CHEMTECH

284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	P1747	**OrderDate:**	3/13/2024 12:28:00 PM
Client:	LiRo Engineers, Inc.	**Project:**	Walter Gladwin Recreation Center, Bronx, NY
Contact:	Steve Frank	**Location:**	I21,I31,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P1747-01	**MW-01**	**Water**			**03/12/24**			**03/13/24**
			SVOC-TCL BNA -20	8270E		03/14/24	03/14/24	
P1747-02	**MW-01-DUP**	**Water**			**03/12/24**			**03/13/24**
			SVOC-TCL BNA -20	8270E		03/14/24	03/14/24	
P1747-03	**MW-01**	**Water**			**03/13/24**			**03/13/24**
			SVOC-NYCD	625.1		03/14/24	03/15/24	
P1747-03RE	**MW-01RE**	**Water**			**03/13/24**			**03/13/24**
			SVOC-NYCD	625.1		03/14/24	03/18/24	
P1747-04	**MW-02**	**Water**			**03/12/24**			**03/13/24**
			SVOC-TCL BNA -20	8270E		03/14/24	03/14/24	
P1747-05	**MW-04**	**Water**			**03/12/24**			**03/13/24**
			SVOC-TCL BNA -20	8270E		03/14/24	03/14/24	

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Hit Summary Sheet
SW-846

SDG No.: P1747

Client: LiRo Engineers, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								
				0.000				
			Total Svoc :			**0.00**		
			Total Concentration:			**0.00**		

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SAMPLE DATA

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/13/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/13/24
Client Sample ID:	MW-01	SDG No.:	P1747
Lab Sample ID:	P1747-03	Matrix:	Water
Analytical Method:	625.1	% Solid:	0
Sample Wt/Vol:	970 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF137615.D	1	03/14/24 11:40	03/15/24 18:08	PB159613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
108-95-2	Phenol	5.20	U	0.96	5.20	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.20	U	1.10	5.20	ug/L
91-20-3	Naphthalene	5.20	U	1.10	5.20	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	41.9	*	60 - 140	42%	SPK: 100
13127-88-3	Phenol-d6	22.8	*	60 - 140	23%	SPK: 100
4165-60-0	Nitrobenzene-d5	87.3		60 - 140	87%	SPK: 100
321-60-8	2-Fluorobiphenyl	86.6		60 - 140	87%	SPK: 100
118-79-6	2,4,6-Tribromophenol	98.9		60 - 140	99%	SPK: 100
1718-51-0	Terphenyl-d14	62.4		60 - 140	62%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	122000	6.722			
1146-65-2	Naphthalene-d8	481000	8.004			
15067-26-2	Acenaphthene-d10	272000	9.757			
1517-22-2	Phenanthrene-d10	476000	11.239			
1719-03-5	Chrysene-d12	380000	13.874			
1520-96-3	Perylene-d12	326000	15.298			

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:	03/13/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/13/24
Client Sample ID:	MW-01RE	SDG No.:	P1747
Lab Sample ID:	P1747-03RE	Matrix:	Water
Analytical Method:	625.1	% Solid:	0
Sample Wt/Vol:	970 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM044656.D	1	03/14/24 11:40	03/18/24 13:12	PB159613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
108-95-2	Phenol	5.20	U	0.96	5.20	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.20	U	1.10	5.20	ug/L
91-20-3	Naphthalene	5.20	U	1.10	5.20	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	40.2	*	60 - 140	40%	SPK: 100
13127-88-3	Phenol-d6	22.4	*	60 - 140	22%	SPK: 100
4165-60-0	Nitrobenzene-d5	94.8		60 - 140	95%	SPK: 100
321-60-8	2-Fluorobiphenyl	96.0		60 - 140	96%	SPK: 100
118-79-6	2,4,6-Tribromophenol	98.4		60 - 140	98%	SPK: 100
1718-51-0	Terphenyl-d14	84.2		60 - 140	84%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	203000	7.698			
1146-65-2	Naphthalene-d8	773000	10.475			
15067-26-2	Acenaphthene-d10	429000	14.339			
1517-22-2	Phenanthrene-d10	831000	17.098			
1719-03-5	Chrysene-d12	797000	21.297			
1520-96-3	Perylene-d12	944000	23.544			

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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QC SUMMARY

