284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

LAB CHRONICLE

OrderID:	Q3468	**OrderDate:**	10/27/2025 11:00:00 AM
Client:	LiRo Engineers, Inc.	**Project:**	RFK Bridge RMB-Randall Island
Contact:	Martin Wesolowski	**Location:**	D41,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3468-01	**MW-06**	**Water**			**10/23/25**			**10/24/25**
			SVOCMS Group1	8270E		10/28/25	10/29/25	
Q3468-02	**MW-08**	**Water**			**10/23/25**			**10/24/25**
			SVOCMS Group1	8270E		10/28/25	10/29/25	
Q3468-03	**MW-10**	**Water**			**10/23/25**			**10/24/25**
			SVOCMS Group1	8270E		10/28/25	10/29/25	
Q3468-04	**MW-11**	**Water**			**10/23/25**			**10/24/25**
			SVOCMS Group1	8270E		10/28/25	10/29/25	
Q3468-05	**MW-13**	**Water**			**10/23/25**			**10/24/25**
			SVOCMS Group1	8270E		10/28/25	10/29/25	
Q3468-06	**MW-12**	**Water**			**10/23/25**			**10/24/25**
			SVOCMS Group1	8270E		10/28/25	10/29/25	

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: Q3468

Client: LiRo Engineers, Inc.

Sample ID	Client ID		Parameter	Concentration	C	MDL	RDL	Units
Client ID : MW-06								
Q3468-01	MW-06	WATER	Acenaphthene	14.200		0.56	5.1	ug/L
Q3468-01	MW-06	WATER	Fluorene	7.200		0.64	5.1	ug/L
Q3468-01	MW-06	WATER	Phenanthrene	6.100		0.51	5.1	ug/L
Q3468-01	MW-06	WATER	Anthracene	3.500	J	0.62	5.1	ug/L
Q3468-01	MW-06	WATER	Fluoranthene	6.900		0.84	5.1	ug/L
Q3468-01	MW-06	WATER	Pyrene	4.700	J	0.51	5.1	ug/L
			Total Svoc :	**42.60**				
			Total Concentration:	**42.60**				

