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LAB CHRONICLE

OrderID:	Q2333	**OrderDate:**	6/13/2025 3:21:44 PM
Client:	LiRo Engineers, Inc.	**Project:**	RFK Bridge RMB-Randall Island
Contact:	Martin Wesolowski	**Location:**	D51,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2333-01	**MW-06**	**Water**			**06/12/25**			**06/13/25**
			SVOCMS Group1	8270E		06/17/25	06/18/25	
Q2333-02	**MW-08**	**Water**			**06/12/25**			**06/13/25**
			SVOCMS Group1	8270E		06/17/25	06/18/25	
Q2333-03	**MW-10**	**Water**			**06/12/25**			**06/13/25**
			SVOCMS Group1	8270E		06/17/25	06/18/25	
Q2333-04	**MW-11**	**Water**			**06/12/25**			**06/13/25**
			SVOCMS Group1	8270E		06/17/25	06/18/25	
Q2333-05	**MW-13**	**Water**			**06/12/25**			**06/13/25**
			SVOCMS Group1	8270E		06/17/25	06/18/25	
Q2333-06	**MW-12**	**Water**			**06/12/25**			**06/13/25**
			SVOCMS Group1	8270E		06/17/25	06/18/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2333

Client: LiRo Engineers, Inc.

Sample ID	Client ID		Parameter	Concentration	C	MDL	RDL	Units
Client ID : MW-06								
Q2333-01	MW-06	WATER	Acenaphthene	2.800	J	0.55	5	ug/L
Q2333-01	MW-06	WATER	Fluoranthene	2.300	J	0.82	5	ug/L
			Total Svoc :	**5.10**				
			Total Concentration:	**5.10**				

SAMPLE DATA

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-06	SDG No.:	Q2333
Lab Sample ID:	Q2333-01	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF142776.D	1	06/17/25 09:25	06/18/25 13:49	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.00	U	0.75	5.00	ug/L
83-32-9	Acenaphthene	2.80	J	0.55	5.00	ug/L
86-73-7	Fluorene	5.00	U	0.63	5.00	ug/L
85-01-8	Phenanthrene	5.00	U	0.50	5.00	ug/L
120-12-7	Anthracene	5.00	U	0.61	5.00	ug/L
206-44-0	Fluoranthene	2.30	J	0.82	5.00	ug/L
129-00-0	Pyrene	5.00	U	0.50	5.00	ug/L
56-55-3	Benzo(a)anthracene	5.00	U	0.45	5.00	ug/L
218-01-9	Chrysene	5.00	U	0.44	5.00	ug/L
205-99-2	Benzo(b)fluoranthene	5.00	U	0.49	5.00	ug/L
207-08-9	Benzo(k)fluoranthene	5.00	U	0.48	5.00	ug/L
50-32-8	Benzo(a)pyrene	5.00	U	0.55	5.00	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	U	0.59	5.00	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.00	U	0.67	5.00	ug/L
191-24-2	Benzo(g,h,i)perylene	5.00	U	0.69	5.00	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	89.1		67 - 132	89%	SPK: 100
321-60-8	2-Fluorobiphenyl	84.0		52 - 132	84%	SPK: 100
1718-51-0	Terphenyl-d14	70.2		42 - 152	70%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	72700	6.881			
1146-65-2	Naphthalene-d8	277000	8.163			
15067-26-2	Acenaphthene-d10	148000	9.922			
1517-22-2	Phenanthrene-d10	244000	11.41			
1719-03-5	Chrysene-d12	167000	14.057			
1520-96-3	Perylene-d12	173000	15.545			

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-06	SDG No.:	Q2333
Lab Sample ID:	Q2333-01	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF142776.D	1	06/17/25 09:25	06/18/25 13:49	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-08	SDG No.:	Q2333
Lab Sample ID:	Q2333-02	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	980 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP025000.D	1	06/17/25 09:25	06/18/25 18:53	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.10	U	0.77	5.10	ug/L
83-32-9	Acenaphthene	5.10	U	0.56	5.10	ug/L
86-73-7	Fluorene	5.10	U	0.64	5.10	ug/L
85-01-8	Phenanthrene	5.10	U	0.51	5.10	ug/L
120-12-7	Anthracene	5.10	U	0.62	5.10	ug/L
206-44-0	Fluoranthene	5.10	U	0.84	5.10	ug/L
129-00-0	Pyrene	5.10	U	0.51	5.10	ug/L
56-55-3	Benzo(a)anthracene	5.10	U	0.46	5.10	ug/L
218-01-9	Chrysene	5.10	U	0.45	5.10	ug/L
205-99-2	Benzo(b)fluoranthene	5.10	U	0.50	5.10	ug/L
207-08-9	Benzo(k)fluoranthene	5.10	U	0.49	5.10	ug/L
50-32-8	Benzo(a)pyrene	5.10	U	0.56	5.10	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.10	U	0.60	5.10	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.10	U	0.68	5.10	ug/L
191-24-2	Benzo(g,h,i)perylene	5.10	U	0.70	5.10	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	87.7		67 - 132	88%	SPK: 100
321-60-8	2-Fluorobiphenyl	79.7		52 - 132	80%	SPK: 100
1718-51-0	Terphenyl-d14	81.7		42 - 152	82%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	285000	7.602			
1146-65-2	Naphthalene-d8	1180000	10.372			
15067-26-2	Acenaphthene-d10	819000	14.254			
1517-22-2	Phenanthrene-d10	1530000	17.06			
1719-03-5	Chrysene-d12	1580000	21.495			
1520-96-3	Perylene-d12	1800000	24.777			

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-08	SDG No.:	Q2333
Lab Sample ID:	Q2333-02	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	980 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP025000.D	1	06/17/25 09:25	06/18/25 18:53	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
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B = Analyte Found in Associated Method Blank
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() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-10	SDG No.:	Q2333
Lab Sample ID:	Q2333-03	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	990 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF142777.D	1	06/17/25 09:25	06/18/25 14:19	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.10	U	0.76	5.10	ug/L
83-32-9	Acenaphthene	5.10	U	0.56	5.10	ug/L
86-73-7	Fluorene	5.10	U	0.64	5.10	ug/L
85-01-8	Phenanthrene	5.10	U	0.51	5.10	ug/L
120-12-7	Anthracene	5.10	U	0.62	5.10	ug/L
206-44-0	Fluoranthene	5.10	U	0.83	5.10	ug/L
129-00-0	Pyrene	5.10	U	0.51	5.10	ug/L
56-55-3	Benzo(a)anthracene	5.10	U	0.45	5.10	ug/L
218-01-9	Chrysene	5.10	U	0.44	5.10	ug/L
205-99-2	Benzo(b)fluoranthene	5.10	U	0.49	5.10	ug/L
207-08-9	Benzo(k)fluoranthene	5.10	U	0.48	5.10	ug/L
50-32-8	Benzo(a)pyrene	5.10	U	0.56	5.10	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.10	U	0.60	5.10	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.10	U	0.68	5.10	ug/L
191-24-2	Benzo(g,h,i)perylene	5.10	U	0.70	5.10	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	87.3		67 - 132	87%	SPK: 100
321-60-8	2-Fluorobiphenyl	81.9		52 - 132	82%	SPK: 100
1718-51-0	Terphenyl-d14	69.4		42 - 152	69%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	75500	6.881			
1146-65-2	Naphthalene-d8	280000	8.163			
15067-26-2	Acenaphthene-d10	151000	9.922			
1517-22-2	Phenanthrene-d10	249000	11.41			
1719-03-5	Chrysene-d12	179000	14.057			
1520-96-3	Perylene-d12	176000	15.545			

