



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	PCB	8082A	03/12/24	03/14/24	03/14/24	03/13/24
			Pesticide-TCL	8081B		03/14/24	03/14/24	
P1747-02	MW-01-DUP	WATER	PCB	8082A	03/12/24	03/14/24	03/14/24	03/13/24
			Pesticide-TCL	8081B		03/14/24	03/14/24	
P1747-03	MW-01	WATER	PCB	608.3	03/13/24	03/14/24	03/15/24	03/13/24
P1747-04	MW-02	WATER	PCB	8082A	03/12/24	03/14/24	03/14/24	03/13/24
			Pesticide-TCL	8081B		03/14/24	03/14/24	
P1747-05	TWP-04	WATER	PCB	8082A	03/12/24	03/14/24	03/14/24	03/13/24
			Pesticide-TCL	8081B		03/14/24	03/14/24	



Hit Summary Sheet
SW-846

SDG No.:

P1747

Order ID:

P1747

Client:

LiRo Engineers, Inc.

Project ID:

Walter Gladwin Recreation Center, Br

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

A

B

C

D

E

F

G

SAMPLE DATA

A

B

C

D

E

F

G

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/12/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/13/24
Client Sample ID:	MW-01	SDG No.:	P1747
Lab Sample ID:	P1747-01	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	980	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	3510C	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102515.D	1	03/14/24 10:51	03/14/24 20:04	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.51	U	0.15	0.51	ug/L
11104-28-2	Aroclor-1221	0.51	U	0.23	0.51	ug/L
11141-16-5	Aroclor-1232	0.51	U	0.38	0.51	ug/L
53469-21-9	Aroclor-1242	0.51	U	0.16	0.51	ug/L
12672-29-6	Aroclor-1248	0.51	U	0.12	0.51	ug/L
11097-69-1	Aroclor-1254	0.51	U	0.11	0.51	ug/L
37324-23-5	Aroclor-1262	0.51	U	0.14	0.51	ug/L
11100-14-4	Aroclor-1268	0.51	U	0.12	0.51	ug/L
11096-82-5	Aroclor-1260	0.51	U	0.15	0.51	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.2		21 - 155	96%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.8		10 - 173	99%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/12/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/13/24
Client Sample ID:	MW-01-DUP	SDG No.:	P1747
Lab Sample ID:	P1747-02	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	970	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	3510C	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102516.D	1	03/14/24 10:51	03/14/24 20:21	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.52	U	0.15	0.52	ug/L
11104-28-2	Aroclor-1221	0.52	U	0.24	0.52	ug/L
11141-16-5	Aroclor-1232	0.52	U	0.38	0.52	ug/L
53469-21-9	Aroclor-1242	0.52	U	0.16	0.52	ug/L
12672-29-6	Aroclor-1248	0.52	U	0.12	0.52	ug/L
11097-69-1	Aroclor-1254	0.52	U	0.11	0.52	ug/L
37324-23-5	Aroclor-1262	0.52	U	0.14	0.52	ug/L
11100-14-4	Aroclor-1268	0.52	U	0.12	0.52	ug/L
11096-82-5	Aroclor-1260	0.52	U	0.15	0.52	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.6		21 - 155	98%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.5		10 - 173	98%	SPK: 20

Comments:

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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:	608.3	% Solid:	0
Sample Wt/Vol:	980	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	5030	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102530.D	1	03/14/24 10:05	03/15/24 01:03	PB159600

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.051	U	0.015	0.051	ug/L
11104-28-2	Aroclor-1221	0.051	U	0.024	0.051	ug/L
11141-16-5	Aroclor-1232	0.051	U	0.038	0.051	ug/L
53469-21-9	Aroclor-1242	0.051	U	0.016	0.051	ug/L
12672-29-6	Aroclor-1248	0.051	U	0.012	0.051	ug/L
11097-69-1	Aroclor-1254	0.051	U	0.011	0.051	ug/L
11096-82-5	Aroclor-1260	0.051	U	0.015	0.051	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	10.8	*	60 - 140	54%	SPK: 20
2051-24-3	Decachlorobiphenyl	22.1		60 - 140	111%	SPK: 20

Comments:

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Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/12/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/13/24
Client Sample ID:	MW-02	SDG No.:	P1747
Lab Sample ID:	P1747-04	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	990	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	3510C	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102517.D	1	03/14/24 10:51	03/14/24 20:38	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.51	U	0.15	0.51	ug/L
11104-28-2	Aroclor-1221	0.51	U	0.23	0.51	ug/L
11141-16-5	Aroclor-1232	0.51	U	0.37	0.51	ug/L
53469-21-9	Aroclor-1242	0.51	U	0.16	0.51	ug/L
12672-29-6	Aroclor-1248	0.51	U	0.12	0.51	ug/L
11097-69-1	Aroclor-1254	0.51	U	0.11	0.51	ug/L
37324-23-5	Aroclor-1262	0.51	U	0.14	0.51	ug/L
11100-14-4	Aroclor-1268	0.51	U	0.12	0.51	ug/L
11096-82-5	Aroclor-1260	0.51	U	0.15	0.51	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.7		21 - 155	98%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.5		10 - 173	103%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