SAMPLE DATA

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-06	SDG No.:	Q3468
Lab Sample ID:	Q3468-01	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	980 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.10	U	1	0.77	5.10	ug/L	10/29/25 18:56	PB170286
83-32-9	Acenaphthene	14.2		1	0.56	5.10	ug/L	10/29/25 18:56	PB170286
86-73-7	Fluorene	7.20		1	0.64	5.10	ug/L	10/29/25 18:56	PB170286
85-01-8	Phenanthrene	6.10		1	0.51	5.10	ug/L	10/29/25 18:56	PB170286
120-12-7	Anthracene	3.50	J	1	0.62	5.10	ug/L	10/29/25 18:56	PB170286
206-44-0	Fluoranthene	6.90		1	0.84	5.10	ug/L	10/29/25 18:56	PB170286
129-00-0	Pyrene	4.70	J	1	0.51	5.10	ug/L	10/29/25 18:56	PB170286
56-55-3	Benzo(a)anthracene	5.10	U	1	0.46	5.10	ug/L	10/29/25 18:56	PB170286
218-01-9	Chrysene	5.10	U	1	0.45	5.10	ug/L	10/29/25 18:56	PB170286
205-99-2	Benzo(b)fluoranthene	5.10	U	1	0.50	5.10	ug/L	10/29/25 18:56	PB170286
207-08-9	Benzo(k)fluoranthene	5.10	U	1	0.49	5.10	ug/L	10/29/25 18:56	PB170286
50-32-8	Benzo(a)pyrene	5.10	U	1	0.56	5.10	ug/L	10/29/25 18:56	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.10	U	1	0.60	5.10	ug/L	10/29/25 18:56	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.10	U	1	0.68	5.10	ug/L	10/29/25 18:56	PB170286
191-24-2	Benzo(g,h,i)perylene	5.10	U	1	0.70	5.10	ug/L	10/29/25 18:56	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	120			67 - 132	120%	SPK: 100		
321-60-8	2-Fluorobiphenyl	95.3			52 - 132	95%	SPK: 100		
1718-51-0	Terphenyl-d14	96.2			42 - 152	96%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	29700							
1146-65-2	Naphthalene-d8	117000							
15067-26-2	Acenaphthene-d10	94500							
1517-22-2	Phenanthrene-d10	229000							
1719-03-5	Chrysene-d12	284000							
1520-96-3	Perylene-d12	313000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-08	SDG No.:	Q3468
Lab Sample ID:	Q3468-02	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	990 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.10	U	1	0.76	5.10	ug/L	10/29/25 19:37	PB170286
83-32-9	Acenaphthene	5.10	U	1	0.56	5.10	ug/L	10/29/25 19:37	PB170286
86-73-7	Fluorene	5.10	U	1	0.64	5.10	ug/L	10/29/25 19:37	PB170286
85-01-8	Phenanthrene	5.10	U	1	0.51	5.10	ug/L	10/29/25 19:37	PB170286
120-12-7	Anthracene	5.10	U	1	0.62	5.10	ug/L	10/29/25 19:37	PB170286
206-44-0	Fluoranthene	5.10	U	1	0.83	5.10	ug/L	10/29/25 19:37	PB170286
129-00-0	Pyrene	5.10	U	1	0.51	5.10	ug/L	10/29/25 19:37	PB170286
56-55-3	Benzo(a)anthracene	5.10	U	1	0.45	5.10	ug/L	10/29/25 19:37	PB170286
218-01-9	Chrysene	5.10	U	1	0.44	5.10	ug/L	10/29/25 19:37	PB170286
205-99-2	Benzo(b)fluoranthene	5.10	U	1	0.49	5.10	ug/L	10/29/25 19:37	PB170286
207-08-9	Benzo(k)fluoranthene	5.10	U	1	0.48	5.10	ug/L	10/29/25 19:37	PB170286
50-32-8	Benzo(a)pyrene	5.10	U	1	0.56	5.10	ug/L	10/29/25 19:37	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.10	U	1	0.60	5.10	ug/L	10/29/25 19:37	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.10	U	1	0.68	5.10	ug/L	10/29/25 19:37	PB170286
191-24-2	Benzo(g,h,i)perylene	5.10	U	1	0.70	5.10	ug/L	10/29/25 19:37	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	118			67 - 132	118%	SPK: 100		
321-60-8	2-Fluorobiphenyl	85.9			52 - 132	86%	SPK: 100		
1718-51-0	Terphenyl-d14	87.9			42 - 152	88%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	30500							
1146-65-2	Naphthalene-d8	123000							
15067-26-2	Acenaphthene-d10	99500							
1517-22-2	Phenanthrene-d10	227000							
1719-03-5	Chrysene-d12	290000							
1520-96-3	Perylene-d12	314000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-10	SDG No.:	Q3468
Lab Sample ID:	Q3468-03	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	970 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.20	U	1	0.77	5.20	ug/L	10/29/25 20:18	PB170286
83-32-9	Acenaphthene	5.20	U	1	0.57	5.20	ug/L	10/29/25 20:18	PB170286
86-73-7	Fluorene	5.20	U	1	0.65	5.20	ug/L	10/29/25 20:18	PB170286
85-01-8	Phenanthrene	5.20	U	1	0.52	5.20	ug/L	10/29/25 20:18	PB170286
120-12-7	Anthracene	5.20	U	1	0.63	5.20	ug/L	10/29/25 20:18	PB170286
206-44-0	Fluoranthene	5.20	U	1	0.85	5.20	ug/L	10/29/25 20:18	PB170286
129-00-0	Pyrene	5.20	U	1	0.52	5.20	ug/L	10/29/25 20:18	PB170286
56-55-3	Benzo(a)anthracene	5.20	U	1	0.46	5.20	ug/L	10/29/25 20:18	PB170286
218-01-9	Chrysene	5.20	U	1	0.45	5.20	ug/L	10/29/25 20:18	PB170286
205-99-2	Benzo(b)fluoranthene	5.20	U	1	0.51	5.20	ug/L	10/29/25 20:18	PB170286
207-08-9	Benzo(k)fluoranthene	5.20	U	1	0.49	5.20	ug/L	10/29/25 20:18	PB170286
50-32-8	Benzo(a)pyrene	5.20	U	1	0.57	5.20	ug/L	10/29/25 20:18	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.20	U	1	0.61	5.20	ug/L	10/29/25 20:18	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.20	U	1	0.69	5.20	ug/L	10/29/25 20:18	PB170286
191-24-2	Benzo(g,h,i)perylene	5.20	U	1	0.71	5.20	ug/L	10/29/25 20:18	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	132			67 - 132	132%	SPK: 100		
321-60-8	2-Fluorobiphenyl	110			52 - 132	110%	SPK: 100		
1718-51-0	Terphenyl-d14	104			42 - 152	104%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	27600							
1146-65-2	Naphthalene-d8	111000							
15067-26-2	Acenaphthene-d10	81800							
1517-22-2	Phenanthrene-d10	193000							
1719-03-5	Chrysene-d12	252000							
1520-96-3	Perylene-d12	279000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-11	SDG No.:	Q3468
Lab Sample ID:	Q3468-04	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	990 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.10	U	1	0.76	5.10	ug/L	10/29/25 20:59	PB170286
83-32-9	Acenaphthene	5.10	U	1	0.56	5.10	ug/L	10/29/25 20:59	PB170286
86-73-7	Fluorene	5.10	U	1	0.64	5.10	ug/L	10/29/25 20:59	PB170286
85-01-8	Phenanthrene	5.10	U	1	0.51	5.10	ug/L	10/29/25 20:59	PB170286
120-12-7	Anthracene	5.10	U	1	0.62	5.10	ug/L	10/29/25 20:59	PB170286
206-44-0	Fluoranthene	5.10	U	1	0.83	5.10	ug/L	10/29/25 20:59	PB170286
129-00-0	Pyrene	5.10	U	1	0.51	5.10	ug/L	10/29/25 20:59	PB170286
56-55-3	Benzo(a)anthracene	5.10	U	1	0.45	5.10	ug/L	10/29/25 20:59	PB170286
218-01-9	Chrysene	5.10	U	1	0.44	5.10	ug/L	10/29/25 20:59	PB170286
205-99-2	Benzo(b)fluoranthene	5.10	U	1	0.49	5.10	ug/L	10/29/25 20:59	PB170286
207-08-9	Benzo(k)fluoranthene	5.10	U	1	0.48	5.10	ug/L	10/29/25 20:59	PB170286
50-32-8	Benzo(a)pyrene	5.10	U	1	0.56	5.10	ug/L	10/29/25 20:59	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.10	U	1	0.60	5.10	ug/L	10/29/25 20:59	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.10	U	1	0.68	5.10	ug/L	10/29/25 20:59	PB170286
191-24-2	Benzo(g,h,i)perylene	5.10	U	1	0.70	5.10	ug/L	10/29/25 20:59	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	123			67 - 132	123%	SPK: 100		
321-60-8	2-Fluorobiphenyl	101			52 - 132	101%	SPK: 100		
1718-51-0	Terphenyl-d14	92.9			42 - 152	93%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	33300							
1146-65-2	Naphthalene-d8	137000							
15067-26-2	Acenaphthene-d10	104000							
1517-22-2	Phenanthrene-d10	235000							
1719-03-5	Chrysene-d12	295000							
1520-96-3	Perylene-d12	322000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-13	SDG No.:	Q3468
Lab Sample ID:	Q3468-05	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	1000 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.00	U	1	0.75	5.00	ug/L	10/29/25 21:40	PB170286
83-32-9	Acenaphthene	5.00	U	1	0.55	5.00	ug/L	10/29/25 21:40	PB170286
86-73-7	Fluorene	5.00	U	1	0.63	5.00	ug/L	10/29/25 21:40	PB170286
85-01-8	Phenanthrene	5.00	U	1	0.50	5.00	ug/L	10/29/25 21:40	PB170286
120-12-7	Anthracene	5.00	U	1	0.61	5.00	ug/L	10/29/25 21:40	PB170286
206-44-0	Fluoranthene	5.00	U	1	0.82	5.00	ug/L	10/29/25 21:40	PB170286
129-00-0	Pyrene	5.00	U	1	0.50	5.00	ug/L	10/29/25 21:40	PB170286
56-55-3	Benzo(a)anthracene	5.00	U	1	0.45	5.00	ug/L	10/29/25 21:40	PB170286
218-01-9	Chrysene	5.00	U	1	0.44	5.00	ug/L	10/29/25 21:40	PB170286
205-99-2	Benzo(b)fluoranthene	5.00	U	1	0.49	5.00	ug/L	10/29/25 21:40	PB170286
207-08-9	Benzo(k)fluoranthene	5.00	U	1	0.48	5.00	ug/L	10/29/25 21:40	PB170286
50-32-8	Benzo(a)pyrene	5.00	U	1	0.55	5.00	ug/L	10/29/25 21:40	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	U	1	0.59	5.00	ug/L	10/29/25 21:40	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.00	U	1	0.67	5.00	ug/L	10/29/25 21:40	PB170286
191-24-2	Benzo(g,h,i)perylene	5.00	U	1	0.69	5.00	ug/L	10/29/25 21:40	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	113			67 - 132	113%	SPK: 100		
321-60-8	2-Fluorobiphenyl	94.7			52 - 132	95%	SPK: 100		
1718-51-0	Terphenyl-d14	90.7			42 - 152	91%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	31900							
1146-65-2	Naphthalene-d8	122000							
15067-26-2	Acenaphthene-d10	91000							
1517-22-2	Phenanthrene-d10	220000							
1719-03-5	Chrysene-d12	278000							
1520-96-3	Perylene-d12	306000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-12	SDG No.:	Q3468
Lab Sample ID:	Q3468-06	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	950 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.30	U	1	0.79	5.30	ug/L	10/29/25 22:21	PB170286
83-32-9	Acenaphthene	5.30	U	1	0.58	5.30	ug/L	10/29/25 22:21	PB170286
86-73-7	Fluorene	5.30	U	1	0.66	5.30	ug/L	10/29/25 22:21	PB170286
85-01-8	Phenanthrene	5.30	U	1	0.53	5.30	ug/L	10/29/25 22:21	PB170286
120-12-7	Anthracene	5.30	U	1	0.64	5.30	ug/L	10/29/25 22:21	PB170286
206-44-0	Fluoranthene	5.30	U	1	0.86	5.30	ug/L	10/29/25 22:21	PB170286
129-00-0	Pyrene	5.30	U	1	0.53	5.30	ug/L	10/29/25 22:21	PB170286
56-55-3	Benzo(a)anthracene	5.30	U	1	0.47	5.30	ug/L	10/29/25 22:21	PB170286
218-01-9	Chrysene	5.30	U	1	0.46	5.30	ug/L	10/29/25 22:21	PB170286
205-99-2	Benzo(b)fluoranthene	5.30	U	1	0.52	5.30	ug/L	10/29/25 22:21	PB170286
207-08-9	Benzo(k)fluoranthene	5.30	U	1	0.51	5.30	ug/L	10/29/25 22:21	PB170286
50-32-8	Benzo(a)pyrene	5.30	U	1	0.58	5.30	ug/L	10/29/25 22:21	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.30	U	1	0.62	5.30	ug/L	10/29/25 22:21	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.30	U	1	0.71	5.30	ug/L	10/29/25 22:21	PB170286
191-24-2	Benzo(g,h,i)perylene	5.30	U	1	0.73	5.30	ug/L	10/29/25 22:21	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	117			67 - 132	117%	SPK: 100		
321-60-8	2-Fluorobiphenyl	86.3			52 - 132	86%	SPK: 100		
1718-51-0	Terphenyl-d14	92.3			42 - 152	92%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	32000							
1146-65-2	Naphthalene-d8	124000							
15067-26-2	Acenaphthene-d10	102000							
1517-22-2	Phenanthrene-d10	213000							
1719-03-5	Chrysene-d12	279000							
1520-96-3	Perylene-d12	310000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