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-10	SDG No.:	Q2333
Lab Sample ID:	Q2333-03	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	990 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF142777.D	1	06/17/25 09:25	06/18/25 14:19	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-11	SDG No.:	Q2333
Lab Sample ID:	Q2333-04	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF142778.D	1	06/17/25 09:25	06/18/25 14:49	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.00	U	0.75	5.00	ug/L
83-32-9	Acenaphthene	5.00	U	0.55	5.00	ug/L
86-73-7	Fluorene	5.00	U	0.63	5.00	ug/L
85-01-8	Phenanthrene	5.00	U	0.50	5.00	ug/L
120-12-7	Anthracene	5.00	U	0.61	5.00	ug/L
206-44-0	Fluoranthene	5.00	U	0.82	5.00	ug/L
129-00-0	Pyrene	5.00	U	0.50	5.00	ug/L
56-55-3	Benzo(a)anthracene	5.00	U	0.45	5.00	ug/L
218-01-9	Chrysene	5.00	U	0.44	5.00	ug/L
205-99-2	Benzo(b)fluoranthene	5.00	U	0.49	5.00	ug/L
207-08-9	Benzo(k)fluoranthene	5.00	U	0.48	5.00	ug/L
50-32-8	Benzo(a)pyrene	5.00	U	0.55	5.00	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	U	0.59	5.00	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.00	U	0.67	5.00	ug/L
191-24-2	Benzo(g,h,i)perylene	5.00	U	0.69	5.00	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	91.5		67 - 132	91%	SPK: 100
321-60-8	2-Fluorobiphenyl	84.9		52 - 132	85%	SPK: 100
1718-51-0	Terphenyl-d14	68.3		42 - 152	68%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	73000	6.881			
1146-65-2	Naphthalene-d8	285000	8.163			
15067-26-2	Acenaphthene-d10	155000	9.922			
1517-22-2	Phenanthrene-d10	263000	11.41			
1719-03-5	Chrysene-d12	182000	14.057			
1520-96-3	Perylene-d12	179000	15.545			

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-11	SDG No.:	Q2333
Lab Sample ID:	Q2333-04	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF142778.D	1	06/17/25 09:25	06/18/25 14:49	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-13	SDG No.:	Q2333
Lab Sample ID:	Q2333-05	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	970 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024998.D	1	06/17/25 09:25	06/18/25 17:30	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.20	U	0.77	5.20	ug/L
83-32-9	Acenaphthene	5.20	U	0.57	5.20	ug/L
86-73-7	Fluorene	5.20	U	0.65	5.20	ug/L
85-01-8	Phenanthrene	5.20	U	0.52	5.20	ug/L
120-12-7	Anthracene	5.20	U	0.63	5.20	ug/L
206-44-0	Fluoranthene	5.20	U	0.85	5.20	ug/L
129-00-0	Pyrene	5.20	U	0.52	5.20	ug/L
56-55-3	Benzo(a)anthracene	5.20	U	0.46	5.20	ug/L
218-01-9	Chrysene	5.20	U	0.45	5.20	ug/L
205-99-2	Benzo(b)fluoranthene	5.20	U	0.51	5.20	ug/L
207-08-9	Benzo(k)fluoranthene	5.20	U	0.49	5.20	ug/L
50-32-8	Benzo(a)pyrene	5.20	U	0.57	5.20	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.20	U	0.61	5.20	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.20	U	0.69	5.20	ug/L
191-24-2	Benzo(g,h,i)perylene	5.20	U	0.71	5.20	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	87.3		67 - 132	87%	SPK: 100
321-60-8	2-Fluorobiphenyl	84.8		52 - 132	85%	SPK: 100
1718-51-0	Terphenyl-d14	81.3		42 - 152	81%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	278000	7.607			
1146-65-2	Naphthalene-d8	1100000	10.378			
15067-26-2	Acenaphthene-d10	687000	14.254			
1517-22-2	Phenanthrene-d10	1380000	17.066			
1719-03-5	Chrysene-d12	1450000	21.495			
1520-96-3	Perylene-d12	1600000	24.759			

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-13	SDG No.:	Q2333
Lab Sample ID:	Q2333-05	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	970 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024998.D	1	06/17/25 09:25	06/18/25 17:30	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-12	SDG No.:	Q2333
Lab Sample ID:	Q2333-06	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024999.D	1	06/17/25 09:25	06/18/25 18:12	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.00	U	0.75	5.00	ug/L
83-32-9	Acenaphthene	5.00	U	0.55	5.00	ug/L
86-73-7	Fluorene	5.00	U	0.63	5.00	ug/L
85-01-8	Phenanthrene	5.00	U	0.50	5.00	ug/L
120-12-7	Anthracene	5.00	U	0.61	5.00	ug/L
206-44-0	Fluoranthene	5.00	U	0.82	5.00	ug/L
129-00-0	Pyrene	5.00	U	0.50	5.00	ug/L
56-55-3	Benzo(a)anthracene	5.00	U	0.45	5.00	ug/L
218-01-9	Chrysene	5.00	U	0.44	5.00	ug/L
205-99-2	Benzo(b)fluoranthene	5.00	U	0.49	5.00	ug/L
207-08-9	Benzo(k)fluoranthene	5.00	U	0.48	5.00	ug/L
50-32-8	Benzo(a)pyrene	5.00	U	0.55	5.00	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	U	0.59	5.00	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.00	U	0.67	5.00	ug/L
191-24-2	Benzo(g,h,i)perylene	5.00	U	0.69	5.00	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	78.8		67 - 132	79%	SPK: 100
321-60-8	2-Fluorobiphenyl	74.6		52 - 132	75%	SPK: 100
1718-51-0	Terphenyl-d14	75.2		42 - 152	75%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	259000	7.602			
1146-65-2	Naphthalene-d8	1020000	10.378			
15067-26-2	Acenaphthene-d10	715000	14.26			
1517-22-2	Phenanthrene-d10	1280000	17.072			
1719-03-5	Chrysene-d12	1390000	21.513			
1520-96-3	Perylene-d12	1590000	24.777			

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	06/12/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	06/13/25
Client Sample ID:	MW-12	SDG No.:	Q2333
Lab Sample ID:	Q2333-06	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024999.D	1	06/17/25 09:25	06/18/25 18:12	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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

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Surrogate Summary

SW-846

SDG No.: Q2333

Client: LiRo Engineers, Inc.

