/2024	INSPECTORS: N. Colson; W. Wise
STRUCTURE ID: Bulkhead at Slip No. 4		STEEL SHEET INFORMATION: TYPE: Varies	DEPTH OF DAMAGE: ☐ DATUM ☐ GAUGE ☐ TIDE
M&N JOB NO: 243346	TIME OF DAY: 2100 - 0200	NOTE KEEPER: W. Wise	Mudline used as datum for measurements (ML = 0')

STATION NO.	ML DEPTH	DEPTH DAMAGE	NI	SHEET CONDITION					DAMAGE SIZE			DAMAGE LOCATION				COMMENTS	Photo
				ND	MN	MD	MJ	SV	LGTH	WDTH	DEPTH	WALE	WEB	FLANGE	JOINT		
BENT 9								X								SEVERE CORROSION WITH HOLES IN WALE WEB	53
BENT 5.6		2'							3"	3"				X		FLOWING WATER AT TIE-ROD PENETRATION	54
BENT 1-8								X								SEVERE CORROSION WITH HOLES IN WALE WEB	55-56
BENT 4.2		2'							3"	3"				X		FLOWING WATER AT TIE-ROD PENETRATION	57
BENT 3.3				X												CHANGE IN SHEET PILE SECTION	-
BENT 1.6																WALE IS BURIED TO END OF BULKHEAD	58
STA 10+55				X												CHANGE IN SHEET PILE SECTION	-

STEEL SHEET PILE LEVEL III INSPECTION RECORD

MOFFATT & NICHOL

LOCATION: Duwamish Waterway, Seattle, WA	DATE: 12/30-31/2024	INSPECTORS: N. Colson; W. Wise	
PIER ID: Bulkhead at Slip No. 4	PILE TYPE: ☐ BEARING ☐ FENDER ☐ SHEET		PILE MATERIAL: ☐ TIMBER ☐ STEEL ☐ CONCRETE
M&N JOB NO: 243346	TIME OF DAY: 2100 - 0200	TIDE: LOW: X HIGH:	NOTE KEEPER: W. Wise	DEPTH OF DAMAGE: ☐ DATUM ☐ GAUGE ☐ TIDE

STATION NO.	ML DEPTH	READING LOCATION					READING 1	READING 2	READING 3
		FLANGE	WEB	MUDLINE	MIDWATER	MLLW			
STA 0+50			X				0.280	0.235	0.200
STA 0+50		X				UPPER	0.440		
STA 0+50		X				LOWER	0.330		
STA 0+50			X			UPPER	0.305		
STA 0+50			X			LOWER	0.240		
STA 1+00		X					0.340	0.470	0.360
STA 1+00			X				0.350	0.330	0.350
STA 1+50		X					0.355	0.355	0.350
STA 1+50			X				0.355	0.360	0.355
STA 2+00		X					0.345	0.330	0.330
STA 2+00			X				0.330	0.330	0.335
STA 2+50			X			UPPER	0.345		
STA 2+50			X			LOWER	0.280	0.275	0.230
STA 2+50		X				UPPER	0.350		
STA 2+50		X				LOWER	0.255	0.260	0.285
STA 3+00		X					0.510	0.520	0.510
STA 3+00			X				0.330	0.335	0.335
STA 3+50		X				UPPER	0.485	0.475	0.475
STA 3+50			X			UPPER	0.325		
STA 4+00		X					0.535	0.535	0.535
STA 4+00			X				0.330	0.330	0.335
STA 4+50		X					0.515	0.510	0.515
STA 4+50			X				0.415	0.400	
BENT 30.5		X					0.540	0.540	0.535
BENT 30.5			X				0.350	0.350	0.355
BENT 28			X				0.350		

STEEL SHEET PILE LEVEL III INSPECTION RECORD

MOFFATT & NICHOL

LOCATION: Duwamish Waterway, Seattle, WA		DATE: 12/30-31/2024	INSPECTORS: N. Colson; W. Wise
PIER ID: Bulkhead at Slip No. 4		PILE TYPE: ☐ BEARING ☐ FENDER ☐ SHEET	PILE MATERIAL: ☐ TIMBER ☐ STEEL ☐ CONCRETE
M&N JOB NO: 243346	TIME OF DAY: 2100 - 0200	TIDE: LOW: X HIGH:	NOTE KEEPER: W. Wise / DEPTH OF DAMAGE: ☐ DATUM ☐ GAUGE ☐ TIDE

STATION NO.	ML DEPTH	READING LOCATION					READING 1	READING 2	READING 3
		FLANGE	WEB	MUDLINE	MIDWATER	MLLW			
BENT 25.5		X					0.515	0.505	0.515
BENT 25.5			X				0.370	0.380	0.370
BENT 23		X					0.500		
BENT 23			X				0.375		
BENT 20.5		X					0.410	0.470	
BENT 20.5			X				0.365	0.360	0.355
BENT 18		X					0.525	0.530	0.525
BENT 18			X				0.355	0.350	0.340
BENT 15.5		X					0.550	0.500	0.495
BENT 15.5			X				0.375	0.365	0.370
BENT 13		X					0.495	0.490	
BENT 13			X				0.370		
BENT 10.5		X					0.315	0.315	0.310
BENT 10.5			X				0.265		
BENT 8		X					0.313		
BENT 8			X				0.313		
BENT 5.5		X					0.325	0.303	
BENT 5.5			X				0.335		
BENT 3		X					0.320	0.335	0.320
BENT 3			X				0.350	0.355	0.345
BENT 0.5		X					0.445	0.445	0.450
BENT 0.5			X				0.315	0.315	0.310
STA 10+95		X					0.465	0.460	0.455
STA 10+95			X				0.320	0.320	0.325

Appendix D

Representative Photographs

PHOTO 1: SLIP NO. 4, WEST END LOOKING NORTH

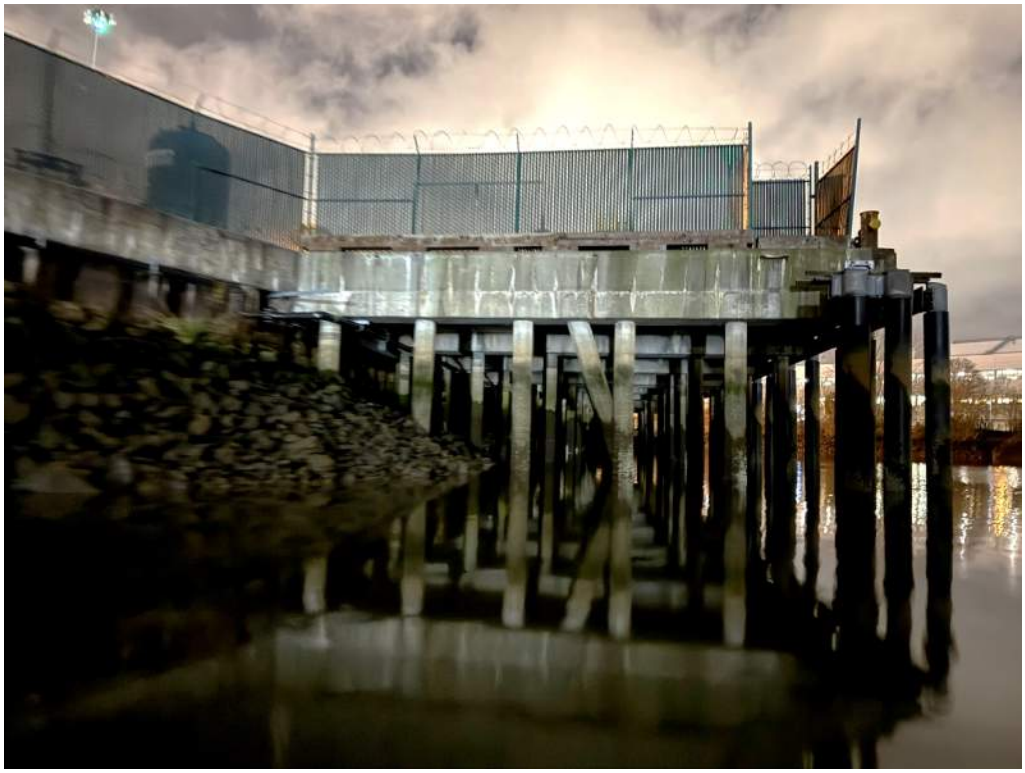


PHOTO 2: SLIP NO. 4, BENT 1 LOOKING NORTHEAST

PHOTO 3: SLIP NO. 4, TYPICAL SHEET PILE BULKHEAD

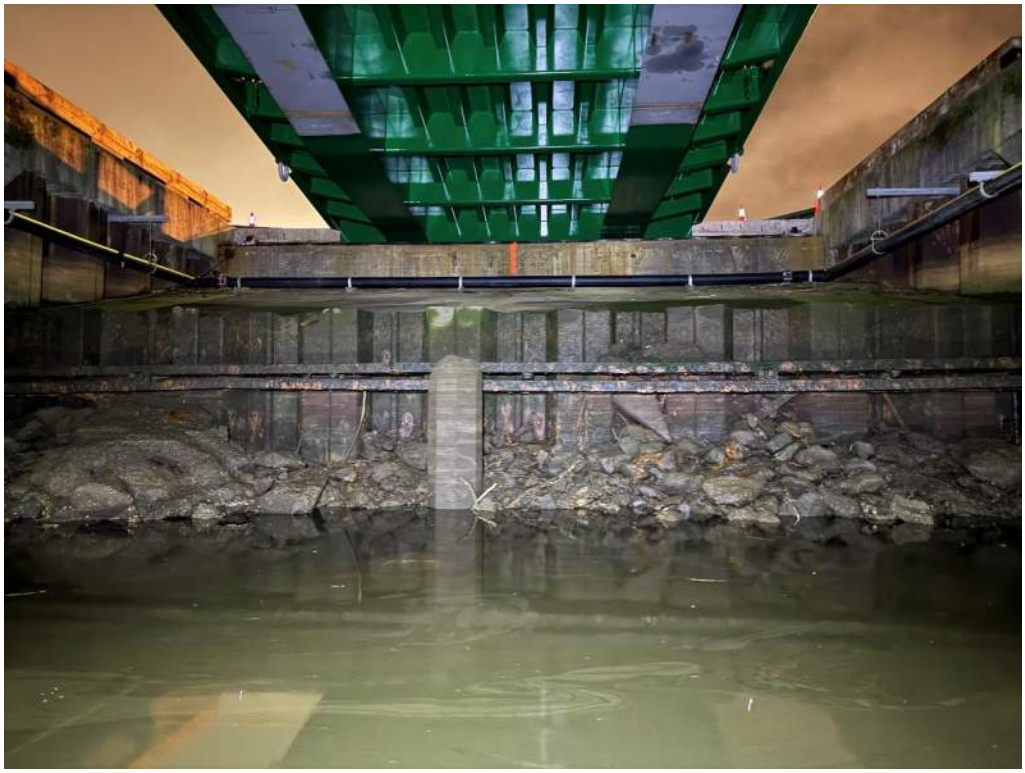


PHOTO 4: SLIP NO. 4, BENT 7 TRANSFER STATION LOOKING NORTHWEST

PHOTO 5: SLIP NO. 4, REMAINING SHEET PILE BULKHEAD LOOKING NORTH FROM BENT 32

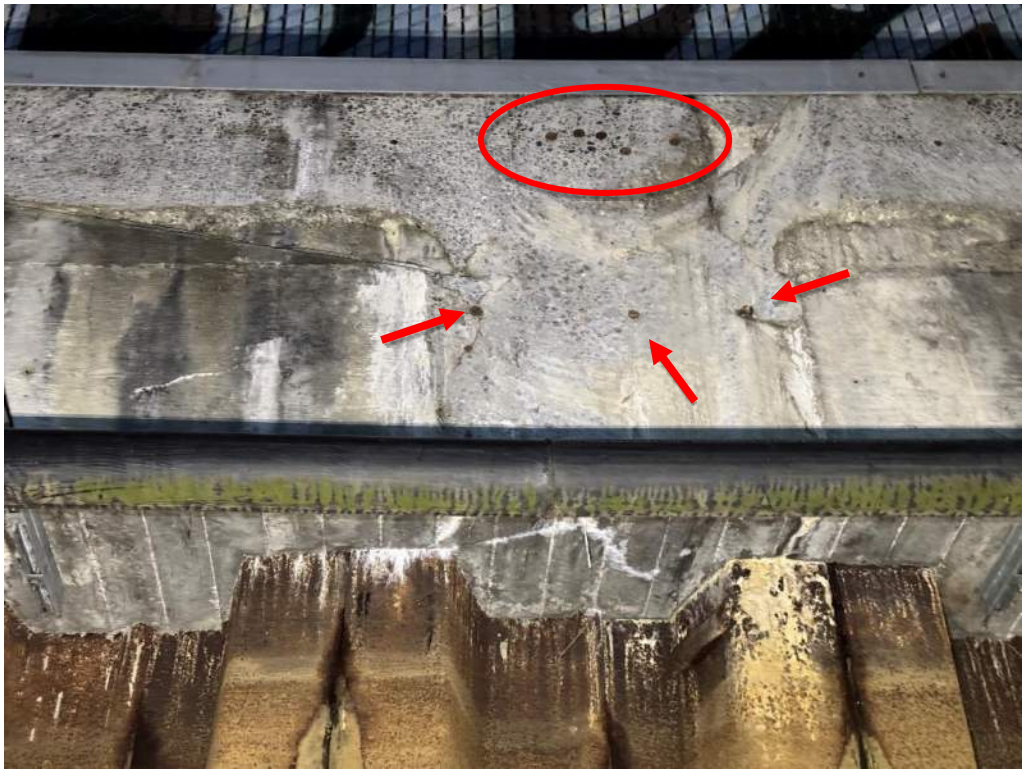


PHOTO 6: CONCRETE CAP, TYPICAL EXPOSED REINFORCING STEEL

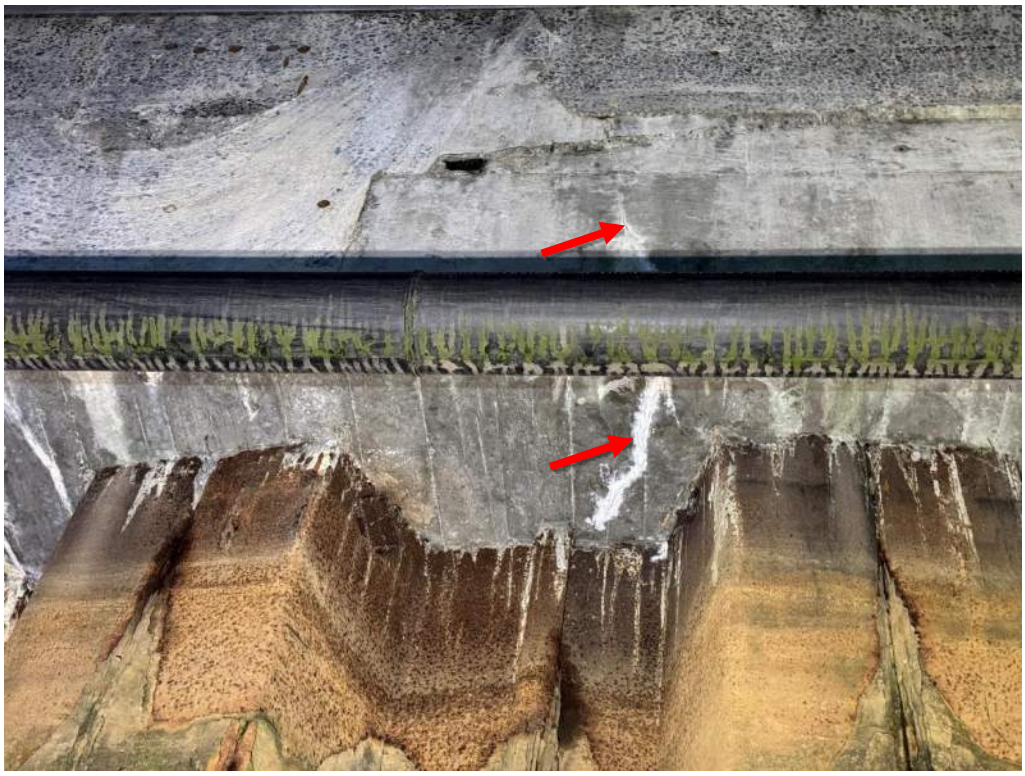


PHOTO 7: CONCRETE CAP, TYPICAL HAIRLINE CRACKING WITH EFFLORESCENSE

PHOTO 8: SHEET PILE BULKHEAD, TYPICAL HEAVY LAMINAR CORROSION ON THE FLANGES, WEBS, AND JOINTS

PHOTO 9: SHEET PILE BULKHEAD, TYPICAL MODERATE PITTING BENEATH LAMINAR CORROSION

PHOTO 10: TIE-BACK RODS AND HARDWARE, TYPICAL MISSING BULKHEAD CLOSURE PLATE AT BENT 24.1

PHOTO 11: TIE-BACK RODS AND HARDWARE, TYPICAL SEVERE CORROSION OF BULKHEAD CLOSURE PLATE AT STA 1+42

PHOTO 12: SHEET PILE BULKHEAD, TYPICAL WEEP HOLE WITH FLOWING WATER AT STA 3+40

PHOTO 13: STEEL WALE, TYPICAL SEVERE KNIFE EDGING ON FLANGES AT STA 0+60

PHOTO 14: STEEL WALE, TYPICAL SEVERE CORROSION ON WEB AT BENT 31.8

PHOTO 15: TIE-BACK RODS AND HARDWARE, TYPICAL MINOR CORROSION

APPENDIX G

SLR's Description of Transient Groundwater Model and Presentation of Modeling Results

DESCRIPTION OF TRANSIENT GROUNDWATER MODEL AND PRESENTATION OF MODELING RESULTS

G.1 INTRODUCTION

SLR International Corporation (SLR) has prepared this appendix to describe the approach and assumptions used to run a transient numerical model to better understand the existing hydrogeologic conditions beneath the Subject Property area, particularly near the sheet pile seawall. This transient model replaces the previous steady-state groundwater model for the Subject Property (SLR International Corporation [SLR] 2024a).

A systematic US Environmental Protection Agency (EPA) groundwater pump and treat (P&T) method for assessing groundwater flux throughout the Subject Property (EPA, 2008) and the groundwater model results for steady-state conditions were previously reported (SLR 2024a). The steady-state model has been replaced to simulate transient conditions, and the EPA method was also updated to include site-specific hydraulic conductivity values, and it calculated the average flux of groundwater flow from north to south beneath the Subject Property.

On April 8, 9, and 10, 2024, Landau Associates, Inc. (Landau) personnel conducted falling-head and rising-head slug tests at 14 selected shallow, intermediate-depth, and deep groundwater monitoring wells at the Subject Property. The objective of the slug tests was to collect the data necessary to calculate site-specific hydraulic conductivity (k) values for the shallow, intermediate-depth, and deep portions of the unconfined aquifer beneath the property, particularly near the Lower Duwamish Waterway (LDW). The low-tide and high-tide water levels collected from January 2013 through September 2024 at the Subject Property area and the mean k values for the shallow, intermediate-depth, and deep portions of the aquifer were utilized for the transient model's calibration. This transient simulation of the existing conditions illustrates the site's dynamic hydrogeologic behavior under both low and high tide scenarios. The transient simulation results were also utilized to assess the retardation capacity of the existing sheet pile seawall during all tidal conditions.

G.1.1 BACKGROUND

The numerical assessment evaluates the existing hydrogeologic conditions beneath the Subject Property area. None of the remedial alternatives in the Public Review Draft Feasibility Study Report Addendum will modify the hydrogeologic conditions at the Site. The lithological and hydrogeological data used in the transient groundwater model are from the previous investigations and groundwater monitoring events conducted at the Site, which were presented in the Final Remedial Investigation Report (SLR 2024b), the Public Review Draft Feasibility Study Report (SLR 2024a), and this Public Review Draft Feasibility Study Report Addendum. All the low tide and high tide hydrogeological data collected at the Site in 2013, 2014, 2020, and 2024 were used for the transient numerical modeling. The transient simulations also included the April 2024 slug test results and publicly available precipitation data collected at the SEATTLE TACOMA INTL AP, WASHINGTON [457473] weather station.

G.1.2 MODEL DEVELOPMENT

A conceptual model (CM) for the Subject Property area provides a framework for understanding site-specific features and physical processes that influence groundwater flow beneath the area. The CM formulation synthesizes the available site-specific hydrological, lithological, and hydrogeological data.

Construction of the model started with a three-dimensional (3D) geological model comprising the major lithologic units beneath the Subject Property area. Hydrostratigraphic units of the CM were developed from more than 170 boring logs using the Leapfrog Geologic Modeling Software package (Leapfrog Works, version 2021.2.5, Seequent Limited, 2022). Leapfrog implements three-dimensional implicit modeling based on a method of global interpolation using the Radial Basis Function (FastRBF™) developed by Seequent Limited. FastRBF™ is a geostatistical method that efficiently interpolates scattered data to generate a three-dimensional geologic structure. It defines several non-intersecting volumes that fit together to precisely fill the model extent, just as lithological units occur together in the real world.

The boring logs were utilized to construct the 3D geologic domain, identifying major lithologic zones from top to bottom as topsoil, two gravel zones, multiple sand zones, and two silt zones (with sand predominating at various depths), and an underlying clayey silt zone (see Figure G-1). The major lithologic zones initially established five layers or hydrogeologic units (named L1 through L5) generated from Leapfrog Works (Leapfrog Works, version 2021.2.5, Seequent Limited, 2022), with the bottom silt (clayey silt) layer acting as a no-flow boundary. These hydrostratigraphic units were exported from Leapfrog Works and imported into the Groundwater Vistas model grid. Layer 3 was later divided into three sub-layers (re-named L3, L4, and L5) to help guide the placement of the seawall, which brings the total number of layers to seven (named L1 through L7; see Figure G-2).

G.1.3 ASSUMPTIONS FOR THE SHEET PILE SEAWALL

The thickness of the sheet pile seawall is assumed to be 0.2 feet. It was assumed that the wall would extend, as indicated in the previous steady-state modeling, from the ground surface to the top of the intermediate-depth zone, reaching a depth of approximately 43 feet (bottom of layer L4 in the model). The wall is known to have localized small holes and cracks, which are accounted for by setting a relatively high hydraulic conductivity throughout the wall. The hydraulic conductivity of the seawall was set to 9.07 x 10^{-3} ft/day (3.2 x 10^{-6} cm/sec). Based on SLR's experience, this hydraulic conductivity value is one to two orders of magnitude greater than the hydraulic conductivity of a soil-bentonite wall.

G.1.4 EPA METHOD OF SEEPAGE RATE ESTIMATE

The groundwater flux through the Site was estimated by using the following mathematical relationship (USEPA, 2008):

$$Q = K * (b * w) * i * factor$$

Where:

Q = flow rate (cubic feet per day)
K = hydraulic conductivity (ft/day)
b = saturated thickness (ft)
w = model domain width (ft)
i = site-wide/regional hydraulic gradient
factor = 1.5 to 2.0, accounting for other contributions to the hydrogeology; for example, horizontal flow from east or west (which was assumed as no flow boundaries in the numerical modeling explained below), etc.

SLR reviewed site-specific data such as:

- Range of hydraulic conductivities for the major lithologic units (slug test results, April 2024).
- Measured groundwater levels at the Subject Property and measured surface water levels in Slip 4 (collected in 2013, 2014, 2020, and 2024)

- Site hydraulic gradient beneath Subject Property area (SLR 2024b)

Using this information, SLR developed key inputs as shown below in Table G-1.

Table G-1 – Key Inputs to EPA Method of Groundwater Flow Rate Estimates

Groundwater Flow Rate Estimates	
Average saturated thickness beneath the Subject Property, b (ft)	80
Length/Width of the model domain, W (ft)	1,044
Geometric mean hydraulic conductivity (ft/day)	19
Horizontal hydraulic gradient (ft/ft) [Average of low tide gradients]	0.006

Assumptions inherent to the method include:

- Homogenous, isotropic, confined groundwater zone of infinite extent;
- Uniform groundwater thickness;
- The saturated zone represents the groundwater thickness;
- Uniform regional horizontal hydraulic gradient;
- Steady-state flow;
- Negligible vertical gradient;
- No net recharge or net recharge is accounted for in regional hydraulic gradient; and
- No other sources of water were introduced to the groundwater zone.

G.1.5 TRANSIENT NUMERICAL MODELLING

The CM is converted into a mathematical model by selecting a code, specifying boundary conditions, and grids to represent the geologic formations, employing groundwater parameters, recharge, and discharge zones of the Subject Property. Details of the model development are provided below.

G.1.5.1 CODE SELECTION

The numerical model was developed using the publicly available codes for MODFLOW (McDonald and Harbaugh, 1988). The modeling platform and pre-/post-processor is Groundwater Vistas version 8.03 (Environmental Simulations, Inc. [ESI] 2020). It provides comprehensive tools for developing, modifying, and calibrating groundwater flow and solute transport simulations.

MODFLOW-NWT (Niswonger et al., 2011), a Newton formulation of MODFLOW 2005 (Harbaugh, 2005), was the selected version. MODFLOW-NWT uses the Upstream-Weighting (UPW) Package to perform cell rewetting. The UPW Package treats nonlinearities of cell drying and rewetting using a continuous function of groundwater head, rather than the discrete approach of drying and rewetting that is used by the Block-Centered Flow (BCF), Layer Property Flow (LPF), and Hydrogeologic-Unit Flow (HUF) Packages (Anderman and Hill, 2001).

G.1.5.2 MODEL DEVELOPMENT AND INPUT DATA

The three-dimensional geologic model domain was built in Leapfrog Works and exported to the Groundwater Vistas. Hydrogeological data gathered during low and high tide conditions in 2013, 2014, 2020, and 2024 were reviewed and utilized. The natural hydraulic gradient present during low tide reverses when high tide occurs.

The transient model was calibrated using time-varying water level data from 36 monitoring wells, which were screened at shallow, intermediate, and deep depths within the groundwater zone (see Table G-2). Furthermore, water level data from a stilling well in Slip 4 were used to establish the southern transient boundary conditions, as detailed in the following section and depicted on Figure G-3.

G.1.5.3 MODEL GRID AND BOUNDARY CONDITIONS

No flow boundaries were assigned to the east and west edges of the domain to simulate the general north-to-south groundwater flow gradient from the area near shallow well EMW-1S (at the northern boundary of the Subject Property) to the LDW. Transient head conditions facilitating groundwater flow into and out of the system were established on the north and south sides, based on water levels recorded from EMW-1S and a stilling well at the southern end of Slip 4 of the LDW (see Figure G-3). These transient head boundaries depict the previous low and high tide water levels collected from 2013 through 2024.

The model grid consists of 7 layers, 172 columns, and 139 rows, with grid spacing ranging from 5 to 20 ft (see Figure G-3). Finer grid spacing was applied around the seawall. The model domain has an active area of 1.1 million square feet.

G.1.5.4 GROUNDWATER ZONE PROPERTIES AND RECHARGE

For the transient model, the primary groundwater zone properties are hydraulic conductivities and groundwater recharge. One of the missing input data during the previous steady-state modeling was the lack of site-specific hydraulic conductivity data. From April 8 through 10, 2024, Landau personnel conducted falling-head and rising-head slug tests at 14 shallow, intermediate-depth, and deep groundwater monitoring wells on the Subject Property, which are listed in the attached Table G-3. The objective was to collect data to calculate site-specific hydraulic conductivity values for different aquifer depths, particularly in the vicinity of the LDW. Integrating these hydraulic conductivities has improved the transient model's ability to simulate the changing groundwater conditions beneath the Subject Property. Hydraulic conductivity values set for the calibrated model are restricted to between 75 to 125 percent of the geometric averages for the lithologies occurring beneath the Subject Property. The hydraulic conductivities for each lithologic zone are shown on Figure G-4.

Recharge flux to the system was estimated from the average precipitation measurements collected from near the Subject Property, namely at the SEATTLE TACOMA INTL AP, WASHINGTON (457473) weather station. The monthly precipitation data summarizes measurements collected from June 1945 to June 2022. The recharge flux applied to the calibrated model is based on precipitation estimates from weather station measurements (see Figure G-5). During calibration, the recharge zones vary, but overall, the mixing zones and unpaved areas show higher rates than the paved areas.

G.1.5.5 INITIAL CONDITIONS, STRESS PERIODS, AND TIME STEPS

The initial conditions for this transient model were derived from the steady-state model water level results that represent the average hydrogeologic conditions of the aquifer. For transient calibration, a model covering the period from January 2013 to September 2024 was used, featuring 141 monthly stress periods and monthly time steps. The stress periods correspond to the water level data collected from 36 monitoring wells. The transient model computes monthly head and flow across the entire domain.

G.1.6 MODEL CALIBRATION

Calibration of a numerical groundwater flow model is the process of adjusting model parameters to obtain a reasonable match between field-measured values and model-predicted values of heads (groundwater levels) and fluxes (groundwater flows). There are two ways of finding model parameters to achieve calibration: (1) manual trial and error adjustment of parameters, and (2) automated parameter estimation (Anderson and Woessner, 1992). Groundwater Vistas (GV) assists model calibration in three ways (ESI, 2020): (1) calculation of calibration statistics for a head, drawdown, or flux, (2) automated parameter sensitivity analysis, and (3) automatic model calibration using a nonlinear least-squares technique built into the GV interface or using external inverse models such as PEST (Doherty, 2010). All these methods have been applied to calibrate the transient model.

G.2 RESULTS

G.2.1 RESULTS OF EPA METHOD FOR GROUNDWATER FLOW RATE ESTIMATES

A total of approximately 170 boring logs and the resulting three-dimensional geologic model demonstrate that sand dominates the subsurface, while silt, gravel and topsoil occur to some extent. The groundwater flux from north to south was estimated at 101 gallons per minute. The estimate was based on a simple empirical method, and the actual flow rates may vary in the field. The results are summarized below in Table G-4.

Table G-4. Estimation of Groundwater Flux

Inflow Estimates	K[1] (ft/day)	b[2] (ft)	W[3] (ft)	i[4] (ft/ft)	Q[5] (ft3/day)	Q[5] (gpm)	Q[6] (ft3/day)	Q[6] (gpm)
Flow Rate (Q)	19	80	1,044	0.006	14,564	76	19,419	101

Notes

[1] *The geometric average hydraulic conductivity was calculated from the April 2024 slug test results.*

[2] *Saturated thickness was computed from site monitoring wells collected in 2013, 2014, 2020, and 2024.*

[3] *Depth and width measurements were taken from the 3D geologic model generated from boring logs*

[4] *A site-wide geometric average hydraulic gradient was taken from groundwater monitoring data collected in 2013, 2014, 2020, and 2024.*

[5] *Option 1, using a factor of 1.5, represents inflows to the site are coming from north only and are all accounted for by the above computation.*

[6] *Option 2, using a factor of 2.0, assumes a small component of inflows coming from the east and west. The methodology and assumptions are provided in EPA's "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems", EPA 600/R-08/003, January 2008.*

G.2.2 TRANSIENT NUMERICAL MODEL CALIBRATION RESULTS

G.2.2.1 OVERVIEW OF CALIBRATION RESULTS

The calibration results for the transient model indicated that the simulated water levels closely aligned with the measured water levels during both low and high tide conditions across the shallow, intermediate-depth, and deep portions of the aquifer (see Figure G-6 through Figure G-8). The locations of the target wells used for the modelling are shown on Figure G-3. The alignment between measured and simulated heads is more accurate in the shallow and intermediate-depth wells, while the trend remains consistent

across all wells, including the deep wells. This indicates that the transient model effectively captures the site's dynamic hydrogeology. Therefore, examining head profiles during specific low and high tide conditions can assist in assessing the sheet pile seawall's effectiveness in reducing natural groundwater flow throughout the year, as detailed in Section G.2.3.2.