QC SUMMARY

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Surrogate Summary

SW-846

SDG No.: Q3468

Client: LiRo Engineers, Inc.

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%) Low	Limits (%) High
PB170286BL	PB170286BL	Nitrobenzene-d5	100	102	102		67	132
		2-Fluorobiphenyl	100	87.4	87		52	132
		Terphenyl-d14	100	79.4	79		42	152
PB170286BS	PB170286BS	Nitrobenzene-d5	100	93.9	94		67	132
		2-Fluorobiphenyl	100	79.9	80		52	132
		Terphenyl-d14	100	79.5	79		42	152
PB170286BSD	PB170286BSD	Nitrobenzene-d5	100	97.0	97		67	132
		2-Fluorobiphenyl	100	79.8	80		52	132
		Terphenyl-d14	100	80.6	81		42	152
Q3468-01	MW-06	Nitrobenzene-d5	100	120	120		67	132
		2-Fluorobiphenyl	100	95.3	95		52	132
		Terphenyl-d14	100	96.2	96		42	152
Q3468-02	MW-08	Nitrobenzene-d5	100	118	118		67	132
		2-Fluorobiphenyl	100	85.9	86		52	132
		Terphenyl-d14	100	87.9	88		42	152
Q3468-03	MW-10	Nitrobenzene-d5	100	132	132		67	132
		2-Fluorobiphenyl	100	110	110		52	132
		Terphenyl-d14	100	104	104		42	152
Q3468-04	MW-11	Nitrobenzene-d5	100	123	123		67	132
		2-Fluorobiphenyl	100	101	101		52	132
		Terphenyl-d14	100	92.9	93		42	152
Q3468-05	MW-13	Nitrobenzene-d5	100	113	113		67	132
		2-Fluorobiphenyl	100	94.7	95		52	132
		Terphenyl-d14	100	90.7	91		42	152
Q3468-06	MW-12	Nitrobenzene-d5	100	117	117		67	132
		2-Fluorobiphenyl	100	86.3	86		52	132
		Terphenyl-d14	100	92.3	92		42	152

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3468 **Analytical Method:** 8270E

Client: LiRo Engineers, Inc. **DataFile:** BG064638.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB170286BS	Acenaphthylene	50	44.6	ug/L	89				79	103	
	Acenaphthene	50	45.1	ug/L	90				59	113	
	Fluorene	50	41.0	ug/L	82				64	107	
	Phenanthrene	50	40.4	ug/L	81				62	109	
	Anthracene	50	40.2	ug/L	80				65	110	
	Fluoranthene	50	41.6	ug/L	83				64	110	
	Pyrene	50	38.0	ug/L	76				71	103	
	Benzo(a)anthracene	50	40.7	ug/L	81				62	107	
	Chrysene	50	40.2	ug/L	80				61	108	
	Benzo(b)fluoranthene	50	43.3	ug/L	87				77	113	
	Benzo(k)fluoranthene	50	43.1	ug/L	86				77	105	
	Benzo(a)pyrene	50	45.1	ug/L	90				72	131	
	Indeno(1,2,3-cd)pyrene	50	43.3	ug/L	87				72	105	
	Dibenz(a,h)anthracene	50	43.7	ug/L	87				78	115	
	Benzo(g,h,i)perylene	50	45.2	ug/L	90				75	118	