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%) Low	Limits (%) High
PB168509BL	PB168509BL	Nitrobenzene-d5	100	84.1	84		67	132
		2-Fluorobiphenyl	100	81.5	81		52	132
		Terphenyl-d14	100	84.2	84		42	152
PB168509BS	PB168509BS	Nitrobenzene-d5	100	84.7	85		67	132
		2-Fluorobiphenyl	100	85.5	86		52	132
		Terphenyl-d14	100	88.9	89		42	152
PB168509BSD	PB168509BSD	Nitrobenzene-d5	100	79.6	80		67	132
		2-Fluorobiphenyl	100	77.8	78		52	132
		Terphenyl-d14	100	85.9	86		42	152
Q2333-01	MW-06	Nitrobenzene-d5	100	89.1	89		67	132
		2-Fluorobiphenyl	100	84.0	84		52	132
		Terphenyl-d14	100	70.2	70		42	152
Q2333-02	MW-08	Nitrobenzene-d5	100	87.7	88		67	132
		2-Fluorobiphenyl	100	79.7	80		52	132
		Terphenyl-d14	100	81.7	82		42	152
Q2333-03	MW-10	Nitrobenzene-d5	100	87.3	87		67	132
		2-Fluorobiphenyl	100	81.9	82		52	132
		Terphenyl-d14	100	69.4	69		42	152
Q2333-04	MW-11	Nitrobenzene-d5	100	91.5	91		67	132
		2-Fluorobiphenyl	100	84.9	85		52	132
		Terphenyl-d14	100	68.3	68		42	152
Q2333-05	MW-13	Nitrobenzene-d5	100	87.3	87		67	132
		2-Fluorobiphenyl	100	84.8	85		52	132
		Terphenyl-d14	100	81.3	81		42	152
Q2333-06	MW-12	Nitrobenzene-d5	100	78.8	79		67	132
		2-Fluorobiphenyl	100	74.6	75		52	132
		Terphenyl-d14	100	75.2	75		42	152

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2333

Client: LiRo Engineers, Inc.

Analytical Method: 8270E **DataFile:** BP024989.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB168509BS	Acenaphthylene	50	49.0	ug/L	98				79	103	
	Acenaphthene	50	48.5	ug/L	97				59	113	
	Fluorene	50	48.5	ug/L	97				64	107	
	Phenanthrene	50	47.9	ug/L	96				62	109	
	Anthracene	50	48.9	ug/L	98				65	110	
	Fluoranthene	50	47.8	ug/L	96				64	110	
	Pyrene	50	50.5	ug/L	101				71	103	
	Benzo(a)anthracene	50	49.9	ug/L	100				62	107	
	Chrysene	50	49.8	ug/L	100				61	108	
	Benzo(b)fluoranthene	50	48.3	ug/L	97				77	113	
	Benzo(k)fluoranthene	50	49.9	ug/L	100				77	105	
	Benzo(a)pyrene	50	49.3	ug/L	99				72	131	
	Indeno(1,2,3-cd)pyrene	50	48.5	ug/L	97				72	105	
	Dibenz(a,h)anthracene	50	48.9	ug/L	98				78	115	
	Benzo(g,h,i)perylene	50	47.7	ug/L	95				75	118	

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2333

Client: LiRo Engineers, Inc.

Analytical Method: 8270E **DataFile:** BP024990.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB168509BSD	Acenaphthylene	50	45.4	ug/L	91	8			79	103	20
	Acenaphthene	50	45.0	ug/L	90	7			59	113	20
	Fluorene	50	44.9	ug/L	90	8			64	107	20
	Phenanthrene	50	46.2	ug/L	92	4			62	109	20
	Anthracene	50	46.6	ug/L	93	5			65	110	20
	Fluoranthene	50	45.7	ug/L	91	4			64	110	20
	Pyrene	50	50.1	ug/L	100	1			71	103	20
	Benzo(a)anthracene	50	47.6	ug/L	95	5			62	107	20
	Chrysene	50	46.0	ug/L	92	8			61	108	20
	Benzo(b)fluoranthene	50	47.7	ug/L	95	1			77	113	20
	Benzo(k)fluoranthene	50	46.5	ug/L	93	7			77	105	20
	Benzo(a)pyrene	50	47.8	ug/L	96	3			72	131	20
	Indeno(1,2,3-cd)pyrene	50	48.2	ug/L	96	1			72	105	20
	Dibenz(a,h)anthracene	50	48.6	ug/L	97	1			78	115	20
	Benzo(g,h,i)perylene	50	48.0	ug/L	96	1			75	118	20

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB168509BL

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: BP024988.D Lab Sample ID: PB168509BL

Instrument ID: BNA_P Date Extracted: 06/17/2025

Matrix: (soil/water) Water Date Analyzed: 06/18/2025

Level: (low/med) LOW Time Analyzed: 10:36

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB168509BS	PB168509BS	BP024989.D	06/18/2025
PB168509BSD	PB168509BSD	BP024990.D	06/18/2025
MW-13	Q2333-05	BP024998.D	06/18/2025
MW-12	Q2333-06	BP024999.D	06/18/2025
MW-08	Q2333-02	BP025000.D	06/18/2025
MW-06	Q2333-01	BF142776.D	06/18/2025
MW-10	Q2333-03	BF142777.D	06/18/2025
MW-11	Q2333-04	BF142778.D	06/18/2025

COMMENTS:

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: BF142710.D DFTPP Injection Date: 06/10/2025

Instrument ID: BNA_F DFTPP Injection Time: 15:42

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.5 (1.7) 1
69	Mass 69 relative abundance	28.7
70	Less than 2.0% of mass 69	0.1 (0.2) 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	5.9
365	Greater than 1% of mass 198	3.3
441	Present, but less than mass 443	15.6
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	19 (19) 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	BF142712.D	06/10/2025	16:54
SSTDICC005	SSTDICC005	BF142713.D	06/10/2025	17:24
SSTDICC010	SSTDICC010	BF142714.D	06/10/2025	17:53
SSTDICC020	SSTDICC020	BF142715.D	06/10/2025	18:22
SSTDICCC040	SSTDICCC040	BF142716.D	06/10/2025	18:52
SSTDICC050	SSTDICC050	BF142717.D	06/10/2025	19:21
SSTDICC060	SSTDICC060	BF142718.D	06/10/2025	19:50
SSTDICC080	SSTDICC080	BF142719.D	06/10/2025	20:19

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: BF142771.D DFTPP Injection Date: 06/18/2025

Instrument ID: BNA_F DFTPP Injection Time: 11:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.6 (1.8) 1
69	Mass 69 relative abundance	34.5
70	Less than 2.0% of mass 69	0.2 (0.5) 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	6.8
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	15.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	19.2 (19.2) 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	BF142772.D	06/18/2025	11:48
MW-06	Q2333-01	BF142776.D	06/18/2025	13:49
MW-10	Q2333-03	BF142777.D	06/18/2025	14:19
MW-11	Q2333-04	BF142778.D	06/18/2025	14:49

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: BP024859.D DFTPP Injection Date: 06/06/2025

Instrument ID: BNA_P DFTPP Injection Time: 09:49

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.7 (1.9) 1
69	Mass 69 relative abundance	36.9
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	6.6
365	Greater than 1% of mass 198	4.6
441	Present, but less than mass 443	13.1
442	Greater than 50% of mass 198	84
443	15.0 - 24.0% of mass 442	16.1 (19.2) 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	BP024860.D	06/06/2025	10:30
SSTDICC005	SSTDICC005	BP024861.D	06/06/2025	11:11
SSTDICC010	SSTDICC010	BP024862.D	06/06/2025	11:52
SSTDICC020	SSTDICC020	BP024863.D	06/06/2025	12:33
SSTDICCC040	SSTDICCC040	BP024864.D	06/06/2025	13:14
SSTDICC050	SSTDICC050	BP024865.D	06/06/2025	13:56
SSTDICC060	SSTDICC060	BP024866.D	06/06/2025	14:37
SSTDICC080	SSTDICC080	BP024867.D	06/06/2025	15:18

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: BP024986.D DFTPP Injection Date: 06/18/2025