G.2.2.2 CALIBRATED HYDRAULIC CONDUCTIVITIES AND RECHARGE ZONES

A summary of the final calibrated hydraulic conductivities for each of the lithologic zones at the Subject Property that were used for the simulation of the transient model are provided below in Table G-5. The final calibrated hydraulic conductivities range from 75% to 125% of the initially selected geometric mean hydraulic conductivities (pre-calibration geometric means).

Table G-5 Calibrated Hydraulic Conductivities

Leapfrog-Lithologic Groups	Zones	Layers	Kx (ft/day) [cm/sec]	Ky (ft/day) [cm/sec]	Kz (ft/day) [cm/sec]
Topsoil	1	1	4.2 E-01 [1.5E-04]	4.2 E-01 [1.5E-04]	3.3E-02 [1.2E-05]
Gravel [Silty Gravel, Sandy Gravel]	2	1, 2	5.4E+01 [1.9E-02]	5.4E+01 [1.9E-02]	2.9E-01 [1.0E-04]
Sand [Silty Sand, Gravelly Sand]	3	1, 2, 3, 4, 5, 6	2.7E+01 [9.4E-03]	2.7E+01 [9.4E-03]	8.2E-02 [2.9E-05]
Gravel [Silty Gravel, Sandy Gravel]	4	1, 2	4.2E+01 [1.5E-02]	4.2E+01 [1.5E-02]	2.3E+00 [8.1E-04]
Silt [Sandy Silt, Clayey Silt]	5	1, 2	5.9E-02 [2.1E-05]	5.9E-02 [2.1E-05]	4.8E-04 [1.7E-07]
Sand [Silty Sand, Gravelly Sand]	6	1, 2, 3, 4, 5, 6	1.8E+01 [6.3E-03]	1.8E+01 [6.3E-03]	9.5E-01 [3.4E-04]
Sand [Silty Sand, Gravelly Sand]	7	1, 2, 3, 4, 5, 6	4.6E00 [1.6E-03]	4.6E00 [1.6E-03]	7.4E-02 [2.6E-05]
Silt- No flow boundary	8	7	5.9-07 [2.1E-10]	5.9-07 [2.1E-10]	9.9E-08 [3.5E-11]

The final calibrated the recharge rates for the paved area of the Subject Property, the unpaved area of the Subject Property, and the groundwater-surface water mixing zone are presented below.

- Paved Area = 0.0000049 ft/day
- Unpaved Area = 0.000023 ft/day
- Groundwater-Surface Water Mixing Area Near Sheet Pile Seawall = 0.00096 ft/day

G.2.2.3 CALIBRATED SPECIFIC STORAGE AND SPECIFIC YIELDS

Transient conditions arise when groundwater inflow does not equal groundwater outflow, leading to changes in heads and the groundwater budget over time. This imbalance causes the storage of porous material to act as a sink or source. It is crucial to specify parameters that describe an aquifer's ability to transfer water to and from storage (Anderson and Woessner, 2002). The storage coefficient indicates the volume of water released from a unit area of a confined aquifer under a unit decrease in hydraulic head. The storage coefficient is applicable to the lower layers. Conversely, the specific yield represents the amount of water released from a unit area of an unconfined aquifer for a unit decrease in the water table.

These parameters are typically derived from a long-term aquifer test, while a slug test only provides hydraulic conductivity estimates. In such instances, the storage coefficient and specific yield are determined through the calibration of site-specific water levels and hydraulic conductivities. Initial values for specific yield and storage coefficient were adjusted using automatic model calibration, a nonlinear least squares technique built into the GV interface, or external inverse models such as PEST. Zones and layers for hydraulic conductivity, storage coefficient, and specific yield are specified together. Transient head measurements from 36 wells, taken monthly from January 2013 to September 2024, were imported into GV to serve as target heads for transient groundwater flow model calibration. These heads were used to estimate specific storage and specific yields during PEST calibration, as shown below in Table G-6.

Table G-6 Calibrated Specific Storage and Specific Yields

Leapfrog-Lithologic Groups	Zones	Layers	Storage Coefficient (ft^{-1})	Specific Yield
Topsoil	1	1	1.2E-05	2.8E-01
Gravel [Silty Gravel, Sandy Gravel]	2	1, 2	1.5E-05	5.7E-02
Sand [Silty Sand, Gravelly Sand]	3	1, 2, 3, 4, 5, 6	6.9E-06	8.6E-01
Gravel [Silty Gravel, Sandy Gravel]	4	1, 2	3.8E-05	9.2E-01
Silt [Sandy Silt, Clayey Silt]	5	1, 2	6.2E-05	9.4E-03
Sand [Silty Sand, Gravelly Sand]	6	1, 2, 3, 4, 5, 6	1.0E-02	9.0E-01
Sand [Silty Sand, Gravelly Sand]	7	1, 2, 3, 4, 5, 6	3.9E-03	2.5E-01
Silt- No flow boundary	8	7	6.1E-05	3.5E-01

G.2.3 SUMMARY OF TRANSIENT MODEL SIMULATION RESULTS

G.2.3.1 TRANSIENT MODEL WATER BALANCE

The summary water balance for the calibrated transient model is provided below in Tables G-7 and G-8 for model results under low and high tide conditions. During low tide, when the natural gradient prevails, the southern constant head boundary for stress period 92 (August 2020) is the major outflow. Conversely, during high tide, when the reverse gradient dominates, the southern constant head boundary for stress period 25 (January 2015) serves as the main inflow route to the inland parts of the model domain.

This demonstrates the effect of tidal conditions and the dynamic nature of the water levels at the Subject Property, which can be best evaluated through transient numerical modeling. The overall water budget fluctuates with low and high tide conditions, emphasizing the influence of tides and the specific storage capacity of porous materials in functioning as a sink or source.

Table G-7 Summary of Water Balance (Low tide Conditions, August 2020, Stress Period 92)

	In (ft^3/day) [gpm]	Out (ft^3/day) [gpm]
Constant Head	4,147 [21.6]	13,868 [72.1]
Recharge	8,649 [44.9]	0.00 [0.00]
Storage	1,091 [5.7]	19.2 [0.1]
Total	13,887 [72.2]	13,887 [72.2]
Discrepancy (In to Out)	-0.056 ft^3/day	-0.001%

Table G-8 Summary of Water Balance (High tide Conditions, January 2015, Stress Period 25)

	In (ft^3/day) [gpm]	Out (ft^3/day) [gpm]
Constant Head	15,638 [81.3]	1,147 [5.9]
Recharge	8,649 [44.9]	0.00 [0.00]
Storage	6.5 [0.03]	23,146 [120.4]
Total	24,294 [126.3]	24,293.5 [126.3]
Discrepancy (In to Out)	-0.05 ft^3/day	-0.03%

The substantial difference in the system's water budget is also reflected in the significant variations in the potentiometric surface results from the transient simulations between low tide and high tide, which will be explained in detail in the next section.

G.2.3.2 SELECTED LOW AND HIGH TIDE POTENTIOMETRIC SURFACES

The transient model simulations reveal significant variations in potentiometric surfaces between low tide and high tide scenarios, as depicted in Figures G-9 and G-10, underscoring the differences in hydrogeological conditions under these circumstances. As shown on Figure G-9, the shallow groundwater flow is retarded and some of the flow is diverted towards the southwestern corner of the wall.

A reverse and stronger gradient is observed under high tide conditions, as shown on Figure G-10, whereas the low tide conditions indicate a moderate natural gradient, as shown on Figure G-9. The stronger reverse gradient observed during high tide enhances the sheet pile seawall's effectiveness in slowing groundwater flow and contaminant transport from the Site towards the LDW, as detailed in the following section.

G.2.3.3 SELECTED LOW AND HIGH TIDE HEAD PROFILES

The simulated potentiometric surface just upgradient of the sheet pile seawall shows that the wall hinders shallow groundwater flow toward and into the LDW during low tide conditions. This becomes more evident when comparing the head profiles of the existing conditions to model results estimating head profiles for a no-seawall condition at the property. The head differential and head mounding in Layer 3 suggest that the primary flow zone is impeded by the wall, as supported by the groundwater IHS concentrations. At an area along the upgradient side of the seawall shown on Figure G-11, the head profiles immediately adjacent to the wall reveal groundwater mounding that ranges from approximately 1 to 2 feet in Layer 3 (see Figure G-12).

During high tide, the natural gradient reverses, strengthening the effects of the sheet pile seawall and minimizing the shallow groundwater flow from the Subject Property towards the LDW. The sheet pile seawall's ability to slow down the reversed hydraulic gradient caused by high tide conditions is also evident when comparing the head profiles for the existing conditions to the no-seawall condition (see Figure G-13).

G.2.3.4 CONCLUDING REMARKS ON THE TRANSIENT NUMERICAL MODEL RESULTS

The transient model results highlight the dynamic hydrogeologic conditions beneath the Subject Property. They also demonstrate the sheet pile seawall's effectiveness in impeding shallow groundwater flow and contaminant transport to the LDW. Based on hydrogeological data from low and high tide conditions, the site-wide horizontal hydraulic gradient is more pronounced than the vertical gradient near the seawall, as indicated by the limited vertical head differences between Layers 3 and 4, and Layers 4 and 5. Despite small localized holes and cracks in the wall, some shallow groundwater is expected to be diverted to the ends of the wall, primarily the southwestern end. Additionally, some flow occurs under the seawall during low tide conditions. However, as evidenced by the limited contaminant migration down to the intermediate-depth and deep monitoring wells near the sheet pile seawall, lateral flow is more prevalent than vertical flow.

G.2.3.5 SENSITIVITY ANALYSIS

Sensitivity analyses were conducted to understand how changing certain conditions can affect the inflow rates to the LDW. For example, two changes made to the model input parameters include:

1. The thickness of the existing sheet pile seawall was initially set at 1 foot and then changed to 0.2 feet. The model results showed an increase in the wall's retardation capacity at 1-foot thickness.

2. The hydraulic conductivity of the seawall was adjusted (decreased by tenfold and increased by tenfold), and the results showed corresponding increases and decreases in the wall's retardation capacity.

G.2.3.6 MODEL UNCERTAINTIES

It is important to understand numerical models have their limitations and the results should be considered approximate. A conceptual 3D geological model and its numerical counterpart rarely capture all field conditions accurately, necessitating continuous updates as new data become available. The calibrated transient flow model simulations match water levels during both low and high tide conditions, and the potentiometric surfaces and estimated groundwater flow budget for these conditions are consistent. However, uncertainties in the model may still limit its predictive capabilities. The primary limitations stem from numerical simulations, which offer only approximate estimates of groundwater conditions at a given site (Anderson and Woessner, 2002). Additionally, assumptions regarding the thickness and hydraulic conductivity of the sheet pile seawall present another limitation.

SLR acknowledges that the numerical simulation results are based on simplified representations of actual field conditions. For instance, the water budget estimated using the USEPA's analytical method is comparable to the results of the low tide numerical model. However, these results represent two different scenarios: the former does not assume the presence of the seawall, while the latter accounts for the retardation effect of the seawall. Hence, the actual flow rate and retardation capacity of the existing sheet pile seawall are anticipated to be close to the model's approximations, though they may vary slightly higher or lower.

REFERENCES

AQTESOLV™ for Windows. http://www.aqtesolv.com/slug_test_analysis.htm, HydroSOLVE, Inc.

Anderman, ER. and Hill, MC. -2001 MODFLOW-2000: the US Geological Survey modular ground-water model--documentation of the Advective-Transport Observation (ADV2) Package

Anderson, M.P, and Woessner, W. W., 1992, Applied Groundwater Modeling, Simulation of Flow and Advective Transport, Academic Press, Inc.

Doherty, J 2010b. PEST Model Independent Parameter Estimation User Manual: 5th Edition. Watermark Numeric. Document can be found via the following website address: http://www.pesthomepage.org/Downloads.php

ESI (Environmental Simulations), Inc. 2020. Guide to Using Groundwater Vistas, Version 6. pp 213. Prepared by Environmental Simulations, Inc., Reinholds, VA.

Freeze, R.A. and Cherry, J.A. (1979) Groundwater. Prentice Hall Inc., Englewood Cliffs, New Jersey, 36-38.

Harbaugh, A.W. (2005) MODFLOW-2005, the U.S. Geological Survey Modular Ground-Water Model—The Ground-Water Flow Process. U.S. Geological Survey Techniques and Methods 6-A16.

McDonald, M. and Harbaugh, A.W. (1988) A Modular Three-Dimensional Finite Difference Ground-Water Flow Model. In: Techniques of Water-Resources Investigations, Book 6, U.S. Geological Survey, 588.

Niswonger, R.G., S. Panday, and M. Ibaraki, 2011, MODFLOW -NWT, a Newton Formulation for MODFLOW-2005, U.S. Geological Survey Techniques and Methods Book 6, Chapter A37, 56p

Pollock, D.W., 2016, Extending the MODPATH Algorithm to Rectangular Unstructured Grids.

Seequent Limited, 2020, Leapfrog Works version 4.0.1 3D geological modeling.

SLR International Corporation. 2024a. Public Review Draft Feasibility Study Report, 8th Avenue Terminals, Inc., Seattle, Washington. January.

SLR International Corporation. 2024b. Final Remedial Investigation Report, 8th Avenue Terminals, Inc. Site, Seattle, Washington. December.

U.S. Environmental Protection Agency, "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems", EPA 600/R-08/003, January 2008.

Table G-2. List of Transient Target Wells

Number	Well ID	X	Y	Layer	Remark
1	CMW-2	1273304	199224	3	
2	CMW-3	1273239	199072	3	
3	CMW-4	1273168	198940	3	
4	CMW-5	1273003	198829	3	
5	CMW-6	1272873	198692	3	
6	CMW-7	1272712	198703	3	
7	DMW-2	1272715	199182	3	
8	DMW-3	1272715	199086	3	
9	DMW-6	1272851	198920	3	
10	HC-4	1272720	198786	3	
11	HC-20	1272652	199231	3	
12	SLR-1	1273065	199652	3	
13	SLR-2	1273280	199674	3	
14	SLR-3	1273163	199531	3	
15	SLR-6	1273285	199544	3	
16	SLR-7	1272997	199539	3	
17	EMW-1S	1272940	199763	3	North Boundary
18	EMW-2S	1273330	199571	3	
19	EMW-3S	1273365	199487	3	
20	EMW-5S	1273148	199380	3	
21	EMW-6S	1272871	199487	3	
22	EMW-7S	1272655	199379	3	
23	EMW-8S	1272897	199223	3	
24	EMW-9S	1273045	199147	3	
25	EMW-11S	1272658	199008	3	
26	EMW-12S	1272671	198752	3	
27	EMW-13S	1272789	198668	2	
28	EMW-4D	1273366	199352	6	
29	EMW-10D	1272714	199094	5	
30	EMW-14D	1272873	198696	3	
31	EMW-15D	1273165	198940	5	
32	EMW-16D	1272700	198688	3	
33	EMW-19D	1272734	199097	6	
34	EMW-20D	1273158	198936	6	
35	EMW-21D	1272751	198671	6	
36	EMW-22D	1273356	199363	6	
37	EMW-23S	1272598	198943	3	New well, not enough data
38	Stilling Well	1273270	198906	Slip 4	South Boundary

Table G-3. Summary of Slug Test Hydraulic Conductivities

Well	Depth	Screen Length (ft)	Well Diameter (inches)	Slug Test Type	Kxy (ft/day)	Kxy (cm/sec)	Remarks
CMW-1	Shallow	15	2	Falling	19.28	6.80E-03	Bouwer and Rice (1976) solution method
				Rising	25.1	8.85E-03	
CMW-2	Shallow	15	2	Falling	1.4	4.94E-04	Bouwer and Rice (1976) solution method
				Rising	1.5	5.29E-04	
EMW-7S	Shallow	14.8	2	Falling	5.57	1.96E-03	Bouwer and Rice (1976) solution method
				Rising	1.4	4.94E-04	
EMW-12S	Shallow	14.8	2	Falling	96.7	3.41E-02	Bouwer and Rice (1976) solution method
				Rising	68.5	2.42E-02	
EMW-13S	Shallow	15	2	Falling	0.74	2.61E-04	Bouwer and Rice (1976) solution method
				Rising	0.79	2.79E-04	
EMW-4D	Intermediate	10	2	Falling1	5.3	1.87E-03	Bouwer and Rice (1976) solution method
				Rising1	5.3	1.87E-03	
EMW-10D	Intermediate	9.8	2	Falling	46.4	1.64E-02	Bouwer and Rice (1976) solution method
				Rising	77.6	2.74E-02	
EMW-14D	Intermediate	15	2	Falling	28.6	1.01E-02	Bouwer and Rice (1976) solution method
				Rising	46.72	1.65E-02	
EMW-15D	Intermediate	15	2	Falling	3.74	1.32E-03	Bouwer and Rice (1976) solution method
				Rising	4.7	1.66E-03	
EMW-16D	Intermediate	10	2	Falling	37.6	1.33E-02	Bouwer and Rice (1976) solution method
				Rising	42.2	1.49E-02	
EMW-19D	Deep	5	2	Falling	70.1	2.47E-02	Bouwer and Rice (1976) solution method
				Rising	116.9	4.12E-02	
EMW-20D	Deep	15	2	Falling	11.12	3.92E-03	Bouwer and Rice (1976) solution method
				Rising	17.7	6.24E-03	
EMW-21D	Deep	5	2	Falling	35.2	1.24E-02	Bouwer and Rice (1976) solution method
				Rising	22.3	7.87E-03	
EMW-22D	Deep	5	2	Falling	32.9	1.16E-02	Bouwer and Rice (1976) solution method
				Rising	33.4	1.18E-02	

Figure G-1. Input to the Leapfrog-Generated 3D Geology

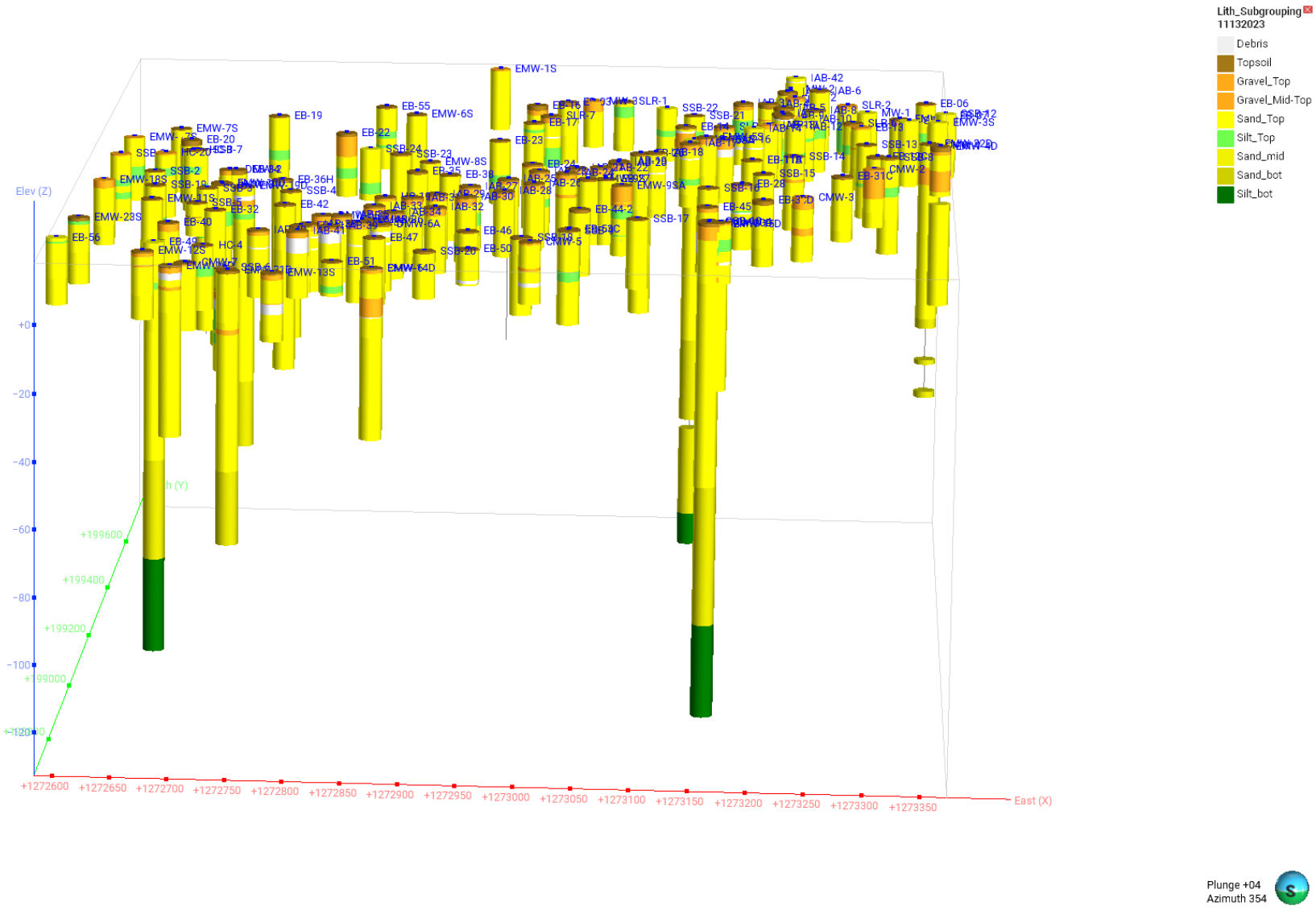
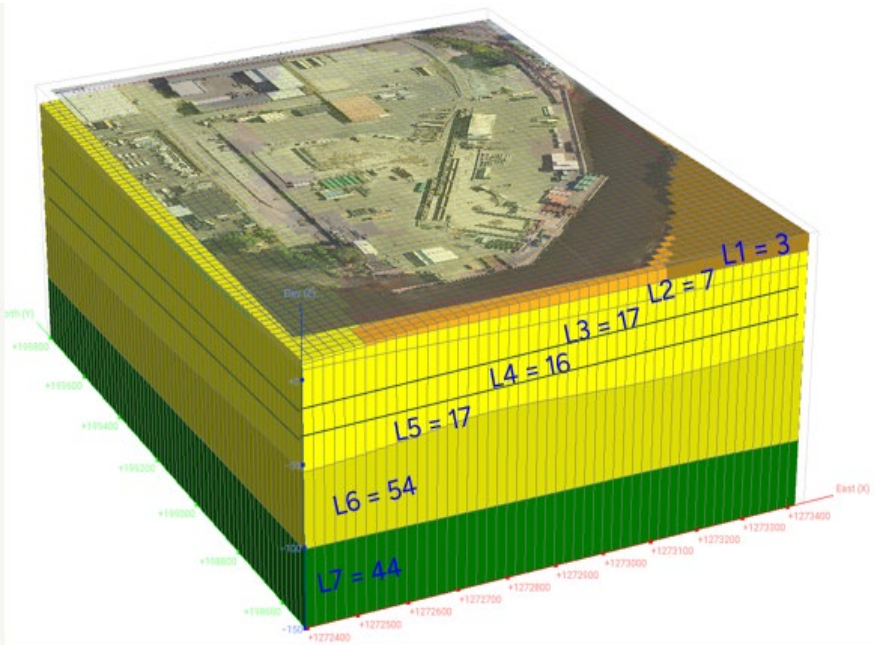


Figure G-2. Leapfrog-Generated 3D Geology Modflow Grid (Domain)



Layer	Ave. Top Elevation (ft)	Ave. Bottom Elevation (ft)	Ave. Thickness (ft)
1	6.9	4.1	2.9
2	4.1	-2.9	7.0
3	-2.9	-20.1	17.2
4	-20.1	-35.9	15.8
5	-35.9	-53.2	16.7
6	-53.2	-106.3	53.8
7	-106.3	-150	43.7

Figure G-3. No Flow and Transient Model Boundaries

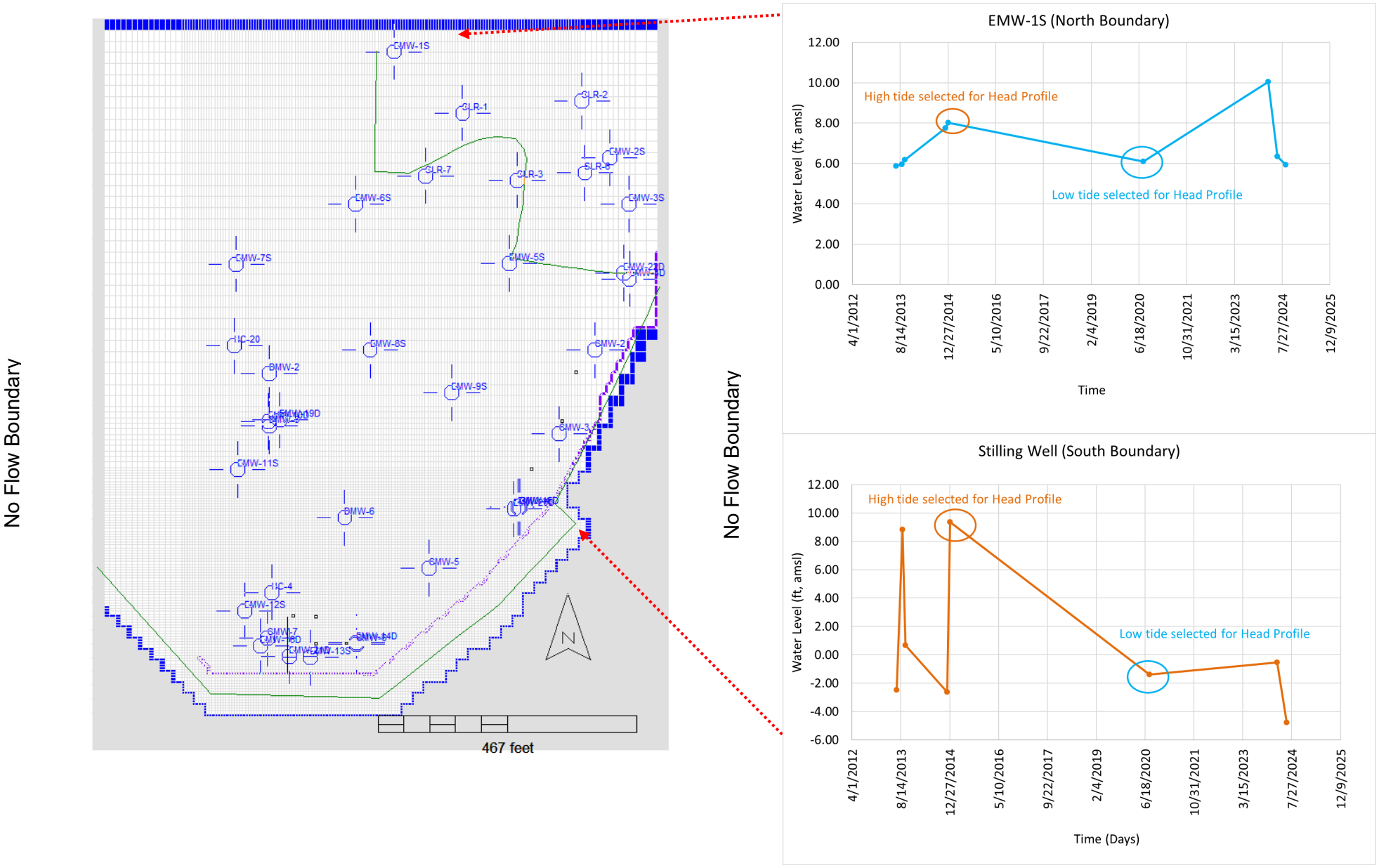
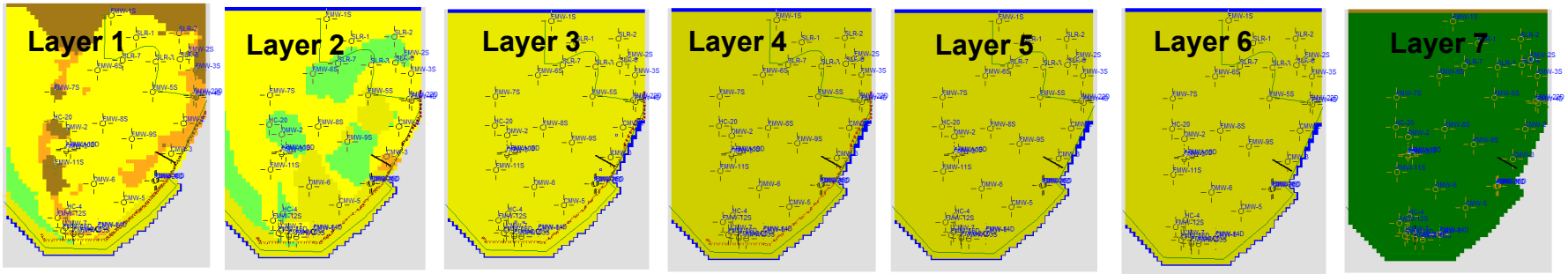


Figure G-4. Calibrated Hydraulic Conductivities



Layers	Dominant Lithology	Kxy (ft/d) [cm/sec]	Kz (ft/d) [cm/sec]
1	Topsoil	4.16 E-01 [1.47E-04]	3.3E-02 [1.2E-05]
1,2	Gravel [Silty Gravel, Sandy Gravel]	5.4E+01 to 4.2E+01 [1.5E-02 to 1.9E-02]	2.9E-01 to 2.3E+00 [1.0E-04 to 8.1E-04]
1,2	Silt [Sandy Silt, Clayey Silt]	5.9E-02 [2.1E-05]	4.8E-04 [1.7E-07]
1,2,3,4, 5, 6	Sand [Silty Sand, Gravelly Sand]	4.6E+01 to 2.7E+01 [1.6E-03 to 9.4E-03]	7.4E-02 to 9.5E-01 [2.6E-05 to 3.4E-04]
7	Silt-bottom [Lower Layer Clayey Silt]	5.9E-07 [2.1E-10]	9.9E-08 [3.5E-11]

Note- The calibrated hydraulic conductivities for the gravel, silt, and sand layers are within the range of slug test K values listed in Table G-3.