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3468 **Analytical Method:** 8270E

Client: LiRo Engineers, Inc. **DataFile:** BG064639.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB170286BSD	Acenaphthylene	50	44.5	ug/L	89	0			79	103	20
	Acenaphthene	50	45.3	ug/L	91	0			59	113	20
	Fluorene	50	40.0	ug/L	80	2			64	107	20
	Phenanthrene	50	40.3	ug/L	81	0			62	109	20
	Anthracene	50	40.1	ug/L	80	0			65	110	20
	Fluoranthene	50	41.3	ug/L	83	1			64	110	20
	Pyrene	50	37.9	ug/L	76	0			71	103	20
	Benzo(a)anthracene	50	40.7	ug/L	81	0			62	107	20
	Chrysene	50	40.5	ug/L	81	1			61	108	20
	Benzo(b)fluoranthene	50	43.9	ug/L	88	1			77	113	20
	Benzo(k)fluoranthene	50	43.0	ug/L	86	0			77	105	20
	Benzo(a)pyrene	50	44.8	ug/L	90	1			72	131	20
	Indeno(1,2,3-cd)pyrene	50	43.3	ug/L	87	0			72	105	20
	Dibenz(a,h)anthracene	50	44.4	ug/L	89	2			78	115	20
	Benzo(g,h,i)perylene	50	44.6	ug/L	89	1			75	118	20

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Client ID: PB170286BL

Lab Name: Alliance | Contract: LIRO01

Lab Code: ACE | SDG NO.: Q3468

Lab File ID: BG064637.D | Lab Sample ID: PB170286BL

Instrument ID: BNA_G | Date Extracted: 10/28/2025

Matrix: (soil/water) Water | Date Analyzed: 10/30/2025

Level: (low/med) LOW | Time Analyzed: 12:17

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB170286BS	PB170286BS	BG064638.D	10/30/2025
PB170286BSD	PB170286BSD	BG064639.D	10/30/2025
MW-06	Q3468-01	BG064629.D	10/29/2025
MW-08	Q3468-02	BG064630.D	10/29/2025
MW-10	Q3468-03	BG064631.D	10/29/2025
MW-11	Q3468-04	BG064632.D	10/29/2025
MW-13	Q3468-05	BG064633.D	10/29/2025
MW-12	Q3468-06	BG064634.D	10/29/2025

COMMENTS:

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Alliance Contract: LIRO01

Lab Code: ACE SDG NO.: Q3468

Lab File ID: BG064568.D DFTPP Injection Date: 10/24/2025

Instrument ID: BNA_G DFTPP Injection Time: 08:20

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	35.3
70	Less than 2.0% of mass 69	0.1 (0.2) 1
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	7.2
365	Greater than 1% of mass 198	5.1
441	Present, but less than mass 443	15.1
442	Greater than 50% of mass 198	92.7
443	15.0 - 24.0% of mass 442	17.5 (18.9) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC2.5	SSTDICC2.5	BG064569.D	10/24/2025	09:00
SSTDICC005	SSTDICC005	BG064570.D	10/24/2025	09:41
SSTDICC010	SSTDICC010	BG064571.D	10/24/2025	11:02
SSTDICC020	SSTDICC020	BG064572.D	10/24/2025	12:23
SSTDICCC040	SSTDICCC040	BG064573.D	10/24/2025	13:03
SSTDICC060	SSTDICC060	BG064574.D	10/24/2025	13:44
SSTDICC080	SSTDICC080	BG064575.D	10/24/2025	14:24
SSTDICC050	SSTDICC050	BG064576.D	10/24/2025	15:32

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Alliance Contract: LIRO01

Lab Code: ACE SDG NO.: Q3468

Lab File ID: BG064617.D DFTPP Injection Date: 10/29/2025

Instrument ID: BNA_G DFTPP Injection Time: 10:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.3 (1) 1
69	Mass 69 relative abundance	31.8
70	Less than 2.0% of mass 69	0.2 (0.6) 1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	7.3
365	Greater than 1% of mass 198	5.3
441	Present, but less than mass 443	16.1
442	Greater than 50% of mass 198	97.3
443	15.0 - 24.0% of mass 442	17.5 (18) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BG064618.D	10/29/2025	11:22
MW-06	Q3468-01	BG064629.D	10/29/2025	18:56
MW-08	Q3468-02	BG064630.D	10/29/2025	19:37
MW-10	Q3468-03	BG064631.D	10/29/2025	20:18
MW-11	Q3468-04	BG064632.D	10/29/2025	20:59
MW-13	Q3468-05	BG064633.D	10/29/2025	21:40
MW-12	Q3468-06	BG064634.D	10/29/2025	22:21

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Alliance | Contract: LIRO01

Lab Code: ACE | SDG NO.: Q3468

Lab File ID: BG064635.D | DFTPP Injection Date: 10/30/2025

Instrument ID: BNA_G | DFTPP Injection Time: 10:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.2 (0.7) 1
69	Mass 69 relative abundance	34.4
70	Less than 2.0% of mass 69	0.0 (0.0) 1
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	7.3
365	Greater than 1% of mass 198	5.1
441	Present, but less than mass 443	15.1
442	Greater than 50% of mass 198	94.2
443	15.0 - 24.0% of mass 442	18.8 (20) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BG064636.D	10/30/2025	11:36
PB170286BL	PB170286BL	BG064637.D	10/30/2025	12:17
PB170286BS	PB170286BS	BG064638.D	10/30/2025	12:58
PB170286BSD	PB170286BSD	BG064639.D	10/30/2025	13:39

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance

Lab Code: ACE SDG NO.: Q3468

Client ID : SSTDCCC040 Date Analyzed: 10/29/2025

Lab File ID: BG064618.D Time Analyzed: 11:22

Instrument ID: BNA_G GC Column: ZB-GR ID: 0.25 (mm)