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Surrogate Summary

SW-846

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 625.1

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%) Low	Limits (%) High
P1747-03	MW-01	2-Fluorophenol	100	41.9	42	*	60	140
		Phenol-d6	100	22.8	23	*	60	140
		Nitrobenzene-d5	100	87.3	87		60	140
		2-Fluorobiphenyl	100	86.6	87		60	140
		2,4,6-Tribromophenol	100	98.9	99		60	140
		Terphenyl-d14	100	62.4	62		60	140
P1747-03RE	MW-01RE	2-Fluorophenol	100	40.2	40	*	60	140
		Phenol-d6	100	22.4	22	*	60	140
		Nitrobenzene-d5	100	94.8	95		60	140
		2-Fluorobiphenyl	100	96.0	96		60	140
		2,4,6-Tribromophenol	100	98.4	98		60	140
		Terphenyl-d14	100	84.2	84		60	140
PB159613BL	PB159613BL	2-Fluorophenol	100	91.8	92		60	140
		Phenol-d6	100	84.3	84		60	140
		Nitrobenzene-d5	100	84.1	84		60	140
		2-Fluorobiphenyl	100	85.8	86		60	140
		2,4,6-Tribromophenol	100	85.2	85		60	140
		Terphenyl-d14	100	77.7	78		60	140
PB159613BS	PB159613BS	2-Fluorophenol	100	86.3	86		60	140
		Phenol-d6	100	80.5	81		60	140
		Nitrobenzene-d5	100	82.2	82		60	140
		2-Fluorobiphenyl	100	82.1	82		60	140
		2,4,6-Tribromophenol	100	90.7	91		60	140
		Terphenyl-d14	100	76.6	77		60	140
PB159613BSD	PB159613BSD	2-Fluorophenol	100	84.1	84		60	140
		Phenol-d6	100	78.3	78		60	140
		Nitrobenzene-d5	100	77.7	78		60	140
		2-Fluorobiphenyl	100	79.4	79		60	140
		2,4,6-Tribromophenol	100	87.2	87		60	140
		Terphenyl-d14	100	73.3	73		60	140

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 625.1 **DataFile:** BF137612.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB159613BS	Phenol	50	42.0	ug/L	84				48	130	
	1,2,4-Trichlorobenzene	50	46.8	ug/L	94				44	142	
	Naphthalene	50	43.9	ug/L	88				70	130	

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 625.1 **DataFile:** BF137613.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB159613BSD	Phenol	50	40.4	ug/L	81	4			48	130	20
	1,2,4-Trichlorobenzene	50	44.3	ug/L	89	5			44	142	20
	Naphthalene	50	41.7	ug/L	83	5			70	130	20

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB159613BL

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: P1747 SAS No.: P1747 SDG NO.: P1747

Lab File ID: BF137611.D Lab Sample ID: PB159613BL

Instrument ID: BNA_F Date Extracted: 03/14/2024

Matrix: (soil/water) Water Date Analyzed: 03/15/2024

Level: (low/med) LOW Time Analyzed: 16:03

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB159613BS	PB159613BS	BF137612.D	03/15/2024
PB159613BSD	PB159613BSD	BF137613.D	03/15/2024
MW-01	P1747-03	BF137615.D	03/15/2024

COMMENTS:

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: P1747 SDG NO.: P1747

Lab File ID: BF137438.D DFTPP Injection Date: 02/29/2024

Instrument ID: BNA_F DFTPP Injection Time: 12:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.3
68	Less than 2.0% of mass 69	0.6 (1.5) 1
69	Mass 69 relative abundance	40.2
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	45.4
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
275	10.0 - 60.0% of mass 198	25.5
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	14
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	17.1 (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
SSTDICC2.5	SSTDICC2.5	BF137439.D	02/29/2024	12:44
SSTDICC005	SSTDICC005	BF137440.D	02/29/2024	13:13
SSTDICC010	SSTDICC010	BF137441.D	02/29/2024	13:43
SSTDICC020	SSTDICC020	BF137442.D	02/29/2024	14:12
SSTDICCC040	SSTDICCC040	BF137443.D	02/29/2024	14:41
SSTDICC050	SSTDICC050	BF137444.D	02/29/2024	16:13
SSTDICC060	SSTDICC060	BF137445.D	02/29/2024	16:43
SSTDICC080	SSTDICC080	BF137446.D	02/29/2024	17:14

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: P1747 SDG NO.: P1747

Lab File ID: BF137609.D DFTPP Injection Date: 03/15/2024

Instrument ID: BNA_F DFTPP Injection Time: 13:52

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	35.3
68	Less than 2.0% of mass 69	0.5 (1.4) 1
69	Mass 69 relative abundance	35
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	43.1
197	Less than 2.0% of mass 198	0.6
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	25.1
365	Greater than 1% of mass 198	3.3
441	Present, but less than mass 443	15.9
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	20.1 (19.5) 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	BF137610.D	03/15/2024	15:34
PB159613BL	PB159613BL	BF137611.D	03/15/2024	16:03
PB159613BS	PB159613BS	BF137612.D	03/15/2024	16:33
PB159613BSD	PB159613BSD	BF137613.D	03/15/2024	17:02
MW-01	P1747-03	BF137615.D	03/15/2024	18:08