Figure G-5. Calibrated Recharge Zone Rates

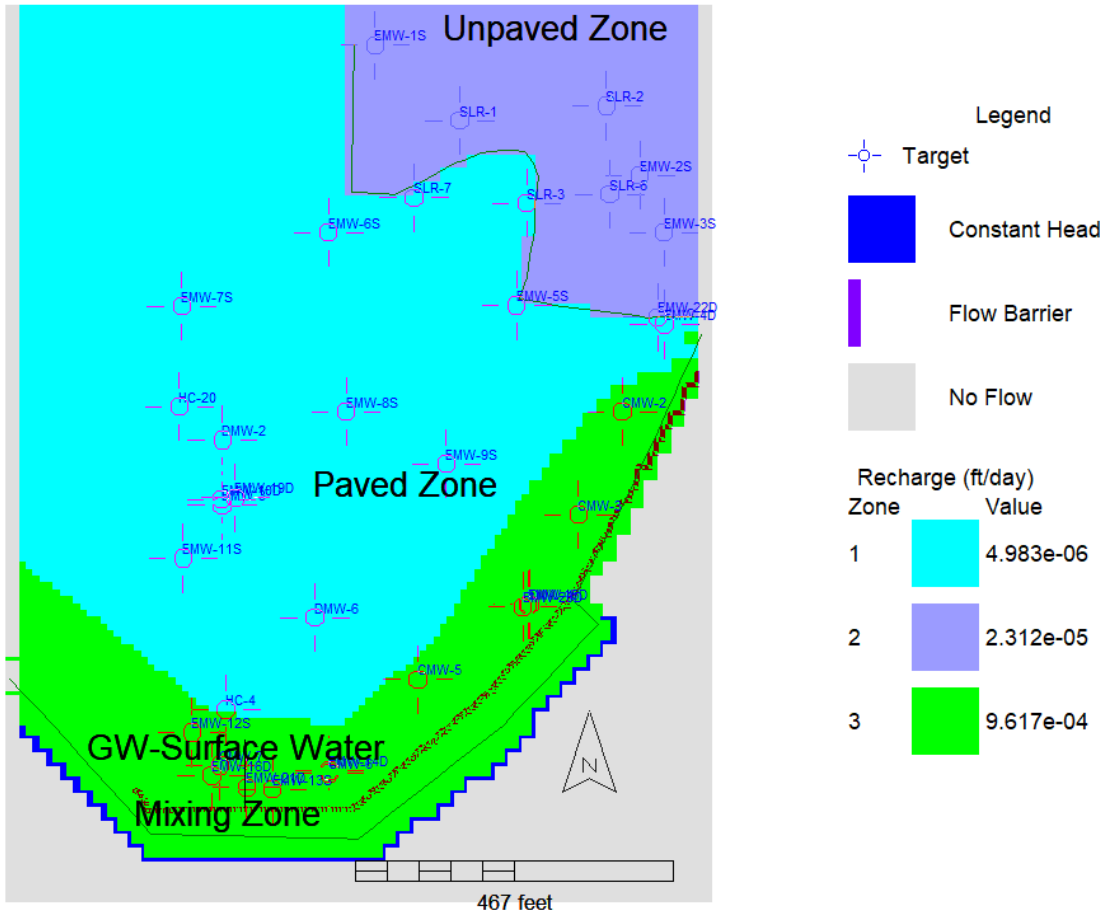


Figure G-6. Transient Calibration Heads- Shallow Zone

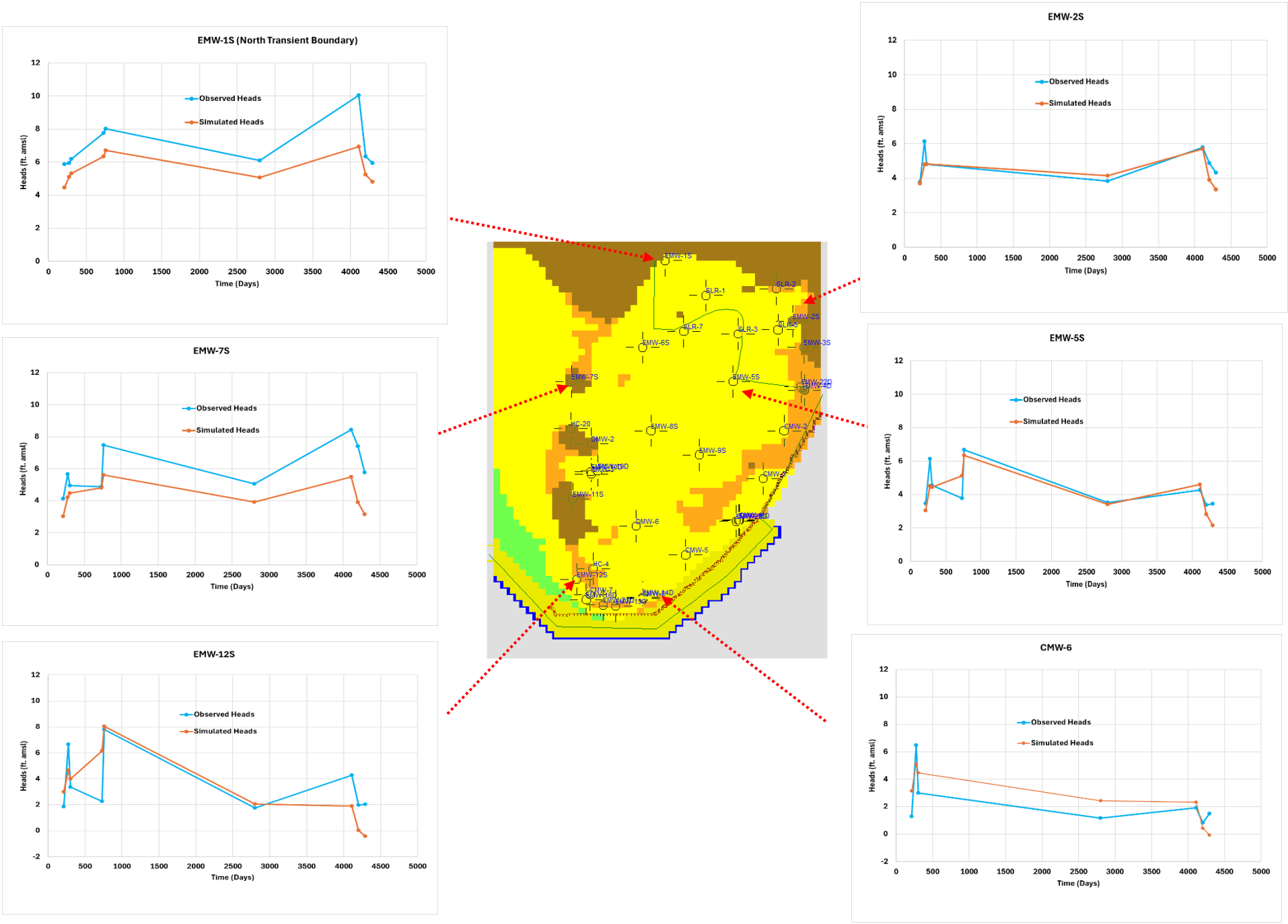
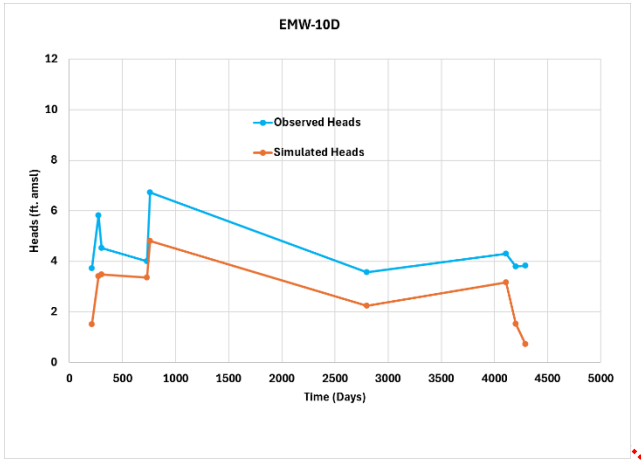
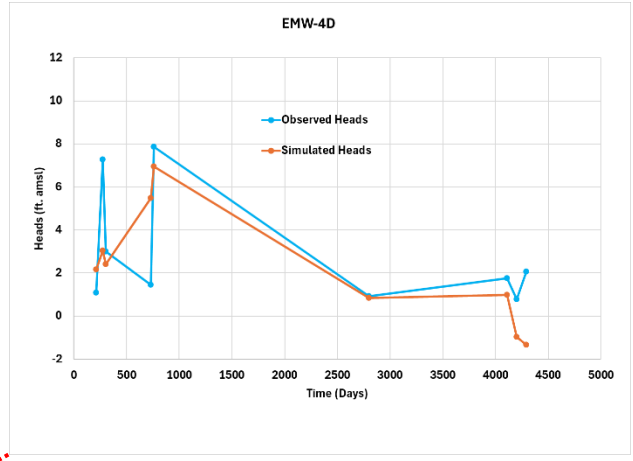
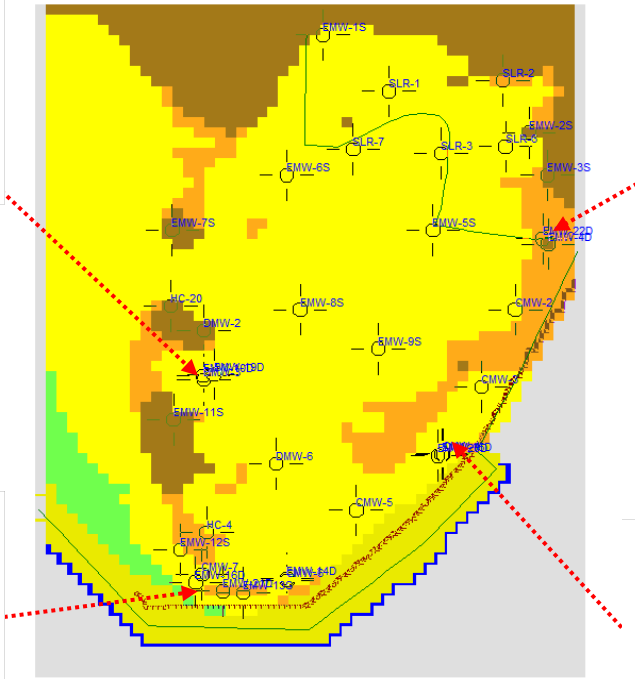
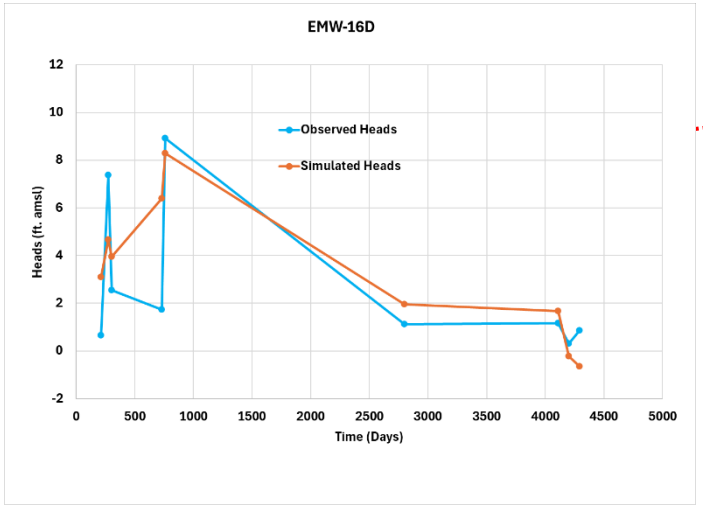


Figure G-7. Transient Calibration Heads- Intermediate- Depth Zone









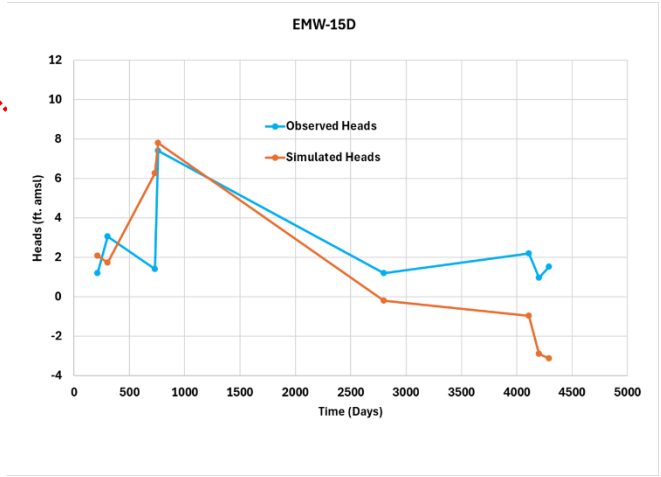


Figure G-8. Transient Calibration Heads- Deep Zone

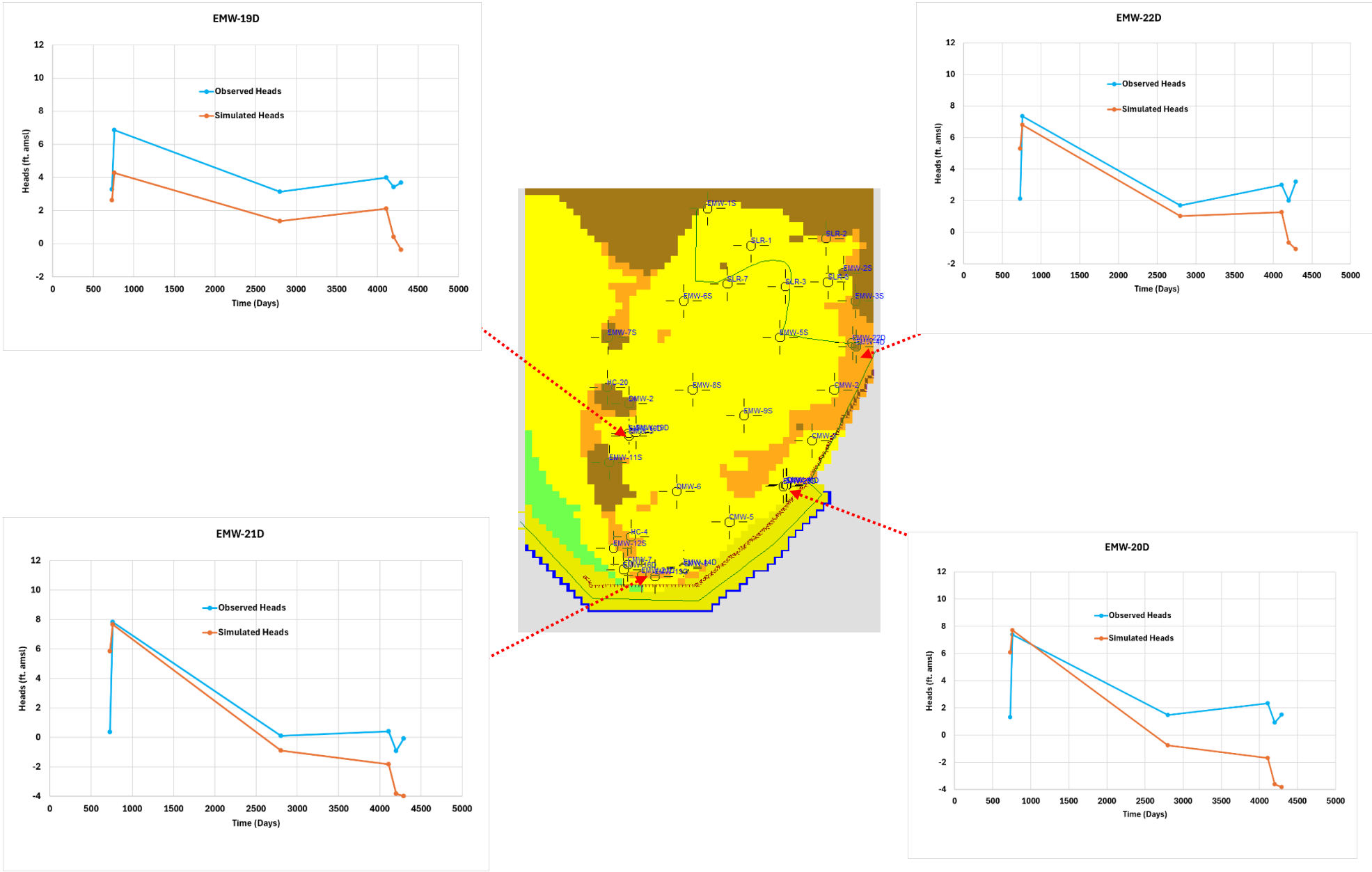


Figure G-9. Low tide Transient Potentiometric Surfaces (Low tide Conditions, August 2020, Stress Period 92)

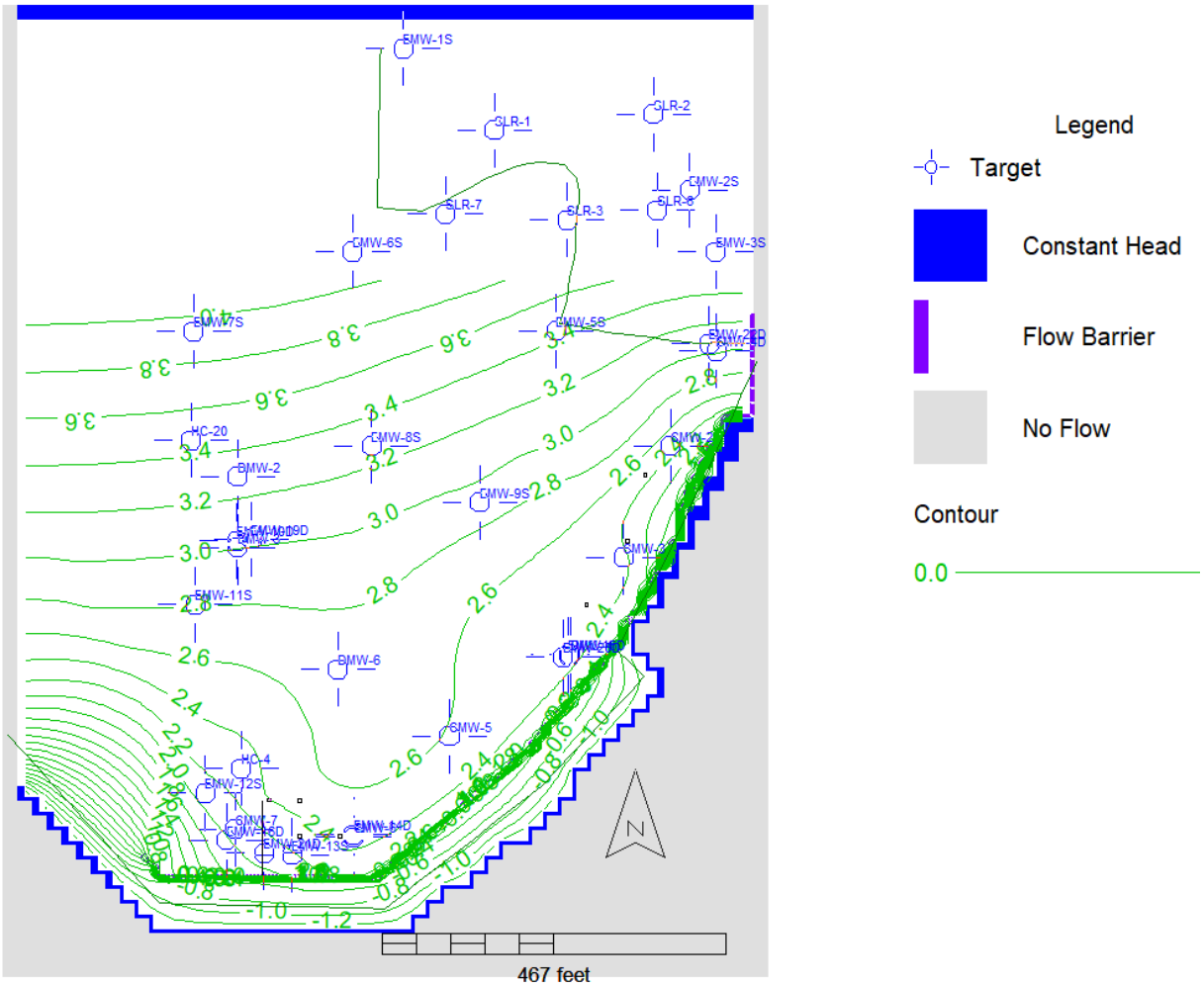


Figure G-10. High tide Transient Potentiometric Surfaces (January 2015, Stress Period 25)

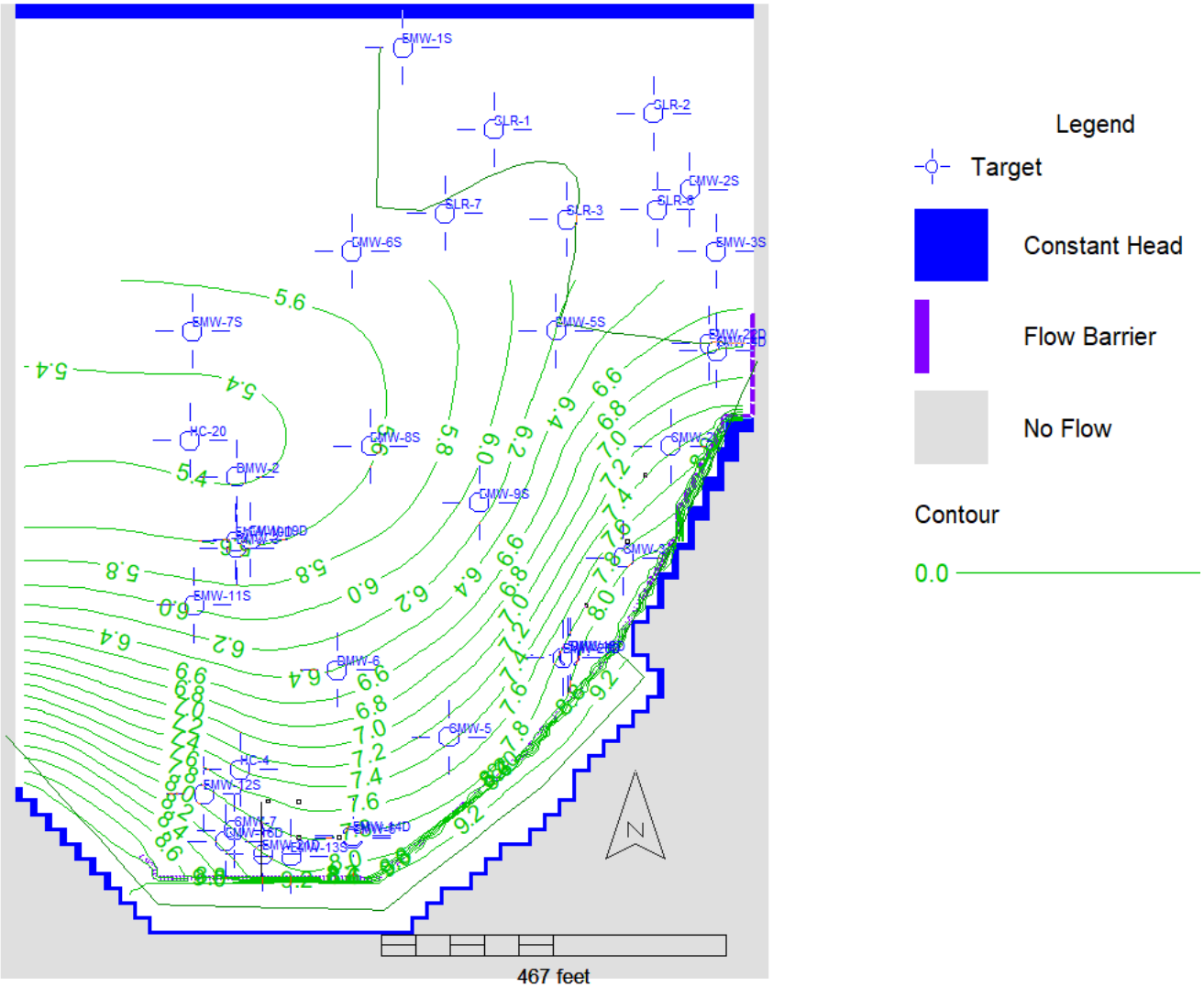


Figure G-11. Location of Head Profiles (Row120) in Model Domain

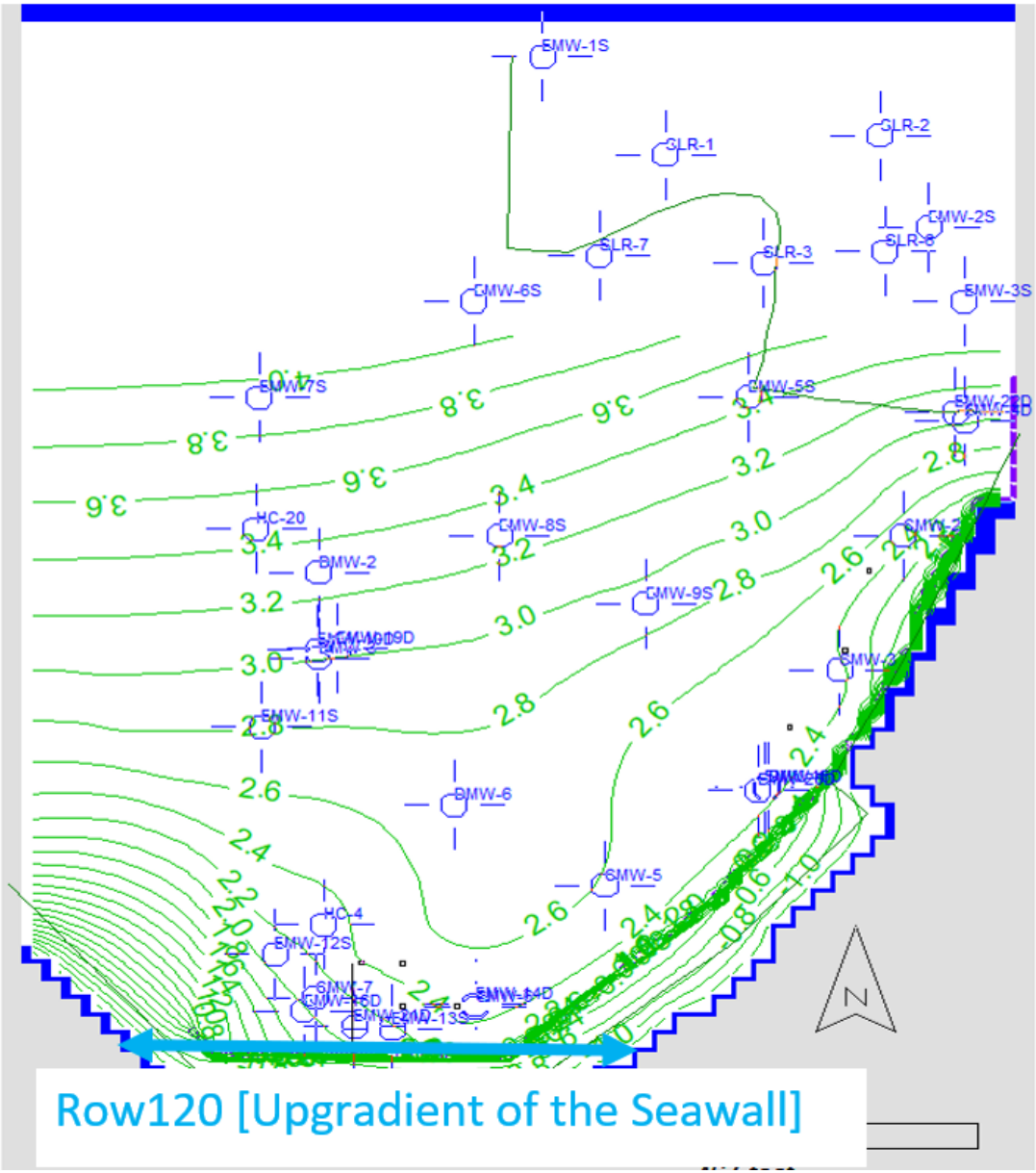


Figure G-12. Head Profiles for Multiple Layers Immediately Upgradient of the Seawall (Low tide Conditions, August 2020, Stress Period 92)

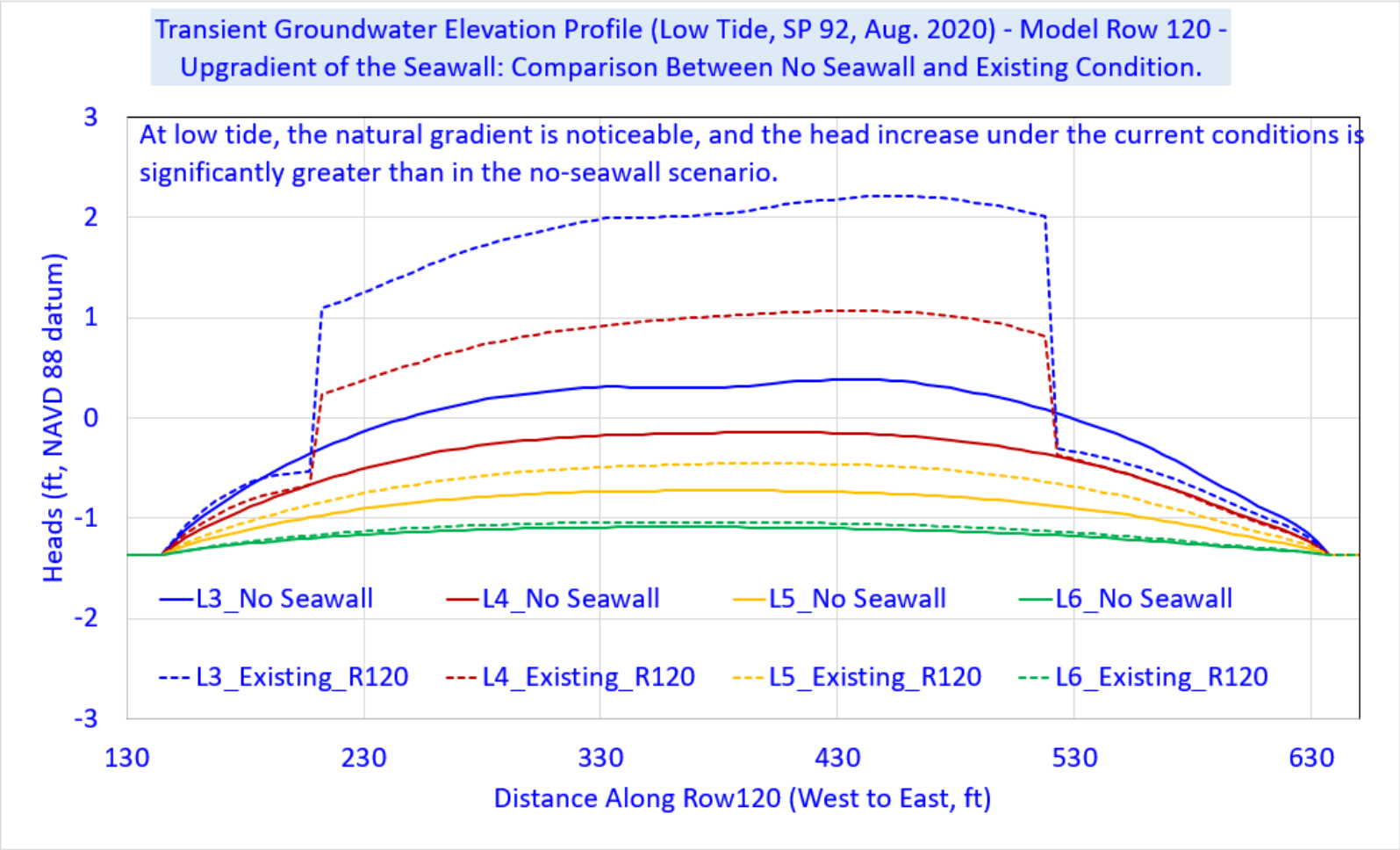
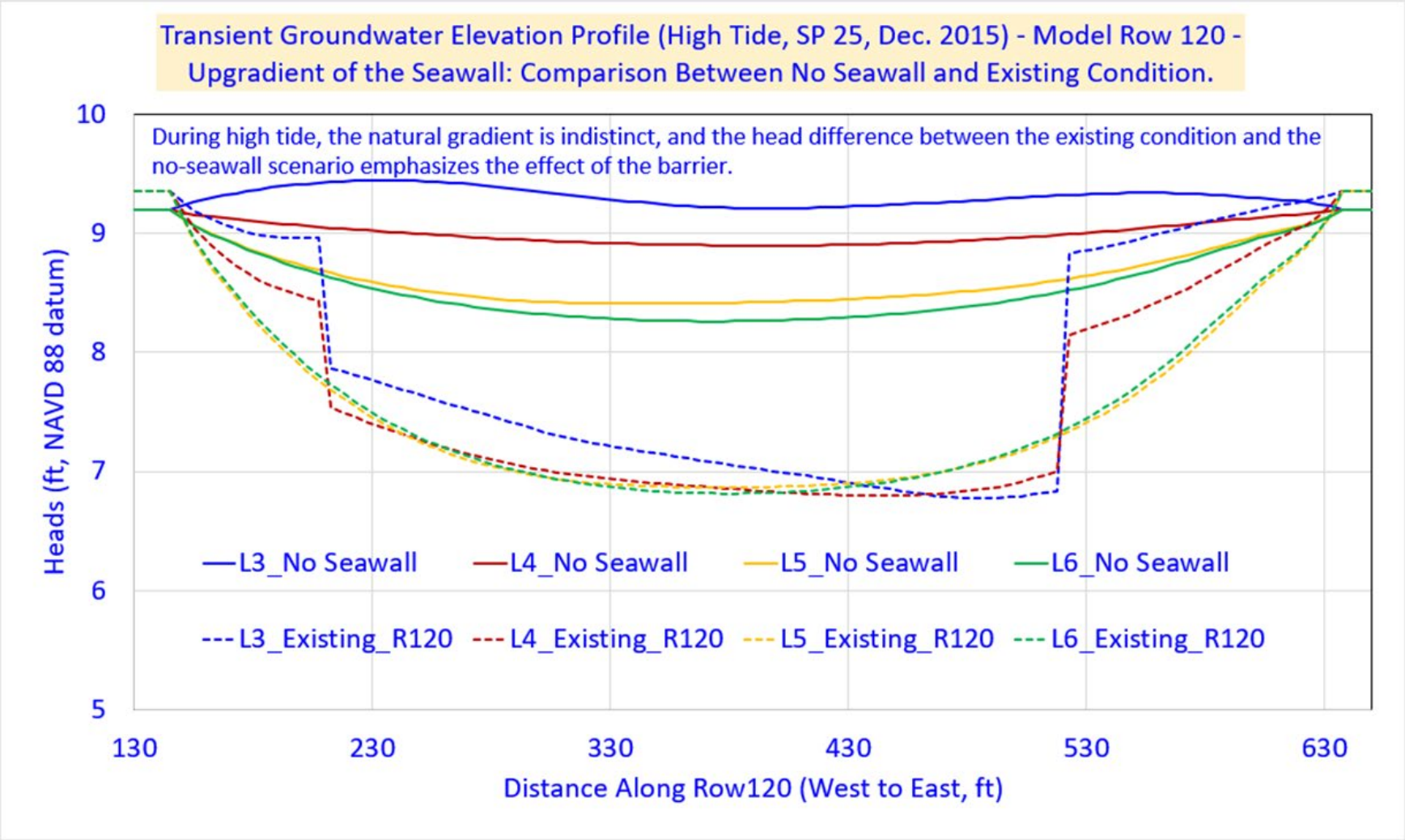


Figure G-13. Head Profiles for Multiple Layers Immediately Upgradient of the Seawall (High tide Conditions, January 2015, Stress Period 25)



APPENDIX H

Data Validation Memorandums for 2024 Sample Analytical Results and 2025 Sample Analytical Results

LANDAU ASSOCIATES

TECHNICAL MEMORANDUM

TO: Mike Staton, Project Manager

FROM: Kristi Schultz and Danielle Jorgensen

DATE: October 25, 2024

RE: 8th Avenue Terminals, Inc. Site
2024 Soil and Groundwater Sample Analytical Results
Laboratory Data Quality Evaluation

This technical memorandum provides the results of a focused data validation associated with 109 groundwater samples, 1 soil sample, and 6 field duplicates collected during 2024 sampling events at the 8th Avenue Terminals, Inc. Site, located in Seattle, Washington. Samples were analyzed by Apex Laboratories (Apex) located in Tigard, Oregon; and SGS North America (SGS), located in Wilmington, North Carolina. This data quality evaluation covers Apex data packages A4C1045, A4C1305, A4C1335, A4C1365, A4D1138, A4F0920, A4F0988, and A4I1323; and SGS data package B9197. Samples submitted to Apex were analyzed for volatile organic compounds ([VOCs], US Environmental Protection Agency [EPA] Method SW8260D with selected ion monitoring [SIM]); semivolatile organic compounds (SVOCs; EPA Method 8270E with or without SIM); diesel- and motor oil-range petroleum hydrocarbons (Washington State Department of Ecology [Ecology]-approved Method NWTPH-Dx); and total and dissolved metals (EPA Method 6020B). Samples submitted to SGS were analyzed for chlorinated dioxins and furans (EPA Method 8290A).