Instrument ID: BNA_P DFTPP Injection Time: 09:15

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
68	Less than 2.0% of mass 69	0.5 (1.5) 1
69	Mass 69 relative abundance	35.1
70	Less than 2.0% of mass 69	0.2 (0.5) 1
197	Less than 2.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
365	Greater than 1% of mass 198	4.1
441	Present, but less than mass 443	11.8
442	Greater than 50% of mass 198	76.3
443	15.0 - 24.0% of mass 442	14.6 (19.1) 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	BP024987.D	06/18/2025	09:55
PB168509BL	PB168509BL	BP024988.D	06/18/2025	10:36
PB168509BS	PB168509BS	BP024989.D	06/18/2025	11:17
PB168509BSD	PB168509BSD	BP024990.D	06/18/2025	11:58
MW-13	Q2333-05	BP024998.D	06/18/2025	17:30
MW-12	Q2333-06	BP024999.D	06/18/2025	18:12
MW-08	Q2333-02	BP025000.D	06/18/2025	18:53

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

EPA Sample No.: SSTDCCC040 Date Analyzed: 06/18/2025

Lab File ID: BF142772.D Time Analyzed: 11:48

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	81687	6.887	316375	8.17	173519	9.93
	UPPER LIMIT	163374	7.387	632750	8.669	347038	10.428
	LOWER LIMIT	40843.5	6.387	158188	7.669	86759.5	9.428
	EPA SAMPLE NO.						
01	MW-06	72728	6.88	276703	8.16	148072	9.92
02	MW-10	75516	6.88	279917	8.16	151116	9.92
03	MW-11	72977	6.88	285294	8.16	155201	9.92

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.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

EPA Sample No.: SSTDCCC040 Date Analyzed: 06/18/2025

Lab File ID: BF142772.D Time Analyzed: 11:48

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	303610	11.416	189006	14.063	179702	15.551
	UPPER LIMIT	607220	11.916	378012	14.563	359404	16.051
	LOWER LIMIT	151805	10.916	94503	13.563	89851	15.051
	EPA SAMPLE NO.						
01	MW-06	243522	11.41	167055	14.06	173007	15.55
02	MW-10	248862	11.41	179367	14.06	176221	15.55
03	MW-11	263148	11.41	182331	14.06	179027	15.55

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.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

EPA Sample No.: SSTDCCC040 Date Analyzed: 06/18/2025

Lab File ID: BP024987.D Time Analyzed: 09:55

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

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	287169	7.607	1150640	10.38	726300	14.26
	UPPER LIMIT	574338	8.107	2301280	10.878	1452600	14.76
	LOWER LIMIT	143585	7.107	575320	9.878	363150	13.76
	EPA SAMPLE NO.						
01	MW-08	284799	7.60	1178300	10.37	818800	14.25
02	MW-13	277507	7.61	1098580	10.38	686732	14.25
03	MW-12	259382	7.60	1022680	10.38	715185	14.26
04	PB168509BL	278843	7.61	1046610	10.38	632257	14.26
05	PB168509BS	309420	7.61	1193310	10.38	709072	14.25
06	PB168509BSD	299910	7.60	1166190	10.37	733128	14.25

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.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

EPA Sample No.: SSTDCCC040 Date Analyzed: 06/18/2025

Lab File ID: BP024987.D Time Analyzed: 09:55

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

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	1437450	17.06	1478430	21.501	1736640	24.765
	UPPER LIMIT	2874900	17.56	2956860	22.001	3473280	25.265
	LOWER LIMIT	718725	16.56	739215	21.001	868320	24.265
	EPA SAMPLE NO.						
01	MW-08	1525740	17.06	1584670	21.50	1801580	24.78
02	MW-13	1378050	17.07	1454710	21.50	1598180	24.76
03	MW-12	1282200	17.07	1386220	21.51	1591860	24.78
04	PB168509BL	1245800	17.07	1328390	21.50	1595370	24.77
05	PB168509BS	1338630	17.07	1331590	21.50	1579120	24.78
06	PB168509BSD	1403510	17.07	1366570	21.51	1569190	24.77

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

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB168509BL	SDG No.:	Q2333
Lab Sample ID:	PB168509BL	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024988.D	1	06/17/25 09:25	06/18/25 10:36	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	5.00	U	0.75	5.00	ug/L
83-32-9	Acenaphthene	5.00	U	0.55	5.00	ug/L
86-73-7	Fluorene	5.00	U	0.63	5.00	ug/L
85-01-8	Phenanthrene	5.00	U	0.50	5.00	ug/L
120-12-7	Anthracene	5.00	U	0.61	5.00	ug/L
206-44-0	Fluoranthene	5.00	U	0.82	5.00	ug/L
129-00-0	Pyrene	5.00	U	0.50	5.00	ug/L
56-55-3	Benzo(a)anthracene	5.00	U	0.45	5.00	ug/L
218-01-9	Chrysene	5.00	U	0.44	5.00	ug/L
205-99-2	Benzo(b)fluoranthene	5.00	U	0.49	5.00	ug/L
207-08-9	Benzo(k)fluoranthene	5.00	U	0.48	5.00	ug/L
50-32-8	Benzo(a)pyrene	5.00	U	0.55	5.00	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	U	0.59	5.00	ug/L
53-70-3	Dibenzo(a,h)anthracene	5.00	U	0.67	5.00	ug/L
191-24-2	Benzo(g,h,i)perylene	5.00	U	0.69	5.00	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	84.1		67 - 132	84%	SPK: 100
321-60-8	2-Fluorobiphenyl	81.5		52 - 132	81%	SPK: 100
1718-51-0	Terphenyl-d14	84.2		42 - 152	84%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	279000	7.608			
1146-65-2	Naphthalene-d8	1050000	10.378			
15067-26-2	Acenaphthene-d10	632000	14.26			
1517-22-2	Phenanthrene-d10	1250000	17.072			
1719-03-5	Chrysene-d12	1330000	21.501			
1520-96-3	Perylene-d12	1600000	24.771			

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Report of Analysis

Client:	LiRo Engineers, Inc.			Date Collected:	
Project:	RFK Bridge RMB-Randall Island			Date Received:	
Client Sample ID:	PB168509BL			SDG No.:	Q2333
Lab Sample ID:	PB168509BL			Matrix:	Water
Analytical Method:	8270E			% Solid:	0
Sample Wt/Vol:	1000	Units:	mL	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	SVOCMS Group1
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3510C				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024988.D	1	06/17/25 09:25	06/18/25 10:36	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB168509BS	SDG No.:	Q2333
Lab Sample ID:	PB168509BS	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024989.D	1	06/17/25 09:25	06/18/25 11:17	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	49.0		0.75	5.00	ug/L
83-32-9	Acenaphthene	48.5		0.55	5.00	ug/L
86-73-7	Fluorene	48.5		0.63	5.00	ug/L
85-01-8	Phenanthrene	47.9		0.50	5.00	ug/L
120-12-7	Anthracene	48.9		0.61	5.00	ug/L
206-44-0	Fluoranthene	47.8		0.82	5.00	ug/L
129-00-0	Pyrene	50.5		0.50	5.00	ug/L
56-55-3	Benzo(a)anthracene	49.9		0.45	5.00	ug/L
218-01-9	Chrysene	49.8		0.44	5.00	ug/L
205-99-2	Benzo(b)fluoranthene	48.3		0.49	5.00	ug/L
207-08-9	Benzo(k)fluoranthene	49.9		0.48	5.00	ug/L
50-32-8	Benzo(a)pyrene	49.3		0.55	5.00	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	48.5		0.59	5.00	ug/L
53-70-3	Dibenzo(a,h)anthracene	48.9		0.67	5.00	ug/L
191-24-2	Benzo(g,h,i)perylene	47.7		0.69	5.00	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	84.7		67 - 132	85%	SPK: 100
321-60-8	2-Fluorobiphenyl	85.5		52 - 132	86%	SPK: 100
1718-51-0	Terphenyl-d14	88.9		42 - 152	89%	SPK: 100