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P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/12/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/13/24
Client Sample ID:	TWP-04	SDG No.:	P1747
Lab Sample ID:	P1747-05	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	980	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	3510C	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102518.D	1	03/14/24 10:51	03/14/24 20:55	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.51	U	0.15	0.51	ug/L
11104-28-2	Aroclor-1221	0.51	U	0.23	0.51	ug/L
11141-16-5	Aroclor-1232	0.51	U	0.38	0.51	ug/L
53469-21-9	Aroclor-1242	0.51	U	0.16	0.51	ug/L
12672-29-6	Aroclor-1248	0.51	U	0.12	0.51	ug/L
11097-69-1	Aroclor-1254	0.51	U	0.11	0.51	ug/L
37324-23-5	Aroclor-1262	0.51	U	0.14	0.51	ug/L
11100-14-4	Aroclor-1268	0.51	U	0.12	0.51	ug/L
11096-82-5	Aroclor-1260	0.51	U	0.15	0.51	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	20.7		21 - 155	104%	SPK: 20
2051-24-3	Decachlorobiphenyl	22.7		10 - 173	113%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

QC SUMMARY

Surrogate Summary

SDG No.: **P1747**

Client: **LiRo Engineers, Inc.**

Analytical Method: **8082A-608.3 PCB**

Lab Sample ID	Client ID	Parameter	Column	Spike	Result	Rec	Qual	Limits	
								Low	High
I.BLK-PO102408.D	PIBLK-PO102408.D	Tetrachloro-m-xylene	1	20	17.9	90		60	140
		Decachlorobiphenyl	1	20	18.4	92		60	140
		Tetrachloro-m-xylene	2	20	17.6	88		60	140
		Decachlorobiphenyl	2	20	18.3	92		60	140
I.BLK-PO102500.D	PIBLK-PO102500.D	Tetrachloro-m-xylene	1	20	20.0	100		60	140
		Decachlorobiphenyl	1	20	26.1	131		60	140
		Tetrachloro-m-xylene	2	20	19.9	100		60	140
		Decachlorobiphenyl	2	20	27.5	137		60	140
PB159587BL	PB159587BL	Tetrachloro-m-xylene	1	20	19.1	96		21	155
		Decachlorobiphenyl	1	20	23.7	118		10	173
		Tetrachloro-m-xylene	2	20	18.8	94		21	155
		Decachlorobiphenyl	2	20	25.0	125		10	173
PB159587BS	PB159587BS	Tetrachloro-m-xylene	1	20	20.0	100		21	155
		Decachlorobiphenyl	1	20	24.2	121		10	173
		Tetrachloro-m-xylene	2	20	17.7	89		21	155
		Decachlorobiphenyl	2	20	25.7	128		10	173
PB159587BSD	PB159587BSD	Tetrachloro-m-xylene	1	20	19.5	97		21	155
		Decachlorobiphenyl	1	20	23.7	119		10	173
		Tetrachloro-m-xylene	2	20	17.5	88		21	155
		Decachlorobiphenyl	2	20	25.1	126		10	173
P1747-01	MW-01	Tetrachloro-m-xylene	1	20	19.2	96		21	155
		Decachlorobiphenyl	1	20	18.9	94		10	173
		Tetrachloro-m-xylene	2	20	19.1	96		21	155
		Decachlorobiphenyl	2	20	19.8	99		10	173
P1747-02	MW-01-DUP	Tetrachloro-m-xylene	1	20	19.0	95		21	155
		Decachlorobiphenyl	1	20	18.2	91		10	173
		Tetrachloro-m-xylene	2	20	19.6	98		21	155
		Decachlorobiphenyl	2	20	19.5	98		10	173
P1747-04	MW-02	Tetrachloro-m-xylene	1	20	19.7	98		21	155
		Decachlorobiphenyl	1	20	19.0	95		10	173
		Tetrachloro-m-xylene	2	20	19.5	97		21	155
		Decachlorobiphenyl	2	20	20.5	103		10	173
P1747-05	TWP-04	Tetrachloro-m-xylene	1	20	20.4	102		21	155
		Decachlorobiphenyl	1	20	21.0	105		10	173
		Tetrachloro-m-xylene	2	20	20.7	104		21	155
		Decachlorobiphenyl	2	20	22.7	113		10	173
I.BLK-PO102520.D	PIBLK-PO102520.D	Tetrachloro-m-xylene	1	20	20.7	104		60	140
		Decachlorobiphenyl	1	20	27.7	138		60	140
		Tetrachloro-m-xylene	2	20	20.9	104		60	140
		Decachlorobiphenyl	2	20	29.7	149	*	60	140
PB159600BS	PB159600BS	Tetrachloro-m-xylene	1	20	15.7	79		60	140
		Decachlorobiphenyl	1	20	20.7	103		60	140
		Tetrachloro-m-xylene	2	20	15.7	79		60	140