The verification and validation check was conducted with guidance from applicable portions of EPA's *National Functional Guidelines for Organic Superfund Methods Data Review* (EPA 2020b), *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA 2020a), *National Functional Guidelines for High Resolution Superfund Methods Data Review* (EPA 2020c), and *Final Remedial Investigation and Feasibility Study Work Plan, 8th Avenue Terminals, Inc. Site, Seattle, Washington* (SLR International Corporation 2012). Landau Associates, Inc. (LAI) performed an EPA-equivalent Level IIA verification and validation check on each laboratory data package, which included the following:

- Verification that the laboratory data package contained all necessary documentation (including chain-of-custody record (COCs); identification of samples received by the laboratory; date and time of receipt of the samples at the laboratory; sample conditions upon receipt at the laboratory; date and time of sample analysis; explanation of any significant corrective actions taken by the laboratory during the analytical process; and, if applicable, date of extraction, definition of laboratory data qualifiers, all sample-related quality control data, and quality control acceptance criteria).
- Verification that all requested analyses, special cleanups, and special handling methods were performed.

- Evaluation of sample holding times.
- Evaluation of quality control data compared to acceptance criteria, including method blanks, surrogate recoveries, matrix spike results, laboratory duplicate and/or replicate results, and laboratory control sample results.
- Evaluation of overall data quality and completeness of analytical data.

Data validation qualifiers are added to the sample results, as appropriate, based on the verification and validation check. The absence of a data qualifier indicates that the reported result is acceptable without qualification. The data quality evaluation is summarized below. Data qualifiers are summarized in Table 1.

Chain-of-Custody Records

A signed COC record was attached to the data packages. The laboratory received all samples in good condition. All analyses were performed as requested. No special cleanups or handling methods were requested.

Upon receipt by Apex or SGS, the sample container information was compared to the associated chain-of-custody and the cooler temperatures were recorded. The coolers were received with temperatures within the EPA-recommended limit of ≤6°C. No qualification of the data was necessary.

Holding Times

For all analyses and all samples, the time between sample collection, extraction (if applicable), and analysis was determined to be within EPA- and project-specified holding times. No qualification of the data was necessary.

Blank Results

Laboratory Method Blanks

At least one method blank was analyzed with each batch of samples for analysis. Target analytes were not detected at concentrations greater than the reporting limits in the associated method blanks, with the following exceptions:

- Total copper was detected in the method blank associated with batch 24C1011 in data package A4C1365. Total copper was either not detected in the associated samples at concentrations greater than the reporting limit, or the detected concentration was considered sufficiently greater than that in the blank. No qualification of the data was necessary.

Surrogate Recoveries

Appropriate compounds were used as surrogate spikes for the organics analyses. Recovery values for the surrogate spikes were within the current laboratory-specified control limits for all project samples. No qualification of the data was necessary.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) and Laboratory Replicate Results

At least one MS and/or laboratory replicate sample were analyzed with the VOC, SVOC, diesel- and motor oil-range petroleum hydrocarbons, and/or total/dissolved metals parameters in data packages A4C1045, A4C1305, A4C1335, A4C1365, A4D1138, A4F0920, A4F0988, and A4I1323. The recovery values for each required spiking compound and/or the relative percent differences (RPDs) between the laboratory replicate results were within the current project-specified and/or laboratory-specified control limits for all project samples with the following exceptions:

- The MS recoveries for vinyl chloride associated with the VOC analyses of samples SLR-6-240313 in data package A4C1335, EMW-23S-240314 in data package A4C1365, and EMW-26S-240917 in data package A4I1323 were greater than the laboratory-specified control limit. Vinyl chloride was not detected in the associated samples at concentrations greater than the reporting limit; no qualification of the data was necessary.
- The laboratory duplicate RPDs for dissolved copper associated with samples CMW-2-240313 in data package A4C1335 and SLR-1-240604 in data package A4F0920 were greater than the laboratory-specified control limit. The associated sample results were qualified as estimated (J), as indicated in Table 1.
- The MS/MSD recoveries for dissolved arsenic associated with the metals analysis of sample DMW2-240314-(0.45) in data package A4D1138 were greater than the laboratory-specified control limit. The associated sample result was qualified as estimated (J), as indicated in Table 1.
- The MS recoveries for dissolved arsenic and copper associated with samples CMW-4-240605 and SLR-3-2040605 in data package A4F0920, and sample EMW-10D-240606 in data package A4F0988 were less than the laboratory-specified control limit. The associated sample results were qualified as estimated (J, UJ), as indicated in Table 1.
- The MS recovery for dissolved arsenic associated with sample CMW-2-240918 in data package A4I1323 was less than the laboratory-specified control limit. The associated sample result was qualified as estimated (J, UJ), as indicated in Table 1.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD) Results

At least one laboratory control sample and/or laboratory control sample duplicate (LCS/LCSD) was analyzed with each batch of samples for analysis. Recoveries and RPDs for the laboratory control samples and associated duplicates were within the current laboratory-specified control limits, with the following exceptions:

- The LCS recovery for vinyl chloride associated with SIM VOC batch 24C0692 in data package A4C1365 was greater than the laboratory-specified control limit. Vinyl chloride was not detected in the associated samples at concentrations greater than the reporting limit. No qualification of the data was necessary.

- The laboratory indicated no LCS was run with batch 24D0462 associated with the dissolved metals analysis in data package A4D1138. The associated sample results were qualified as estimated (J), as indicated in Table 1.

- The LCS recovery for benzo(g,h,i)perylene associated with SVOC batch 24F0393 in data package A4F0920 was greater than the laboratory-specified control limit. Benzo(g,h,i)perylene was not detected in the associated samples at concentrations greater than the reporting limit. No qualification of the data was necessary.
- The LCS/LCSD recoveries for fluorene associated with SVOC batch 24I0717 in data package A4I1323 were greater than the laboratory-specified control limit. Associated detected concentrations were qualified as estimated (J), as indicated in Table 1.

Blind Field Duplicate Results

Six pairs of blind field duplicate water samples (EMW-31S-240313/EMW-11S-240313, SLR-17-240314/SLR-7-240314, DMW12-240604/DMW2-240604, EMW-26S-240604/EMW-6S-240604, DMW-12-240917/DMW-2-240917, and EMW-26S-240917/EMW-6S-240917) were submitted for analysis with data packages A4C1335, A4C1365, A4F0920, and A4I1323.

A project-specified control limit of 20 percent was used to evaluate the RPDs between the duplicate samples except when the sample results were within five times the reporting limit. In these cases, a project-specified control limit of plus or minus the reporting limit was used. RPDs for the duplicate sample pairs submitted for analysis were within the project-specified control limits, with the following exceptions:

- The RPD for total copper associated with field duplicate pair SLR-17-240314/SLR-7-240314 in data package A4C1365 was greater than the project-specified control limit. The associated sample results were qualified as estimated (J), as indicated in Table 1.
- The RPDs for acenaphthylene and dissolved arsenic associated with field duplicate pair DMW12-240604/DMW2-240604 in data package A4F0920 was greater than the project-specified control limit. The associated sample results were qualified as estimated (J), as indicated in Table 1.
- The RPD for dissolved arsenic associated with field duplicate pair DMW-12-240917/DMW-2-240917 in data package A4I1323 was greater than the project-specified control limit. The associated sample results were qualified as estimated (J), as indicated in Table 1.

Total and Dissolved Metals Concentrations

The analytical results for total and dissolved metals were compared for each project sample. A project-specified control limit of 20 percent was used to evaluate the RPDs between the total and dissolved metals results, except when the sample results were within five times the reporting limit. In these cases, a project-specified control limit of plus or minus the reporting limit was used. The RPDs between the total and dissolved metals results were within the project-specified control limits for all project samples, with the following exceptions:

- The RPDs between the total/dissolved copper concentrations for samples CMW-2-240313 in data package A4C1335 and HC-4-240314 in data package A4C1365 were greater than the

project-specified control limit. The associated results were qualified as estimated (J), as indicated in Table 1.

Quantitation Limits

Project-specified quantitation limits were met for all samples except for instances where dilution was performed due to the presence of high-level target or non-target species or sample matrix interference (i.e., sample foaming at the time of purging).

For chlorinated dioxin/furan results qualified by the laboratory as “estimated maximum possible concentration” (EMPC), results were qualified as non-detect (U) at the reported concentration. Determining whether an EMPC qualified result is considered a detection requires a Level IV validation check and is beyond the scope of the review discussed in this memorandum.

Audit/Corrective Action Records

No corrective action records were generated for these sample batches. Based on the laboratory’s case narratives, continuing calibration verification (CCV) recovery results were within laboratory-specified control limits. The laboratory also noted the following:

- Following a review of the initial metals results, the dissolved arsenic and/or copper concentrations for samples EMW-21D-240312 in data package A4C1305; CMW-6-240313 and EMW-13S-240313 in data package A4C1335; and CMW-5-240314 and DMW2-240314 in data package A4C1365 appeared much higher than expected. A field filtering issue was suspected, and the lab was requested to lab filter remaining volume for the sample and reanalyze. The reanalysis results were reported in data package A4D1138 and were much more consistent with historical results. The original analysis results were qualified as “do not report” (DNR), and the reanalysis results were reported, as indicated in Table 1.
- In data package A4C1335, lab notes indicate for sample SLR-3-240313, the SVOC sample and solvent extract created an emulsion during extraction. The sample and solvent were left in the extraction bottle to aid in the separation of the emulsion; however, the sample extract bottle was not refrigerated per method requirements for a period of approximately 15 hours. The associated sample results were qualified as estimated (J, UJ) for improper sample preservation, as indicated in Table 1.

Completeness and Overall Data Quality

The completeness for this data set is 100 percent, which meets the project goal of 90 percent minimum.

Data precision was evaluated through laboratory control sample duplicates, laboratory duplicates, matrix spike duplicates, and blind field duplicates. Data accuracy was evaluated through laboratory control samples, matrix spikes, and surrogate spikes. No data were rejected.

LANDAU ASSOCIATES, INC.

Kristi Schultz
Senior Data Specialist

Danille Jorgensen
Environmental Data Manager

DRJ/kes
[P:\2175\001\T\DATA\DV\DV MEMOS\2024\8TH AVE TERMINALS 2024 DV TM.DOCX]

Attachments

Table 1. Summary of Data Qualifiers

References

EPA. 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. OLEM 9240.1-66; EPA-542-R-20-006. US Environmental Protection Agency. November. https://www.epa.gov/sites/default/files/2021-03/documents/nfg_for_inorganic_superfund_methods_data_review_november_2020.pdf.

EPA. 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. OLEM 9240.0-51; EPA-540-R-20-005. US Environmental Protection Agency. November. https://www.epa.gov/sites/default/files/2021-03/documents/nfg_for_organic_superfund_methods_data_review_november_2020.pdf.

EPA. 2020c. National Functional Guidelines for High Resolution Superfund Methods Data Review. OLEM 9240.1-65; EPA 542-R-20-007. US Environmental Protection Agency. November. https://www.epa.gov/sites/default/files/2021-03/documents/nfg_for_hrsm_superfund_methods_data_review_november_2020.pdf

SLR International Corporation. 2012. Final Remedial Investigation and Feasibility Study Work Plan, 8th Avenue Terminals, Inc. Site, Seattle, Washington. March 21.

Table 1
Summary of Data Qualifiers
8th Avenue Terminals, Inc. Site
Seattle, Washington

Data Package	Sample Number	Analyte	Result	Lab Qualifier	Data Qualifier	Reason
A4C1305	EMW-21D-240312	Dissolved Arsenic	152		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1335	CMW-2-240313	Total Copper	2.02		J	High RPD between total/dissolved metals
A4C1335	CMW-2-240313	Dissolved Copper	4.06		J	High RPD between total/dissolved metals, high laboratory duplicate RPD
A4C1335	CMW-6-240313	Dissolved Arsenic	40.8		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1335	CMW-6-240313	Dissolved Copper	21.8		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1335	EMW-13S-240313	Dissolved Arsenic	84.6		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1335	EMW-13S-240313	Dissolved Copper	3.52		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1335	SLR-3-240313	ALL SVOCS	ALL		J, UJ	Improper sample preservation
A4C1365	HC-4-240314	Total Copper	3.17		J	High RPD between total/dissolved metals
A4C1365	HC-4-240314	Dissolved Copper	4.21		J	High RPD between total/dissolved metals
A4C1365	CMW-5-240314	Dissolved Arsenic	93.7		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1365	DMW2-240314	Dissolved Arsenic	140		DNR	Do not report, use reanalysis result reported in SDG A4D1138
A4C1365	SLR-7-240314	Total Copper	2.87		J	High field duplicate RPD
A4C1365	SLR-17-240314	Total Copper	1.74		J	High field duplicate RPD
A4D1138	DMW2-240314-(0.45)	Dissolved Arsenic	9.27		J	High MS/MSD recoveries
A4D1138	EMW-21D-240312-(0.45)	Dissolved Arsenic	3.17		J	Batch LCS not prepared/reported
A4F0920	DMW-2-240604	Acenaphthylene	3.60		J	High field duplicate RPD
A4F0920	DMW-12-240604	Acenaphthylene	4.44		J	High field duplicate RPD
A4F0920	DMW-2-240604	Dissolved Arsenic	6.44		J	High field duplicate RPD
A4F0920	DMW-12-240604	Dissolved Arsenic	8.26		J	High field duplicate RPD
A4F0920	CMW-4-240605	Dissolved Arsenic	43.5		J	Low MS recovery
A4F0920	CMW-4-240605	Dissolved Copper	3.70		J	Low MS recovery
A4F0920	SLR-3-240605	Dissolved Arsenic	36.2		J	Low MS recovery
A4F0920	SLR-3-240605	Dissolved Copper	18.4		J	Low MS recovery, high laboratory duplicate RPD
A4F0988	EMW-10D-240606	Dissolved Arsenic	0.360	U	UJ	Low MS recovery
A4F0988	EMW-10D-240606	Dissolved Copper	0.360	U	UJ	Low MS recovery
A4I1323	DMW-2-240917	Dissolved Arsenic	13.4		J	High field duplicate RPD
A4I1323	DMW-12-240917	Dissolved Arsenic	17.1		J	High field duplicate RPD
A4I1323	CMW-2-240918	Dissolved Arsenic	63.0		J	Low MS recovery
A4I1323	EMW-13S-240916	Fluorene	0.103		J	High LCS/LCSD recoveries
B9197	EMW-23s-7.5-8.0	1,2,3,4,7,8-HxCDD	0.295	EMPC	U	Reported as estimated maximum possible concentration (EMPC)

Notes:

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
DNR = do not report
MS = matrix spike
MSD = matrix spike duplicate
RPD = relative percent difference
SDG = sample delivery group

LANDAU ASSOCIATES

TECHNICAL MEMORANDUM

TO: Mike Staton, Project Manager

FROM: Kristi Schultz

DATE: September 5, 2025

RE: 8th Avenue Terminals, Inc. Site
2025 Groundwater Sample Analytical Results
Laboratory Data Quality Evaluation

This technical memorandum provides the results of a focused data validation associated with eight groundwater samples, one field duplicate, and one equipment blank collected during the 2025 sampling event at the 8th Avenue Terminals, Inc. Site, located in Seattle, Washington. Samples were analyzed by SGS North America (SGS), located in Orlando, Florida. This data quality evaluation covers SGS data packages FC26776 and FC26850. Samples submitted to SGS were analyzed for per- and polyfluoroalkyl substances (PFAS; US Environmental Protection Agency [EPA] Method 1633).

Without published guidance for PFAS validation from EPA National Functional Guidelines, the verification and validation check was conducted with guidance from applicable portions of United States Department of Defense *Data Validation Guidelines Module 6: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-24* (DoD 2022), as well as *Final Remedial Investigation and Feasibility Study Work Plan, 8th Avenue Terminals, Inc. Site, Seattle, Washington* (SLR International Corporation 2012), and *Work Plan, Per- and Polyfluoroalkyl Substances (PFAS) Investigation, 8th Avenue Terminals, Inc. Site, Seattle Washington* (Landau 2025). Landau Associates, Inc. (Landau) performed an EPA-equivalent Level IIA verification and validation check on each laboratory data package, which included the following:

- Verification that the laboratory data package contained all necessary documentation (including chain-of-custody record (COCs); identification of samples received by the laboratory; date and time of receipt of the samples at the laboratory; sample conditions upon receipt at the laboratory; date and time of sample analysis; explanation of any significant corrective actions taken by the laboratory during the analytical process; and, if applicable, date of extraction, definition of laboratory data qualifiers, all sample-related quality control data, and quality control acceptance criteria).
- Verification that all requested analyses, special cleanups, and special handling methods were performed.
- Evaluation of sample holding times.
- Evaluation of quality control data compared to acceptance criteria, including method blanks, surrogate recoveries, matrix spike results, laboratory duplicate and/or replicate results, and laboratory control sample results.

- Evaluation of overall data quality and completeness of analytical data.

Data validation qualifiers are added to the sample results, as appropriate, based on the verification and validation check. The absence of a data qualifier indicates that the reported result is acceptable without qualification. The data quality evaluation is summarized below. All results discussed herein were found to be acceptable with no further qualification.

Chain-of-Custody Records

A signed COC record was attached to the data packages. The laboratory received all samples in good condition. All analyses were performed as requested. No special cleanups or handling methods were requested.

Upon receipt by SGS, the sample container information was compared to the associated COC and the cooler temperatures were recorded. The coolers were received with temperatures within the EPA-recommended limit of ≤6°C. No qualification of the data was necessary.

Holding Times

For all analyses and all samples, the time between sample collection, extraction (if applicable), and analysis was determined to be within EPA- and project-specified holding times. No qualification of the data was necessary.

Blank Results

Laboratory Blanks

At least one method blank was analyzed with each batch of samples for analysis; the laboratory also included results for associated instrument and continuing calibration blanks. Target analytes were not detected at concentrations greater than the detection limits in the associated blanks, with the following exceptions:

- Perfluorotetradecanoic acid (PFTeDA) and/or n-methylperfluorooctanesulfonamide (MeFOSA) and n-ethylperfluorooctanesulfonamide (EtFOSA) were detected in several instrument blanks associated with data packages FC26776 and FC26850. The affected analytes were not detected in the associated samples at concentrations greater than the detection limit. No qualification of the data was necessary.

Equipment Blanks

One equipment blank was analyzed with samples in data package FC26776. Target analytes were not detected at concentrations greater than the detection limits in the equipment blank. No qualification of the data was necessary.

Labeled Internal Standard Recoveries

Appropriate compounds were used as labeled internal standards for the PFAS analysis. Recovery values were within the current laboratory-specified control limits for all project samples. No qualification of the data was necessary.

Laboratory Control Sample Results

At least one laboratory control sample (LCS) was analyzed with each batch of samples for analysis. Recoveries for the laboratory control samples were within the current laboratory-specified control limits. No qualification of the data was necessary.

Blind Field Duplicate Results

One pair of blind field duplicate water samples (EMW-1S-250806/DUP-1-250806) were submitted for analysis with data package FC26776.

A project-specified control limit of 20 percent was used to evaluate the RPDs between the duplicate samples except when the sample results were within five times the reporting limit. In these cases, a project-specified control limit of plus or minus the reporting limit was used. RPDs for the duplicate sample pair submitted for analysis were within the project-specified control limits. No qualification of the data was necessary.

Quantitation Limits

Project-specified quantitation limits were met for all samples except for instances where dilution was performed due to the presence of high-level target or non-target species or sample matrix interference.

Audit/Corrective Action Records

No corrective action records were generated for these sample batches. Based on the laboratory's internal qualifiers, initial and continuing calibration verification (ICV/CCV) recovery results were within laboratory-specified control limits, with the following exception:

- Lab notes indicated the ICV recovery was high for 3:3 fluorotelomer carboxylic acid (3:3-FTCA) in data package FC26850. 3:3-FTCA was not detected in the associated samples at concentrations greater than the detection limit; no qualification of the data was necessary.

Completeness and Overall Data Quality

The completeness for this data set is 100 percent, which meets the project goal of 90 percent minimum.

Data precision was evaluated through laboratory control sample duplicates and blind field duplicates. Data accuracy was evaluated through laboratory control samples, matrix spikes, and labeled internal standard spikes. No data were rejected.

LANDAU ASSOCIATES, INC.

Kristi Schultz
Senior Data Specialist

KES/
[P:\2175\001\T\DATA\DV\DV MEMOS\2025\8TH AVE TERMINALS 2025 DV TM PFAS.DOCX]

References

DoD. 2022. Data Validation Guidelines Module 6: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-24. United States Department of Defense. October 18.

Landau. 2025. Work Plan, Per- and Polyfluoroalkyl Substances (PFAS) Investigation, 8th Avenue Terminals, Inc. Site, Seattle, Washington. August 5.

SLR International Corporation. 2012. Final Remedial Investigation and Feasibility Study Work Plan, 8th Avenue Terminals, Inc. Site, Seattle, Washington. March 21.

APPENDIX I

PRIMA Report for ZVI Treatability Study

January 29, 2025

Mike Staton
Bill Haldeman
Landau Associates
155 NE 100th Street, Ste 302
Seattle, WA 98125

RE: Report of Findings "Bench-scale Evaluation of Metals Removal from Groundwater"
Client Project Number: 2175001-020-023
Client Project ID: 8th Avenue Terminals
PRIMA Project ID: Landau – 8th

Dear Mr. Stanton and Mr. Haldeman:

Enclosed is the final Report of Findings entitled "Bench-scale Evaluation of Metals Removal from Groundwater" that describes bench testing conducted on site groundwater to evaluate the removal of metals using different types of zero valent iron. If you have any questions or concerns – I can be reached at 916-939-7300 or cschreier@primaenvironmental.com. Thank you for the opportunity to be of service.

Sincerely,
PRIMA Environmental, Inc.

Cindy G. Schreier, Ph.D.
President and Chief Scientist

5070 Robert J. Mathews Parkway, Suite 300, El Dorado Hills, CA 95762
Ph (916) 939-7300 • Fax (916) 939-7398
www.primaenvironmental.com

Report of Findings

Bench-Scale Evaluation of Metals Removal from Groundwater

Client Project Number: 2175001-020-023
Client Project ID: 8th Avenue Terminals
PRIMA Project ID: Landau – 8th

January 29, 2025

Submitted to:
Mike Staton
Bill Haldeman
Landau Associates
155 NE 100th Street, Ste 302
Seattle, WA 98125

Submitted by

PRIMA ENVIRONMENTAL INC.
Questions Answered.
5070 Robert J Mathews Parkway, Suite 300
El Dorado Hills, CA 95762

Cindy G. Schreier, Ph.D., President

January 29, 2025
Date

EXECUTIVE SUMMARY

Bench-scale column tests were performed on site groundwater to assess the ability of several forms of zero-valent iron (ZVI) to remove arsenic and copper. Three sources of ZVI were used: S-Micro Zerovalent Iron (SMZVI) from Regenesis, Ferox Target from Hepure, and CC-1004 ZVI from Connelly GPM. SMZVI and Ferox Target are microscale forms of ZVI that are commonly injected into the subsurface, while CC-1004 is a granular ZVI typically used in permeable reactive barrier applications.

Laboratory testing demonstrated that all three forms of ZVI could remove arsenic. Both forms of micro-scale ZVI (SMZVI and Ferox Target) removed total arsenic (and hence dissolved arsenic) to below 1.3 μg/L for 73 pore volumes when the hydraulic residence time was 16 hours. Granular ZVI (Connelly CC-1004) removed total and dissolved arsenic to below 1 μg/L for 453 pore volumes when the HRT was as short as 0.3 hours.

Total arsenic removal by SMZVI and Ferox Target was effective at the lowest dose of each iron tested – 3 g ZVI (7.5 g SMZVI)/kg for SMZVI and 10 g ZVI/kg for Ferox Target. While removal was effective for 73 pore volumes in the laboratory study, additional arsenic removal would likely have occurred had it been practical to run the study longer since total and dissolved effluent concentrations were below 1.3 ug/L at the conclusion of the study. Only one dose of CC-1004 ZVI was tested – 111 g ZVI/kg. It was effective for the duration of the study (453 pore volumes), and would likely have continued to remove total arsenic since effluent arsenic was less than 1 μg/L at the end of the test. It is possible that lower ZVI doses of all three sources of ZVI would also be effective, but it is unknown if a lower dose would last as long. The longevity of ZVI in the field will depend in part upon the flowrate of the groundwater – that is, how long will it take 73 (or 453) pore volumes to pass through the treatment zone.

Copper removal by SMZVI and Target Ferox was less straightforward because total copper, rather than dissolved copper, was inadvertently measured for the first 50 pore volumes. Total copper concentrations were highly variable in SMZVI and Ferox Target tests for the first 35 pore volumes and removal was generally poor. However, by 51 pore volumes and when dissolved copper was also measured, both total and dissolved copper concentrations were consistent and copper was no longer detected in effluent. It is hypothesized that some of the total copper was associated with iron particulates in

influent water and that these particulates were not filtered out by the columns. Once the iron particles settled, the only copper entering the columns was dissolved copper, which was removed.

While total copper was not removed initially by SMZVI or Ferox Target, it is likely that this was an artifact of the test. However, additional laboratory testing or a field pilot test should be performed to confirm copper removal in the short term.

Total and dissolved copper were completely removed by CC-1004 ZVI.

TABLE of CONTENTS

EXECUTIVE SUMMARY ..... **i**
List of Figures ..... **iv**
List of Tables ..... **iv**
ACRONYMS and ABBREVIATIONS ..... **v**
1.0 INTRODUCTION **1**
2.0 MATERIALS and METHODS **2**
2.1 Materials 2
2.2 Preparation and Characterization of Groundwater and Sand 2
2.3 Column Tests – SMZVI and Ferox Target 2
2.4 Column Tests – Connelly CC-1004 3
2.5 Analytical Methods 3
3.0 RESULTS and DISCUSSION **7**
3.1 Untreated Sand and Groundwater 7
3.2 SMZVI and Target Column Tests 7
3.2.1 Arsenic and Copper Removal 7
3.2.2 Other Parameters 8
3.3 Connelly CC-1004 Column Test 9
3.3.1 Arsenic and Copper Removal 9
3.3.2 Other Parameters 9
4.0 SUMMARY and CONCLUSIONS **16**
APPENDIX A (Chains of Custody)
APPENDIX B (Subcontracted Analytical Reports)

LIST of FIGURES

Figure 1. SMZVI and Target Columns 4
Figure 2. Connelly CC-1004 Column 5

LIST of TABLES

Table 1. Column Test Parameters – SMZVI and Ferox Target. 4
Table 2. Column Test Parameters – CC-1004 Column. 6
Table 3. Analytical Methods 6
Table 4. Metals and Other Parameters in Untreated Sand and Groundwater. 10
Table 5. SMZVI and Target Columns - Arsenic and Copper. 11
Table 6. Minimum Arsenic Capacity of ZVI. 12
Table 7. SMZVI and Target Columns – Other Parameters. 13
Table 8. CC-1004 Column - Arsenic and Copper 14
Table 9. CC-1004 Column – Other Parameters. 15

ACRONYMS and ABBREVIATIONS

As	arsenic
Cu	copper
g	grams
HRT	hydraulic residence time
kg	kilograms
L	liters
mg	milligrams
mL	milliliters
mV	millivolts
µg	micrograms
ORP	oxidation reduction potential

1.0 INTRODUCTION

Bench-scale column tests were performed on site groundwater to assess the ability of several forms of zero-valent iron (ZVI) to remove arsenic and copper. Three sources of ZVI were used: S-Micro Zerovalent Iron (SMZVI) from Regenesis, Ferox Target from Hepure, and CC-1004 ZVI from Connelly GPM. SMZVI and Ferox Target are microscale forms of ZVI that are commonly injected into the subsurface, while CC-1004 is a granular ZVI typically used in permeable reactive barrier applications.

ZVI can potentially remove a wide range of metals from water including arsenic and copper. Arsenic may be removed directly via sorption, or indirectly via co-precipitation with iron if the ZVI treatment zone generates ferrous iron that later is oxidized to ferric iron. Copper may sorb onto the ZVI or onto iron oxides.

The goals of the study were to:

- Conduct column tests to assess the ability of each form of ZVI to remove arsenic and copper from water,
- For the two micro-scale materials, estimate the dose required for removal,
- Estimate the longevity of the ZVI.

The specific tests conducted to achieve these goals are described in **Section 2.0** of this report. Results and Summary/Conclusions are presented in **Sections 3.0 and 4.0**, respectively.