CAS Number	Parameter	Conc.	Qualifier
INTERNAL STANDARDS			
3855-82-1	1,4-Dichlorobenzene-d4	309000	7.608
1146-65-2	Naphthalene-d8	1190000	10.378
15067-26-2	Acenaphthene-d10	709000	14.254
1517-22-2	Phenanthrene-d10	1340000	17.066
1719-03-5	Chrysene-d12	1330000	21.495
1520-96-3	Perylene-d12	1580000	24.777

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB168509BS	SDG No.:	Q2333
Lab Sample ID:	PB168509BS	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024989.D	1	06/17/25 09:25	06/18/25 11:17	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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
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J = Estimated Value
B = Analyte Found in Associated Method Blank
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D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	PB168509BSD	SDG No.:	Q2333
Lab Sample ID:	PB168509BSD	Matrix:	Water
Analytical Method:	8270E	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024990.D	1	06/17/25 09:25	06/18/25 11:58	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
208-96-8	Acenaphthylene	45.4		0.75	5.00	ug/L
83-32-9	Acenaphthene	45.0		0.55	5.00	ug/L
86-73-7	Fluorene	44.9		0.63	5.00	ug/L
85-01-8	Phenanthrene	46.2		0.50	5.00	ug/L
120-12-7	Anthracene	46.6		0.61	5.00	ug/L
206-44-0	Fluoranthene	45.7		0.82	5.00	ug/L
129-00-0	Pyrene	50.1		0.50	5.00	ug/L
56-55-3	Benzo(a)anthracene	47.6		0.45	5.00	ug/L
218-01-9	Chrysene	46.0		0.44	5.00	ug/L
205-99-2	Benzo(b)fluoranthene	47.7		0.49	5.00	ug/L
207-08-9	Benzo(k)fluoranthene	46.5		0.48	5.00	ug/L
50-32-8	Benzo(a)pyrene	47.8		0.55	5.00	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	48.2		0.59	5.00	ug/L
53-70-3	Dibenzo(a,h)anthracene	48.6		0.67	5.00	ug/L
191-24-2	Benzo(g,h,i)perylene	48.0		0.69	5.00	ug/L
SURROGATES						
4165-60-0	Nitrobenzene-d5	79.6		67 - 132	80%	SPK: 100
321-60-8	2-Fluorobiphenyl	77.8		52 - 132	78%	SPK: 100
1718-51-0	Terphenyl-d14	85.9		42 - 152	86%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	300000	7.602			
1146-65-2	Naphthalene-d8	1170000	10.372			
15067-26-2	Acenaphthene-d10	733000	14.254			
1517-22-2	Phenanthrene-d10	1400000	17.066			
1719-03-5	Chrysene-d12	1370000	21.507			
1520-96-3	Perylene-d12	1570000	24.766			

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Report of Analysis

Client:	LiRo Engineers, Inc.			Date Collected:	
Project:	RFK Bridge RMB-Randall Island			Date Received:	
Client Sample ID:	PB168509BSD			SDG No.:	Q2333
Lab Sample ID:	PB168509BSD			Matrix:	Water
Analytical Method:	8270E			% Solid:	0
Sample Wt/Vol:	1000	Units:	mL	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	SVOCMS Group1
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3510C				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP024990.D	1	06/17/25 09:25	06/18/25 11:58	PB168509

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

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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 BNA_F

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF061125.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Wed Jun 11 05:56:09 2025
Response Via : Initial Calibration

Calibration Files
2.5 =BF142712.D 5.0 =BF142713.D 10 =BF142714.D 20 =BF142715.D 40 =BF142716.D 50 =BF142717.D 60 =BF142718.D 80 =BF1427
19.D

		Compound	2.5	5.0	10	20	40	50	60	80	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------	ISTD	----------							
2)		1,4-Dioxane		0.499	0.448	0.472	0.455	0.481	0.460	0.439	0.465	4.40
3)		Pyridine		1.172	1.129	1.159	1.160	1.222	1.193	1.122	1.165	3.00
4)		n-Nitrosodimet...			0.558	0.590	0.591	0.633	0.617	0.588	0.596	4.36
5)	S	2-Fluorophenol		1.238	1.170	1.199	1.161	1.220	1.156	1.075	1.174	4.55
6)		Aniline		1.866	1.788	1.894	1.848	1.955	1.861	1.736	1.850	3.83
7)	S	Phenol-d6		1.434	1.339	1.400	1.376	1.446	1.377	1.302	1.382	3.67
8)		2-Chlorophenol		1.288	1.254	1.300	1.290	1.347	1.286	1.219	1.283	3.09
9)		Benzaldehyde			0.943	0.950	0.839	0.839	0.708		0.856	11.52
10)	C	Phenol		1.550	1.503	1.577	1.522	1.607	1.547	1.446	1.536	3.42
11)		bis(2-Chloroet...		1.222	1.118	1.149	1.130	1.202	1.131	1.079	1.147	4.29
12)		1,3-Dichlorobe...		1.557	1.483	1.504	1.451	1.513	1.411	1.333	1.465	5.08
13)	C	1,4-Dichlorobe...		1.596	1.483	1.519	1.454	1.528	1.431	1.349	1.480	5.34
14)		1,2-Dichlorobe...		1.554	1.418	1.444	1.401	1.457	1.375	1.282	1.419	5.83
15)		Benzyl Alcohol			0.970	1.049	1.059	1.121	1.061	1.007	1.045	4.95
16)		2,2'-oxybis(1-...		1.957	1.812	1.840	1.806	1.875	1.746	1.609	1.806	6.03
17)		2-Methylphenol		0.978	0.950	0.995	0.992	1.043	0.995	0.933	0.984	3.61
18)		Hexachloroethane		0.562	0.521	0.545	0.524	0.552	0.522	0.488	0.530	4.69
19)	P	n-Nitroso-di-n...	0.885	0.912	0.870	0.886	0.878	0.921	0.863	0.823	0.880	3.43
20)		3+4-Methylphenols			1.261	1.285	1.246	1.299	1.218	1.134	1.240	4.80
21)	I	Naphthalene-d8	----------	ISTD	----------							
22)		Acetophenone		0.475	0.451	0.458	0.435	0.454	0.433	0.408	0.445	4.79
23)	S	Nitrobenzene-d5		0.381	0.363	0.369	0.358	0.378	0.363	0.346	0.365	3.24
24)		Nitrobenzene		0.338	0.313	0.326	0.320	0.335	0.327	0.312	0.324	3.10
25)		Isophorone		0.657	0.621	0.628	0.603	0.630	0.606	0.585	0.619	3.77
26)	C	2-Nitrophenol		0.172	0.174	0.183	0.181	0.192	0.187	0.178	0.181	3.92
27)		2,4-Dimethylph...		0.318	0.303	0.311	0.304	0.321	0.308	0.292	0.308	3.14
28)		bis(2-Chloroet...		0.408	0.381	0.392	0.377	0.397	0.378	0.356	0.384	4.31
29)	C	2,4-Dichloroph...		0.284	0.281	0.292	0.280	0.300	0.285	0.269	0.284	3.51
30)		1,2,4-Trichlor...		0.337	0.313	0.322	0.306	0.322	0.307	0.294	0.314	4.42
31)		Naphthalene		1.065	0.997	1.021	0.972	1.008	0.958	0.903	0.989	5.20
32)		Benzoic acid			0.137	0.162	0.174	0.192	0.190	0.186	0.174	12.16
33)		4-Chloroaniline		0.429	0.389	0.399	0.399	0.408	0.386	0.370	0.397	4.68
34)	C	Hexachlorobuta...		0.210	0.204	0.206	0.197	0.205	0.196	0.184	0.200	4.41
35)		Caprolactam			0.077	0.079	0.075	0.079	0.077	0.074	0.077	2.82
36)	C	4-Chloro-3-met...		0.317	0.299	0.303	0.289	0.301	0.287	0.273	0.296	4.76
37)		2-Methylnaphth...		0.674	0.649	0.641	0.618	0.636	0.599	0.565	0.626	5.72
38)		1-Methylnaphth...		0.727	0.666	0.669	0.629	0.650	0.619	0.580	0.649	7.16