Surrogate Summary

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 608.3 PCB

Lab Sample ID	Client ID	Parameter	Column	Spike	Result	Rec	Qual	Limits	
								Low	High
PB159600BS	PB159600BS	Decachlorobiphenyl	2	20	22.1	111		60	140
PB159600BSD	PB159600BSD	Tetrachloro-m-xylene	1	20	16.3	81		60	140
		Decachlorobiphenyl	1	20	20.5	103		60	140
		Tetrachloro-m-xylene	2	20	15.4	77		60	140
		Decachlorobiphenyl	2	20	22.3	111		60	140
PB159600BL	PB159600BL	Tetrachloro-m-xylene	1	20	15.7	79		60	140
		Decachlorobiphenyl	1	20	20.6	103		60	140
		Tetrachloro-m-xylene	2	20	15.6	78		60	140
		Decachlorobiphenyl	2	20	22.1	111		60	140
P1747-03	MW-01	Tetrachloro-m-xylene	1	20	10.8	54	*	60	140
		Decachlorobiphenyl	1	20	22.1	111		60	140
		Tetrachloro-m-xylene	2	20	12.8	64		60	140
		Decachlorobiphenyl	2	20	24.3	121		60	140
I.BLK-PO102532.D	PIBLK-PO102532.D	Tetrachloro-m-xylene	1	20	21.2	106		60	140
		Decachlorobiphenyl	1	20	28.0	140		60	140
		Tetrachloro-m-xylene	2	20	21.2	106		60	140
		Decachlorobiphenyl	2	20	29.7	149	*	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: 8082A Datafile : PO102513.D

Lab Sample ID	Parameter	Spike	Result	Units	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB159587BS	AR1016	5	5.30	ug/L	106				61	112	
	AR1260	5	5.20	ug/L	104				66	113	



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

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 8082A

Datafile : PO102514.D

Lab Sample ID	Parameter	Spike	Result	Units	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB159587BSD	AR1016	5	5.20	ug/L	104	2			61	112	20
	AR1260	5	5.20	ug/L	104	0			66	113	20



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

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 608.3 PCB

Datafile : PO102527.D

Lab Sample ID	Parameter	Spike	Result	Units	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB159600BS	AROCLOR 1016	0.05	0.053	ug/L	106				50	140	
	AROCLOR 1260	0.05	0.050	ug/L	99				8	140	



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

SDG No.: P1747

Client: LiRo Engineers, Inc.

Analytical Method: 608.3 PCB Datafile : PO102528.D

Lab Sample ID	Parameter	Spike	Result	Units	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB159600BSD	AROCLOR 1016	0.05	0.055	ug/L	109	3			50	140	20
	AROCLOR 1260	0.05	0.051	ug/L	102	3			8	140	20



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4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB159587BL

Lab Name: CHEMTECH

Contract: LIRO01

Lab Code: CHEM Case No.: P1747

SAS No.: P1747 SDG NO.: P1747

Lab Sample ID: PB159587BL

Lab File ID: PO102512.D

Matrix: (soil/water) WATER

Extraction: (Type)

Sulfur Cleanup: (Y/N) N

Date Extracted: 03/14/2024

Date Analyzed (1): 03/14/2024

Date Analyzed (2): 03/14/2024

Time Analyzed (1): 19:12

Time Analyzed (2): 19:12

Instrument ID (1): ECD_O

Instrument ID (2): ECD_O

GC Column (1): ZB-MR1 ID: 0.32 (mm)

GC Column (2): ZB-MR2 ID: 0.32 (mm)

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
PB159587BS	PB159587BS	PO102513.D	03/14/2024	03/14/2024
PB159587BSD	PB159587BSD	PO102514.D	03/14/2024	03/14/2024
MW-01	P1747-01	PO102515.D	03/14/2024	03/14/2024
MW-01-DUP	P1747-02	PO102516.D	03/14/2024	03/14/2024
MW-02	P1747-04	PO102517.D	03/14/2024	03/14/2024
TWP-04	P1747-05	PO102518.D	03/14/2024	03/14/2024

COMMENTS:



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

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB159600BL

Lab Name: CHEMTECH

Contract: LIRO01

Lab Code: CHEM Case No.: P1747

SAS No.: P1747 SDG NO.: P1747

Lab Sample ID: PB159600BL

Lab File ID: PO102529.D

Matrix: (soil/water) WATER

Extraction: (Type) _____

Sulfur Cleanup: (Y/N) N

Date Extracted: 03/14/2024

Date Analyzed (1): 03/15/2024

Date Analyzed (2): 03/15/2024

Time Analyzed (1): 00:46

Time Analyzed (2): 00:46

Instrument ID (1): ECD_O

Instrument ID (2): ECD_O

GC Column (1): ZB-MR1 ID: 0.32 (mm)

GC Column (2): ZB-MR2 ID: 0.32 (mm)

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
PB159600BS	PB159600BS	PO102527.D	03/15/2024	03/15/2024
PB159600BSD	PB159600BSD	PO102528.D	03/15/2024	03/15/2024
MW-01	P1747-03	PO102530.D	03/15/2024	03/15/2024

COMMENTS: _____

CALIBRATION SUMMARY

RETENTION TIMES OF INITIAL CALIBRATION

Contract: LIRO01
Lab Code: CHEM **Case No.:** P1747 **SAS No.:** P1747 **SDG NO.:** P1747
Instrument ID: ECD_O **Calibration Date(s):** 03/12/2024 03/12/2024
Calibration Times: 15:06 22:50

GC Column: ZB-MR1 ID: 0.32 (mm)

LAB FILE ID:	RT 1000 = <u>PO102409.D</u>	RT 750 = <u>PO102410.D</u>
RT 500 = <u>PO102411.D</u>	RT 250 = <u>PO102412.D</u>	RT 050 = <u>PO102413.D</u>

COMPOUND		RT 1000	RT 750	RT 500	RT 250	RT 050	MEAN RT	RT WINDOW	
								FROM	TO
Aroclor-1016-1	(1)	5.42	5.42	5.42	5.42	5.42	5.42	5.32	5.52
Aroclor-1016-2	(2)	5.44	5.44	5.44	5.44	5.44	5.44	5.34	5.54
Aroclor-1016-3	(3)	5.50	5.50	5.50	5.50	5.50	5.50	5.40	5.60
Aroclor-1016-4	(4)	5.60	5.60	5.60	5.60	5.60	5.60	5.50	5.70
Aroclor-1016-5	(5)	5.89	5.89	5.89	5.89	5.89	5.89	5.79	5.99
Aroclor-1260-1	(1)	7.00	7.00	7.00	7.00	7.00	7.00	6.90	7.10
Aroclor-1260-2	(2)	7.25	7.25	7.25	7.25	7.25	7.25	7.15	7.35
Aroclor-1260-3	(3)	7.61	7.61	7.61	7.61	7.61	7.61	7.51	7.71
Aroclor-1260-4	(4)	7.83	7.83	7.83	7.83	7.83	7.83	7.73	7.93
Aroclor-1260-5	(5)	8.14	8.14	8.14	8.14	8.14	8.14	8.04	8.24
Decachlorobiphenyl		9.82	9.81	9.81	9.82	9.82	9.82	9.72	9.92
Tetrachloro-m-xylene		4.27	4.27	4.27	4.27	4.27	4.27	4.17	4.37
Aroclor-1242-1	(1)	5.42	5.42	5.42	5.42	5.42	5.42	5.32	5.52
Aroclor-1242-2	(2)	5.44	5.44	5.44	5.44	5.44	5.44	5.34	5.54
Aroclor-1242-3	(3)	5.50	5.50	5.50	5.50	5.50	5.50	5.40	5.60
Aroclor-1242-4	(4)	5.60	5.60	5.60	5.60	5.60	5.60	5.50	5.70
Aroclor-1242-5	(5)	6.32	6.32	6.32	6.32	6.32	6.32	6.22	6.42
Decachlorobiphenyl		9.82	9.82	9.82	9.81	9.81	9.82	9.72	9.92
Tetrachloro-m-xylene		4.27	4.27	4.27	4.27	4.27	4.27	4.17	4.37
Aroclor-1248-1	(1)	5.42	5.44	5.42	5.41	5.42	5.42	5.32	5.52
Aroclor-1248-2	(2)	5.69	5.71	5.68	5.68	5.68	5.69	5.59	5.79
Aroclor-1248-3	(3)	5.89	5.91	5.89	5.89	5.89	5.89	5.79	5.99
Aroclor-1248-4	(4)	6.28	6.31	6.28	6.28	6.28	6.29	6.19	6.39
Aroclor-1248-5	(5)	6.32	6.34	6.32	6.32	6.32	6.33	6.23	6.43
Decachlorobiphenyl		9.81	9.84	9.81	9.82	9.82	9.82	9.72	9.92
Tetrachloro-m-xylene		4.27	4.29	4.27	4.27	4.27	4.27	4.17	4.37
Aroclor-1254-1	(1)	6.26	6.26	6.26	6.26	6.26	6.26	6.16	6.36
Aroclor-1254-2	(2)	6.47	6.47	6.47	6.47	6.47	6.47	6.37	6.57
Aroclor-1254-3	(3)	6.84	6.83	6.83	6.83	6.83	6.83	6.73	6.93
Aroclor-1254-4	(4)	7.12	7.12	7.12	7.12	7.12	7.12	7.02	7.22
Aroclor-1254-5	(5)	7.53	7.53	7.53	7.53	7.53	7.53	7.43	7.63
Decachlorobiphenyl		9.81	9.81	9.81	9.81	9.81	9.81	9.71	9.91
Tetrachloro-m-xylene		4.27	4.27	4.27	4.27	4.27	4.27	4.17	4.37
Aroclor-1268-1	(1)	8.42	8.43	8.43	8.43	8.43	8.43	8.33	8.53
Aroclor-1268-2	(2)	8.51	8.51	8.51	8.51	8.51	8.51	8.41	8.61
Aroclor-1268-3	(3)	8.72	8.73	8.72	8.72	8.72	8.72	8.62	8.82
Aroclor-1268-4	(4)	9.12	9.12	9.12	9.12	9.12	9.12	9.02	9.22
Aroclor-1268-5	(5)	9.50	9.51	9.50	9.50	9.50	9.50	9.40	9.60