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: P1747 SDG NO.: P1747

Lab File ID: BM044594.D DFTPP Injection Date: 03/13/2024

Instrument ID: BNA_M DFTPP Injection Time: 13:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	44.4
68	Less than 2.0% of mass 69	0.7 (1.7) 1
69	Mass 69 relative abundance	41.7
70	Less than 2.0% of mass 69	0.1 (0.3) 1
127	10.0 - 80.0% of mass 198	50
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	22.6
365	Greater than 1% of mass 198	2.8
441	Present, but less than mass 443	11.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	13.4 (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
SSTDICC2.5	SSTDICC2.5	BM044595.D	03/13/2024	13:44
SSTDICC005	SSTDICC005	BM044596.D	03/13/2024	14:20
SSTDICC010	SSTDICC010	BM044597.D	03/13/2024	14:56
SSTDICC020	SSTDICC020	BM044598.D	03/13/2024	15:33
SSTDICCC040	SSTDICCC040	BM044599.D	03/13/2024	16:09
SSTDICC050	SSTDICC050	BM044600.D	03/13/2024	16:46
SSTDICC060	SSTDICC060	BM044601.D	03/13/2024	17:22
SSTDICC080	SSTDICC080	BM044602.D	03/13/2024	17:59

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM SAS No.: P1747 SDG NO.: P1747

Lab File ID: BM044653.D DFTPP Injection Date: 03/18/2024

Instrument ID: BNA_M DFTPP Injection Time: 11:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	44.5
68	Less than 2.0% of mass 69	0.7 (1.6) 1
69	Mass 69 relative abundance	42.6
70	Less than 2.0% of mass 69	0.3 (0.6) 1
127	10.0 - 80.0% of mass 198	50.9
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	6.4
275	10.0 - 60.0% of mass 198	23.9
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	13
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	15.8 (19.6) 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	BM044654.D	03/18/2024	11:50
MW-01RE	P1747-03RE	BM044656.D	03/18/2024	13:12

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: P1747 SAS No.: P1747 SDG NO.: P1747

EPA Sample No.: SSTDCCC040 Date Analyzed: 03/15/2024

Lab File ID: BF137610.D Time Analyzed: 15:34

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	156491	6.728	579710	8.01	317075	9.76
	UPPER LIMIT	312982	7.228	1159420	8.51	634150	10.263
	LOWER LIMIT	78245.5	6.228	289855	7.51	158538	9.263
	EPA SAMPLE NO.						
01	PB159613BL	164876	6.73	640676	8.00	350327	9.76
02	PB159613BS	174702	6.73	662837	8.01	361357	9.76
03	MW-01	122193	6.72	480505	8.00	271859	9.76
04	PB159613BSD	177128	6.73	685431	8.01	367798	9.76

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.: P1747 SAS No.: P1747 SDG NO.: P1747

EPA Sample No.: SSTDCCC040 Date Analyzed: 03/15/2024

Lab File ID: BF137610.D Time Analyzed: 15:34

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	518790	11.245	315670	13.874	268004	15.298
	UPPER LIMIT	1037580	11.745	631340	14.374	536008	15.798
	LOWER LIMIT	259395	10.745	157835	13.374	134002	14.798
	EPA SAMPLE NO.						
01	PB159613BL	572257	11.24	350600	13.87	288694	15.30
02	PB159613BS	592768	11.25	363148	13.88	315730	15.30
03	MW-01	476309	11.24	380092	13.87	326161	15.30
04	PB159613BSD	614466	11.25	368786	13.88	320365	15.30

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.: P1747 SAS No.: P1747 SDG NO.: P1747

EPA Sample No.: SSTDCCC040 Date Analyzed: 03/18/2024

Lab File ID: BM044654.D Time Analyzed: 11:50

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

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	181490	7.698	729361	10.48	422995	14.34
	UPPER LIMIT	362980	8.198	1458720	10.975	845990	14.839
	LOWER LIMIT	90745	7.198	364681	9.975	211498	13.839
	EPA SAMPLE NO.						
01	MW-01RE	202767	7.70	772524	10.48	428984	14.34