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF061125.M

39)	I	Acenaphthene-d10	----------ISTD----------								
40)		1,2,4,5-Tetrac...	0.585	0.592	0.589	0.568	0.618	0.570	0.531	0.579	4.64
41)	P	Hexachlorocycl...		0.297	0.348	0.375	0.414	0.400	0.396	0.372	11.64
42)	S	2,4,6-Tribromo...	0.236	0.223	0.224	0.213	0.226	0.210	0.202	0.219	5.28
43)	C	2,4,6-Trichlor...	0.349	0.373	0.383	0.373	0.405	0.380	0.359	0.375	4.79
44)		2,4,5-Trichlor...	0.404	0.404	0.413	0.400	0.431	0.399	0.383	0.405	3.61
45)	S	2-Fluorobiphenyl	1.690	1.610	1.569	1.444	1.535	1.402	1.289	1.505	9.04
46)		1,1'-Biphenyl	1.630	1.617	1.587	1.506	1.622	1.500	1.409	1.553	5.39
47)		2-Chloronaphth...	1.190	1.172	1.178	1.117	1.197	1.108	1.047	1.144	4.82
48)		2-Nitroaniline	0.320	0.321	0.333	0.323	0.345	0.325	0.311	0.325	3.38
49)		Acenaphthylene	2.053	1.986	2.003	1.881	1.991	1.847	1.744	1.929	5.65
50)		Dimethylphthalate	1.444	1.368	1.359	1.291	1.379	1.273	1.234	1.336	5.42
51)		2,6-Dinitrotol...	0.307	0.283	0.295	0.285	0.299	0.283	0.268	0.289	4.49
52)	C	Acenaphthene	1.266	1.222	1.224	1.170	1.237	1.155	1.099	1.196	4.80
53)		3-Nitroaniline	0.334	0.313	0.316	0.307	0.322	0.304	0.295	0.313	4.08
54)	P	2,4-Dinitrophenol		0.123	0.154	0.157	0.176	0.170	0.169	0.158	12.18
55)		Dibenzofuran	1.855	1.777	1.783	1.643	1.741	1.607	1.517	1.703	6.93
56)	P	4-Nitrophenol		0.203	0.219	0.210	0.222	0.212	0.208	0.212	3.42
57)		2,4-Dinitrotol...	0.396	0.383	0.399	0.377	0.396	0.372	0.348	0.382	4.73
58)		Fluorene	1.547	1.429	1.397	1.279	1.357	1.240	1.167	1.345	9.49
59)		2,3,4,6-Tetrac...	0.364	0.339	0.357	0.327	0.354	0.332	0.311	0.340	5.58
60)		Diethylphthalate	1.508	1.392	1.372	1.256	1.332	1.246	1.164	1.324	8.55
61)		4-Chlorophenyl...	0.748	0.692	0.680	0.633	0.663	0.610	0.571	0.657	8.84
62)		4-Nitroaniline	0.297	0.281	0.294	0.270	0.283	0.275	0.261	0.280	4.58
63)		Azobenzene	1.290	1.186	1.178	1.115	1.187	1.094	1.045	1.157	6.89
64)	I	Phenanthrene-d10	----------ISTD----------								
65)		4,6-Dinitro-2-...		0.104	0.123	0.125	0.137	0.133	0.129	0.125	9.17
66)	c	n-Nitrosodiphe...	0.710	0.679	0.693	0.672	0.722	0.685	0.651	0.687	3.45
67)		4-Bromophenyl-...	0.240	0.229	0.238	0.231	0.252	0.236	0.227	0.236	3.52
68)		Hexachlorobenzene	0.270	0.261	0.263	0.255	0.275	0.260	0.251	0.262	3.17
69)		Atrazine	0.185	0.174	0.188	0.179	0.191	0.188	0.178	0.183	3.33
70)	C	Pentachlorophenol		0.118	0.133	0.139	0.148	0.144	0.142	0.137	7.80
71)		Phenanthrene	1.165	1.100	1.094	1.036	1.091	1.035	0.978	1.071	5.61
72)		Anthracene	1.203	1.145	1.140	1.064	1.132	1.072	1.004	1.108	5.96
73)		Carbazole	1.003	0.960	0.968	0.898	0.931	0.903	0.832	0.928	6.07
74)		Di-n-butylphth...	1.105	1.048	1.072	1.005	1.053	1.017	0.953	1.036	4.76
75)	C	Fluoranthene	1.184	1.083	1.081	0.965	0.988	0.953	0.878	1.019	10.08
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine		0.711	0.772	0.799	0.754	0.684	0.553	0.712	12.40
78)		Pyrene	2.014	1.918	1.928	1.883	1.878	1.753	1.635	1.859	6.75
79)	S	Terphenyl-d14	1.609	1.562	1.556	1.462	1.430	1.327	1.247	1.456	9.11
80)		Butylbenzylpht...	0.435	0.486	0.526	0.581	0.626	0.605	0.588	0.550	12.67
81)		Benzo(a)anthra...	1.367	1.273	1.284	1.350	1.400	1.340	1.263	1.325	3.94
82)		3,3'-Dichlorob...		0.370	0.403	0.442	0.473	0.459	0.418	0.427	8.88
83)		Chrysene	1.298	1.208	1.245	1.172	1.250	1.222	1.170	1.224	3.72
84)		Bis(2-ethylhex...	0.616	0.709	0.756	0.895	0.977	0.926	0.896	0.825	16.02
85)	c	Di-n-octyl pht...		1.284	1.385	1.677	1.816	1.680	1.654	1.582	12.84

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF061125.M

86)	I	Perylene-d12	----------ISTD----------							
87)		Indeno(1,2,3-c...	1.438	1.406	1.458	1.498	1.602	1.514	1.460	1.482	4.31
88)		Benzo(b)fluora...	1.256	1.094	1.112	1.162	1.230	1.251	1.139	1.178	5.71
89)		Benzo(k)fluora...	1.236	1.178	1.245	1.076	1.189	1.035	1.039	1.143	7.94
90)	C	Benzo(a)pyrene	1.164	1.085	1.122	1.104	1.184	1.111	1.068	1.120	3.70
91)		Dibenzo(a,h)an...	1.134	1.176	1.214	1.236	1.318	1.222	1.172	1.210	4.87
92)		Benzo(g,h,i)pe...	1.201	1.164	1.178	1.216	1.295	1.207	1.163	1.203	3.77