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RETENTION TIMES OF INITIAL CALIBRATION

Decachlorobiphenyl	9.81	9.81	9.81	9.81	9.81	9.81	9.71	9.91
Tetrachloro-m-xylene	4.27	4.27	4.27	4.27	4.27	4.27	4.17	4.37

A
B
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RETENTION TIMES OF INITIAL CALIBRATION

Contract:	<u>LIRO01</u>						
Lab Code:	<u>CHEM</u>	Case No.:	<u>P1747</u>	SAS No.:	<u>P1747</u>	SDG NO.:	<u>P1747</u>
Instrument ID:	<u>ECD_O</u>	Calibration Date(s):		<u>03/12/2024</u>	<u>03/12/2024</u>		
		Calibration Times:		<u>15:06</u>	<u>22:50</u>		

GC Column: ZB-MR2 ID: 0.32 (mm)

LAB FILE ID:	RT 1000 =	<u>PO102409.D</u>	RT 750 =	<u>PO102410.D</u>
	RT 500 =	PO102411.D	RT 250 =	PO102412.D
			RT 050 =	PO102413.D

[illegible]



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RETENTION TIMES OF INITIAL CALIBRATION

Decachlorobiphenyl	8.25	8.25	8.25	8.25	8.25	8.25	8.15	8.35
Tetrachloro-m-xylene	3.38	3.38	3.38	3.38	3.38	3.38	3.28	3.48

A
B
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CALIBRATION FACTOR OF INITIAL CALIBRATION

Contract: LIRO01

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

Instrument ID: ECD_O Calibration Date(s): 03/12/2024 03/12/2024

Calibration Times: 15:06 22:50

GC Column: ZB-MR1 ID: 0.32 (mm)