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	36613	8.223	148961	11.04	108882	14.84
	UPPER LIMIT	73226	8.723	297922	11.543	217764	15.339
	LOWER LIMIT	18306.5	7.723	74480.5	10.543	54441	14.339
	EPA SAMPLE NO.						
01	MW-12	31994	8.22	123990	11.04	102275	14.84
02	MW-06	29669	8.21	117287	11.04	94541	14.84
03	MW-08	30503	8.22	122508	11.04	99505	14.84
04	MW-10	27605	8.22	111146	11.04	81763	14.84
05	MW-11	33286	8.22	137382	11.04	103755	14.84
06	MW-13	31875	8.22	122159	11.04	91004	14.84

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance

Lab Code: ACE SDG NO.: Q3468

Client ID: SSTDCCC040 Date Analyzed: 10/29/2025

Lab File ID: BG064618.D Time Analyzed: 11:22

Instrument ID: BNA_G GC Column: ZB-GR ID: 0.25 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	241683	17.577	261016	21.854	298207	25.197
	UPPER LIMIT	483366	18.077	522032	22.354	596414	25.697
	LOWER LIMIT	120842	17.077	130508	21.354	149104	24.697
	EPA SAMPLE NO.						
01	MW-12	212573	17.57	278839	21.84	309539	25.19
02	MW-06	229494	17.57	284022	21.85	312536	25.19
03	MW-08	226879	17.57	289509	21.85	314104	25.19
04	MW-10	192626	17.58	251896	21.85	278585	25.19
05	MW-11	234664	17.57	295229	21.85	321514	25.19
06	MW-13	219936	17.57	277573	21.85	306088	25.19

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance

Lab Code: ACE SDG NO.: Q3468

Client ID : SSTDCCC040 Date Analyzed: 10/30/2025

Lab File ID: BG064636.D Time Analyzed: 11:36

Instrument ID: BNA_G GC Column: ZB-GR ID: 0.25 (mm)

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	32501	8.219	127691	11.05	94503	14.84
	UPPER LIMIT	65002	8.719	255382	11.545	189006	15.341
	LOWER LIMIT	16250.5	7.719	63845.5	10.545	47251.5	14.341
	EPA SAMPLE NO.						
01	PB170286BL	25136	8.22	99198	11.04	73729	14.84
02	PB170286BS	30784	8.22	124677	11.04	97021	14.84
03	PB170286BSD	30191	8.22	121649	11.04	100532	14.84

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance

Lab Code: ACE SDG NO.: Q3468

Client ID: SSTDCCC040 Date Analyzed: 10/30/2025

Lab File ID: BG064636.D Time Analyzed: 11:36

Instrument ID: BNA_G GC Column: ZB-GR ID: 0.25 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	210658	17.579	257813	21.856	295961	25.199
	UPPER LIMIT	421316	18.079	515626	22.356	591922	25.699
	LOWER LIMIT	105329	17.079	128907	21.356	147981	24.699
	EPA SAMPLE NO.						
01	PB170286BL	191571	17.58	261407	21.85	302809	25.19
02	PB170286BS	242858	17.58	288177	21.85	302049	25.20
03	PB170286BSD	246375	17.58	288758	21.86	302411	25.19