2.0 MATERIALS and METHODS

2.1 Materials

SMZVI was obtained from Regenesis (www.regenesis.com). Ferox Target ZVI was obtained from Hepure (www.hepure.com). Connelly CC-1004 ZVI was obtained from Connelly GM (www.connellygpm.com). The sands used in this study were PW Gillibrand brand industrial sand that were obtained either directly from the vendor or from a local landscaping supply store.

2.2 Preparation and Characterization of Groundwater and Sand

Two groundwater samples (EMW-13S-240930 and EMW-13S-211001) were received and October 2, 2024 and October 3, 2024, respectively. Prior to testing, the water was composited, then analyzed for total and dissolved metals (arsenic, calcium, copper, iron), alkalinity, anions (chloride, nitrate, nitrite), dissolved oxygen, oxidation reduction potential (ORP), and pH. The sands used in this study were analyzed for total metals (arsenic, copper, iron). The laboratories and methods are specified in **Section 2.5.**

2.3 Column Tests – SMZVI and Ferox Target

Two column tests – a low dose test and a high dose test – were performed for each source of ZVI. The columns were 2 inches in diameter, approximately 15 inches tall and constructed of clear PVC pipe. For SMZVI, the bed was a 50/50 weight percent (wt%) mixture of #20 and #60 sand as requested by Landau to match the sand at the site. SMZVI, a liquid reagent, was emplaced by pumping a dilute solution upflow through the sand bed such that one of the columns contained 3 g/kg ZVI (7.5 g/kg as SMZVI) while the other contained 10 g/kg ZVI (25 g/kg as SMZVI). For Ferox Target, a dry reagent, the 50/50 wt% blend of #20 and #60 sand was mixed with Ferox Target such that the sand contained 10 g/kg ZVI or 100 g/kg ZVI; the iron sand mixtures were then placed into the column. Dosing for both SMZVI and Ferox Target were determined in consultation with the vendor. Groundwater flow to the columns was upflow at approximately 0.3 mL/min, resulting in a hydraulic residence time of 16 hours. Influent and effluent samples were collected periodically and analyzed for total metals (arsenic, copper), dissolved oxygen, ferrous iron, ORP and pH. For later samples, dissolved

metals were also measured. The column is shown in **Figure 1**. Column parameters are summarized in **Table 1**.

2.4 Column Tests – Connelly CC-1004

One column test was performed to evaluate granular ZVI. The column was 1.5 inches in diameter, approximately 8.75 inches tall and constructed of clear PVC pipe. The bed was a mixture of 90% (by weight) #12 industrial sand and 10% (by weight) CC-1004 ZVI, which is equivalent to 111 g ZVI/kg sand. The ZVI dose was chosen in consultation with Landau who determined that it is a commonly used amount in PRB applications. The sand size was specified by Landau to ensure a PRB would be more permeable than surrounding sand. Groundwater was pumped upflow at a rate of 0.64 to 4.1 mL/min, giving a hydraulic residence time (HRT) of 2.2 to 0.3 hours per pore volume. Influent and effluent samples were collected periodically and analyzed for total and dissolved metals (arsenic, copper), dissolved oxygen, ferrous iron, ORP and pH. The column is shown in **Figure 2**. Column parameters are summarized in **Table 2**.

2.5 Analytical Methods

The methods for each analysis and the laboratory that performed the analyses are summarized in **Table 3**. All subcontracted samples were collected in appropriately preserved containers and shipped on ice under chain of custody via overnight delivery to the analytical laboratory.

Figure 1. SMZVI and Target Columns. *From left: SMZVI Low Dose, SMZVI High Dose, Target Low Dose, Target High Dose.*

Table 1. Column Test Parameters – SMZVI and Ferox Target.

Parameter	Units	Column			
		SMZVI-Low	SMZVI - High	Target Low	Target High
Sand	size	50/50 w/w mix of #20 and #60 industrial sand			
	mass, kg	1.235	1.175	1.15	1.15
Iron	source	SMZVI	SMZVI	Ferox Target	Ferox Target
	size	micro-scale		-325 mesh	
	g ZVI/kg sand	3	10	10	100
	g as ZVI	3.7	11.8	11.5	115
Column diameter	inches	2	2	2	2
Bed Height	inches	15	14.75	14.5	14.5
Bed Volume	mL	772	759	746	746
Pore Volume	mL	280	290	290	290
Flowrate	mL/min	0.3	0.3	0.3	0.3
	hours/pore volume (HRT)	16	16	16	16
Direction of Flow	--	up	up	up	up
Water put through	L	21.6	21.6	21.6	21.6
	# pore volumes	77	74	74	74
Run Time	days	50.0	50.0	50.0	50.0

Figure 2. Connelly CC-1004 Column.

Table 2. Column Test Parameters – CC-1004 Column.

Parameter	Units	Column
		PRB
Sand	size	#12 industrial sand
	mass, kg	0.38
Iron	source	CC-1004
	size	-8/50
	g ZVI/kg sand	111
	g as ZVI	42.2
Column diameter	inches	1.5
Bed Height	inches	8.75
Bed Volume	mL	253
Pore Volume	mL	85
Flowrate, mL/min	74 pore volumes	0.64
	74-109 pore volumes	1.0
	109 - 452 pore volumes	4.1
HRT, hours	74 pore volumes	6.6
	74-109 pore volumes	1.4
	109 - 452 pore volumes	0.3
Direction of Flow	--	up
Water put through	L	38.5
	# pore volumes	453
	# bed volumes	154
Run Time	days	14.1

HRT = hydraulic residence time

Table 3. Analytical Methods.

Analyte	Method	Laboratory*
Alkalinity	SM 2320B	Enthalpy
Anions	EPA 300.0	Enthalpy
Dissolved Oxygen/ORP/pH	Probe	PRIMA
Ferrous Iron	Hach**	PRIMA
Metals	EPA 6020	Enthalpy

* Enthalpy Analytical (Orange, CA)

** Hach 2800 Spectrophotometer and appropriate Hach test reagents.

3.0 RESULTS and DISCUSSION

Tables in this section contain selected data from subcontracted analytical laboratories. Complete analytical data reports are provided in ***Appendix B****.*

3.1 Untreated Sand and Groundwater

The concentrations of metals and other parameters in untreated groundwater and the sands in this study are shown in **Table 4**. Groundwater contained 130 μg/L total arsenic (100 μg/L dissolved arsenic), 36 μg/L total copper (8.0 μg/L dissolved copper), 190,000 μg/L total calcium, all of which was dissolved, and 1,200 μg/L total iron, none of which was dissolved. Groundwater was oxidizing with neutral pH and high chloride – specifically, dissolved oxygen was 7.1 mg/L, ORP was 214 mV, pH was 7.67, and chloride was 7,500 mg/L. The sands used in this study contained 480-1,400 mg/kg iron, but no detectable copper. Only the #60 sand contained measurable arsenic (0.33 mg/kg).

3.2 SMZVI and Target Column Tests

3.2.1 Arsenic and Copper Removal

Influent and effluent concentrations for total and dissolved arsenic and total and dissolved copper are shown in **Table 5**, though dissolved metals were only measured after 50 pore volumes. Total arsenic was over 99% removed in all columns throughout the study. Total and dissolved arsenic in the influent varied from 100 to 160 μg/L, while total and dissolved arsenic in the effluent, when detected, was estimated at 1.3 μg/L or lower. The amount of arsenic removed by each column during the course of the study normalized to the amount of ZVI in the column is given in **Table 6**. These values should be considered minima, since complete breakthrough had not occurred when the tests were stopped. Note that the SMZI High test and the Target Low test contained similar amounts of ZVI and removed the same amount of arsenic.

Evaluation of copper removal was less straightforward because total copper, rather than dissolved copper, was inadvertently measured for the first 50 pore volumes. Total copper concentrations in influent were highly variable for the first 35 pore volumes, ranging from 7.4 to 75 μg/L. Although effluent concentrations were typically lower than influent concentrations, they were often higher than the target concentration of 3 μg/L. The

variability was presumably due to the presence of particulates, although the samples were not obviously cloudy. Starting with 51 pore volumes, both total and dissolved metals samples were collected. Total and dissolved copper concentrations were similar to each other and indicated complete removal of copper by all columns. Because the total copper concentrations were variable at the beginning of the test, copper sorption onto iron was not calculated.

Notes: The cause of the total copper variability is uncertain but is most likely due to particulates. Influent water contained 1,200 μg/L of particulate iron (see **Section 3.1**). If copper was sorbed to this iron, and if the iron was slow to settle in the influent tank, then it is possible that some particulates entered the columns but were not filtered out. Slow settling of the iron particles could also explain why total copper was variable for the first 35 pore volumes, but then was consistent. Efforts to determine whether sampling method affected total copper results were inconclusive. For the first several sample events, effluent water was collected directly into the acid-preserved sample container. For subsequent samples, water was collected in Tedlar bags, filtered (if appropriate) then distributed into appropriate sample containers. The samples collected at 72 and 73 pore volumes were an attempt to determine if sampling method affected total copper, but all samples yield similar values.

3.2.2 Other Parameters

The effect of ZVI treatment on secondary water quality is given in **Table 7**. Reducing conditions do not appear to have been established within the columns in most cases. Dissolved oxygen was typically over 4 mg/L, ORP was usually positive, and ferrous iron was not present. The exception was the Target High column, which, by 51 pore volumes, had negative ORP and ferrous iron ranging from 0.35 to 0.56 mg/L; dissolved oxygen ranged from 6.3 to 8.1 mg/L, possibly due to the difficulty of collecting a groundwater sample over several minutes to hours without exposure to air. Groundwater pH was not affected in any of the tests.

3.3 Connelly CC-1004 Column Test

3.3.1 Arsenic and Copper Removal

Influent and effluent concentrations for arsenic and copper are shown in **Table 8**. Both arsenic and copper were removed throughout the study. Arsenic was over 99% removed: total and dissolved arsenic in the influent varied from 96 to 110 μg/L, while arsenic in the effluent, when detected, was estimated at less than 0.76 μg/L or lower. Influent copper concentrations were consistent, ranging from 6.5 to 7.8 μg/L. Copper was not detected in the effluent except once at 1.3 μg/L at 74 pore volumes.

3.3.2 Other Parameters

The effect of ZVI on secondary water quality is given in **Table 8**. Reducing conditions appear to have been present throughout the study, even when the HRT was 0.3 hours. Dissolved oxygen was typically over 4 mg/L, but ORP was usually negative and ferrous iron was present.

Table 4. Metals and Other Parameters in Untreated Sand and Groundwater.

Analyte	Units	Sand #12	Sand #20	Sand #60	Groundwater
Metals, dissolved					
Arsenic	mg/kg or µg/L	n.a.	n.a.	n.a.	100
Calcium	mg/kg or µg/L	n.a.	n.a.	n.a.	190,000
Copper	mg/kg or µg/L	n.a.	n.a.	n.a.	8.0
Iron	mg/kg or µg/L	n.a.	n.a.	n.a.	< 34
Metals, total					
Arsenic	mg/kg or µg/L	< 0.23	< 0.24	0.33 J	130
Calcium	mg/kg or µg/L	n.m.	n.m.	n.m.	190,000
Copper	mg/kg or µg/L	< 0.86	< 0.90	< 0.85	36
Iron	mg/kg or µg/L	670	480	1,400	1,200
Other Parameters					
Alkalinity	mg/L CaCO3	n.a.	n.a.	n.a.	130
Chloride	mg/L	n.a.	n.a.	n.a.	7,500
Dissolved oxygen	mg/L	n.a.	n.a.	n.a.	7.1
Ferrous iron	mg/L	n.a.	n.a.	n.a.	< 0.02
Nitrate	mg/L-N	n.a.	n.a.	n.a.	0.22
Nitrite	mg/L-N	n.a.	n.a.	n.a.	< 0.02
ORP	mV	n.a.	n.a.	n.a.	214
pH	--	n.a.	n.a.	n.a.	7.67

n.a. = not applicable

n.m. = not measured

Table 5. SMZVI and Target Columns - Arsenic and Copper.

	Total Arsenic#, ug/L					Total Copper#				
Cummulative PV	Influent	SMZVI - Low	SMZVI - High	Target - Low	Target - High	Influent	SMZVI - Low	SMZVI - High	Target - Low	Target - High
0										
2	110	1.4 J	0.92 J	0.41 J	< 0.38	7.8	15	16	1.7 J	23
10	100	< 0.38	< 0.38	< 0.38	< 0.38	7.4	1.2 J	0.97 J	1.4 J	8.8
14	160	0.59 J	< 0.38	< 0.38	< 0.38	75	37	24	44	21
20	120	< 0.38	< 0.38	< 0.38	< 0.38	40	30	33	24	15
25	120	0.54 J	< 0.38	< 0.38	< 0.38	20	2.5 J	5.9 J	6.6	5.4
31	n.m.	0.48 J	0.50 J	0.42 J	< 0.38	n.m.	< 0.71	< 0.71	2.1 J	2.7 J
35	100	0.59 J	0.45 J	0.29 J	0.27 J	8.5	43	20	13	22
51	110 (100)	0.89 J (0.85J)	0.58J (0.59J)	0.43J (0.37J)	0.37J (0.37J)	7.8 (6.7)	< 2.0 (< 0.79)	< 2.0 (< 0.79)	< 2.0 (< 0.79)	< 2.0 (< 0.79)
62	110 (110)	1.1J (1.1J)	0.70J (0.84J)	0.46J (0.59J)	0.48J (0.50J)	7.2 (7.6)	< 0.71 (< 0.73)	< 0.71 (< 0.73)	< 0.71 (< 0.73)	< 0.71 (< 0.73)
72	-	1.3 J *	0.90 J*	0.70 J*	0.63 J *		< 2.0 *	< 2.0 *	< 2.0 *	< 2.0 *
73	120 (120)	1.3 J ** (1.3 J)^	1.0 J ** (0.92 J)^	n.m.	0.50J** (0.73 J)^	6.4 (6.9)	< 2.0 ** (< 0.79)^	< 2.0 ** (< 0.79)^	n.m.	< 2.0 ** (< 0.79)^

Value in ( ) is dissolved metal

* Total metals. Water collected directly into sample container.

** Total metals. Water collected into Tedlar bag, then distributed into appropriate sample containers.

^ Dissolved metals - a portion of the water collected in the Tedlar bag was field filtered before being put in the sample container.

SMZVI Low =3 g/kg as ZVI (7.5 g/kg as product)

SMZVI High =10 g/kg as ZVI (25 g/kg as product)

Target Low = 1% (10 g/kg)

Target High = 10% (100 g/kg)

Table 6. Minimum Arsenic Capacity of ZVI.

Column	Volume Water Put Through	Mass of ZVI In Column	Arsenic Removed*
	L	g	µg/g ZVI
SMZVI Low	21.6	3.7	640
SMZVI High	21.6	11.8	200
Target Low	21.6	11.5	210
Target High	21.6	115	21
CC-1004	13.0	111	34

* Calculated from total arsenic, assuming influent is 110 µg/L.

Table 7. SMZVI and Target Columns – Other Parameters.

	Dissolved Oxygen. mg/L					ORP, mV					pH					Ferrous Iron, mg/L				
Cummulative PV	Influent	SMZVI Low	SMZVI High	Target Low	Target High	Influent	SMZVI Low	SMZVI High	Target Low	Target High	Influent	SMZVI Low	SMZVI High	Target Low	Target High	Influent	SMZVI Low	SMZVI High	Target Low	Target High
0																				
2	7.9	7.1	5.9	6.3	6.3	204	203	94	74	60	7.7	7.8	7.5	7.4	7.9	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
10	7.2	7.4	7.4	7.1	7.6	105	169	151	108	199	7.7	7.8	7.8	7.9	7.7	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
14	6.6	6.7	6.6	6.7	6.5	142	208	121	134	144	7.6	6.7	6.8	7.8	7.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
20	6.5	7.4	7.0	6.4	8.0	152	188	153	28	167	7.6	7.6	7.6	7.7	7.0	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
25	6.1	7.2	3.9	6.0	6.4	145	163	21	69	74	6.6	7.5	7.6	7.6	7.0	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
31	7.2	7.9	4.9	3.6	6.3	140	172	116	3	184	7.5	7.4	8.0	7.4	6.7	< 0.02	0.05	0.04	< 0.02	< 0.02
35	6.6	7.8	7.3	5.9	7.4	163	193	180	154	194	7.6	7.5	8.0	7.7	6.9	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
51	8.3	6.3	7.2	7.1	8.2	141	234	249	194	-22	8.3	6.3	7.2	7.1	8.2	< 0.02	< 0.02	< 0.02	< 0.02	0.35
62	7.3	5.8	6.9	7.1	7.1	110	3.0	86	120	-28	7.9	7.3	7.5	7.6	7.0	< 0.02	0.2	< 0.02	< 0.02	0.37
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	7.74	5.7	6.87	n.m.	6.29	62	-27	27	n.m.	-29	7.98	7.25	7.39	n.m.	7.06	< 0.02	0.47	0.03	n.m.	0.56

SMZVI Low =3 g/kg as ZVI (7.5 g/kg as product)

SMZVI High =10 g/kg as ZVI (25 g/kg as product)

Target Low = 1% (10 g/kg)

Target High = 10% (100 g/kg)

n.m. = not measured

Table 8. CC-1004 Column - Arsenic and Copper.

	Total Arsenic*, ug/L		Total Copper*, ug/L	
Cummulative Pore Volumes	Influent	Effluent	Influent	Effluent
0	110 (100)	-	7.8 (6.7)	-
9	100 (110)	< 0.22 (0.20J)	7.0 (6.1)	< 2.0 (< 0.79)
30	-	< 0.38 (0.48 J)	-	< 0.71 (< 0.73)
74	-	< 0.38 (0.37 J)	-	< 0.71 (1.3 J)
109	99 (98)	< 0.22 (< 0.18)	7.3 (6.6)	< 2.0 (< 0.79)
172	100 (96)	0.35J (0.31J)	7.3 (7.1)	< 2.0 (< 0.79)
452	110 (110)	0.76J (0.65J)	6.5 (7.5)	< 2.0 (< 0.79)

* Value in ( ) is dissolved concentration

hydraulic residence time (HRT) = 2.2 hrs for 0-74 pore volumes

HRT = 1.4 hrs for 74-109 pore volumes

HRT = 0.3 hrs for 172 to 452 pore volumes

Table 9. CC-1004 Column – Other Parameters.

	DO, mg/L		ORP, mV		pH		Ferrous Iron, mg/L	
Cummulative Pore Volumes	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
0	-	-	-	-	-	-	-	-
9	8.3	6.0	139	-87	7.8	7.3	< 0.02	1.950
30	-	4.9	-	-36	-	7.1	-	0.990
74	-	4.9	-	-57	-	7.2	-	1.080
109	7.1	4.3	92	-43	7.7	7.3	< 0.02	0.560
172	6.8	3.3	229	3	7.7	7.5	< 0.02	0.08
452	6.3	2.1	223	-14	7.6	7.6	< 0.02	0.09

* Value in ( ) is dissolved concentration

hydraulic residence time (HRT) = 2.2 hrs for 0-74 pore volumes

HRT = 1.4 hrs for 74-109 pore volumes

HRT = 0.3 hrs for 172 to 452 pore volumes

4.0 SUMMARY and CONCLUSIONS

Laboratory testing demonstrated that all three forms of ZVI could remove arsenic. Both forms of micro-scale ZVI (SMZVI and Ferox Target) removed total arsenic (and hence dissolved arsenic) to below 1.3 μg/L for 73 pore volumes when the hydraulic residence time was 16 hours. Granular ZVI (Connelly CC-1004) removed total and dissolved arsenic to below 1 μg/L for 453 pore volumes when the HRT was as short as 0.3 hours.

Total arsenic removal by SMZVI and Ferox Target was effective at the lowest dose of each iron tested – 3 g ZVI (7.5 g SMZVI)/kg for SMZVI and 10 g ZVI/kg for Ferox Target. While removal was effective for 73 pore volumes in the laboratory study, additional arsenic removal would likely have occurred had it been practical to run the study longer since total and dissolved effluent concentrations were below 1.3 ug/L at the conclusion of the study. Only one dose of CC-1004 ZVI was tested – 111 g ZVI/kg. It was effective for the duration of the study (453 pore volumes), and would likely have continued to remove total arsenic since effluent arsenic was less than 1 μg/L at the end of the test. It is possible that lower ZVI doses of all three sources of ZVI would also be effective, but it is unknown if a lower dose would last as long. The longevity of ZVI in the field will depend in part upon the flowrate of the groundwater – that is, how long will it take 73 (or 453) pore volumes to pass through the treatment zone.

Copper removal by SMZVI and Target Ferox was less straightforward because total copper, rather than dissolved copper, was inadvertently measured for the first 50 pore volumes. Total copper concentrations were highly variable in SMZVI and Ferox Target tests for the first 35 pore volumes and removal was generally poor. However, by 51 pore volumes when dissolved copper was also measured, both total and dissolved copper concentrations were consistent and copper was no longer detected in effluent. It is hypothesized that total copper was associated with iron particulates in influent water and that these particulates were not filtered out by the columns. Once the iron particles settled, the only copper entering the columns was dissolved copper, which was removed.

While total copper was not removed initially by SMZVI or Ferox Target, it is likely that this was an artifact of the test. However, additional laboratory testing or a field pilot test should be performed to confirm copper removal in the short term.

Total and dissolved copper were completely removed by CC-1004 ZVI.

APPENDIX A
(Chains of Custody)

5070 Robert J Mathews Parkway, Suite 300
El Dorado Hills, CA 95762
916-939-7300
www.primaenvironmental.com

Sample Receipt Summary

Date/Time: 10/02/2024 11:45

Client/Company: Landau

Project: 8th Ave

	Yes	No	N/A
Custody seals intact?	☐	☐	☒
Chain of custody Present?	☒	☐	☐
If no, list number of samples and Sample ID			
Ice present?	☐	☐	☒
If no, what is temperature? _____			
Samples in good condition?	☒	☐	☐
If no, explain:			
Do sample IDs on containers match IDs on COC?	☒	☐	☐
If no, explain:			

Other Comments:

LANDAU ASSOCIATES

Chain-of-Custody Record

☒ North Seattle (206) 631-8660
☐ Tacoma (253) 926-2493
☐ Olympia (360) 791-3178
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

Date 9/30/24
Page 1 of 1

Turnaround Time:
Standard
Accelerated

Project Name 8th Ave Terminals
Project No. 2175001.020.023
Project Location/Event Treatability Study
Sampler's Name Spencer Lo
Project Contact Mike Staton
Send Results To mike.staton-mstaton@landauinc.com

Special Handling Requirements:
Shipment Method:
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	ZVI column test
EMW-135-240930	9/30/24	924	water	9	X

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion ☐

___ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐

___ Dissolved metal samples were field filtered

Other
Combine samples collected from CMW-6-240930 with EMW-135-240930 prior to Study/test

Communicate w/ Mike Staton for further instructions

Include Bill Haldeman for results at bhaldeman@landauinc.com

Relinquished by	Received by	Relinquished by	Received by
Signature: Spencer Lo	Signature: Brittney Bingaman	Signature:	Signature:
Printed Name: Spencer Lo	Printed Name: Brittney Bingaman	Printed Name:	Printed Name:
Company: LAI	Company: PRIMA	Company:	Company:
Date: 9/30/24 Time: 1400	Date: 10/02/2024 Time: 11:45	Date: Time:	Date: Time:

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

APPENDIX B
(Subcontracted Analytical Reports)

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	518023
Report Level	:	II
Report Date	:	10/15/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	518023 Landau - 8th 10/11/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-8TH	518023-001	10/10/24 15:50	Water
LANDAU-8TH (F)	518023-002	10/10/24 15:50	Water
SAND #12	518023-003	10/10/24 15:50	Soil
SAND #20	518023-004	10/10/24 15:50	Soil
SAND #60	518023-005	10/10/24 15:50	Soil

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 518023 Location: Landau - 8th Date Received: 10/11/24

This data package contains sample and QC results for three soil samples and two water samples, requested for the above referenced project on 10/11/24. The samples were received cold and intact.

Metals (EPA 6020) Water:
No analytical problems were encountered.

Metals (EPA 6020) Soil:
No analytical problems were encountered.

Metals (EPA 6020) Filtrate:
No analytical problems were encountered.

Ion Chromatography (EPA 300.0):

- Low recovery was observed for nitrogen, nitrite in the MS of LANDAU-8TH (lab # 518023-001); the LCS was within limits, and the associated RPD was within limits.
- Responses exceeding the instrument's linear range were observed for chloride in the MS/MSD for batch 352800; affected data was qualified with "E".
- No other analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page __1__ of __1__
Chain of Custody # : _____

C&T LOGIN # S18023

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☒ RUSH 48hr ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix: Water	Matrix: Soil	Matrix:	Matrix:	# of Containers	Chemical Preservative: HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request: Alkalinity	Chloride	Nitrate	Nitrite	Arsenic	Calcium	Copper	Iron
	Landau-8th	10/10/24	15:50	x				1						x	x	x	x	x	x	x	x
	Landau-8th (F)	10/10/24	15:50	x				1										x	x	x	x
	Sand #12	10/10/24	15:50		x			1										x		x	x
	Sand #20	10/10/24	15:50		x			1										x		x	x
	Sand #60	10/10/24	15:50		x			1										x		x	x

Notes:
Sample Landau-8th (F) has been field filtered.

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
CSch	10/10/24	1745 FedEx	
		10/11/24	

1.7/4.2 IR 1

SAMPLE RECEIPT CHECKLIST

ENTHALPY

Section 1: General Info

Date Received: 10/11/24 WO# 518023 Client: Prima Environmental Inc

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☑ No

Custody seals intact on arrival? ☐ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: _____

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 10/11/24 By (initials) GCK Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR01 CF: -0.5

Cooler Temp (°C) #1: 4.7 / 4.2 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ■ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ■ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	x		
2) Is the sampler's name present on the CoC?	x		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	x		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	x		
5) Were all of, and only, the correct samples received?	x		
6) Are sample labels present, legible, and in agreement with the CoC?	x		
7) Does the container count match the CoC?		x	
8) Was sufficient sample volume / mass received for the analyses requested?	x		
9) Were samples received in proper containers for the analyses requested?	x		
10) Were samples received with > 1/2 holding time remaining?	x		
11) Are samples properly preserved as indicated by CoC / labels?	x		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			x
13) Are VOA vials free from headspace/bubbles > 6mm?			x

Section 5: Explanations / Comments ☐ **PM notified**

4.7) 001: COC indicates 1 container. We received 2.

Date Logged 10/11/24 **By (print)** GCK **(sign)** [signature]

Date Labeled 10/11/24 **By (print)** Orange **(sign)** _____

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 10OCT24
ACTWGT: 10.00 LB
CAD: 4692371/INET4535
DIMS: 12x10x10 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: LANDAU-8TH
INV:
PO: DEPT:

58CJ2/B264/C8C4

FedEx Express

J24102407301uv

FRI - 11 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7791 7025 4258**

92 APVA

92868
CA-US **SNA**

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value; pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ENTHALPY ANALYTICAL

Analysis Results for 518023

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 518023
Location: Landau - 8th
Date Received: 10/11/24

Sample ID: LANDAU-8TH **Lab ID: 518023-001** **Collected: 10/10/24 15:50**
Matrix: Water

518023-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 300.0 Prep Method: METHOD										
Chloride	**7,500**		mg/L	50	10	50	352800	10/14/24 16:10	10/14/24 23:10	AJL
Nitrogen, Nitrite	ND		mg/L	0.10	0.02	1	352643	10/11/24 16:45	10/11/24 17:49	AJL
Nitrogen, Nitrate	**0.22**		mg/L	0.10	0.06	1	352643	10/11/24 16:45	10/11/24 17:49	AJL
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**130**		ug/L	2.0	0.38	1	352755	10/14/24	10/14/24	DXC
Calcium	**190,000**		ug/L	7,900	7,900	25	352755	10/14/24	10/14/24	DXC
Copper	**36**		ug/L	3.0	0.71	1	352816	10/14/24	10/15/24	KAM
Iron	**1,200**		ug/L	100	34	1	352755	10/14/24	10/14/24	DXC
Method: SM2320B Prep Method: METHOD										
Alkalinity, Bicarbonate, as CaCO3	**130**		mg/L	13		2.5	352691	10/12/24	10/12/24	WWC
Alkalinity, Carbonate, as CaCO3	ND		mg/L	13		2.5	352691	10/12/24	10/12/24	WWC
Alkalinity, Hydroxide, as CaCO3	ND		mg/L	13		2.5	352691	10/12/24	10/12/24	WWC
Alkalinity, Total as CaCO3	**130**		mg/L	13		2.5	352691	10/12/24	10/12/24	WWC

Sample ID: LANDAU-8TH (F) **Lab ID: 518023-002** **Collected: 10/10/24 15:50**
Matrix: Filtrate

518023-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**100**		ug/L	2.0	0.38	1	352755	10/14/24	10/14/24	DXC
Calcium	**190,000**		ug/L	7,900	7,900	25	352755	10/14/24	10/14/24	DXC
Copper	**8.0**		ug/L	3.0	0.71	1	352816	10/14/24	10/15/24	KAM
Iron	ND		ug/L	100	34	1	352755	10/14/24	10/14/24	DXC

Sample ID: SAND #12 **Lab ID: 518023-003** **Collected: 10/10/24 15:50**
Matrix: Soil

518023-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3050B										
Arsenic	ND		mg/Kg	0.96	0.23	0.96	352777	10/14/24	10/14/24	DXC
Copper	ND		mg/Kg	0.96	0.86	0.96	352777	10/14/24	10/14/24	DXC
Iron	**670**		mg/Kg	48	16	0.96	352777	10/14/24	10/14/24	DXC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 518023

Sample ID: SAND #20	Lab ID: 518023-004	Collected: 10/10/24 15:50
	Matrix: Soil	

518023-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3050B										
Arsenic	ND		mg/Kg	1.0	0.24	1	352777	10/14/24	10/14/24	DXC
Copper	ND		mg/Kg	1.0	0.90	1	352777	10/14/24	10/14/24	DXC
Iron	**480**		mg/Kg	50	16	1	352777	10/14/24	10/14/24	DXC

Sample ID: SAND #60	Lab ID: 518023-005	Collected: 10/10/24 15:50
	Matrix: Soil	

518023-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3050B										
Arsenic	**0.33**	J	mg/Kg	0.95	0.23	0.95	352777	10/14/24	10/14/24	DXC
Copper	ND		mg/Kg	0.95	0.85	0.95	352777	10/14/24	10/14/24	DXC
Iron	**1,400**		mg/Kg	48	16	0.95	352777	10/14/24	10/14/24	DXC

J Estimated value
ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1194616**	**Batch:**	**352643**
Matrix:	**Water**	**Method:**	**EPA 300.0**	**Prep Method:**	**METHOD**

QC1194616 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Nitrogen, Nitrite	ND		mg/L	0.10	0.02	10/11/24 16:45	10/11/24 17:03
Nitrogen, Nitrate	ND		mg/L	0.10	0.06	10/11/24 16:45	10/11/24 17:03

Type:	**Lab Control Sample**	**Lab ID:**	**QC1194617**	**Batch:**	**352643**
Matrix:	**Water**	**Method:**	**EPA 300.0**	**Prep Method:**	**METHOD**

QC1194617 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Nitrogen, Nitrite	4.597	4.567	mg/L	101%		90-110
Nitrogen, Nitrate	4.809	4.518	mg/L	106%		90-110

Type:	**Matrix Spike**	**Lab ID:**	**QC1194618**	**Batch:**	**352643**
Matrix (Source ID):	**Water (518023-001)**	**Method:**	**EPA 300.0**	**Prep Method:**	**METHOD**

QC1194618 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Nitrogen, Nitrite	6.965	ND	9.134	mg/L	76%	*	80-120	1
Nitrogen, Nitrate	7.701	0.2159	9.036	mg/L	83%		80-120	1

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1194619**	**Batch:**	**352643**
Matrix (Source ID):	**Water (518023-001)**	**Method:**	**EPA 300.0**	**Prep Method:**	**METHOD**