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.: P1747 SAS No.: P1747 SDG NO.: P1747

EPA Sample No.: SSTDCCC040 Date Analyzed: 03/18/2024

Lab File ID: BM044654.D Time Analyzed: 11:50

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

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	831298	17.098	768575	21.297	882881	23.544
	UPPER LIMIT	1662600	17.598	1537150	21.797	1765760	24.044
	LOWER LIMIT	415649	16.598	384288	20.797	441441	23.044
	EPA SAMPLE NO.						
01	MW-01RE	830911	17.10	796584	21.30	943523	23.54

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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QC SAMPLE DATA

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	
Client Sample ID:	PB159613BL	SDG No.:	P1747
Lab Sample ID:	PB159613BL	Matrix:	Water
Analytical Method:	625.1	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF137611.D	1	03/14/24 11:40	03/15/24 16:03	PB159613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
108-95-2	Phenol	5.00	U	0.93	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	U	1.10	5.00	ug/L
91-20-3	Naphthalene	5.00	U	1.00	5.00	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	91.8		60 - 140	92%	SPK: 100
13127-88-3	Phenol-d6	84.3		60 - 140	84%	SPK: 100
4165-60-0	Nitrobenzene-d5	84.1		60 - 140	84%	SPK: 100
321-60-8	2-Fluorobiphenyl	85.8		60 - 140	86%	SPK: 100
118-79-6	2,4,6-Tribromophenol	85.2		60 - 140	85%	SPK: 100
1718-51-0	Terphenyl-d14	77.7		60 - 140	78%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	165000	6.728			
1146-65-2	Naphthalene-d8	641000	8.004			
15067-26-2	Acenaphthene-d10	350000	9.757			
1517-22-2	Phenanthrene-d10	572000	11.239			
1719-03-5	Chrysene-d12	351000	13.874			
1520-96-3	Perylene-d12	289000	15.298			

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:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	
Client Sample ID:	PB159613BS	SDG No.:	P1747
Lab Sample ID:	PB159613BS	Matrix:	Water
Analytical Method:	625.1	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF137612.D	1	03/14/24 11:40	03/15/24 16:33	PB159613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
108-95-2	Phenol	42.0		0.93	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	46.8		1.10	5.00	ug/L
91-20-3	Naphthalene	43.9		1.00	5.00	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	86.3		60 - 140	86%	SPK: 100
13127-88-3	Phenol-d6	80.5		60 - 140	81%	SPK: 100
4165-60-0	Nitrobenzene-d5	82.2		60 - 140	82%	SPK: 100
321-60-8	2-Fluorobiphenyl	82.1		60 - 140	82%	SPK: 100
118-79-6	2,4,6-Tribromophenol	90.7		60 - 140	91%	SPK: 100
1718-51-0	Terphenyl-d14	76.6		60 - 140	77%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	175000	6.728			
1146-65-2	Naphthalene-d8	663000	8.01			
15067-26-2	Acenaphthene-d10	361000	9.763			
1517-22-2	Phenanthrene-d10	593000	11.245			
1719-03-5	Chrysene-d12	363000	13.88			
1520-96-3	Perylene-d12	316000	15.298			

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:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	
Client Sample ID:	PB159613BSD	SDG No.:	P1747
Lab Sample ID:	PB159613BSD	Matrix:	Water
Analytical Method:	625.1	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF137613.D	1	03/14/24 11:40	03/15/24 17:02	PB159613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
108-95-2	Phenol	40.4		0.93	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	44.3		1.10	5.00	ug/L
91-20-3	Naphthalene	41.7		1.00	5.00	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	84.1		60 - 140	84%	SPK: 100
13127-88-3	Phenol-d6	78.3		60 - 140	78%	SPK: 100
4165-60-0	Nitrobenzene-d5	77.7		60 - 140	78%	SPK: 100
321-60-8	2-Fluorobiphenyl	79.4		60 - 140	79%	SPK: 100
118-79-6	2,4,6-Tribromophenol	87.2		60 - 140	87%	SPK: 100
1718-51-0	Terphenyl-d14	73.3		60 - 140	73%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	177000	6.728			
1146-65-2	Naphthalene-d8	685000	8.01			
15067-26-2	Acenaphthene-d10	368000	9.763			
1517-22-2	Phenanthrene-d10	614000	11.245			
1719-03-5	Chrysene-d12	369000	13.88			
1520-96-3	Perylene-d12	320000	15.298			

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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CALIBRATION SUMMARY

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6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: P1747 SAS No.: P1747 SDG No.: P1747