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

QC SAMPLE DATA

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB170286BL	SDG No.:	Q3468
Lab Sample ID:	PB170286BL	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	1000 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	5.00	U	1	0.75	5.00	ug/L	10/30/25 12:17	PB170286
83-32-9	Acenaphthene	5.00	U	1	0.55	5.00	ug/L	10/30/25 12:17	PB170286
86-73-7	Fluorene	5.00	U	1	0.63	5.00	ug/L	10/30/25 12:17	PB170286
85-01-8	Phenanthrene	5.00	U	1	0.50	5.00	ug/L	10/30/25 12:17	PB170286
120-12-7	Anthracene	5.00	U	1	0.61	5.00	ug/L	10/30/25 12:17	PB170286
206-44-0	Fluoranthene	5.00	U	1	0.82	5.00	ug/L	10/30/25 12:17	PB170286
129-00-0	Pyrene	5.00	U	1	0.50	5.00	ug/L	10/30/25 12:17	PB170286
56-55-3	Benzo(a)anthracene	5.00	U	1	0.45	5.00	ug/L	10/30/25 12:17	PB170286
218-01-9	Chrysene	5.00	U	1	0.44	5.00	ug/L	10/30/25 12:17	PB170286
205-99-2	Benzo(b)fluoranthene	5.00	U	1	0.49	5.00	ug/L	10/30/25 12:17	PB170286
207-08-9	Benzo(k)fluoranthene	5.00	U	1	0.48	5.00	ug/L	10/30/25 12:17	PB170286
50-32-8	Benzo(a)pyrene	5.00	U	1	0.55	5.00	ug/L	10/30/25 12:17	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	U	1	0.59	5.00	ug/L	10/30/25 12:17	PB170286
53-70-3	Dibenzo(a,h)anthracene	5.00	U	1	0.67	5.00	ug/L	10/30/25 12:17	PB170286
191-24-2	Benzo(g,h,i)perylene	5.00	U	1	0.69	5.00	ug/L	10/30/25 12:17	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	102			67 - 132	102%	SPK: 100		
321-60-8	2-Fluorobiphenyl	87.4			52 - 132	87%	SPK: 100		
1718-51-0	Terphenyl-d14	79.4			42 - 152	79%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	25100							
1146-65-2	Naphthalene-d8	99200							
15067-26-2	Acenaphthene-d10	73700							
1517-22-2	Phenanthrene-d10	192000							
1719-03-5	Chrysene-d12	261000							
1520-96-3	Perylene-d12	303000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB170286BS	SDG No.:	Q3468
Lab Sample ID:	PB170286BS	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	1000 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	44.6		1	0.75	5.00	ug/L	10/30/25 12:58	PB170286
83-32-9	Acenaphthene	45.1		1	0.55	5.00	ug/L	10/30/25 12:58	PB170286
86-73-7	Fluorene	41.0		1	0.63	5.00	ug/L	10/30/25 12:58	PB170286
85-01-8	Phenanthrene	40.4		1	0.50	5.00	ug/L	10/30/25 12:58	PB170286
120-12-7	Anthracene	40.2		1	0.61	5.00	ug/L	10/30/25 12:58	PB170286
206-44-0	Fluoranthene	41.6		1	0.82	5.00	ug/L	10/30/25 12:58	PB170286
129-00-0	Pyrene	38.0		1	0.50	5.00	ug/L	10/30/25 12:58	PB170286
56-55-3	Benzo(a)anthracene	40.7		1	0.45	5.00	ug/L	10/30/25 12:58	PB170286
218-01-9	Chrysene	40.2		1	0.44	5.00	ug/L	10/30/25 12:58	PB170286
205-99-2	Benzo(b)fluoranthene	43.3		1	0.49	5.00	ug/L	10/30/25 12:58	PB170286
207-08-9	Benzo(k)fluoranthene	43.1		1	0.48	5.00	ug/L	10/30/25 12:58	PB170286
50-32-8	Benzo(a)pyrene	45.1		1	0.55	5.00	ug/L	10/30/25 12:58	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	43.3		1	0.59	5.00	ug/L	10/30/25 12:58	PB170286
53-70-3	Dibenzo(a,h)anthracene	43.7		1	0.67	5.00	ug/L	10/30/25 12:58	PB170286
191-24-2	Benzo(g,h,i)perylene	45.2		1	0.69	5.00	ug/L	10/30/25 12:58	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	93.9			67 - 132	94%	SPK: 100		
321-60-8	2-Fluorobiphenyl	79.9			52 - 132	80%	SPK: 100		
1718-51-0	Terphenyl-d14	79.5			42 - 152	79%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	30800							
1146-65-2	Naphthalene-d8	125000							
15067-26-2	Acenaphthene-d10	97000							
1517-22-2	Phenanthrene-d10	243000							
1719-03-5	Chrysene-d12	288000							
1520-96-3	Perylene-d12	302000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB170286BSD	SDG No.:	Q3468
Lab Sample ID:	PB170286BSD	Matrix:	Water
Analytical Method:	8270E Level: LOW	% Solid:	0
Sample Wt/Vol:	1000 mL Final Vol: 1000 uL	Test:	SVOCMS Group1
Prep Method :	3510C Prep Date: 10/28/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	Prep BatchID
TARGETS									
208-96-8	Acenaphthylene	44.5		1	0.75	5.00	ug/L	10/30/25 13:39	PB170286
83-32-9	Acenaphthene	45.3		1	0.55	5.00	ug/L	10/30/25 13:39	PB170286
86-73-7	Fluorene	40.0		1	0.63	5.00	ug/L	10/30/25 13:39	PB170286
85-01-8	Phenanthrene	40.3		1	0.50	5.00	ug/L	10/30/25 13:39	PB170286
120-12-7	Anthracene	40.1		1	0.61	5.00	ug/L	10/30/25 13:39	PB170286
206-44-0	Fluoranthene	41.3		1	0.82	5.00	ug/L	10/30/25 13:39	PB170286
129-00-0	Pyrene	37.9		1	0.50	5.00	ug/L	10/30/25 13:39	PB170286
56-55-3	Benzo(a)anthracene	40.7		1	0.45	5.00	ug/L	10/30/25 13:39	PB170286
218-01-9	Chrysene	40.5		1	0.44	5.00	ug/L	10/30/25 13:39	PB170286
205-99-2	Benzo(b)fluoranthene	43.9		1	0.49	5.00	ug/L	10/30/25 13:39	PB170286
207-08-9	Benzo(k)fluoranthene	43.0		1	0.48	5.00	ug/L	10/30/25 13:39	PB170286
50-32-8	Benzo(a)pyrene	44.8		1	0.55	5.00	ug/L	10/30/25 13:39	PB170286
193-39-5	Indeno(1,2,3-cd)pyrene	43.3		1	0.59	5.00	ug/L	10/30/25 13:39	PB170286
53-70-3	Dibenzo(a,h)anthracene	44.4		1	0.67	5.00	ug/L	10/30/25 13:39	PB170286
191-24-2	Benzo(g,h,i)perylene	44.6		1	0.69	5.00	ug/L	10/30/25 13:39	PB170286
SURROGATES									
4165-60-0	Nitrobenzene-d5	97.0			67 - 132	97%	SPK: 100		
321-60-8	2-Fluorobiphenyl	79.8			52 - 132	80%	SPK: 100		
1718-51-0	Terphenyl-d14	80.6			42 - 152	81%	SPK: 100		
INTERNAL STANDARDS		**Area Count**							
3855-82-1	1,4-Dichlorobenzene-d4	30200							
1146-65-2	Naphthalene-d8	122000							
15067-26-2	Acenaphthene-d10	101000							
1517-22-2	Phenanthrene-d10	246000							
1719-03-5	Chrysene-d12	289000							
1520-96-3	Perylene-d12	302000							

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

CALIBRATION SUMMARY

Response Factor Report GC/MS Ins

Method Path : Z:\svoasrv\HPCHEM1\BNA_G\Methods\
Method File : 8270-BG102425.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Mon Nov 03 18:16:26 2025
Response Via : Initial Calibration

Calibration Files
2.5 =BG064569.D 5 =BG064570.D 10 =BG064571.D 20 =BG064572.D 40 =BG064573.D 50 =BG064576.D 60 =BG064574.D 80 =BG0645
75.D

		Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------									
2)		1,4-Dioxane		0.570	0.581	0.524	0.525	0.474	0.559	0.460	0.528	8.85
3)		Pyridine		1.630	1.608	1.552	1.669	1.471	1.733	1.427	1.584	6.84
4)		n-Nitrosodimet...			0.912	0.807	0.900	0.780	0.921	0.776	0.850	8.08
5)	S	2-Fluorophenol		1.098	1.207	1.155	1.292	1.139	1.318	1.132	1.192	7.09
6)		Aniline		2.203	2.320	2.131	2.386	2.090	2.440	2.004	2.225	7.28
7)	S	Phenol-d6		1.469	1.654	1.566	1.771	1.597	1.864	1.524	1.635	8.55
8)		2-Chlorophenol		1.051	1.207	1.197	1.373	1.225	1.461	1.216	1.247	10.65
9)		Benzaldehyde			0.942	0.994	0.940	0.836	0.981	0.662	0.893	14.09
10)	C	Phenol		1.665	1.820	1.748	1.944	1.761	2.027	1.693	1.808	7.36
11)		bis(2-Chloroet...		1.307	1.409	1.292	1.383	1.273	1.443	1.198	1.329	6.47
12)		1,3-Dichlorobe...		1.435	1.516	1.394	1.520	1.342	1.542	1.299	1.435	6.62
13)	C	1,4-Dichlorobe...		1.431	1.546	1.442	1.534	1.381	1.561	1.323	1.460	6.21
14)		1,2-Dichlorobe...		1.371	1.518	1.364	1.483	1.316	1.520	1.283	1.408	6.97
15)		Benzyl Alcohol			1.281	1.263	1.425	1.306	1.533	1.283	1.348	7.97
16)		2,2'-oxybis(1-...		3.421	3.604	3.396	3.733	3.301	3.802	3.154	3.487	6.74
17)		2-Methylphenol		1.103	1.225	1.178	1.273	1.159	1.345	1.120	1.201	7.22
18)		Hexachloroethane		0.468	0.535	0.505	0.541	0.496	0.557	0.483	0.512	6.41
19)	P	n-Nitroso-di-n...	1.044	1.038	1.141	1.129	1.227	1.115	1.289	1.057	1.130	7.93
20)		3+4-Methylphenols			1.652	1.581	1.818	1.612	1.895	1.571	1.688	8.04
21)	I	Naphthalene-d8	----------ISTD----------									
22)		Acetophenone		0.535	0.565	0.528	0.584	0.516	0.590	0.509	0.547	6.04
23)	S	Nitrobenzene-d5		0.239	0.286	0.314	0.377	0.356	0.403	0.356	0.333	17.02
24)		Nitrobenzene		0.274	0.312	0.344	0.410	0.377	0.438	0.380	0.362	15.64
25)		Isophorone		0.751	0.796	0.771	0.869	0.764	0.891	0.751	0.799	7.25
26)	C	2-Nitrophenol		0.076	0.095	0.110	0.137	0.135	0.152	0.144	0.121	23.20
27)		2,4-Dimethylph...		0.236	0.294	0.285	0.335	0.297	0.343	0.290	0.297	11.93
28)		bis(2-Chloroet...		0.452	0.464	0.443	0.490	0.426	0.493	0.417	0.455	6.48
29)	C	2,4-Dichloroph...		0.243	0.299	0.315	0.360	0.327	0.373	0.322	0.320	13.34
30)		1,2,4-Trichlor...		0.338	0.369	0.348	0.391	0.349	0.399	0.349	0.363	6.44
31)		Naphthalene		1.083	1.144	1.084	1.177	1.036	1.201	1.037	1.109	5.96
32)		Benzoic acid			0.142	0.164	0.223	0.215	0.260	0.237	0.207	21.74
33)		4-Chloroaniline		0.390	0.456	0.411	0.459	0.410	0.486	0.405	0.431	8.29
34)	C	Hexachlorobuta...		0.266	0.291	0.282	0.299	0.271	0.306	0.273	0.284	5.33
35)		Caprolactam			0.112	0.114	0.134	0.118	0.142	0.116	0.123	9.85
36)	C	4-Chloro-3-met...		0.323	0.381	0.361	0.426	0.376	0.454	0.370	0.384	11.18
37)		2-Methylnaphth...		0.764	0.858	0.797	0.865	0.772	0.888	0.755	0.814	6.74
38)		1-Methylnaphth...		0.798	0.849	0.776	0.853	0.752	0.878	0.735	0.806	6.85

Method Path : Z:\svoasrv\HPCHEM1\BNA_G\Methods\
Method File : 8270-BG102425.M

39)	I	Acenaphthene-d10	----------ISTD----------								
40)		1,2,4,5-Tetrac...	0.657	0.684	0.648	0.702	0.633	0.717	0.657	0.671	4.55
41)	P	Hexachlorocycl...		0.268	0.279	0.324	0.297	0.340	0.305	0.302	8.97
42)	S	2,4,6-Tribromo...	0.221	0.266	0.272	0.318	0.292	0.346	0.306	0.289	14.04
43)	C	2,4,6-Trichlor...	0.294	0.333	0.375	0.423	0.399	0.456	0.408	0.384	14.41
44)		2,4,5-Trichlor...	0.339	0.425	0.439	0.484	0.443	0.517	0.454	0.443	12.48
45)	S	2-Fluorobiphenyl	1.310	1.389	1.306	1.384	1.235	1.384	1.228	1.319	5.24
46)		1,1'-Biphenyl	1.456	1.450	1.401	1.489	1.326	1.498	1.333	1.422	4.98
47)		2-Chloronaphth...	1.065	1.082	1.053	1.132	1.013	1.145	1.023	1.073	4.71
48)		2-Nitroaniline	0.201	0.234	0.277	0.348	0.343	0.404	0.367	0.311	24.06
49)		Acenaphthylene	1.667	1.726	1.647	1.786	1.593	1.827	1.604	1.693	5.30
50)		Dimethylphthalate	1.389	1.570	1.488	1.641	1.462	1.699	1.462	1.530	7.21
51)		2,6-Dinitrotol...	0.127	0.180	0.193	0.247	0.244	0.283	0.254	0.218	24.69
52)	C	Acenaphthene	1.126	1.178	1.115	1.223	1.093	1.261	1.101	1.157	5.63
53)		3-Nitroaniline	0.180	0.211	0.252	0.294	0.281	0.325	0.297	0.263	19.70
54)	P	2,4-Dinitrophenol		0.086	0.110	0.137	0.139	0.165	0.154	0.132	22.11
55)		Dibenzofuran	1.881	1.972	1.826	1.963	1.734	1.988	1.725	1.870	5.96
56)	P	4-Nitrophenol		0.191	0.213	0.261	0.250	0.283	0.267	0.244	14.40
57)		2,4-Dinitrotol...	0.223	0.269	0.300	0.385	0.373	0.434	0.396	0.340	22.67
58)		Fluorene	1.471	1.559	1.426	1.531	1.356	1.549	1.329	1.460	6.38
59)		2,3,4,6-Tetrac...	0.312	0.385	0.402	0.466	0.444	0.508	0.449	0.424	15.04
60)		Diethylphthalate	1.417	1.645	1.514	1.657	1.486	1.718	1.502	1.563	7.06
61)		4-Chlorophenyl...	0.800	0.864	0.792	0.866	0.763	0.888	0.763	0.820	6.38
62)		4-Nitroaniline	0.194	0.252	0.286	0.327	0.310	0.355	0.324	0.293	18.55
63)		Azobenzene	1.362	1.504	1.377	1.538	1.338	1.564	1.353	1.434	6.80
64)	I	Phenanthrene-d10	----------ISTD----------								
65)		4,6-Dinitro-2-...		0.055	0.064	0.083	0.083	0.097	0.093	0.079	21.00
66)	c	n-Nitrosodiphe...	0.510	0.551	0.525	0.583	0.518	0.594	0.500	0.540	6.79
67)		4-Bromophenyl-...	0.218	0.236	0.230	0.258	0.229	0.264	0.224	0.237	7.28
68)		Hexachlorobenzene	0.254	0.266	0.262	0.292	0.260	0.302	0.256	0.270	6.99
69)		Atrazine	0.215	0.227	0.249	0.245	0.219	0.261	0.211	0.232	8.27
70)	C	Pentachlorophenol		0.132	0.152	0.180	0.172	0.199	0.177	0.169	13.91
71)		Phenanthrene	1.084	1.133	1.073	1.162	1.020	1.179	1.005	1.094	6.17
72)		Anthracene	1.087	1.144	1.101	1.187	1.041	1.204	1.025	1.113	6.17
73)		Carbazole	0.982	1.037	0.982	1.031	0.910	1.028	0.897	0.981	5.90
74)		Di-n-butylphth...	1.011	1.156	1.179	1.240	1.084	1.198	1.075	1.134	7.11
75)	C	Fluoranthene	1.385	1.463	1.380	1.440	1.273	1.403	1.247	1.370	5.91
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine		0.392	0.475	0.490	0.416	0.533	0.383	0.448	13.40
78)		Pyrene	1.287	1.331	1.284	1.411	1.233	1.406	1.196	1.307	6.24
79)	S	Terphenyl-d14	1.074	1.120	1.066	1.142	0.987	1.102	0.928	1.060	7.21
80)		Butylbenzylpht...	0.284	0.359	0.388	0.450	0.408	0.467	0.410	0.395	15.43
81)		Benzo(a)anthra...	1.294	1.355	1.292	1.416	1.253	1.430	1.243	1.326	5.71
82)		3,3'-Dichlorob...		0.418	0.428	0.477	0.424	0.486	0.424	0.443	6.88
83)		Chrysene	1.249	1.291	1.229	1.344	1.188	1.359	1.173	1.262	5.76
84)		Bis(2-ethylhex...	0.484	0.555	0.581	0.671	0.585	0.667	0.588	0.590	10.95
85)	c	Di-n-octyl pht...		0.871	0.932	1.087	0.976	1.117	0.986	0.995	9.32