QC1194619 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Nitrogen, Nitrite	7.811	ND	9.134	mg/L	86%		80-120	11	20	1
Nitrogen, Nitrate	8.555	0.2159	9.036	mg/L	92%		80-120	11	20	1

Type:	**Blank**	**Lab ID:**	**QC1195194**	**Batch:**	**352800**
Matrix:	**Water**	**Method:**	**EPA 300.0**	**Prep Method:**	**METHOD**

QC1195194 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Chloride	ND		mg/L	1.0	0.20	10/14/24 16:10	10/14/24 16:42

Type:	**Lab Control Sample**	**Lab ID:**	**QC1195195**	**Batch:**	**352800**
Matrix:	**Water**	**Method:**	**EPA 300.0**	**Prep Method:**	**METHOD**

QC1195195 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Chloride	49.15	50.00	mg/L	98%		90-110

ENTHALPY ANALYTICAL

Batch QC

Type:	Matrix Spike	Lab ID:	QC1195196	Batch:	352800
Matrix (Source ID):	Water (518076-001)	Method:	EPA 300.0	Prep Method:	METHOD

QC1195196 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Chloride	130.9	31.72	100.0	mg/L	99%		80-120	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1195197	Batch:	352800
Matrix (Source ID):	Water (518076-001)	Method:	EPA 300.0	Prep Method:	METHOD

QC1195197 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Chloride	131.2	31.72	100.0	mg/L	100%		80-120	0	20	1

Type:	Matrix Spike	Lab ID:	QC1195214	Batch:	352800
Matrix (Source ID):	Water (517940-002)	Method:	EPA 300.0	Prep Method:	METHOD

QC1195214 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Chloride	213.4	127.2	100.0	mg/L	86%	E	80-120	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1195215	Batch:	352800
Matrix (Source ID):	Water (517940-002)	Method:	EPA 300.0	Prep Method:	METHOD

QC1195215 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Chloride	213.5	127.2	100.0	mg/L	86%	E	80-120		20	1

Type:	Blank	Lab ID:	QC1195061	Batch:	352755
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195061 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	10/14/24	10/14/24
Calcium	ND		ug/L	320	320	10/14/24	10/14/24
Iron	ND		ug/L	100	34	10/14/24	10/14/24

Type:	Lab Control Sample	Lab ID:	QC1195062	Batch:	352755
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195062 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	96.91	100.0	ug/L	97%		80-120
Calcium	5,172	5100	ug/L	101%		80-120
Iron	486.5	500.0	ug/L	97%		80-120

ENTHALPY ANALYTICAL

Batch QC

Type:	Matrix Spike	Lab ID:	QC1195063	Batch:	352755
Matrix (Source ID):	Filtrate (517974-014)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195063 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	103.5	2.900	100.0	ug/L	101%		75-125	5
Calcium	72,790	68720	5100	ug/L	80%	NM	75-125	5
Iron	482.0	ND	500.0	ug/L	96%		75-125	5

Type:	Matrix Spike Duplicate	Lab ID:	QC1195064	Batch:	352755
Matrix (Source ID):	Filtrate (517974-014)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195064 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	104.2	2.900	100.0	ug/L	101%		75-125	1	20	5
Calcium	75,280	68720	5100	ug/L	129%	NM	75-125	3	37	5
Iron	504.1	ND	500.0	ug/L	101%		75-125	4	27	5

Type:	Blank	Lab ID:	QC1195234	Batch:	352816
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195234 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Copper	ND		ug/L	3.0	0.71	10/14/24	10/15/24

Type:	Lab Control Sample	Lab ID:	QC1195235	Batch:	352816
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195235 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Copper	104.7	100.0	ug/L	105%		80-120

Type:	Matrix Spike	Lab ID:	QC1195236	Batch:	352816
Matrix (Source ID):	Water (518042-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195236 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Copper	105.1	4.346	100.0	ug/L	101%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1195237	Batch:	352816
Matrix (Source ID):	Water (518042-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1195237 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Copper	105.3	4.346	100.0	ug/L	101%		75-125	0	29	1

ENTHALPY ANALYTICAL

Batch QC

Type:	Blank	Lab ID:	QC1195121	Batch:	352777
Matrix:	Soil	Method:	EPA 6020	Prep Method:	EPA 3050B

QC1195121 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		mg/Kg	1.0	0.24	10/14/24	10/14/24
Copper	ND		mg/Kg	1.0	0.90	10/14/24	10/14/24
Iron	ND		mg/Kg	50	16	10/14/24	10/14/24

Type:	Lab Control Sample	Lab ID:	QC1195122	Batch:	352777
Matrix:	Soil	Method:	EPA 6020	Prep Method:	EPA 3050B

QC1195122 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	101.0	100.0	mg/Kg	101%		80-120
Copper	107.4	100.0	mg/Kg	107%		80-120
Iron	110.0	100.0	mg/Kg	110%		80-120

Type:	Matrix Spike	Lab ID:	QC1195123	Batch:	352777
Matrix (Source ID):	Soil (518011-001)	Method:	EPA 6020	Prep Method:	EPA 3050B

QC1195123 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	97.91	7.777	95.24	mg/Kg	95%		75-125	0.95
Copper	116.4	16.26	95.24	mg/Kg	105%		75-125	0.95
Iron	25,790	23970	95.24	mg/Kg	1913%	E,NM	75-125	0.95

Type:	Matrix Spike Duplicate	Lab ID:	QC1195124	Batch:	352777
Matrix (Source ID):	Soil (518011-001)	Method:	EPA 6020	Prep Method:	EPA 3050B

QC1195124 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	110.6	7.777	100.0	mg/Kg	103%		75-125	8	20	1
Copper	129.0	16.26	100.0	mg/Kg	113%		75-125	6	20	1
Iron	30,030	23970	100.0	mg/Kg	6063%	E,NM	75-125		20	1

Type:	Post Digest Spike	Lab ID:	QC1195125	Batch:	352777
Matrix (Source ID):	Soil (518011-001)	Method:	EPA 6020	Prep Method:	EPA 3050B

QC1195125 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	106.6	7.777	96.15	mg/Kg	103%		75-125	0.96
Copper	121.0	16.26	96.15	mg/Kg	109%		75-125	0.96
Iron	23,570	23970	96.15	mg/Kg	-417%	E,NM	75-125	0.96

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1194835**	**Batch:**	**352691**
Matrix:	**Water**	**Method:**	**SM2320B**	**Prep Method:**	**METHOD**

QC1194835 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Alkalinity, Bicarbonate, as CaCO3	ND		mg/L	5.0		10/12/24	10/12/24
Alkalinity, Carbonate, as CaCO3	ND		mg/L	5.0		10/12/24	10/12/24
Alkalinity, Hydroxide, as CaCO3	ND		mg/L	5.0		10/12/24	10/12/24
Alkalinity, Total as CaCO3	ND		mg/L	5.0		10/12/24	10/12/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1194836**	**Batch:**	**352691**
Matrix:	**Water**	**Method:**	**SM2320B**	**Prep Method:**	**METHOD**

QC1194836 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Alkalinity, Total as CaCO3	1,025	1000	mg/L	102%		90-110

Type:	**Sample Duplicate**	**Lab ID:**	**QC1194837**	**Batch:**	**352691**
Matrix (Source ID):	**Water (518023-001)**	**Method:**	**SM2320B**	**Prep Method:**	**METHOD**

QC1194837 Analyte	Result	Source Sample Result	Units	Qual	RPD	RPD Lim	DF
Alkalinity, Bicarbonate, as CaCO3	136.8	134.3	mg/L		2	20	2.5
Alkalinity, Carbonate, as CaCO3	ND	ND	mg/L			20	2.5
Alkalinity, Hydroxide, as CaCO3	ND	ND	mg/L			20	2.5
Alkalinity, Total as CaCO3	136.8	134.3	mg/L		2	20	2.5

* Value is outside QC limits
E Response exceeds instrument's linear range
ND Not Detected
NM Not Meaningful

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	519449
Report Level	:	II
Report Date	:	11/09/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	519449 Landau - 8th 11/01/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-INFL 0 PV	519449-001	10/30/24 00:00	Water
LANDAU-SMZVI-LOW 0 PV	519449-002	10/30/24 00:00	Water
LANDAU-SMZVI-HIGH 0 PV	519449-003	10/30/24 00:00	Water
LANDAU-T LOW 0 PV	519449-004	10/30/24 00:00	Water
LANDAU-T HIGH 0 PV	519449-005	10/30/24 00:00	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 519449 Location: Landau - 8th Date Received: 11/01/24

This data package contains sample and QC results for five water samples, requested for the above referenced project on 11/01/24. The samples were received cold and intact.

Metals (EPA 6020):
No analytical problems were encountered.

S19449

CHAIN OF CUSTODY

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

Page 1 of 1
Chain of Custody # : _____

C&T LOGIN # _____

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix Water	Matrix Soil			# of Containers	Chemical Preservative HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request Alkalinity	Chloride	Nitrate	Nitrite	Arsenic (Total)	Calcium	Copper (Total	Iron
	Landau-Infl 0 pv	10/30/24		x				1			x							x		x	
	Landau-SMZVI-Low 0 pv	10/30/24		x				1			x							x		x	
	Landau-SMZVI-High 0 pv	10/30/24		x				1			x							x		x	
	Landau-T Low 0 pv	10/30/24		x				1			x							x		x	
	landau-t High 0 pv	10/30/24		x				1			x							x		x	

Notes:

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
M. Schlesinger PRIMA	10/31/24 DATE/TIME	FedEx 1430	DATE/TIME
	DATE/TIME		11/1/24 0954 DATE/TIME
	DATE/TIME		DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 11/01/24 WO# 519449 Client: Prima Environmental

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☑ No

Custody seals intact on arrival? ☑ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: _____

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 11/01/24 By (initials) EA.Orange Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR11 CF: +0.1

Cooler Temp (°C) #1: 5.8 / 5.9 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ☐ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ☐ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other _____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)			✓
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 11/01/24 **By (print)** AES **(sign)** _____

Date Labeled 11/01/24 **By (print)** EA.Orange **(sign)** _____

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 31OCT24
ACTWGT: 10.00 LB
CAD: 4692371/INET4535
DIMS: 12x10x10 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900
INV:
PO:

REF: EA-DZUS/LANDAU-8TH

DEPT:

5.8/5.9
IR11
+0.1

58CJ6/2D2B/C8C4

FedEx Express

J24402409101uv

FRI - 01 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7796 5993 8514

92 APVA

92868
CA-US SNA

HSO

ENTHALPY ANALYTICAL

Analysis Results for 519449

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 519449
Location: Landau - 8th
Date Received: 11/01/24

Sample ID: LANDAU-INFL 0 PV **Lab ID: 519449-001** **Collected: 10/30/24**
Matrix: Water

519449-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**110**		ug/L	2.0	0.38	1	354456	11/01/24	11/05/24	DXC
Copper	**7.8**		ug/L	3.0	0.71	1	354456	11/01/24	11/05/24	DXC

Sample ID: LANDAU-SMZVI-LOW 0 PV **Lab ID: 519449-002** **Collected: 10/30/24**
Matrix: Water

519449-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**1.4**	J	ug/L	2.0	0.38	1	354456	11/01/24	11/05/24	DXC
Copper	**15**		ug/L	3.0	0.71	1	354456	11/01/24	11/05/24	DXC

Sample ID: LANDAU-SMZVI-HIGH 0 PV **Lab ID: 519449-003** **Collected: 10/30/24**
Matrix: Water

519449-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.92**	J	ug/L	2.0	0.38	1	354456	11/01/24	11/05/24	DXC
Copper	**16**		ug/L	3.0	0.71	1	354456	11/01/24	11/05/24	DXC

Sample ID: LANDAU-T LOW 0 PV **Lab ID: 519449-004** **Collected: 10/30/24**
Matrix: Water

519449-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.41**	J	ug/L	2.0	0.38	1	354456	11/01/24	11/05/24	DXC
Copper	**1.7**	J	ug/L	3.0	0.71	1	354456	11/01/24	11/05/24	DXC

Sample ID: LANDAU-T HIGH 0 PV **Lab ID: 519449-005** **Collected: 10/30/24**
Matrix: Water

519449-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	354456	11/01/24	11/05/24	DXC
Copper	**23**		ug/L	3.0	0.71	1	354456	11/01/24	11/05/24	DXC

Results for any subcontracted analyses are not included in this section.

Analysis Results for 519449

J	Estimated value
ND	Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	Blank	Lab ID:	QC1200606	Batch:	354456
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1200606 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	11/01/24	11/05/24
Copper	ND		ug/L	3.0	0.71	11/01/24	11/05/24

Type:	Lab Control Sample	Lab ID:	QC1200607	Batch:	354456
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1200607 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	99.23	100.0	ug/L	99%		80-120
Copper	103.1	100.0	ug/L	103%		80-120

Type:	Matrix Spike	Lab ID:	QC1200608	Batch:	354456
Matrix (Source ID):	Water (519383-002)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1200608 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	105.9	5.633	100.0	ug/L	100%		75-125	1
Copper	104.0	ND	100.0	ug/L	104%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1200609	Batch:	354456
Matrix (Source ID):	Water (519383-002)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1200609 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	107.0	5.633	100.0	ug/L	101%		75-125	1	20	1
Copper	106.7	ND	100.0	ug/L	107%		75-125	3	29	1

Type:	Matrix Spike	Lab ID:	QC1200610	Batch:	354456
Matrix (Source ID):	Water (519422-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1200610 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	103.2	0.9640	100.0	ug/L	102%		75-125	1
Copper	107.6	1.349	100.0	ug/L	106%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1200611	Batch:	354456
Matrix (Source ID):	Water (519422-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1200611 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	105.8	0.9640	100.0	ug/L	105%		75-125	3	20	1
Copper	109.6	1.349	100.0	ug/L	108%		75-125	2	29	1

Batch QC

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	519608
Report Level	:	II
Report Date	:	11/12/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau-8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	519608 Landau-8th 11/05/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-INFL 5 PV	519608-001	11/04/24 08:15	Water
LANDAU-SMZVI- LOW 5 PV	519608-002	11/04/24 08:15	Water
LANDAU-SMZVI- HIGH 5 PV	519608-003	11/04/24 08:15	Water
LANDAU-T LOW 5 PV	519608-004	11/04/24 08:15	Water
LANDAU-T HIGH 5 PV	519608-005	11/04/24 08:15	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 519608 Location: Landau-8th Date Received: 11/05/24

This data package contains sample and QC results for five water samples, requested for the above referenced project on 11/05/24. The samples were received cold and intact.

Metals (EPA 6020):
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page __1__ of __1__
Chain of Custody # : _____

C&T LOGIN # 519608

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix Water	Matrix Soil	Matrix	Matrix	# of Containers	Chemical Preservative HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request Alkalinity	Chloride	Nitrate	Nitrite	Arsenic (Total)	Calcium	Copper (Total)	Iron
	Landau-Infl 5 pv	11/04/24	8:15	x				1			x							x		x	
	Landau-SMZVI-Low 5 pv	11/04/24	8:15	x				1			x							x		x	
	Landau-SMZVI-High 5 pv	11/04/24	8:15	x				1			x							x		x	
	Landau-T Low 5 pv	11/04/24	8:15	x				1			x							x		x	
	Landau-T High 5 pv	11/04/24	8:15	x				1			x							x		x	

Notes:

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
M. Schreier	PRIMA 11/04/24 DATE/TIME	1600 FedEx	DATE/TIME
	DATE/TIME		11/5/24 am 10:20 DATE/TIME
	DATE/TIME		DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 11/5/24 WO# 5196078 Client: PRIMA Environmental

Section 2: Shipping / Custody — **Are custody seals present?** ☐ Yes ☒ No

Custody seals intact on arrival? ☒ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: Fed Ex

Section 3a: Condition / Packaging — ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 11/5/24 By (initials) NCM Type of ice used : ☒ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR 01 CF: -0.5°

Cooler Temp (°C) #1: 8.0 / 7.5 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples — ☒ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples — ☒ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)			✓
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

Section 5: Explanations / Comments — ☐ **PM notified**

Date Logged 11/5/24 **By (print)** Nicole Mendoza **(sign)** [signature]

Date Labeled _____ **By (print)** _____ **(sign)** _____

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 04NOV24
ACTWGT: 10.00 LB
CAD: 4692371/INET4535
DIMS: 12x10x10 IN

BILL SENDER

TO SAMPLE RECEIVING
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: EA-DZUS/LANDAU-8TH
INV:
PO: DEPT:

58CJ4/F74C/C6C4

FedEx Express

J2402401101uv

TUE - 05 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7797 3447 4161

92 APVA

92868
CA-US SNA

8.0/7.5
IR01 -0.5

ENTHALPY ANALYTICAL

Analysis Results for 519608

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 519608
Location: Landau-8th
Date Received: 11/05/24

Sample ID: LANDAU-INFL 5 PV **Lab ID: 519608-001** **Collected: 11/04/24 08:15**
Matrix: Water

519608-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**100**		ug/L	2.0	0.38	1	354691	11/05/24	11/05/24	DXC
Copper	**7.4**		ug/L	3.0	0.71	1	354691	11/05/24	11/05/24	DXC

Sample ID: LANDAU-SMZVI- LOW 5 PV **Lab ID: 519608-002** **Collected: 11/04/24 08:15**
Matrix: Water

519608-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	354691	11/05/24	11/05/24	DXC
Copper	**1.2**	J	ug/L	3.0	0.71	1	354691	11/05/24	11/05/24	DXC

Sample ID: LANDAU-SMZVI- HIGH 5 PV **Lab ID: 519608-003** **Collected: 11/04/24 08:15**
Matrix: Water

519608-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	354691	11/05/24	11/05/24	DXC
Copper	**0.97**	J	ug/L	3.0	0.71	1	354691	11/05/24	11/05/24	DXC

Sample ID: LANDAU-T LOW 5 PV **Lab ID: 519608-004** **Collected: 11/04/24 08:15**
Matrix: Water

519608-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	354691	11/05/24	11/05/24	DXC
Copper	**1.4**	J	ug/L	3.0	0.71	1	354691	11/05/24	11/05/24	DXC

Sample ID: LANDAU-T HIGH 5 PV **Lab ID: 519608-005** **Collected: 11/04/24 08:15**
Matrix: Water

519608-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	354691	11/05/24	11/05/24	DXC
Copper	**8.8**		ug/L	3.0	0.71	1	354691	11/05/24	11/05/24	DXC

Results for any subcontracted analyses are not included in this section.

Analysis Results for 519608

J	Estimated value
ND	Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1201477**	**Batch:**	**354691**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1201477 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	11/05/24	11/05/24
Copper	ND		ug/L	3.0	0.71	11/05/24	11/05/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1201478**	**Batch:**	**354691**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1201478 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	98.64	100.0	ug/L	99%		80-120
Copper	104.4	100.0	ug/L	104%		80-120

Type:	**Matrix Spike**	**Lab ID:**	**QC1201479**	**Batch:**	**354691**
Matrix (Source ID):	**Water (519498-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1201479 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	100.4	2.365	100.0	ug/L	98%		75-125	1
Copper	98.54	ND	100.0	ug/L	99%		75-125	1

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1201480**	**Batch:**	**354691**
Matrix (Source ID):	**Water (519498-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1201480 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	101.3	2.365	100.0	ug/L	99%		75-125	1	20	1
Copper	98.14	ND	100.0	ug/L	98%		75-125	0	29	1

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	519980
Report Level	:	II
Report Date	:	11/16/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	519980 Landau - 8th 11/08/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-INFL 10 PV	519980-001	11/07/24 08:15	Water
LANDAU-SMZVI-LOW 10 PV	519980-002	11/07/24 08:15	Water
LANDAU-SMZVI-HIGH 10 PV	519980-003	11/07/24 08:15	Water
LANDAU-T LOW 10 PV	519980-004	11/07/24 08:15	Water
LANDAU-T HIGH 10 PV	519980-005	11/07/24 08:15	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 519980 Location: Landau - 8th Date Received: 11/08/24

This data package contains sample and QC results for five water samples, requested for the above referenced project on 11/08/24. The samples were received cold and intact.

Metals (EPA 6020):
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page __1__ of __1__
Chain of Custody # : _____

C&T LOGIN # ~~519980~~ 519980 GCM 11/8/24

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling		Matrix					Chemical Preservative					Analytical Request														
		Date	Time	Water	Soil			# of Containers	HCl	H_2SO_4	HNO_3	NaOH	None	Alkalinity	Chloride	Nitrate	Nitrite	Arsenic (Total)	Calcium	Copper (Total)	Iron							
	Landau-Infl 10 pv	11/07/24	8:15	x				1			x							x		x								
	Landau-SMZVI-Low 10 pv	11/07/24	8:15	x				1			x							x		x								
	Landau-SMZVI-High 10 pv	11/07/24	8:15	x				1			x							x		x								
	Landau-T Low 10 pv	11/07/24	8:15	x				1			x							x		x								
	Landau-T High 10 pv	11/07/24	8:15	x				1			x							x		x								

Notes:

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

5.2 / 5.3

RELINQUISHED BY:	RECEIVED BY:
11/07/2024 ~14:30 Brittney Bingaman PRIMA DATE/TIME	FedEx DATE/TIME
DATE/TIME	11/8/24 1000 DATE/TIME
DATE/TIME	DATE/TIME

SAMPLE RECEIPT CHECKLIST

ENTHALPY

Section 1: General Info

Date Received: 11/8/24 WO# 519980 Client: PRIMA Env. Inc

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☒ No

Custody seals intact on arrival? ☒ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: _____

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 11/8/24 By (initials) GCh Type of ice used : ☒ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR11 CF: +0.1

Cooler Temp (°C) #1: 5.2 / 5.3 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ☒ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ☒ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	✓		
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 11/8/24 **By (print)** GChilgren ~~G Kim~~ J. Peterson **(sign)** [signature]

Date Labeled 11/8/24 **By (print)** G Kim **(sign)** [signature]

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 07NOV24
ACTWGT: 10.00 LB
CAD: 4692371/INET4535
DIMS: 12x8x8 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: EA-DZUS/LANDAU-8TH
INV:
PO: DEPT:

58CJ4/F74C/C6C4

FedEx Express

J24402409101uv

FRI - 08 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7798 1081 6783**

92 APVA

92868
CA-US SNA

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ENTHALPY ANALYTICAL

Analysis Results for 519980

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 519980
Location: Landau - 8th
Date Received: 11/08/24

Sample ID: LANDAU-INFL 10 PV **Lab ID: 519980-001** **Collected: 11/07/24 08:15**
Matrix: Water

519980-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**160**		ug/L	2.0	0.38	1	355072	11/08/24	11/09/24	KAM
Copper	**75**		ug/L	3.0	0.71	1	355072	11/08/24	11/11/24	KAM

Sample ID: LANDAU-SMZVI-LOW 10 PV **Lab ID: 519980-002** **Collected: 11/07/24 08:15**
Matrix: Water

519980-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.59**	J	ug/L	2.0	0.38	1	355072	11/08/24	11/09/24	KAM
Copper	**37**		ug/L	3.0	0.71	1	355072	11/08/24	11/11/24	KAM

Sample ID: LANDAU-SMZVI-HIGH 10 PV **Lab ID: 519980-003** **Collected: 11/07/24 08:15**
Matrix: Water

519980-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355072	11/08/24	11/09/24	KAM
Copper	**24**		ug/L	3.0	0.71	1	355072	11/08/24	11/11/24	KAM

Sample ID: LANDAU-T LOW 10 PV **Lab ID: 519980-004** **Collected: 11/07/24 08:15**
Matrix: Water

519980-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355072	11/08/24	11/09/24	KAM
Copper	**44**		ug/L	3.0	0.71	1	355072	11/08/24	11/11/24	KAM

Sample ID: LANDAU-T HIGH 10 PV **Lab ID: 519980-005** **Collected: 11/07/24 08:15**
Matrix: Water

519980-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355072	11/08/24	11/09/24	KAM
Copper	**21**		ug/L	3.0	0.71	1	355072	11/08/24	11/11/24	KAM

Results for any subcontracted analyses are not included in this section.

Analysis Results for 519980

J	Estimated value
ND	Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1202667**	**Batch:**	**355072**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1202667 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	11/08/24	11/08/24
Copper	ND		ug/L	3.0	0.71	11/08/24	11/11/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1202668**	**Batch:**	**355072**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1202668 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	94.65	100.0	ug/L	95%		80-120
Copper	109.9	100.0	ug/L	110%		80-120

Type:	**Matrix Spike**	**Lab ID:**	**QC1202669**	**Batch:**	**355072**
Matrix (Source ID):	**Water (519850-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1202669 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	99.42	ND	100.0	ug/L	99%		75-125	1
Copper	115.4	0.7630	100.0	ug/L	115%		75-125	1

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1202670**	**Batch:**	**355072**
Matrix (Source ID):	**Water (519850-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1202670 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	95.08	ND	100.0	ug/L	95%		75-125	4	20	1
Copper	114.6	0.7630	100.0	ug/L	114%		75-125	1	29	1

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	520657
Report Level	:	II
Report Date	:	11/26/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	520657 Landau - 8th 11/19/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-INFL 15 PV	520657-001	11/11/24 08:55	Water
LANDAU-SMZVI-LOW 15 PV	520657-002	11/11/24 08:55	Water
LANDAU-SMZVI-HIGH 15 PV	520657-003	11/11/24 08:55	Water
LANDAU-T LOW 15 PV	520657-004	11/11/24 08:55	Water
LANDAU-T HIGH 15 PV	520657-005	11/11/24 08:55	Water
LANDAU-INFL 25 PV	520657-006	11/14/24 08:15	Water
LANDAU-SMZVI-LOW 25 PV	520657-007	11/14/24 08:15	Water
LANDAU-SMZVI-HIGH 25 PV	520657-008	11/14/24 08:15	Water
LANDAU-T LOW 25 PV	520657-009	11/14/24 08:15	Water
LANDAU-T HIGH 25 PV	520657-010	11/14/24 08:15	Water
LANDAU-SMZVI-LOW -1118	520657-011	11/18/24 08:15	Water
LANDAU-SMZVI-HIGH -1118	520657-012	11/18/24 08:15	Water
LANDAU-T LOW -1118	520657-013	11/18/24 08:15	Water
LANDAU-T HIGH -1118	520657-014	11/18/24 08:15	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 520657 Location: Landau - 8th Date Received: 11/19/24

This data package contains sample and QC results for fourteen water samples, requested for the above referenced project on 11/19/24. The samples were received cold and intact.

Metals (EPA 6020):
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Chain of Custody # : _____

C&T LOGIN # 520657

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix Water	Matrix Soil	Matrix	Matrix	# of Containers	Chemical Preservative HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request Alkalinity	Chloride	Nitrate	Nitrite	Arsenic (Total)	Calcium	Copper (Total)	Iron								
	Landau-Infl 15 pv	11/11/24	8:55	x				1			x							x		x									
	Landau-SMZVI-Low 15 pv	11/11/24	8:55	x				1			x							x		x									
	Landau-SMZVI-High 15 pv	11/11/24	8:55	x				1			x							x		x									
	Landau-T Low 15 pv	11/11/24	8:55	x				1			x							x		x									
	Landau-T High 15 pv	11/11/24	8:55	x				1			x							x		x									
	Landau-Infl 25 pv	11/14/24	8:15	x				1			x							x		x									
	Landau-SMZVI-Low 25 pv	11/14/24	8:15	x				1			x							x		x									
	Landau-SMZVI-High 25 pv	11/14/24	8:15	x				1			x							x		x									
	Landau-T Low 25 pv	11/14/24	8:15	x				1			x							x		x									
	Landau-T High 25 pv	11/14/24	8:15	x				1			x							x		x									

Notes:

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:	RECEIVED BY:
CSchr PRIMA 11/18/24 DATE/TIME	~1730 FedEx DATE/TIME
DATE/TIME	11/19/24 10:21 DATE/TIME
DATE/TIME	DATE/TIME

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Chain of Custody # : _____

C&T LOGIN # 520657

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix Water	Matrix Soil	Matrix	Matrix	# of Containers	Chemical Preservative HCl	H_2SO_4	HNO_3	NaOH	None	Alkalinity	Chloride	Nitrate	Nitrite	Arsenic (Total)	Calcium	Copper (Total)	Iron
	Landau-SMZVI-Low -1118	11/18/24	8:15	x				1			x							x		x	
	Landau-SMZVI-High -1118	11/18/24	8:15	x				1			x							x		x	
	Landau-T Low -1118	11/18/24	8:15	x				1			x							x		x	
	Landau-T High -1118	11/18/24	8:15	x				1			x							x		x	

Notes:

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
PRIMA	11/18/24 DATE/TIME	~1730 FedEx	DATE/TIME
	DATE/TIME		11/19/24 10:21 DATE/TIME
	DATE/TIME		DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 11/19/24 WO# 520657 Client: Prima

ENTHALPY

Section 2: Shipping / Custody **Are custody seals present?** ☒ Yes ☐ No

Custody seals intact on arrival? ☐ N/A ☒ Yes ☐ No ☒ On cooler / box ☐ On samples

Shipping Info: Fed Ex

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 11/19/24 By (initials) NCM Type of ice used : ☒ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR01 CF: -0.5

Cooler Temp (°C) #1: 2.5 / 2.0 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ☒ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ☒ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	X		
2) Is the sampler's name present on the CoC?	X		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	X		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)			X
5) Were all of, and only, the correct samples received?	X		
6) Are sample labels present, legible, and in agreement with the CoC?	X		
7) Does the container count match the CoC?	X		
8) Was sufficient sample volume / mass received for the analyses requested?	X		
9) Were samples received in proper containers for the analyses requested?	X		
10) Were samples received with > 1/2 holding time remaining?	X		
11) Are samples properly preserved as indicated by CoC / labels?	X		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			X
13) Are VOA vials free from headspace/bubbles > 6mm?			X

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 11/19/24 **By (print)** NCM **(sign)** [signature]

Date Labeled 11/19/24 **By (print)** NCM **(sign)** [signature]

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 19NOV24
ACTWGT: 20.00 LB
CAD: 4692371/INET4535
DIMS: 18x18x14 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

2.5 1R01
2.0 -0.5

ORANGE CA 92868
(714) 771-6900 REF: LAND-8TH; HA-PK
INV:
PO: DEPT:

53CJ5/582E/C6C4

FedEx Express

J24402403051IN

WED - 20 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7700 4886 1769**

92 APVA

92868
CA-US SNA

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ENTHALPY ANALYTICAL

Analysis Results for 520657

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 520657
Location: Landau - 8th
Date Received: 11/19/24

Sample ID: LANDAU-INFL 15 PV **Lab ID: 520657-001** **Collected: 11/11/24 08:55**
Matrix: Water

520657-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**120**		ug/L	20	3.8	10	355892	11/19/24	11/19/24	KAM
Copper	**40**		ug/L	30	7.1	10	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-SMZVI-LOW 15 PV **Lab ID: 520657-002** **Collected: 11/11/24 08:55**
Matrix: Water

520657-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**30**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-SMZVI-HIGH 15 PV **Lab ID: 520657-003** **Collected: 11/11/24 08:55**
Matrix: Water

520657-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**33**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-T LOW 15 PV **Lab ID: 520657-004** **Collected: 11/11/24 08:55**
Matrix: Water

520657-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**24**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-T HIGH 15 PV **Lab ID: 520657-005** **Collected: 11/11/24 08:55**
Matrix: Water

520657-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**15**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 520657

Sample ID: LANDAU-INFL 25 PV	Lab ID: 520657-006	Collected: 11/14/24 08:15
	Matrix: Water	

520657-006 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**120**		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**20**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-SMZVI-LOW 25 PV	Lab ID: 520657-007	Collected: 11/14/24 08:15
	Matrix: Water	

520657-007 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.54**	J	ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**2.5**	J	ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-SMZVI-HIGH 25 PV	Lab ID: 520657-008	Collected: 11/14/24 08:15
	Matrix: Water	

520657-008 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**5.9**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-T LOW 25 PV	Lab ID: 520657-009	Collected: 11/14/24 08:15
	Matrix: Water	

520657-009 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**6.6**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-T HIGH 25 PV	Lab ID: 520657-010	Collected: 11/14/24 08:15
	Matrix: Water	

520657-010 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	**5.4**		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 520657

Sample ID: LANDAU-SMZVI-LOW -1118	Lab ID: 520657-011	Collected: 11/18/24 08:15
	Matrix: Water	

520657-011 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.48**	J	ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	ND		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-SMZVI-HIGH -1118	Lab ID: 520657-012	Collected: 11/18/24 08:15
	Matrix: Water	

520657-012 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.50**	J	ug/L	2.0	0.38	1	355892	11/19/24	11/19/24	KAM
Copper	ND		ug/L	3.0	0.71	1	355892	11/19/24	11/19/24	KAM

Sample ID: LANDAU-T LOW -1118	Lab ID: 520657-013	Collected: 11/18/24 08:15
	Matrix: Water	

520657-013 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.42**	J	ug/L	2.0	0.38	1	355892	11/19/24	11/20/24	KAM
Copper	**2.1**	J	ug/L	3.0	0.71	1	355892	11/19/24	11/20/24	KAM

Sample ID: LANDAU-T HIGH -1118	Lab ID: 520657-014	Collected: 11/18/24 08:15
	Matrix: Water	

520657-014 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	355892	11/19/24	11/20/24	KAM
Copper	**2.7**	J	ug/L	3.0	0.71	1	355892	11/19/24	11/20/24	KAM

J Estimated value
ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1205530**	**Batch:**	**355892**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1205530 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	11/19/24	11/19/24
Copper	ND		ug/L	3.0	0.71	11/19/24	11/19/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1205531**	**Batch:**	**355892**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1205531 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	105.4	100.0	ug/L	105%		80-120
Copper	108.9	100.0	ug/L	109%		80-120

Type:	**Matrix Spike**	**Lab ID:**	**QC1205534**	**Batch:**	**355892**
Matrix (Source ID):	**Water (520658-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1205534 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	104.5	5.910	100.0	ug/L	99%		75-125	10
Copper	109.1	ND	100.0	ug/L	109%		75-125	10

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1205535**	**Batch:**	**355892**
Matrix (Source ID):	**Water (520658-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1205535 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	107.3	5.910	100.0	ug/L	101%		75-125	3	20	10
Copper	105.0	ND	100.0	ug/L	105%		75-125	4	29	10

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	521588
Report Level	:	II
Report Date	:	12/05/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	521588 Landau - 8th 12/04/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-INFL-1202	521588-001	12/02/24 07:57	Water
LANDAU-INFL-1202 (F)	521588-002	12/02/24 07:57	Water
LANDAU-PRB INFL 0 BV	521588-003	12/03/24 14:40	Water
LANDAU-PRB INFL 0 BV (F)	521588-004	12/03/24 14:40	Water
LANDAU-PRB 0 BV	521588-005	12/03/24 14:40	Water
LANDAU-PRB 0 BV (F)	521588-006	12/03/24 14:40	Water
LANDAU-SMZVI-LOW-1121	521588-007	11/21/24 09:10	Water
LANDAU-SMZVI-HIGH-1121	521588-008	11/21/24 09:10	Water
LANDAU-T LOW-1121	521588-009	11/21/24 09:10	Water
LANDAU-T HIGH-1121	521588-010	11/21/24 09:10	Water
LANDAU-INFL-1121	521588-011	11/21/24 09:10	Water
LANDAU-SMZVI-LOW-1202	521588-012	11/02/24 07:57	Water
LANDAU-SMZVI-LOW-1202 (F)	521588-013	11/02/24 07:57	Water
LANDAU-SMZVI-HIGH-1202	521588-014	11/02/24 07:57	Water
LANDAU-SMZVI-HIGH-1202 (F)	521588-015	11/02/24 07:57	Water
LANDAU-T LOW-1202	521588-016	11/02/24 07:57	Water
LANDAU-T LOW-1202 (F)	521588-017	11/02/24 07:57	Water
LANDAU-T HIGH-1202	521588-018	11/02/24 07:57	Water
LANDAU-T HIGH-1202 (F)	521588-019	11/02/24 07:57	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 521588 Location: Landau - 8th Date Received: 12/04/24

This data package contains sample and QC results for nineteen water samples, requested for the above referenced project on 12/04/24. The samples were received cold and intact.