Instrument ID: BNA_F Calibration Date(s): 02/29/2024 02/29/2024

Calibration Time(s): 12:44 17:14

LAB FILE ID: RRF2.5 = BF137439.D RRF005 = BF137440.D RRF010 = BF137441.D
RRF020 = BF137442.D RRF040 = BF137443.D RRF050 = BF137444.D

COMPOUND	RRF2.5	RRF005	RRF010	RRF020	RRF040	RRF050	RRF	% RSD
2-Fluorophenol		1.221	1.350	1.475	1.380	1.318	1.321	7.1
Phenol-d6		1.987	2.007	2.095	1.924	1.832	1.906	7.4
Phenol		2.046	2.142	2.271	2.125	2.004	2.052	7.5
Nitrobenzene-d5		0.418	0.437	0.471	0.441	0.427	0.430	5.4
1,2,4-Trichlorobenzene		0.323	0.326	0.332	0.310	0.302	0.310	6.3
Naphthalene		1.163	1.163	1.192	1.058	1.028	1.073	9.7
2-Fluorobiphenyl		1.509	1.467	1.412	1.240	1.157	1.278	14.5
2,4,6-Tribromophenol		0.169	0.174	0.187	0.175	0.173	0.176	3.3
Terphenyl-d14		1.470	1.472	1.534	1.490	1.441	1.454	4.2

All other compounds must meet a minimum RRF of 0.010.

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6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: P1747 SAS No.: P1747 SDG No.: P1747

Instrument ID: BNA_M Calibration Date(s): 03/13/2024 03/13/2024

Calibration Time(s): 13:44 17:59

LAB FILE ID: RRF2.5 = BM044595.D RRF005 = BM044596.D RRF010 = BM044597.D
RRF020 = BM044598.D RRF040 = BM044599.D RRF050 = BM044600.D

COMPOUND	RRF2.5	RRF005	RRF010	RRF020	RRF040	RRF050	RRF	% RSD
2-Fluorophenol		1.337	1.392	1.461	1.411	1.381	1.393	3.0
Phenol-d6		1.685	1.757	1.893	1.832	1.802	1.792	3.9
Phenol		1.681	1.748	1.881	1.828	1.804	1.790	3.8
Nitrobenzene-d5		0.387	0.399	0.436	0.427	0.421	0.415	4.3
1,2,4-Trichlorobenzene		0.311	0.314	0.326	0.317	0.312	0.316	1.9
Naphthalene		1.084	1.083	1.148	1.113	1.087	1.098	2.6
2-Fluorobiphenyl		1.451	1.476	1.531	1.463	1.424	1.452	3.5
2,4,6-Tribromophenol		0.190	0.201	0.232	0.228	0.228	0.221	8.1
Terphenyl-d14		1.104	1.133	1.227	1.202	1.140	1.143	5.5

All other compounds must meet a minimum RRF of 0.010.

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: P1747 SAS No.: P1747 SDG No.: P1747

Instrument ID: BNA_F Calibration Date/Time: 03/15/2024 15:34

Lab File ID: BF137610.D Init. Calib. Date(s): 02/29/2024 02/29/2024

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 12:44 17:14

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.321	1.324		0.2	
Phenol-d6	1.906	1.756		-7.9	
Phenol	2.052	1.929		-6.0	20.0
Nitrobenzene-d5	0.430	0.417		-3.0	
1,2,4-Trichlorobenzene	0.310	0.304		-1.9	
Naphthalene	1.073	1.032		-3.8	
2-Fluorobiphenyl	1.278	1.209		-5.4	
2,4,6-Tribromophenol	0.176	0.172		-2.3	
Terphenyl-d14	1.454	1.253		-13.8	

All other compounds must meet a minimum RRF of 0.010.

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: P1747 SAS No.: P1747 SDG No.: P1747

Instrument ID: BNA_M Calibration Date/Time: 03/18/2024 11:50

Lab File ID: BM044654.D Init. Calib. Date(s): 03/13/2024 03/13/2024

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 13:44 17:59

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.393	1.339		-3.9	
Phenol-d6	1.792	1.757		-2.0	
Phenol	1.790	1.737		-3.0	20.0
Nitrobenzene-d5	0.415	0.407		-1.9	
1,2,4-Trichlorobenzene	0.316	0.303		-4.1	
Naphthalene	1.098	1.055		-3.9	
2-Fluorobiphenyl	1.452	1.423		-2.0	
2,4,6-Tribromophenol	0.221	0.228		3.2	
Terphenyl-d14	1.143	1.150		0.6	

All other compounds must meet a minimum RRF of 0.010.