LAB FILE ID: CF 1000 = <u>PO102409.D</u> CF 750 = <u>PO102410.D</u> CF 500 = <u>PO102411.D</u> CF 250 = <u>PO102412.D</u> CF 050 = <u>PO102413.D</u>							
COMPOUND		CF 1000	CF 750	CF 500	CF 250	CF 050	% RSD
Aroclor-1016-1	(1)	93563038	97123216	102044386	106731912	100069820	99906474
Aroclor-1016-2	(2)	136260299	142537469	148189950	154008608	144181520	145035569
Aroclor-1016-3	(3)	87342056	90634015	94592544	97805336	96848960	93444582
Aroclor-1016-4	(4)	72534043	75429643	78235916	79868668	72169460	75647546
Aroclor-1016-5	(5)	77420158	80396157	83985936	86862016	80456000	81824053
Aroclor-1260-1	(1)	131181049	134971357	137876932	141884944	138892960	136961448
Aroclor-1260-2	(2)	128312597	130866932	134674406	137104064	127802560	131752112
Aroclor-1260-3	(3)	100658023	103214861	104803156	104816128	96278940	101954222
Aroclor-1260-4	(4)	111168562	113486237	117205258	118639448	117770780	115654057
Aroclor-1260-5	(5)	183390983	186862735	192284016	198326972	211179100	194408761
Decachlorobiphenyl		1877349970	1921522760	1951094520	1966069040	1778358600	1898878978
Tetrachloro-m-xylene		4021587140	4125463107	4229369860	4285100880	3833013400	4098906877
Aroclor-1242-1	(1)	70801651	71664075	77002890	80094500	74510460	74814715
Aroclor-1242-2	(2)	102966506	105817047	111171592	115162764	113268360	109677254
Aroclor-1242-3	(3)	65412696	66678299	70925724	73088120	74700600	70161088
Aroclor-1242-4	(4)	54337431	55287147	58083268	58734876	54648480	56218240
Aroclor-1242-5	(5)	47769800	49290476	52363832	55001484	54360560	51757230
Decachlorobiphenyl		1709777200	1741154587	1810008500	1811905480	1675595200	1749688193
Tetrachloro-m-xylene		3706836810	3758547107	3867479060	3904321360	3604647400	3768366347
Aroclor-1248-1	(1)	54408854	57669447	58183908	60610976	60244780	58223593
Aroclor-1248-2	(2)	93838842	99079524	101640578	106943360	98807500	100061961
Aroclor-1248-3	(3)	98103923	103325616	105799778	109606744	103974020	104162016
Aroclor-1248-4	(4)	85213217	87696157	92397632	95314244	85406500	89205550
Aroclor-1248-5	(5)	81951324	81671221	89239116	92902348	88656360	86884074
Decachlorobiphenyl		1714334220	1689352507	1814675140	1853188280	1686174400	1751544909
Tetrachloro-m-xylene		3701303590	3773388747	3809039180	3880639200	3583275600	3749529263
Aroclor-1254-1	(1)	111366329	116534868	120962130	125966888	115660280	118098099
Aroclor-1254-2	(2)	155911990	163322787	169687240	177930112	165118260	166394078
Aroclor-1254-3	(3)	147744395	152184023	157425838	161618568	147660520	153326669
Aroclor-1254-4	(4)	83825982	86726899	89542306	90856444	78508860	85892098
Aroclor-1254-5	(5)	99278733	102654509	105953614	109703000	103924920	104302955
Decachlorobiphenyl		1763816600	1816519013	1882508340	1918219280	1722256200	1820663887
Tetrachloro-m-xylene		3774972600	3952855427	3953620040	4013083360	3540117000	3846929685
Aroclor-1268-1	(1)	259115122	264052016	274111560	276014212	245018120	263662206

CALIBRATION FACTOR OF INITIAL CALIBRATION

Aroclor-1268-2	(2)	231353326	234573352	243757844	249052348	223617260	236470826	4
Aroclor-1268-3	(3)	214875904	217611949	227142334	228797720	205585060	218802593	4
Aroclor-1268-4	(4)	71387399	72204917	75007610	75906868	69120560	72725471	4
Aroclor-1268-5	(5)	615952676	616993091	638606272	636227824	562324800	614020933	5
Decachlorobiphenyl		3180375410	3193015973	3335631760	3387766240	3131484600	3245654797	3
Tetrachloro-m-xylene		3909026740	3967270867	4102520360	4180288880	3682433200	3968308009	5

CALIBRATION FACTOR OF INITIAL CALIBRATION

Contract: LIRO01

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

Instrument ID: ECD_O Calibration Date(s): 03/12/2024 03/12/2024

Calibration Times: 15:06 22:50

GC Column: ZB-MR2 ID: 0.32 (mm)