Metals (EPA 6020) Water:
No analytical problems were encountered.

Metals (EPA 6020) Filtrate:
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page 1 of 12
Chain of Custody # : _____

C&T LOGIN # _____

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix: Water	Matrix: Soil	Matrix:	Matrix:	# of Containers	Chemical Preservative: HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request: Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium	As, Cu (Dissolved)	Iron
1	Landau-Infl-1202	12/02/24	7:57	x				1			x							x			
2	Landau-Infl-1202 (F)	12/02/24	7:57	x				1			x									x	
3	Landau-PRB Infl 0 bv	12/03/24	14:40	x				1			x							x			
4	Landau-PRB Infl 0 bv (F)	12/03/24	14:40	x				1			x									x	
5	Landau-PRB 0 bv	12/03/24	14:40	x				1			x							x			
6	Landau-PRB 0 bv (F)	12/03/24	14:40	x				1			x									x	

Notes:
Samples labeld with (F) field filtered
24 hr TAT for samples:
Landau-PRB Infl 0 bv,
Landau-PRB Infl 0 bv (F),
Landau-PRB 0 bv,
Landau-PRB 0 bv (F)

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
M Stickinger PRIMA	12/03/24	16:15 FedEX	
		[illegible]	12-4-24 9:40

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page __2__ of __2__
Chain of Custody # : _____

C&T LOGIN # _____

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix: Water	Matrix: Soil	Matrix:	Matrix:	# of Containers	Chemical Preservative: HCl	Chemical Preservative: H_2SO_4	Chemical Preservative: HNO_3	Chemical Preservative: NaOH	Chemical Preservative: None	Analytical Request: Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium			As, Cu (Dissolved)							
7	Landau-SMZVI-Low-1121	11/21/24	9:10	x				1			x							x											
8	Landau-SMZVI-High -1121	11/21/24	9:10	x				1			x							x											
9	Landau-T Low -1121	11/21/24	9:10	x				1			x							x											
10	Landau-T High -1121	11/21/24	9:10	x				1			x							x											
11	Landau-Infl-1121	11/21/24	9:10	x				1			x							x											
12	Landau-SMZVI-Low-1202	12/02/24	7:57	x				1			x							x											
13	Landau-SMZVI-Low-1202 (F)	12/02/24	7:57	x				1			x											x							
14	Landau-SMZVI-High-1202	12/02/24	7:57	x				1			x							x											
15	Landau-SMZVI-High-1202 (F)	12/02/24	7:57	x				1			x											x							
16	Landau-T Low-1202	12/02/24	7:57	x				1			x							x											
17	Landau-T Low-1202 (F)	12/02/24	7:57	x				1			x											x							
18	Landau-T High-1202	12/02/24	7:57	x				1			x							x											
19	Landau-T High-1202 (F)	12/02/24	7:57	x				1			x											x							

Notes:
Samples labeled with (F) field filtered

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
M. Stickrigen PRIMA	12/03/24 DATE/TIME	16:15 FedEx	DATE/TIME
	DATE/TIME	[illegible] 12-4-24 9:40	DATE/TIME
	DATE/TIME		DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 12/4/24 WO# 521588 Client: Prima Environmental, Inc.

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☐ No

Custody seals intact on arrival? ☑ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: _____

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 12/4/24 By (initials) DEP Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

■ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR CF: +0.1

Cooler Temp (°C) #1: 4.5 / 4.6 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ■ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ■ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	x		
2) Is the sampler's name present on the CoC?	x		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	x		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	x		
5) Were all of, and only, the correct samples received?	x		
6) Are sample labels present, legible, and in agreement with the CoC?		x	
7) Does the container count match the CoC?	x		
8) Was sufficient sample volume / mass received for the analyses requested?	x		
9) Were samples received in proper containers for the analyses requested?	x		
10) Were samples received with > 1/2 holding time remaining?	x		
11) Are samples properly preserved as indicated by CoC / labels?	x		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			x
13) Are VOA vials free from headspace/bubbles > 6mm?			x

Section 5: Explanations / Comments ☐ **PM notified**

4.6) Samples 005 and 006: The container labels list the sample collection time as 08:08; the COC lists 14:00

Date Logged 12/24/24 **By (print)** G. Kim **(sign)** [signature]

Date Labeled 12/24/24 **By (print)** G. Kim **(sign)** [signature]

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 03DEC24
ACTWGT: 22.00 LB
CAD: 4692371/INET4535
DIMS: 16x11x16 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: LANDAU-8TH
INV:
PO: DEPT:

58CJ4/EB78/C6C4

FedEx Express

J244024091001uv

WED - 04 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 0201 **7704 6766 7676**

92 APVA

92868
CA-US **SNA**

TEMP: 4.5 | 4.6 1R11
+0.1

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Analysis Results for 521588

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 521588
Location: Landau - 8th
Date Received: 12/04/24

Sample ID: LANDAU-INFL-1202 **Lab ID: 521588-001** **Collected: 12/02/24 07:57**
Matrix: Water

521588-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**110**		ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**7.8**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-INFL-1202 (F) **Lab ID: 521588-002** **Collected: 12/02/24 07:57**
Matrix: Filtrate

521588-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**100**		ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	**6.7**		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

Sample ID: LANDAU-PRB INFL 0 BV **Lab ID: 521588-003** **Collected: 12/03/24 14:40**
Matrix: Water

521588-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**100**		ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**7.0**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-PRB INFL 0 BV (F) **Lab ID: 521588-004** **Collected: 12/03/24 14:40**
Matrix: Filtrate

521588-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**110**		ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	**6.1**		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

Sample ID: LANDAU-PRB 0 BV **Lab ID: 521588-005** **Collected: 12/03/24 14:40**
Matrix: Water

521588-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 521588

Sample ID:	Lab ID:	Collected:
LANDAU-PRB 0 BV (F)	521588-006	12/03/24 14:40
	Matrix: Filtrate	

521588-006 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.20**	J	ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

Sample ID:	Lab ID:	Collected:
LANDAU-SMZVI-LOW-1121	521588-007	11/21/24 09:10
	Matrix: Water	

521588-007 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.59**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**43**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID:	Lab ID:	Collected:
LANDAU-SMZVI-HIGH-1121	521588-008	11/21/24 09:10
	Matrix: Water	

521588-008 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.45**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**20**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID:	Lab ID:	Collected:
LANDAU-T LOW-1121	521588-009	11/21/24 09:10
	Matrix: Water	

521588-009 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.29**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**13**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID:	Lab ID:	Collected:
LANDAU-T HIGH-1121	521588-010	11/21/24 09:10
	Matrix: Water	

521588-010 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.27**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**22**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Results for any subcontracted analyses are not included in this section.

Analysis Results for 521588

Sample ID: LANDAU-INFL-1121	Lab ID: 521588-011	Collected: 11/21/24 09:10
	Matrix: Water	

521588-011 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**100**		ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	**8.5**		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-SMZVI-LOW-1202	Lab ID: 521588-012	Collected: 11/02/24 07:57
	Matrix: Water	

521588-012 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.89**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-SMZVI-LOW-1202 (F)	Lab ID: 521588-013	Collected: 11/02/24 07:57
	Matrix: Filtrate	

521588-013 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.85**	J	ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

Sample ID: LANDAU-SMZVI-HIGH-1202	Lab ID: 521588-014	Collected: 11/02/24 07:57
	Matrix: Water	

521588-014 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.58**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-SMZVI-HIGH-1202 (F)	Lab ID: 521588-015	Collected: 11/02/24 07:57
	Matrix: Filtrate	

521588-015 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.59**	J	ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 521588

Sample ID: LANDAU-T LOW-1202	Lab ID: 521588-016	Collected: 11/02/24 07:57
	Matrix: Water	

521588-016 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.43**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-T LOW-1202 (F)	Lab ID: 521588-017	Collected: 11/02/24 07:57
	Matrix: Filtrate	

521588-017 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.37**	J	ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

Sample ID: LANDAU-T HIGH-1202	Lab ID: 521588-018	Collected: 11/02/24 07:57
	Matrix: Water	

521588-018 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.37**	J	ug/L	2.0	0.22	1	357007	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357007	12/04/24	12/04/24	DXC

Sample ID: LANDAU-T HIGH-1202 (F)	Lab ID: 521588-019	Collected: 11/02/24 07:57
	Matrix: Filtrate	

521588-019 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.37**	J	ug/L	2.0	0.18	1	357006	12/04/24	12/04/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357006	12/04/24	12/04/24	DXC

J Estimated value
ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	Blank	Lab ID:	QC1209425	Batch:	357007
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1209425 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.22	12/04/24	12/04/24
Copper	ND		ug/L	3.0	2.0	12/04/24	12/04/24

Type:	Lab Control Sample	Lab ID:	QC1209426	Batch:	357007
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1209426 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	98.19	100.0	ug/L	98%		80-120
Copper	106.4	100.0	ug/L	106%		80-120

Type:	Matrix Spike	Lab ID:	QC1209427	Batch:	357007
Matrix (Source ID):	Water (521597-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1209427 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	96.28	ND	100.0	ug/L	96%		75-125	1
Copper	101.0	ND	100.0	ug/L	101%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1209428	Batch:	357007
Matrix (Source ID):	Water (521597-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1209428 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	95.73	ND	100.0	ug/L	96%		75-125	1	20	1
Copper	101.1	ND	100.0	ug/L	101%		75-125	0	29	1

Type:	Matrix Spike	Lab ID:	QC1209429	Batch:	357007
Matrix (Source ID):	Water (521604-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1209429 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	97.57	ND	100.0	ug/L	98%		75-125	1
Copper	100.5	ND	100.0	ug/L	100%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1209430	Batch:	357007
Matrix (Source ID):	Water (521604-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1209430 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	98.43	ND	100.0	ug/L	98%		75-125	1	20	1
Copper	101.7	ND	100.0	ug/L	102%		75-125	1	29	1

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1209422**	**Batch:**	**357006**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1209422 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.18	12/04/24	12/04/24
Copper	ND		ug/L	3.0	0.79	12/04/24	12/04/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1209423**	**Batch:**	**357006**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1209423 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	99.96	100.0	ug/L	100%		80-120
Copper	105.4	100.0	ug/L	105%		80-120

Type:	**Lab Control Sample Duplicate**	**Lab ID:**	**QC1209424**	**Batch:**	**357006**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1209424 Analyte	Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim
Arsenic	100.9	100.0	ug/L	101%		80-120	1	20
Copper	107.1	100.0	ug/L	107%		80-120	2	20

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	521784
Report Level	:	II
Report Date	:	12/13/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: West-As

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	521784 West-As 12/06/24

Sample ID	Lab ID	Collected	Matrix
WEST - CON - A	521784-001	12/04/24 16:45	Water
WEST - TEST 0.5MM - A	521784-002	12/04/24 16:45	Water
WEST - TEST 1.0MM - A	521784-003	12/04/24 16:45	Water
WEST - TEST 1.5MM - A	521784-004	12/04/24 16:45	Water
WEST - TEST 2.0MM - A	521784-005	12/04/24 16:45	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 521784 Location: West-As Date Received: 12/06/24

This data package contains sample and QC results for five water samples, requested for the above referenced project on 12/06/24. The samples were received cold and intact.

Metals (EPA 6020):
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Chain of Custody # : _____

C&T LOGIN # 521784

Project No:
Project Name: West-As
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling		Matrix					Chemical Preservative					Analytical Request														
		Date	Time	Water	Soil			# of Containers	HCl	H_2SO_4	HNO_3	NaOH	None	VOCs (8260)	Alkalinty	Phosphate	Metals (As, Mg) Dissolved	Metals (As, Mg) Total										
	West - Con - A	12/04/24	16:45	x				1			x						x											
	West - Test 0.5mM - A	12/04/24	16:45	x				1			x						x											
	West - Test 1.0mM - A	12/04/24	16:45	x				1			x						x											
	West - Test 1.5mM - A	12/04/24	16:45	x				1			x						x											
	West - Test 2.0mM - A	12/04/24	16:45	x				1			x						x											

Notes:
Samples have been field filtered.

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:
12/05/24 ~1600
Brittney Bingamon PRIMA DATE/TIME
DATE/TIME
DATE/TIME

RECEIVED BY:
Fed Ex DATE/TIME
12/06/24 0915AM
[illegible] DATE/TIME
DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 12-6-24 WO# 521784 Client: PRIMA Envioimental, Inc.

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☑ No

Custody seals intact on arrival? ☑ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: FeDex

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 12/6/24 By (initials) DEP Gen Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR11 CF: +0.1

Cooler Temp (°C) #1: 2.8 / 3.0 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ☑ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ☑ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	✓		
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 12/6/24 **By (print)** ~~Berke~~ Emeryville ccn **(sign)** fo- Emy

Date Labeled 12/6/24 **By (print)** Orange **(sign)** to Ora

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 05DEC24
ACTWGT: 10.00 LB
CAD: 4692371/INET4535
DIMS: 12x8x8 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: WEST-AS/LANDAU-8TH
INV:
PO: DEPT:

58CJ4/EB78/C6C4

FedEx Express

J244024091001uv

FRI - 06 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7705 3167 2460

92 APVA

92868
CA-US SNA

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

29 | 3.0

1R 11
+0.1

ENTHALPY ANALYTICAL

Analysis Results for 521784

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 521784
Location: West-As
Date Received: 12/06/24

Sample ID: WEST - CON - A **Lab ID: 521784-001** **Collected: 12/04/24 16:45**
Matrix: Filtrate

521784-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**40**		ug/L	20	1.8	10	357241	12/06/24	12/06/24	DXC
Magnesium	**100,000**		ug/L	1,000	500	10	357241	12/06/24	12/06/24	DXC

Sample ID: WEST - TEST 0.5MM - A **Lab ID: 521784-002** **Collected: 12/04/24 16:45**
Matrix: Filtrate

521784-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**39**		ug/L	20	1.8	10	357241	12/06/24	12/06/24	DXC
Magnesium	**110,000**		ug/L	1,000	500	10	357241	12/06/24	12/06/24	DXC

Sample ID: WEST - TEST 1.0MM - A **Lab ID: 521784-003** **Collected: 12/04/24 16:45**
Matrix: Filtrate

521784-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**37**		ug/L	20	1.8	10	357241	12/06/24	12/06/24	DXC
Magnesium	**120,000**		ug/L	1,000	500	10	357241	12/06/24	12/06/24	DXC

Sample ID: WEST - TEST 1.5MM - A **Lab ID: 521784-004** **Collected: 12/04/24 16:45**
Matrix: Filtrate

521784-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**35**		ug/L	20	1.8	10	357241	12/06/24	12/06/24	DXC
Magnesium	**130,000**		ug/L	1,000	500	10	357241	12/06/24	12/06/24	DXC

Sample ID: WEST - TEST 2.0MM - A **Lab ID: 521784-005** **Collected: 12/04/24 16:45**
Matrix: Filtrate

521784-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**35**		ug/L	20	1.8	10	357241	12/06/24	12/06/24	DXC
Magnesium	**150,000**		ug/L	1,000	500	10	357241	12/06/24	12/06/24	DXC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1210147**	**Batch:**	**357241**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1210147 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.18	12/06/24	12/06/24
Magnesium	ND		ug/L	100	50	12/06/24	12/06/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1210148**	**Batch:**	**357241**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1210148 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	95.30	100.0	ug/L	95%		80-120
Magnesium	5,026	5100	ug/L	99%		80-120

Type:	**Matrix Spike**	**Lab ID:**	**QC1210149**	**Batch:**	**357241**
Matrix (Source ID):	**Filtrate (521784-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1210149 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	137.5	39.78	100.0	ug/L	98%		75-125	10
Magnesium	104,800	100800	5100	ug/L	78%	NM	75-125	10

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1210150**	**Batch:**	**357241**
Matrix (Source ID):	**Filtrate (521784-001)**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1210150 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	142.3	39.78	100.0	ug/L	103%		75-125	3	20	10
Magnesium	105,700	100800	5100	ug/L	97%	NM	75-125	1	27	10

ND Not Detected
NM Not Meaningful

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	522066
Report Level	:	II
Report Date	:	12/18/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	522066 Landau - 8th 12/11/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-PRB-EFF-120524	522066-001	12/05/24 07:55	Water
LANDAU-PRB-EFF-120524 (F)	522066-002	12/05/24 07:55	Water
LANDAU-PRB-EFF-120924	522066-003	12/09/24 08:07	Water
LANDAU-PRB-EFF-120924 (F)	522066-004	12/09/24 08:07	Water
LANDAU-SMZVI LOW-120924	522066-005	12/09/24 16:11	Water
LANDAU-SMZVI LOW-120924 (F)	522066-006	12/09/24 16:11	Water
LANDAU-SMZVI HIGH-120924	522066-007	12/09/24 16:11	Water
LANDAU-SMZVI HIGH-120924 (F)	522066-008	12/09/24 16:11	Water
LANDAU-T LOW-120924	522066-009	12/09/24 16:11	Water
LANDAU-T LOW-120924 (F)	522066-010	12/09/24 16:11	Water
LANDAU-T HIGH-120924	522066-011	12/09/24 16:11	Water
LANDAU-T HIGH-120924 (F)	522066-012	12/09/24 16:11	Water
LANDAU-INFL-121024	522066-013	12/10/24 11:50	Water
LANDAU-INFL-121024 (F)	522066-014	12/10/24 11:50	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 522066 Location: Landau - 8th Date Received: 12/11/24

This data package contains sample and QC results for fourteen water samples, requested for the above referenced project on 12/11/24. The samples were received cold and intact.

Metals (EPA 6020) Water:
No analytical problems were encountered.

Metals (EPA 6020) Filtrate:
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page 1 of 12
Chain of Custody # : _____

C&T LOGIN # 522064

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix Water	Matrix Soil			# of Containers	Chemical Preservative HCl	H_2SO_4	HNO_3	NaOH	None	Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium	As, Cu (Dissolved)	Iron								
	Landau-PRB-Eff-120524	12/05/24	7:55	x				1			x							x											
	Landau-PRB-Eff-120524 (F)	12/05/24	7:55	x				1			x									x									
	Landau-PRB-Eff-120924	12/09/24	8:07	x				1			x							x											
	Landau-PRB-Eff-120924 (F)	12/09/24	8:07	x				1			x									x									
	Landau-SMZVI Low-120924	12/09/24	16:11	x				1			x							x											
	Landau-SMZVI Low-120924 (F)	12/09/24	16:11	x				1			x									x									
	Landau-SMZVI High-120924	12/09/24	16:11	x				1			x							x											
	Landau-SMZVI High-120924 (F)	12/09/24	16:11	x				1			x									x									
	Landau-T Low-120924	12/09/24	16:11	x				1			x							x											
	Landau-T Low-120924 (F)	12/09/24	16:11	x				1			x									x									
	Landau-T High-120924	12/09/24	16:11	x				1			x							x											
	Landau-T High-120924(F)	12/09/24	16:11	x				1			x									x									
	Landau-Infl-121024	12/10/24	11:50	x				1			x							x											

Notes:
Samples labeld with (F) field filtered

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
Mariah Slichenger PRIMA	12/10/24 DATE/TIME	@16:00 FedEx	DATE/TIME
	DATE/TIME	12/11/24 1000	DATE/TIME
	DATE/TIME		DATE/TIME

3.8/40

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page 2 of 2
Chain of Custody # : _____

C&T LOGIN # 572064

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix Water	Matrix Soil	Matrix	Matrix	# of Containers	Chemical Preservative HCl	H_2SO_4	HNO_3	NaOH	None	Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium	As, Cu (Dissolved)	Iron								
	Landau-Infl-121024 (F)	12/10/24	11:50	x				1			x									x									

Analytical Request

Notes:
Samples labeld with (F) field filtered

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
Mariah Stidringer PRIMA	12/10/24 DATE/TIME	@16:00 FedEX	DATE/TIME
	DATE/TIME	12/11/24 1000	DATE/TIME
	DATE/TIME		DATE/TIME

38/4.0

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 12/11/24 WO# 522066 Client: Prima Environmental, Inc.

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☑ No

Custody seals intact on arrival? ☑ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: _____

Section 3a: Condition / Packaging ■ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 12/11/24 By (initials) GCK Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR12 CF: +0.2

Cooler Temp (°C) #1: 3.8 / 4.0 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ■ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ■ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	x		
2) Is the sampler's name present on the CoC?	x		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	x		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	x		
5) Were all of, and only, the correct samples received?	x		
6) Are sample labels present, legible, and in agreement with the CoC?	x		
7) Does the container count match the CoC?	x		
8) Was sufficient sample volume / mass received for the analyses requested?	x		
9) Were samples received in proper containers for the analyses requested?	x		
10) Were samples received with > 1/2 holding time remaining?	x		
11) Are samples properly preserved as indicated by CoC / labels?	x		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			x
13) Are VOA vials free from headspace/bubbles > 6mm?			x

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 12/11/24 **By (print)** G. Kim **(sign)** _____

Date Labeled 12/11/24 **By (print)** Orange **(sign)** _____

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 10DEC24
ACTWGT: 14.00 LB
CAD: 4692371/INET4535
DIMS: 16x10x16 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: LANDAU-8TH
INV:
PO: DEPT:

58CJ4/EB78/C8C4

FedEx Express

J244024091001uv

WED - 11 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 0201 **7706 5243 2256**

92 APVA

CA-US **92868**
SNA

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ENTHALPY ANALYTICAL

Analysis Results for 522066

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 522066
Location: Landau - 8th
Date Received: 12/11/24

Sample ID: LANDAU-PRB-EFF-120524 | **Lab ID: 522066-001** | **Matrix: Water** | **Collected: 12/05/24 07:55**

522066-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	ND		ug/L	3.0	0.71	1	357711	12/12/24	12/12/24	KAM

Sample ID: LANDAU-PRB-EFF-120524 (F) | **Lab ID: 522066-002** | **Matrix: Filtrate** | **Collected: 12/05/24 07:55**

522066-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.48**	J	ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	ND		ug/L	3.0	0.73	1	357657	12/11/24	12/12/24	DXC

Sample ID: LANDAU-PRB-EFF-120924 | **Lab ID: 522066-003** | **Matrix: Water** | **Collected: 12/09/24 08:07**

522066-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	ND		ug/L	3.0	0.71	1	357711	12/12/24	12/12/24	KAM

Sample ID: LANDAU-PRB-EFF-120924 (F) | **Lab ID: 522066-004** | **Matrix: Filtrate** | **Collected: 12/09/24 08:07**

522066-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.37**	J	ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	**1.3**	J	ug/L	3.0	0.73	1	357657	12/11/24	12/12/24	DXC

Sample ID: LANDAU-SMZVI LOW-120924 | **Lab ID: 522066-005** | **Matrix: Water** | **Collected: 12/09/24 16:11**

522066-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**1.1**	J	ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	ND		ug/L	3.0	0.71	1	357711	12/12/24	12/12/24	KAM

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 522066

Sample ID:	Lab ID: 522066-006	Collected: 12/09/24 16:11
LANDAU-SMZVI LOW-120924 (F)	Matrix: Filtrate	

522066-006 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**1.1**	J	ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	ND		ug/L	3.0	0.73	1	357657	12/11/24	12/12/24	DXC

Sample ID:	Lab ID: 522066-007	Collected: 12/09/24 16:11
LANDAU-SMZVI HIGH-120924	Matrix: Water	

522066-007 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.70**	J	ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	ND		ug/L	3.0	0.71	1	357711	12/12/24	12/12/24	KAM

Sample ID:	Lab ID: 522066-008	Collected: 12/09/24 16:11
LANDAU-SMZVI HIGH-120924 (F)	Matrix: Filtrate	

522066-008 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.84**	J	ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	ND		ug/L	3.0	0.73	1	357657	12/11/24	12/12/24	DXC

Sample ID: LANDAU-T LOW-120924	Lab ID: 522066-009	Collected: 12/09/24 16:11
	Matrix: Water	

522066-009 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.46**	J	ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	ND		ug/L	3.0	0.71	1	357711	12/12/24	12/12/24	KAM

Sample ID:	Lab ID: 522066-010	Collected: 12/09/24 16:11
LANDAU-T LOW-120924 (F)	Matrix: Filtrate	

522066-010 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.59**	J	ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	ND		ug/L	3.0	0.73	1	357657	12/11/24	12/12/24	DXC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 522066

Sample ID: LANDAU-T HIGH-120924	Lab ID: 522066-011	Collected: 12/09/24 16:11
	Matrix: Water	

522066-011 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.48**	J	ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	ND		ug/L	3.0	0.71	1	357711	12/12/24	12/12/24	KAM

Sample ID: LANDAU-T HIGH-120924 (F)	Lab ID: 522066-012	Collected: 12/09/24 16:11
	Matrix: Filtrate	

522066-012 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.50**	J	ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	ND		ug/L	3.0	0.73	1	357657	12/11/24	12/12/24	DXC

Sample ID: LANDAU-INFL-121024	Lab ID: 522066-013	Collected: 12/10/24 11:50
	Matrix: Water	

522066-013 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**110**		ug/L	2.0	0.38	1	357711	12/12/24	12/12/24	KAM
Copper	**7.2**		ug/L	3.0	0.71	1	357711	12/12/24	12/13/24	KAM

Sample ID: LANDAU-INFL-121024 (F)	Lab ID: 522066-014	Collected: 12/10/24 11:50
	Matrix: Filtrate	

522066-014 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**110**		ug/L	2.0	0.28	1	357657	12/11/24	12/12/24	DXC
Copper	**7.6**		ug/L	3.0	0.73	1	357657	12/11/24	12/13/24	DXC

J Estimated value
ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1211704**	**Batch:**	**357711**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1211704 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	12/12/24	12/12/24
Copper	ND		ug/L	3.0	0.71	12/12/24	12/12/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1211705**	**Batch:**	**357711**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1211705 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	100.1	100.0	ug/L	100%		80-120
Copper	113.3	100.0	ug/L	113%		80-120

Type:	**Matrix Spike**	**Lab ID:**	**QC1211706**	**Batch:**	**357711**
Matrix (Source ID):	**Water (522156-007)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1211706 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	108.3	8.000	100.0	ug/L	100%		75-125	10
Copper	111.3	ND	100.0	ug/L	111%		75-125	10

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1211707**	**Batch:**	**357711**
Matrix (Source ID):	**Water (522156-007)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1211707 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	108.3	8.000	100.0	ug/L	100%		75-125	0	20	10
Copper	110.9	ND	100.0	ug/L	111%		75-125	0	29	10

Type:	**Blank**	**Lab ID:**	**QC1211496**	**Batch:**	**357657**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1211496 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.28	12/11/24	12/12/24
Copper	ND		ug/L	3.0	0.73	12/11/24	12/12/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1211497**	**Batch:**	**357657**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1211497 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	100.7	100.0	ug/L	101%		80-120
Copper	107.6	100.0	ug/L	108%		80-120

ENTHALPY ANALYTICAL

Batch QC

Type:	**Lab Control Sample Duplicate**	**Lab ID:**	**QC1211498**	**Batch:**	**357657**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1211498 Analyte	Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim
Arsenic	101.6	100.0	ug/L	102%		80-120	1	20
Copper	107.7	100.0	ug/L	108%		80-120	0	20

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	522256
Report Level	:	II
Report Date	:	12/16/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	522256 Landau - 8th 12/13/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-PRB EFF 121124	522256-001	12/11/24 10:00	Water
LANDAU-PRB EFF 121124 (F)	522256-002	12/11/24 10:00	Water
LANDAU-PRB INFL 121124	522256-003	12/11/24 14:10	Water
LANDAU-PRB INFL 121124 (F)	522256-004	12/11/24 14:10	Water
LANDAU-PRB EFF 121224	522256-005	12/12/24 07:44	Water
LANDAU-PRB EFF 121224 (F)	522256-006	12/12/24 07:44	Water
LANDAU-PRB INFL 121224	522256-007	12/12/24 10:30	Water
LANDAU-PRB INFL 121224 (F)	522256-008	12/12/24 10:30	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 522256 Location: Landau - 8th Date Received: 12/13/24

This data package contains sample and QC results for eight water samples, requested for the above referenced project on 12/13/24. The samples were received cold and intact.