(#) = Out of Range

Response Factor Report MSBNA_P

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
Method File : 8270E-BP060625.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Fri Jun 06 16:20:27 2025
Response Via : Initial Calibration

Calibration Files
2.5 =BP024860.D 5 =BP024861.D 10 =BP024862.D 20 =BP024863.D 40 =BP024864.D 50 =BP024865.D 60 =BP024866.D 80 =BP0248
67.D

		Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------	ISTD	----------							
2)		1,4-Dioxane		0.564	0.529	0.524	0.495	0.546	0.515	0.517	0.527	4.21
3)		Pyridine		1.151	1.183	1.265	1.226	1.370	1.367	1.315	1.268	6.84
4)		n-Nitrosodimet...			0.478	0.509	0.502	0.542	0.554	0.525	0.518	5.36
5)	S	2-Fluorophenol		1.127	1.139	1.207	1.163	1.283	1.253	1.215	1.198	4.85
6)		Aniline		1.917	1.892	2.016	1.978	2.145	2.182	2.031	2.023	5.37
7)	S	Phenol-d6		1.507	1.528	1.588	1.545	1.676	1.689	1.564	1.585	4.49
8)		2-Chlorophenol		1.336	1.290	1.346	1.314	1.453	1.422	1.348	1.358	4.29
9)		Benzaldehyde			1.038	1.071	0.873	0.985	0.869	0.646	0.914	16.98
10)	C	Phenol		1.560	1.564	1.616	1.587	1.725	1.759	1.629	1.634	4.78
11)		bis(2-Chloroet...		1.222	1.277	1.334	1.234	1.363	1.322	1.246	1.285	4.26
12)		1,3-Dichlorobe...		1.570	1.515	1.537	1.425	1.571	1.519	1.471	1.515	3.49
13)	C	1,4-Dichlorobe...		1.596	1.507	1.535	1.439	1.604	1.534	1.488	1.529	3.82
14)		1,2-Dichlorobe...		1.529	1.637	1.488	1.401	1.540	1.492	1.422	1.501	5.25
15)		Benzyl Alcohol			1.137	1.185	1.170	1.289	1.309	1.211	1.217	5.63
16)		2,2'-oxybis(1-...		1.748	1.732	1.722	1.583	1.751	1.667	1.574	1.682	4.54
17)		2-Methylphenol		1.053	1.149	1.138	1.106	1.210	1.211	1.121	1.141	4.94
18)		Hexachloroethane		0.591	0.565	0.581	0.545	0.611	0.574	0.562	0.576	3.73
19)	P	n-Nitroso-di-n...	0.984	1.101	1.105	1.107	1.043	1.141	1.113	1.029	1.078	4.93
20)		3+4-Methylphenols			1.507	1.548	1.493	1.631	1.648	1.515	1.557	4.29
21)	I	Naphthalene-d8	----------	ISTD	----------							
22)		Acetophenone		0.506	0.521	0.511	0.491	0.535	0.510	0.463	0.505	4.58
23)	S	Nitrobenzene-d5		0.407	0.397	0.423	0.404	0.444	0.423	0.383	0.412	4.89
24)		Nitrobenzene		0.366	0.351	0.375	0.360	0.392	0.376	0.339	0.366	4.81
25)		Isophorone		0.704	0.678	0.724	0.694	0.764	0.726	0.704	0.713	3.91
26)	C	2-Nitrophenol		0.154	0.157	0.178	0.180	0.201	0.195	0.198	0.180	10.62
27)		2,4-Dimethylph...		0.294	0.286	0.310	0.303	0.331	0.320	0.318	0.309	5.12
28)		bis(2-Chloroet...		0.414	0.408	0.438	0.414	0.465	0.423	0.416	0.426	4.70
29)	C	2,4-Dichloroph...		0.246	0.272	0.300	0.292	0.327	0.313	0.323	0.296	9.81
30)		1,2,4-Trichlor...		0.335	0.319	0.335	0.317	0.352	0.330	0.351	0.334	4.16
31)		Naphthalene		1.071	1.022	1.044	0.989	1.079	1.035	0.935	1.025	4.86
32)		Benzoic acid			0.159	0.181	0.204	0.230	0.235	0.243	0.209	16.01
33)		4-Chloroaniline		0.397	0.401	0.435	0.426	0.471	0.463	0.414	0.429	6.72
34)	C	Hexachlorobuta...		0.203	0.199	0.208	0.194	0.218	0.198	0.189	0.201	4.76
35)		Caprolactam			0.098	0.109	0.110	0.118	0.116	0.104	0.109	6.91
36)	C	4-Chloro-3-met...		0.312	0.322	0.351	0.341	0.374	0.363	0.329	0.342	6.58
37)		2-Methylnaphth...		0.659	0.638	0.659	0.633	0.696	0.664	0.602	0.650	4.54
38)		1-Methylnaphth...		0.720	0.680	0.718	0.671	0.741	0.693	0.643	0.695	4.86

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
Method File : 8270E-BP060625.M