LAB FILE ID:		CF 1000 = <u>PO102409.D</u>		CF 750 = <u>PO102410.D</u>			
CF 500 = <u>PO102411.D</u>		CF 250 = <u>PO102412.D</u>		CF 050 = <u>PO102413.D</u>			
COMPOUND		CF 1000	CF 750	CF 500	CF 250	CF 050	% RSD
Aroclor-1016-1	(1)	58696238	60616144	63066162	67105372	63823620	62661507
Aroclor-1016-2	(2)	82013235	85107073	88091940	91514892	87003400	86746108
Aroclor-1016-3	(3)	47261886	48820220	50794324	53591692	50809740	50255572
Aroclor-1016-4	(4)	43853014	45556295	47794522	50326636	47749420	47055977
Aroclor-1016-5	(5)	54146459	56225881	58688580	61568952	56839140	57493802
Aroclor-1260-1	(1)	100719055	103394260	106974340	111066288	102568440	104944477
Aroclor-1260-2	(2)	104247188	107334469	111215210	113979372	109879760	109331200
Aroclor-1260-3	(3)	104513848	107182821	110873240	116212788	125089620	112774463
Aroclor-1260-4	(4)	81511401	83514541	85594380	88252444	87689000	85312353
Aroclor-1260-5	(5)	158596862	160991860	163819070	166031896	160266400	161941218
Decachlorobiphenyl		1214458370	1243514467	1269835120	1283645160	1152705600	1232831743
Tetrachloro-m-xylene		2746988550	2808981253	2861603840	2903695640	2688755600	2802004977
Aroclor-1242-1	(1)	44864486	45664360	49177422	52038320	49513560	48251630
Aroclor-1242-2	(2)	61925174	64381949	67595228	70958464	64175740	65807311
Aroclor-1242-3	(3)	35875974	36668015	38997074	40568756	40860540	38594072
Aroclor-1242-4	(4)	41052096	42335213	45134234	47758400	45158300	44287649
Aroclor-1242-5	(5)	39876034	40825744	43190576	44817260	40818740	41905671
Decachlorobiphenyl		1128829920	1150284373	1190878200	1194389480	1056130000	1144102395
Tetrachloro-m-xylene		2543686010	2589296587	2672429400	2704706880	2436369000	2589297575
Aroclor-1248-1	(1)	34777028	36468401	38308276	40420952	38872180	37769367
Aroclor-1248-2	(2)	57962842	60782383	64044808	68269168	66767760	63565392
Aroclor-1248-3	(3)	60642519	63521609	66787854	70677480	69191080	66164108
Aroclor-1248-4	(4)	67968601	70971901	74149414	78318016	75435000	73368586
Aroclor-1248-5	(5)	50539958	52878513	54896690	56959620	54085960	53872148
Decachlorobiphenyl		1129908350	1167109320	1199785360	1224048400	1077258400	1159621966
Tetrachloro-m-xylene		2504999690	2572402240	2616585040	2663266920	2430383400	2557527458
Aroclor-1254-1	(1)	98789035	103457292	108228942	113623224	107173360	106254371
Aroclor-1254-2	(2)	84818474	88537215	93128442	97790628	91110900	91077132
Aroclor-1254-3	(3)	125024985	128895424	134501700	138177520	123332320	129986390
Aroclor-1254-4	(4)	61003456	63408880	65167436	66601968	58258960	62888140
Aroclor-1254-5	(5)	99780359	102755484	105867616	109208524	99564400	103435277
Decachlorobiphenyl		1180984460	1213437640	1246607560	1264573600	1154079000	1211936452
Tetrachloro-m-xylene		2574404500	2657812000	2718605980	2770961480	2534587800	2651274352
Aroclor-1268-1	(1)	209130910	211829637	219220314	222479400	207011600	213934372

CALIBRATION FACTOR OF INITIAL CALIBRATION

Aroclor-1268-2	(2)	189982362	190917147	198168918	199506520	182929680	192300925	4
Aroclor-1268-3	(3)	178091693	178323552	185564432	186155616	168084800	179244019	4
Aroclor-1268-4	(4)	433163930	430609372	443928932	442158236	391236960	428219486	5
Aroclor-1268-5	(5)	214377020	216064579	225558916	227407844	199135520	216508776	5
Decachlorobiphenyl		2143770200	2160645787	2255589160	2274078440	1991355200	2165087757	5
Tetrachloro-m-xylene		2674258870	2708622827	2802054420	2863161720	2575330600	2724685687	4



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INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Contract: LIRO01

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

Instrument ID: ECD_O Date(s) Analyzed: 03/12/2024 03/12/2024

GC Column: ZB-MR1 ID: 0.32 (mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW		CALIBRATION FACTOR
				FROM	TO	
Aroclor-1221	500	1	4.47	4.37	4.57	37730200
		2	4.56	4.46	4.66	29415800
		3	4.63	4.53	4.73	84397200
		4	0.00			0
		5	0.00			0
Aroclor-1232	500	1	4.63	4.53	4.73	80996400
		2	5.15	5.05	5.25	50396200
		3	5.44	5.34	5.54	75184600
		4	5.60	5.50	5.70	38046200
		5	5.69	5.59	5.79	35648800
Aroclor-1262	500	1	7.53	7.43	7.63	118996000
		2	8.13	8.03	8.23	279624000
		3	8.43	8.33	8.53	195627000
		4	8.51	8.41	8.61	152696000
		5	9.12	9.02	9.22	95184200



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INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Contract: LIRO01

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

Instrument ID: ECD_O Date(s) Analyzed: 03/12/2024 03/12/2024

GC Column: ZB-MR2 ID: 0.32 (mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW		CALIBRATION FACTOR
				FROM	TO	
Aroclor-1221	500	1	3.59	3.49	3.69	25736400
		2	3.67	3.57	3.77	19447900
		3	3.75	3.65	3.85	54184000
		4	0.00			0
		5	0.00			0
Aroclor-1232	500	1	3.75	3.65	3.85	52464600
		2	4.46	4.36	4.56	45552400
		3	4.63	4.53	4.73	25464600
		4	4.71	4.61	4.81	26883200
		5	4.88	4.78	4.98	27129200
Aroclor-1262	500	1	6.40	6.30	6.50	75630600
		2	6.69	6.59	6.79	144271000
		3	7.21	7.11	7.31	102462000
		4	7.27	7.17	7.37	174045000
		5	7.76	7.66	7.86	70060200



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CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01

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

Continuing Calib Date: 03/14/2024 Initial Calibration Date(s): 03/12/2024 03/12/2024