Metals (EPA 6020) Water:
No analytical problems were encountered.

Metals (EPA 6020) Filtrate:
No analytical problems were encountered.

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

CHAIN OF CUSTODY

Page 1 of 1
Chain of Custody # :

C&T LOGIN # 522256

Project No:
Project Name: Landau - 8th
EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV
Turnaround Time: ☒ RUSH 24hr TAT ☐ Standard

Sampler: Cindy Schreier
Report To: Cindy Schreier
Company : PRIMA Environmental, Inc.
Telephone: 916-939-7300
Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix: Water	Matrix: Soil	Matrix:	Matrix:	# of Containers	Chemical Preservative: HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request: Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium	As, Cu (Dissolved)	Iron								
	Landau-PRB Eff 121124	12/11/24	10:00	x				1			x							x											
	Landau-PRB Eff 121124 (F)	12/11/24	10:00	x				1			x									x									
	Landau-PRB Infl 121124	12/11/24	14:10	x				1			x							x											
	Landau-PRB Infl 121124 (F)	12/11/24	14:10	x				1			x									x									
	Landau-PRB Eff 121224	12/12/24	7:44	x				1			x							x											
	Landau-PRB Eff 121224 (F)	12/12/24	7:44	x				1			x									x									
	Landau-PRB Infl 121224	12/12/24	10:30	x				1			x							x											
	Landau-PRB Infl 121224 (F)	12/12/24	10:30	x				1			x									x									

Notes:
Samples labeld with (F) field filtered

24hr TAT

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:	RECEIVED BY:
Mariah Strickinger PRIMA 12/12/24 @1600 DATE/TIME	FedEX DATE/TIME
DATE/TIME	Dunf. 12-13-24 0945 DATE/TIME
DATE/TIME	DATE/TIME

SAMPLE RECEIPT CHECKLIST

ENTHALPY

Section 1: General Info

Date Received: 12-13-24 WO# _____ Client: Prima

Section 2: Shipping / Custody **Are custody seals present?** ☑ Yes ☐ No

Custody seals intact on arrival? ☐ N/A ☑ Yes ☐ No ☑ On cooler / box ☐ On samples

Shipping Info: FeDex

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 12-13-24 By (initials) DEP Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR12 CF: +0.2

Cooler Temp (°C) #1: 3.9 / 4.1 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ☑ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ☑ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	✓		
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 12/13/24 **By (print)** Frown **(sign)** [signature]

Date Labeled 12/13/24 **By (print)** Frown **(sign)** [signature]

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 12DEC24
ACTWGT: 11.00 LB
CAD: 4692371/INET4535
DIMS: 16x10x16 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

3.9/4.1
1.42 +0.2

ORANGE CA 92868
(714) 771-6900 REF: LANDAU-8TH
INV:
PO: DEPT:

58CJ4/EB78/C6C4

FedEx Express

J244024091001sw

FRI - 13 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7707 2101 4499

92 APVA

92868
CA-US SNA

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ENTHALPY ANALYTICAL

Analysis Results for 522256

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 522256
Location: Landau - 8th
Date Received: 12/13/24

Sample ID: LANDAU-PRB EFF 121124 | **Lab ID: 522256-001** | **Matrix: Water** | **Collected: 12/11/24 10:00**

522256-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	ND		ug/L	2.0	0.22	1	357897	12/13/24	12/13/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357897	12/13/24	12/13/24	DXC

Sample ID: LANDAU-PRB EFF 121124 (F) | **Lab ID: 522256-002** | **Matrix: Filtrate** | **Collected: 12/11/24 10:00**

522256-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.34**	J	ug/L	2.0	0.18	1	357891	12/13/24	12/13/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357891	12/13/24	12/13/24	DXC

Sample ID: LANDAU-PRB INFL 121124 | **Lab ID: 522256-003** | **Matrix: Water** | **Collected: 12/11/24 14:10**

522256-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**99**		ug/L	2.0	0.22	1	357897	12/13/24	12/13/24	DXC
Copper	**7.3**		ug/L	3.0	2.0	1	357897	12/13/24	12/13/24	DXC

Sample ID: LANDAU-PRB INFL 121124 (F) | **Lab ID: 522256-004** | **Matrix: Filtrate** | **Collected: 12/11/24 14:10**

522256-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**98**		ug/L	2.0	0.18	1	357891	12/13/24	12/13/24	DXC
Copper	**6.6**		ug/L	3.0	0.79	1	357891	12/13/24	12/13/24	DXC

Sample ID: LANDAU-PRB EFF 121224 | **Lab ID: 522256-005** | **Matrix: Water** | **Collected: 12/12/24 07:44**

522256-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.35**	J	ug/L	2.0	0.22	1	357897	12/13/24	12/13/24	DXC
Copper	ND		ug/L	3.0	2.0	1	357897	12/13/24	12/13/24	DXC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 522256

Sample ID:	Lab ID: 522256-006	Collected: 12/12/24 07:44
LANDAU-PRB EFF 121224 (F)	Matrix: Filtrate	

522256-006 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.31**	J	ug/L	2.0	0.18	1	357891	12/13/24	12/13/24	DXC
Copper	ND		ug/L	3.0	0.79	1	357891	12/13/24	12/13/24	DXC

Sample ID:	Lab ID: 522256-007	Collected: 12/12/24 10:30
LANDAU-PRB INFL 121224	Matrix: Water	

522256-007 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**100**		ug/L	2.0	0.22	1	357897	12/13/24	12/13/24	DXC
Copper	**7.3**		ug/L	3.0	2.0	1	357897	12/13/24	12/13/24	DXC

Sample ID:	Lab ID: 522256-008	Collected: 12/12/24 10:30
LANDAU-PRB INFL 121224 (F)	Matrix: Filtrate	

522256-008 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**96**		ug/L	2.0	0.18	1	357891	12/13/24	12/13/24	DXC
Copper	**7.1**		ug/L	3.0	0.79	1	357891	12/13/24	12/13/24	DXC

J Estimated value
ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	Blank	Lab ID:	QC1212205	Batch:	357897
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1212205 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.38	12/13/24	12/13/24
Copper	ND		ug/L	3.0	0.71	12/13/24	12/13/24

Type:	Lab Control Sample	Lab ID:	QC1212206	Batch:	357897
Matrix:	Water	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1212206 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	96.53	100.0	ug/L	97%		80-120
Copper	102.3	100.0	ug/L	102%		80-120

Type:	Matrix Spike	Lab ID:	QC1212207	Batch:	357897
Matrix (Source ID):	Water (522221-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1212207 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	97.44	0.5990	100.0	ug/L	97%		75-125	1
Copper	110.3	8.705	100.0	ug/L	102%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1212208	Batch:	357897
Matrix (Source ID):	Water (522221-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1212208 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	96.73	0.5990	100.0	ug/L	96%		75-125	1	20	1
Copper	108.5	8.705	100.0	ug/L	100%		75-125	2	29	1

Type:	Matrix Spike	Lab ID:	QC1212209	Batch:	357897
Matrix (Source ID):	Water (522257-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1212209 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	97.92	0.2199	100.0	ug/L	98%		75-125	1
Copper	106.0	2.689	100.0	ug/L	103%		75-125	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1212210	Batch:	357897
Matrix (Source ID):	Water (522257-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1212210 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	97.58	0.2199	100.0	ug/L	97%		75-125	0	20	1
Copper	103.4	2.689	100.0	ug/L	101%		75-125	2	29	1

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1212175**	**Batch:**	**357891**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1212175 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.18	12/13/24	12/13/24
Copper	ND		ug/L	3.0	0.79	12/13/24	12/13/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1212176**	**Batch:**	**357891**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1212176 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	92.45	100.0	ug/L	92%		80-120
Copper	99.79	100.0	ug/L	100%		80-120

Type:	**Lab Control Sample Duplicate**	**Lab ID:**	**QC1212177**	**Batch:**	**357891**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1212177 Analyte	Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim
Arsenic	97.09	100.0	ug/L	97%		80-120	5	20
Copper	104.0	100.0	ug/L	104%		80-120	4	20

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number	:	522713
Report Level	:	II
Report Date	:	12/20/2024

Analytical Report *prepared for:*

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Location: Landau - 8th

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105, ORELAP# 4197

ENTHALPY ANALYTICAL

Sample Summary

Cindy Schreier Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762		Lab Job #: Location: Date Received:	522713 Landau - 8th 12/19/24

Sample ID	Lab ID	Collected	Matrix
LANDAU-T HIGH T (F)	522713-001	12/17/24 18:45	Water
LANDAU-INFL 121724	522713-002	12/18/24 09:15	Water
LANDAU-INFL 121724 (F)	522713-003	12/18/24 09:15	Water
LANDAU-SMZVI L 121624 D	522713-004	12/16/24 08:40	Water
LANDAU-SMZVI H 121624 D	522713-005	12/16/24 08:40	Water
LANDAU-T LOW 121624 D	522713-006	12/16/24 08:40	Water
LANDAU-T HIGH 121624 D	522713-007	12/16/24 08:40	Water
LANDAU-T PRB INFL 121624	522713-008	12/16/24 10:17	Water
LANDAU-T PRB INFL 121624 (F)	522713-009	12/16/24 10:17	Water
LANDAU-T PRB EFF 121624	522713-010	12/16/24 08:41	Water
LANDAU-T PRB EFF 121624 (F)	522713-011	12/16/24 08:41	Water
LANDAU-T SMZVI L 121724 T	522713-012	12/17/24 18:45	Water
LANDAU-T SMZVI L 121724 T (F)	522713-013	12/17/24 18:45	Water
LANDAU-T SMZVI H 121724	522713-014	12/17/24 18:45	Water
LANDAU-T SMZVI H 121724 (F)	522713-015	12/17/24 18:45	Water
LANDAU-T HIGH 121724 T	522713-016	12/17/24 18:45	Water

Case Narrative

Prima Environmental, Inc. 5070 Robert J. Mathews Pkwy Suite 300 El Dorado Hills, CA 95762 Cindy Schreier	Lab Job Number: 522713 Location: Landau - 8th Date Received: 12/19/24

This data package contains sample and QC results for sixteen water samples, requested for the above referenced project on 12/19/24. The samples were received cold and intact.

Metals (EPA 6020) Water:
No analytical problems were encountered.

Metals (EPA 6020) Filtrate:
No analytical problems were encountered.

522713

CHAIN OF CUSTODY

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

Chain of Custody # : _____

C&T LOGIN # _____

Project No:

Project Name: Landau - 8th

EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ____24hr TAT_____ ☐

Sampler: Cindy Schreier

Report To: Cindy Schreier

Company : PRIMA Environmental, Inc.

Telephone: 916-939-7300

Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling		Matrix					Chemical Preservative					Analytical Request														
		Date	Time	Water	Soil			# of Containers	HCl	H_2SO_4	HNO_3	NaOH	None	Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium	As, Cu (Dissolved)	Iron							
	Landau-T High T (F)	12/17/24	18:45	x				1			x									x								
	Landau-Infl 121724	12/18/24	9:15	x				1			x							x										
	Landau-Infl 121724 (F)	12/18/24	9:15	x				1			x									x								

Notes:

Samples labeld with (F) field filtered

24hr TAT

SAMPLE RECEIPT

☐ Intact ☐ Cold

☐ On Ice ☐ Ambient

RELINQUISHED BY:

Mariah Blickenger PRIMA 12/18/24 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

@12:30 Fed Ex DATE/TIME

ENTHALPY 12/19/24 09:37 DATE/TIME

DATE/TIME

522713

CHAIN OF CUSTODY

Enthalpy Analytical LLC
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900 Phone

Chain of Custody # : _____

C&T LOGIN # _____

Project No:

Project Name: Landau - 8th

EDD Format: _____ Rpt Level: ☐ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ___24hr TAT_____ ☐

Sampler: Cindy Schreier

Report To: Cindy Schreier

Company : PRIMA Environmental, Inc.

Telephone: 916-939-7300

Email: data@primaenvironmental.com

Lab No.	Sample ID.	Sampling Date	Sampling Time	Matrix: Water	Matrix: Soil	Matrix:	Matrix:	# of Containers	Chemical Preservative: HCl	H_2SO_4	HNO_3	NaOH	None	Analytical Request: Alkalinity	Chloride	Nitrate	Nitrite	As, Cu (Total)	Calcium			As, Cu (Dissolved)							
	Landau-SMZVI L 121624 D	12/16/24	8:40	x				1			x							x											
	Landau-SMZVI H 121624 D	12/16/14	8:40	x				1			x							x											
	Landau-T Low 121624 D	12/16/24	8:40	x				1			x							x											
	Landau-T High 121624 D	12/16/24	8:40	x				1			x							x											
	Landau-PRB Infl 121624	12/16/24	10:17	x				1			x							x											
	Landau-PRB Infl 121624 (F)	12/16/24	10:17	x				1			x											x							
	Landau-PRB Eff 121624	12/16/24	8:41	x				1			x							x											
	Landau-PRB Eff 121624 (F)	12/16/24	8:41	x				1			x											x							
	Landau-SMZVI L 121724 T	12/17/24	18:45	x				1			x							x											
	Landau-SMZVI L 121724 T (F)	12/17/24	18:45	x				1			x											x							
	Landau-SMZVI H 121724 T	12/17/24	18:45	x				1			x							x											
	Landau-SMZVI H 121724 T (F)	12/17/24	18:45	x				1			x											x							
	Landau-T High 121724 T	12/17/24	18:45	x				1			x							x											

Notes:

Samples labeled with (F) field filtered

24hr TAT

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient

RELINQUISHED BY:

Mariah Fleeringen PRIMA 12/18/24 @12:30 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

FedEx DATE/TIME

ENTHALPY 12/19/24 09:37 DATE/TIME

DATE/TIME

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 12/19/24 WO# 522713 Client: PRIMA

Section 2: Shipping / Custody **Are custody seals present?** ☐ Yes ☑ No

Custody seals intact on arrival? ☑ N/A ☐ Yes ☐ No ☐ On cooler / box ☐ On samples

Shipping Info: FEDEX

Section 3a: Condition / Packaging ☐ **Outside 0.0 - 6.0°C (0.0 - 10.0°C for microbiology) (PM notified)**

Date Opened 12/19/24 By (initials) JKC Type of ice used : ☑ Wet ☐ Blue/Gel ☐ None

☐ Samples received on ice directly from the field; cooling process had begun. (if checked, skip temperatures)

☐ Sample matrix doesn't require cooling (e.g. air, bulk PCB). (if checked, skip temperatures)

If no cooler: Observed/Adjusted Temp (°C): _____ / _____ Thermometer/IR Gun: IR12 CF: +0.2

Cooler Temp (°C) #1: 1.5 / 1.7 #2: ____/____ #3: ____/____ #4: ____/____ #5: ____/____ #6: ____/____

Section 3b: Microbiology Samples ☑ **No microbiology samples submitted (skip 3b)**

☐ Within temp range 0.0 - 10.0°C or received on ice directly from field.

☐ Adequate headspace for microbiology analysis.

Section 3c: Air Samples ☑ **No air samples submitted (skip 3c)**

☐ 1.4L Canisters ☐ 6L Canisters ☐ Tedlar Bags ☐ MCE Cassettes ☐ Sorbent Tubes ☐ Other_____

Section 4: Containers / Labels / Samples	YES	NO	N/A
1) Were custody papers present, filled properly, and legible?	✓		
2) Is the sampler's name present on the CoC?	✓		
3) Were containers received in good condition (unbroken / unopened / uncompromised)?	✓		
4) Were the samples bagged? (required for microbiology samples; recommended for soil samples)	✓		
5) Were all of, and only, the correct samples received?	✓		
6) Are sample labels present, legible, and in agreement with the CoC?	✓		
7) Does the container count match the CoC?	✓		
8) Was sufficient sample volume / mass received for the analyses requested?	✓		
9) Were samples received in proper containers for the analyses requested?	✓		
10) Were samples received with > 1/2 holding time remaining?	✓		
11) Are samples properly preserved as indicated by CoC / labels?	✓		
12) Unpreserved VOAs received - If necessary, was the hold time changed in LIMS?			✓
13) Are VOA vials free from headspace/bubbles > 6mm?			✓

Section 5: Explanations / Comments ☐ **PM notified**

Date Logged 12/19/24 **By (print)** JETH CO **(sign)** [signature]

Date Labeled 12/19/24 **By (print)** GCK **(sign)** _____

ORIGIN ID:MHRA (916) 939-7300
CINDY SCHREIER
PRIMA ENVIRONMENTAL, INC.
5070 ROBERT J. MATHEWS PKWY
SUITE 300
EL DORADO HILLS, CA 95762
UNITED STATES US

SHIP DATE: 18DEC24
ACTWGT: 20.00 LB
CAD: 4692371/INET4535
DIMS: 16x10x16 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ENTHALPY ANALYTICAL
931 WEST BARKLEY AVE

ORANGE CA 92868
(714) 771-6900 REF: EFI-LA/LANDAU-8TH
INV:
PO: DEPT:

58CJ5/49B9/C6C4

FedEx Express

J244020409100uv

THU - 19 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7708 8316 3424

92 APVA

92868
CA-US SNA

1.5 1R12
1.7 +0.2

After printing this label
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Analysis Results for 522713

Cindy Schreier
Prima Environmental, Inc.
5070 Robert J. Mathews Pkwy
Suite 300
El Dorado Hills, CA 95762

Lab Job #: 522713
Location: Landau - 8th
Date Received: 12/19/24

Sample ID: LANDAU-T HIGH T (F) **Lab ID: 522713-001** **Collected: 12/17/24 18:45**
Matrix: Filtrate

522713-001 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.73**	J	ug/L	2.0	0.28	1	358458	12/19/24	12/19/24	KAM
Copper	ND		ug/L	3.0	0.79	1	358458	12/19/24	12/20/24	KAM

Sample ID: LANDAU-INFL 121724 **Lab ID: 522713-002** **Collected: 12/18/24 09:15**
Matrix: Water

522713-002 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**120**		ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	**6.4**		ug/L	3.0	0.71	1	358452	12/19/24	12/20/24	KAM

Sample ID: LANDAU-INFL 121724 (F) **Lab ID: 522713-003** **Collected: 12/18/24 09:15**
Matrix: Filtrate

522713-003 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**120**		ug/L	2.0	0.28	1	358458	12/19/24	12/19/24	KAM
Copper	**6.9**		ug/L	3.0	0.79	1	358458	12/19/24	12/20/24	KAM

Sample ID: LANDAU-SMZVI L 121624 D **Lab ID: 522713-004** **Collected: 12/16/24 08:40**
Matrix: Water

522713-004 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**1.3**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Sample ID: LANDAU-SMZVI H 121624 D **Lab ID: 522713-005** **Collected: 12/16/24 08:40**
Matrix: Water

522713-005 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.90**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 522713

Sample ID:	Lab ID: 522713-006	Collected: 12/16/24 08:40
LANDAU-T LOW 121624 D	Matrix: Water	

522713-006 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.70**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-007	Collected: 12/16/24 08:40
LANDAU-T HIGH 121624 D	Matrix: Water	

522713-007 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.63**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-008	Collected: 12/16/24 10:17
LANDAU-T PRB INFL 121624	Matrix: Water	

522713-008 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**110**		ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	**6.5**		ug/L	3.0	0.71	1	358452	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-009	Collected: 12/16/24 10:17
LANDAU-T PRB INFL 121624 (F)	Matrix: Filtrate	

522713-009 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**110**		ug/L	2.0	0.28	1	358458	12/19/24	12/19/24	KAM
Copper	**7.5**		ug/L	3.0	0.79	1	358458	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-010	Collected: 12/16/24 08:41
LANDAU-T PRB EFF 121624	Matrix: Water	

522713-010 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.76**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Results for any subcontracted analyses are not included in this section.

Analysis Results for 522713

Sample ID:	Lab ID: 522713-011	Collected: 12/16/24 08:41
LANDAU-T PRB EFF 121624 (F)	Matrix: Filtrate	

522713-011 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.65**	J	ug/L	2.0	0.28	1	358458	12/19/24	12/19/24	KAM
Copper	ND		ug/L	3.0	0.79	1	358458	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-012	Collected: 12/17/24 18:45
LANDAU-T SMZVI L 121724 T	Matrix: Water	

522713-012 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**1.3**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-013	Collected: 12/17/24 18:45
LANDAU-T SMZVI L 121724 T (F)	Matrix: Filtrate	

522713-013 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**1.3**	J	ug/L	2.0	0.28	1	358458	12/19/24	12/19/24	KAM
Copper	ND		ug/L	3.0	0.79	1	358458	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-014	Collected: 12/17/24 18:45
LANDAU-T SMZVI H 121724	Matrix: Water	

522713-014 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**1.0**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

Sample ID:	Lab ID: 522713-015	Collected: 12/17/24 18:45
LANDAU-T SMZVI H 121724 (F)	Matrix: Filtrate	

522713-015 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: METHOD										
Arsenic	**0.92**	J	ug/L	2.0	0.28	1	358458	12/19/24	12/19/24	KAM
Copper	ND		ug/L	3.0	0.79	1	358458	12/19/24	12/20/24	KAM

Results for any subcontracted analyses are not included in this section.

Analysis Results for 522713

Sample ID:	Lab ID: 522713-016	Collected: 12/17/24 18:45
LANDAU-T HIGH 121724 T	Matrix: Water	

522713-016 Analyte	Result	Qual	Units	RL	MDL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 6020 Prep Method: EPA 3015A										
Arsenic	**0.50**	J	ug/L	2.0	0.38	1	358452	12/19/24	12/20/24	KAM
Copper	ND		ug/L	3.0	2.0	1	358452	12/19/24	12/20/24	KAM

J Estimated value
ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type:	**Blank**	**Lab ID:**	**QC1214056**	**Batch:**	**358452**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1214056 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.22	12/19/24	12/19/24
Copper	ND		ug/L	3.0	2.0	12/19/24	12/19/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1214057**	**Batch:**	**358452**
Matrix:	**Water**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1214057 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	95.85	100.0	ug/L	96%		80-120
Copper	96.87	100.0	ug/L	97%		80-120

Type:	**Matrix Spike**	**Lab ID:**	**QC1214058**	**Batch:**	**358452**
Matrix (Source ID):	**Water (522681-004)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1214058 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Arsenic	94.29	ND	100.0	ug/L	94%		75-125	10
Copper	97.65	ND	100.0	ug/L	98%		75-125	10

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1214059**	**Batch:**	**358452**
Matrix (Source ID):	**Water (522681-004)**	**Method:**	**EPA 6020**	**Prep Method:**	**EPA 3015A**

QC1214059 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Arsenic	97.95	ND	100.0	ug/L	98%		75-125	4	20	10
Copper	91.86	ND	100.0	ug/L	92%		75-125	6	29	10

Type:	**Blank**	**Lab ID:**	**QC1214076**	**Batch:**	**358458**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1214076 Analyte	Result	Qual	Units	RL	MDL	Prepared	Analyzed
Arsenic	ND		ug/L	2.0	0.28	12/19/24	12/19/24
Copper	ND		ug/L	3.0	0.79	12/19/24	12/20/24

Type:	**Lab Control Sample**	**Lab ID:**	**QC1214077**	**Batch:**	**358458**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1214077 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Arsenic	102.5	100.0	ug/L	103%		80-120
Copper	103.9	100.0	ug/L	104%		80-120

ENTHALPY ANALYTICAL

Batch QC

Type:	**Lab Control Sample Duplicate**	**Lab ID:**	**QC1214078**	**Batch:**	**358458**
Matrix:	**Filtrate**	**Method:**	**EPA 6020**	**Prep Method:**	**METHOD**

QC1214078 Analyte	Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim
Arsenic	104.5	100.0	ug/L	105%		80-120	2	20
Copper	105.9	100.0	ug/L	106%		80-120	2	20

ND Not Detected

APPENDIX J

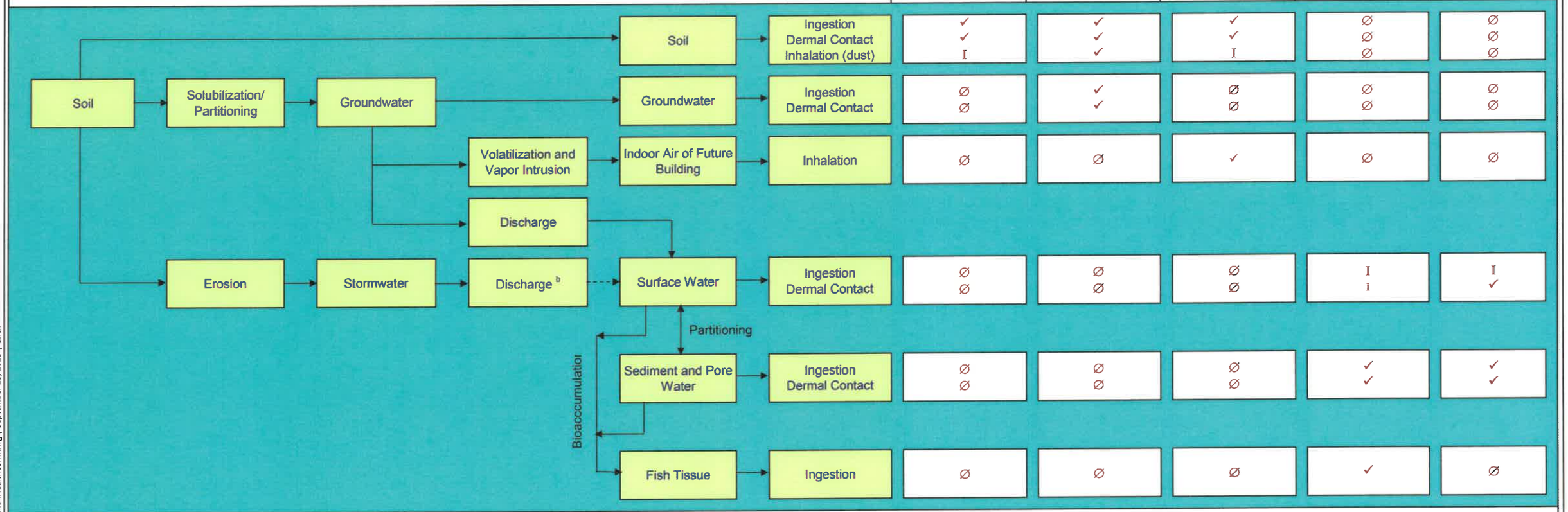
Responses to Specific Ecology Comments Regarding Public Review Draft Feasibility Study Report

APPENDIX J
Responses to Specific Ecology Comments Regarding Public Review Draft Feasibility Study Report

The Public Review Draft Feasibility Study Report Addendum (Addendum) has been prepared to meet several objectives (see Section 1.0 of the Addendum), including providing the information required to address the Washington State Department of Ecology's (Ecology's) comments regarding the Public Review Draft Feasibility Study Report (Draft FS Report). Almost all the information required to address Ecology's comments was included in the text, figures, and/or tables of the Addendum; however, responses to two of Ecology's comments dated August 6, 2025 did not fit with the content of the Addendum. Therefore, this appendix presents Landau Associates, Inc.'s (Landau's) responses to the two Ecology comments that were not addressed in the Addendum text, figures, or tables.

Ecology Comment #18—There were several comments regarding Figure 31, which depicts the human health conceptual site model for the site. *Figure 31 was revised to address the Ecology comments; however, Landau did not agree with adding a line directly from soil to indoor air. The revised Figure 31, which has been prepared by Landau, is presented in this appendix.*

Ecology Comment #19—There were two comments regarding Figure 32, which depicts the ecological conceptual site model for the site. *Figure 32 was revised to address the Ecology comments. The revised Figure 32, which has been prepared by Landau, is presented in this appendix.*



Notes:
[a] Current and Future
[b] Stormwater is treated before discharge
→ Primary Pathway
--→ Incomplete Pathway
✓ Potentially Complete Exposure Route
∅ Incomplete Exposure Route
I Insignificant Exposure Route

Note
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: SLR 2022

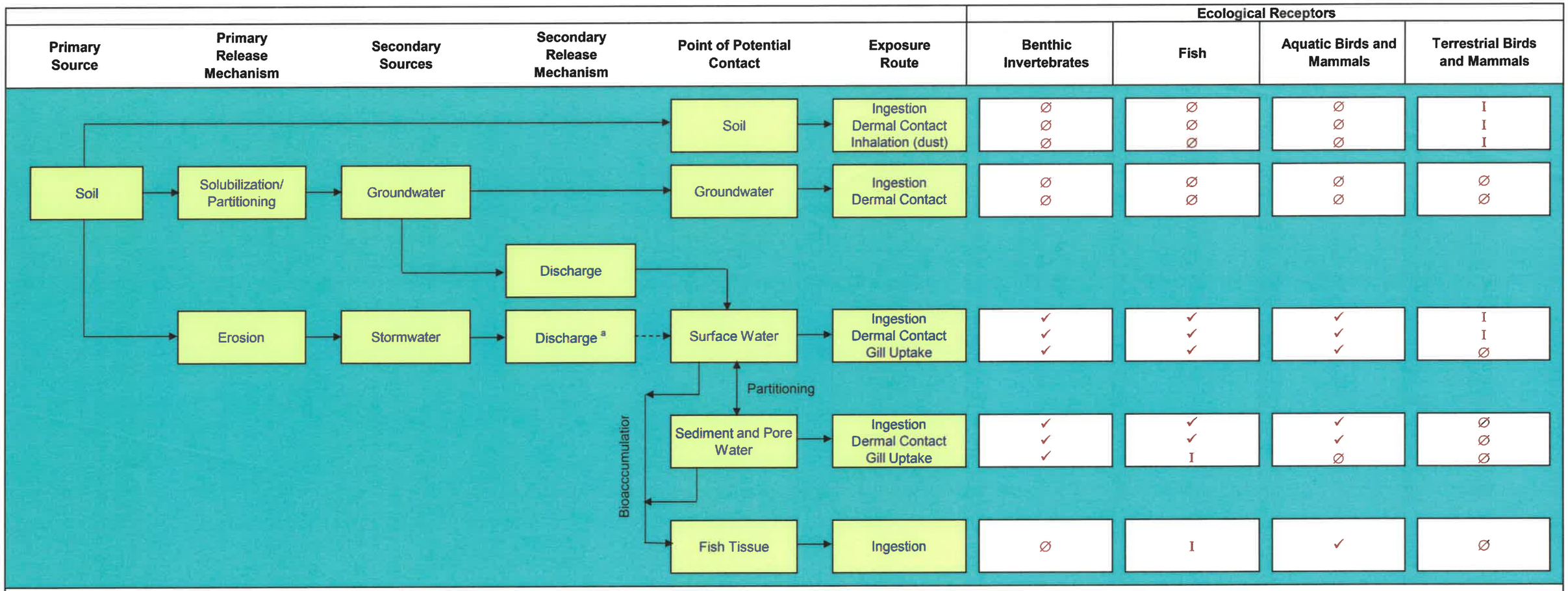
8th Avenue Terminals, Inc Site
7400 8th Avenue South
Seattle, Washington

Human Health Conceptual Site Model

Figure 31

LANDAU ASSOCIATES

Landau Associates | G:\Projects\2175\001\030\032\F031 HumanHealthCSM.dwg | September 15, 2025 | ezick



Notes:

[a] Stormwater is treated before discharge

→ Primary Pathway

- - → Incomplete Pathway

✓ Potentially Complete Exposure Route

∅ Incomplete Exposure Route

I Insignificant Exposure Route

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: SLR 2022

8th Avenue Terminals, Inc Site
7400 8th Avenue South
Seattle, Washington

Ecological Conceptual Site Model

Figure 32

LANDAU ASSOCIATES

Landau Associates | G:\Projects\2175\001\030\032\F032 EcologicalCSM.dwg | September 15, 2025 | ezick