39)	I	Acenaphthene-d10	----------ISTD----------								
40)		1,2,4,5-Tetrac...	0.568	0.561	0.568	0.538	0.601	0.574	0.562	0.568	3.31
41)	P	Hexachlorocycl...		0.259	0.315	0.337	0.404	0.369	0.394	0.346	15.74
42)	S	2,4,6-Tribromo...	0.256	0.264	0.279	0.267	0.298	0.286	0.285	0.277	5.26
43)	C	2,4,6-Trichlor...	0.342	0.352	0.386	0.375	0.411	0.404	0.396	0.381	6.86
44)		2,4,5-Trichlor...	0.349	0.379	0.414	0.405	0.448	0.436	0.426	0.408	8.44
45)	S	2-Fluorobiphenyl	1.542	1.507	1.517	1.390	1.563	1.464	1.409	1.485	4.44
46)		1,1'-Biphenyl	1.477	1.456	1.485	1.386	1.509	1.458	1.403	1.453	3.05
47)		2-Chloronaphth...	1.123	1.104	1.135	1.069	1.171	1.136	1.081	1.117	3.16
48)		2-Nitroaniline	0.289	0.324	0.344	0.346	0.371	0.374	0.355	0.343	8.59
49)		Acenaphthylene	1.880	1.851	1.892	1.768	1.939	1.904	1.805	1.863	3.19
50)		Dimethylphthalate	1.515	1.450	1.501	1.400	1.550	1.473	1.438	1.475	3.45
51)		2,6-Dinitrotol...	0.299	0.301	0.326	0.312	0.339	0.333	0.317	0.318	4.86
52)	C	Acenaphthene	1.106	1.064	1.090	1.020	1.087	1.069	1.036	1.067	2.86
53)		3-Nitroaniline	0.263	0.292	0.337	0.338	0.367	0.364	0.349	0.330	11.74
54)	P	2,4-Dinitrophenol		0.117	0.155	0.179	0.203	0.208	0.205	0.178	20.23
55)		Dibenzofuran	1.815	1.721	1.756	1.627	1.757	1.702	1.615	1.713	4.22
56)	P	4-Nitrophenol		0.142	0.213	0.248	0.276	0.281	0.275	0.239	22.62
57)		2,4-Dinitrotol...	0.390	0.416	0.457	0.437	0.487	0.470	0.458	0.445	7.45
58)		Fluorene	1.437	1.394	1.420	1.304	1.434	1.370	1.329	1.384	3.77
59)		2,3,4,6-Tetrac...	0.343	0.350	0.360	0.354	0.395	0.381	0.370	0.365	5.04
60)		Diethylphthalate	1.501	1.474	1.487	1.393	1.545	1.444	1.449	1.470	3.27
61)		4-Chlorophenyl...	0.711	0.668	0.689	0.637	0.709	0.665	0.658	0.677	4.06
62)		4-Nitroaniline	0.239	0.235	0.307	0.311	0.336	0.333	0.334	0.299	14.69
63)		Azobenzene	1.346	1.334	1.394	1.300	1.425	1.335	1.307	1.349	3.37
64)	I	Phenanthrene-d10	----------ISTD----------								
65)		4,6-Dinitro-2-...		0.102	0.125	0.130	0.147	0.143	0.142	0.131	12.78
66)	c	n-Nitrosodiphe...	0.627	0.608	0.633	0.597	0.659	0.622	0.594	0.620	3.68
67)		4-Bromophenyl-...	0.224	0.215	0.226	0.213	0.246	0.229	0.226	0.226	4.83
68)		Hexachlorobenzene	0.278	0.268	0.272	0.260	0.290	0.275	0.272	0.274	3.31
69)		Atrazine	0.213	0.212	0.231	0.217	0.244	0.228	0.228	0.225	5.16
70)	C	Pentachlorophenol		0.105	0.131	0.139	0.162	0.153	0.159	0.142	15.21
71)		Phenanthrene	1.158	1.108	1.110	1.056	1.161	1.102	1.041	1.105	4.12
72)		Anthracene	1.129	1.093	1.137	1.072	1.188	1.133	1.083	1.119	3.58
73)		Carbazole	1.023	1.013	1.057	0.998	1.112	1.052	1.007	1.038	3.83
74)		Di-n-butylphth...	1.178	1.245	1.326	1.272	1.421	1.273	1.284	1.285	5.81
75)	C	Fluoranthene	1.300	1.287	1.307	1.223	1.344	1.268	1.238	1.281	3.25
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine		0.512	0.669	0.653	0.690	0.663	0.529	0.619	12.54
78)		Pyrene	1.307	1.195	1.261	1.184	1.322	1.272	1.206	1.249	4.41
79)	S	Terphenyl-d14	1.178	1.073	1.146	1.089	1.164	1.120	1.039	1.116	4.57
80)		Butylbenzylpht...	0.508	0.529	0.581	0.561	0.641	0.596	0.589	0.572	7.74
81)		Benzo(a)anthra...	1.312	1.234	1.288	1.219	1.347	1.310	1.243	1.279	3.73
82)		3,3'-Dichlorob...		0.468	0.513	0.493	0.542	0.531	0.501	0.508	5.29
83)		Chrysene	1.252	1.174	1.229	1.144	1.279	1.238	1.168	1.212	4.13
84)		Bis(2-ethylhex...	0.715	0.780	0.846	0.797	0.921	0.831	0.850	0.820	7.87
85)	c	Di-n-octyl pht...		1.320	1.438	1.384	1.587	1.470	1.473	1.445	6.25

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
Method File : 8270E-BP060625.M

86)	I	Perylene-d12	----------ISTD----------							
87)		Indeno(1,2,3-c...	1.427	1.402	1.469	1.412	1.559	1.510	1.436	1.459	3.92
88)		Benzo(b)fluora...	1.103	1.104	1.133	1.127	1.232	1.180	1.133	1.145	4.06
89)		Benzo(k)fluora...	1.165	1.144	1.180	1.106	1.259	1.158	1.144	1.165	4.05
90)	C	Benzo(a)pyrene	1.096	1.069	1.127	1.070	1.214	1.136	1.113	1.118	4.46
91)		Dibenzo(a,h)an...	1.151	1.143	1.202	1.143	1.279	1.224	1.172	1.188	4.25
92)		Benzo(g,h,i)pe...	1.172	1.127	1.183	1.136	1.261	1.214	1.157	1.179	3.95

(#) = 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: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG No.: Q2333

Instrument ID: BNA_F Calibration Date/Time: 06/18/2025 11:48

Lab File ID: BF142772.D Init. Calib. Date(s): 06/10/2025 06/10/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 16:54 20:19

GC Column: DB-UI ID: 0.18 (mm)

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.174	1.170		-0.3	
Phenol-d6	1.382	1.385		0.2	
Nitrobenzene-d5	0.365	0.356		-2.5	
2-Fluorobiphenyl	1.505	1.389		-7.7	
Acenaphthylene	1.929	1.853		-3.9	
Acenaphthene	1.196	1.138		-4.8	20.0
Fluorene	1.345	1.278		-5.0	
2,4,6-Tribromophenol	0.219	0.206		-5.9	
Phenanthrene	1.071	1.018		-4.9	
Anthracene	1.108	1.043		-5.9	
Fluoranthene	1.019	1.030		1.1	20.0
Pyrene	1.859	1.665		-10.4	
Terphenyl-d14	1.456	1.259		-13.5	
Benzo(a)anthracene	1.325	1.285		-3.0	
Chrysene	1.224	1.148		-6.2	
Benzo(b)fluoranthene	1.178	1.205		2.3	
Benzo(k)fluoranthene	1.143	1.050		-8.1	
Benzo(a)pyrene	1.120	1.081		-3.5	20.0
Indeno(1,2,3-cd)pyrene	1.482	1.312		-11.5	
Dibenzo(a,h)anthracene	1.210	1.075		-11.2	
Benzo(g,h,i)perylene	1.203	1.047		-13.0	

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: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG No.: Q2333

Instrument ID: BNA_P Calibration Date/Time: 06/18/2025 09:55

Lab File ID: BP024987.D Init. Calib. Date(s): 06/06/2025 06/06/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 15:18

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.198	1.233		2.9	
Phenol-d6	1.585	1.551		-2.1	
Nitrobenzene-d5	0.412	0.408		-1.0	
2-Fluorobiphenyl	1.485	1.412		-4.9	
Acenaphthylene	1.863	1.810		-2.8	
Acenaphthene	1.067	1.036		-2.9	20.0
Fluorene	1.384	1.336		-3.5	
2,4,6-Tribromophenol	0.277	0.268		-3.2	
Phenanthrene	1.105	1.039		-6.0	
Anthracene	1.119	1.072		-4.2	
Fluoranthene	1.281	1.220		-4.8	20.0
Pyrene	1.249	1.224		-2.0	
Terphenyl-d14	1.116	1.080		-3.2	
Benzo(a)anthracene	1.279	1.252		-2.1	
Chrysene	1.212	1.156		-4.6	
Benzo(b)fluoranthene	1.145	1.079		-5.8	
Benzo(k)fluoranthene	1.165	1.122		-3.7	
Benzo(a)pyrene	1.118	1.070		-4.3	20.0
Indeno(1,2,3-cd)pyrene	1.459	1.404		-3.8	
Dibenzo(a,h)anthracene	1.188	1.130		-4.9	
Benzo(g,h,i)perylene	1.179	1.124		-4.7	

All other compounds must meet a minimum RRF of 0.010.