Method Path : Z:\svoasrv\HPCHEM1\BNA_G\Methods\
Method File : 8270-BG102425.M

86)	I	Perylene-d12	----------ISTD----------							
87)		Indeno(1,2,3-c...	1.383	1.491	1.410	1.568	1.396	1.642	1.410	1.471	6.80
88)		Benzo(b)fluora...	1.138	1.246	1.169	1.322	1.173	1.353	1.183	1.226	6.77
89)		Benzo(k)fluora...	1.175	1.260	1.206	1.285	1.151	1.364	1.149	1.227	6.51
90)	C	Benzo(a)pyrene	1.061	1.144	1.093	1.202	1.067	1.246	1.079	1.127	6.42
91)		Dibenzo(a,h)an...	1.120	1.223	1.158	1.268	1.130	1.324	1.143	1.195	6.55
92)		Benzo(g,h,i)pe...	1.080	1.162	1.089	1.213	1.078	1.280	1.092	1.142	6.95

(#) = Out of Range

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Alliance Contract: LIRO01

Lab Code: ACE SDG No.: Q3468

Instrument ID: BNA_G Calibration Date/Time: 10/29/2025 11:22

Lab File ID: BG064618.D Init. Calib. Date(s): 10/24/2025 10/24/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 09:00 15:32

GC Column: ZB-GR ID: 0.25 (mm)

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.192	1.266		6.2	
Phenol-d6	1.635	1.656		1.3	
Nitrobenzene-d5	0.333	0.401		20.4	
2-Fluorobiphenyl	1.319	1.473		11.7	
Acenaphthylene	1.693	1.770		4.5	
Acenaphthene	1.157	1.225		5.9	20.0
Fluorene	1.460	1.476		1.1	
2,4,6-Tribromophenol	0.289	0.312		8.0	
Phenanthrene	1.094	1.132		3.5	
Anthracene	1.113	1.125		1.1	
Fluoranthene	1.370	1.343		-2.0	20.0
Pyrene	1.307	1.322		1.1	
Terphenyl-d14	1.060	1.074		1.3	
Benzo(a)anthracene	1.326	1.395		5.2	
Chrysene	1.262	1.298		2.9	
Benzo(b)fluoranthene	1.226	1.236		0.8	
Benzo(k)fluoranthene	1.227	1.235		0.7	
Benzo(a)pyrene	1.127	1.157		2.7	20.0
Indeno(1,2,3-cd)pyrene	1.471	1.519		3.3	
Dibenzo(a,h)anthracene	1.195	1.241		3.8	
Benzo(g,h,i)perylene	1.142	1.182		3.5	

All other compounds must meet a minimum RRF of 0.010.

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Alliance Contract: LIRO01

Lab Code: ACE SDG No.: Q3468

Instrument ID: BNA_G Calibration Date/Time: 10/30/2025 11:36

Lab File ID: BG064636.D Init. Calib. Date(s): 10/24/2025 10/24/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 09:00 15:32

GC Column: ZB-GR ID: 0.25 (mm)

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.192	1.233		3.4	
Phenol-d6	1.635	1.603		-2.0	
Nitrobenzene-d5	0.333	0.420		26.1	
2-Fluorobiphenyl	1.319	1.427		8.2	
Acenaphthylene	1.693	1.756		3.7	
Acenaphthene	1.157	1.205		4.1	20.0
Fluorene	1.460	1.442		-1.2	
2,4,6-Tribromophenol	0.289	0.317		9.7	
Phenanthrene	1.094	1.114		1.8	
Anthracene	1.113	1.144		2.8	
Fluoranthene	1.370	1.451		5.9	20.0
Pyrene	1.307	1.247		-4.6	
Terphenyl-d14	1.060	1.043		-1.6	
Benzo(a)anthracene	1.326	1.410		6.3	
Chrysene	1.262	1.324		4.9	
Benzo(b)fluoranthene	1.226	1.272		3.8	
Benzo(k)fluoranthene	1.227	1.285		4.7	
Benzo(a)pyrene	1.127	1.190		5.6	20.0
Indeno(1,2,3-cd)pyrene	1.471	1.593		8.3	
Dibenzo(a,h)anthracene	1.195	1.283		7.4	
Benzo(g,h,i)perylene	1.142	1.243		8.8	

All other compounds must meet a minimum RRF of 0.010.