Continuing Calib Time: 15:28 Initial Calibration Time(s): 15:06 22:50

GC Column: ZB-MR1 ID: 0.32 (mm)

COMPOUND		CCAL RT	AVG RT	RT WINDOW		DIFF RT
				FROM	TO	
Aroclor-1016-1	(1)	5.41	5.42	5.32	5.52	0.01
Aroclor-1016-2	(2)	5.44	5.44	5.34	5.54	0.01
Aroclor-1016-3	(3)	5.50	5.50	5.40	5.60	0.00
Aroclor-1016-4	(4)	5.59	5.60	5.50	5.70	0.01
Aroclor-1016-5	(5)	5.88	5.89	5.79	5.99	0.01
Aroclor-1260-1	(1)	6.99	7.00	6.90	7.10	0.01
Aroclor-1260-2	(2)	7.25	7.25	7.15	7.35	0.00
Aroclor-1260-3	(3)	7.60	7.61	7.51	7.71	0.01
Aroclor-1260-4	(4)	7.83	7.83	7.73	7.93	0.00
Aroclor-1260-5	(5)	8.13	8.14	8.04	8.24	0.01
Tetrachloro-m-xylene		4.27	4.27	4.17	4.37	0.00
Decachlorobiphenyl		9.81	9.81	9.71	9.91	0.00



CALIBRATION VERIFICATION SUMMARY

Contract:

LIRO01

Lab Code:

CHEM

Case No.:

P1747

SAS No.:

P1747

SDG NO.:

P1747

Continuing Calib Date:

03/14/2024

Initial Calibration Date(s):

03/12/2024

03/12/2024

Continuing Calib Time:

15:28

Initial Calibration Time(s):

15:06

22:50

GC Column:

ZB-MR2

ID:

0.32

(mm)

COMPOUND		CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
Aroclor-1016-1	(1)	4.44	4.44	4.34	4.54	0.01
Aroclor-1016-2	(2)	4.45	4.45	4.35	4.55	0.00
Aroclor-1016-3	(3)	4.62	4.63	4.53	4.73	0.01
Aroclor-1016-4	(4)	4.67	4.67	4.57	4.77	0.01
Aroclor-1016-5	(5)	4.87	4.88	4.78	4.98	0.01
Aroclor-1260-1	(1)	5.89	5.89	5.79	5.99	0.00
Aroclor-1260-2	(2)	6.07	6.08	5.98	6.18	0.01
Aroclor-1260-3	(3)	6.22	6.23	6.13	6.33	0.01
Aroclor-1260-4	(4)	6.69	6.69	6.59	6.79	0.00
Aroclor-1260-5	(5)	6.93	6.93	6.83	7.03	0.00
Tetrachloro-m-xylene		3.38	3.39	3.29	3.49	0.01
Decachlorobiphenyl		8.25	8.25	8.15	8.35	0.00

CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01
Lab Code: CHEM **Case No.:** P1747 **SAS No.:** P1747 **SDG NO.:** P1747
GC Column: ZB-MR1 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 03/12/2024 03/12/2024

Client Sample No.: CCAL01 **Date Analyzed:** 03/14/2024

Lab Sample No.: AR1660CCC500 **Data File :** PO102499.D **Time Analyzed:** 15:28

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	5.413	5.315	5.515	479.370	500.000	-4.1
Aroclor-1016-2	5.435	5.338	5.538	479.540	500.000	-4.1
Aroclor-1016-3	5.496	5.399	5.599	484.480	500.000	-3.1
Aroclor-1016-4	5.593	5.496	5.696	487.030	500.000	-2.6
Aroclor-1016-5	5.883	5.786	5.986	485.050	500.000	-3.0
Aroclor-1260-1	6.994	6.897	7.097	477.170	500.000	-4.6
Aroclor-1260-2	7.248	7.151	7.351	505.010	500.000	1.0
Aroclor-1260-3	7.603	7.506	7.706	503.610	500.000	0.7
Aroclor-1260-4	7.827	7.730	7.930	494.910	500.000	-1.0
Aroclor-1260-5	8.132	8.035	8.235	506.240	500.000	1.2
Decachlorobiphenyl	9.808	9.714	9.914	53.420	50.000	6.8
Tetrachloro-m-xylene	4.269	4.171	4.371	42.760	50.000	-14.5

CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01
Lab Code: CHEM **Case No.:** P1747 **SAS No.:** P1747 **SDG NO.:** P1747
GC Column: ZB-MR2 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 03/12/2024 03/12/2024

Client Sample No.: CCAL01 **Date Analyzed:** 03/14/2024

Lab Sample No.: AR1660CCC500 **Data File :** PO102499.D **Time Analyzed:** 15:28

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	4.435	4.337	4.537	490.100	500.000	-2.0
Aroclor-1016-2	4.453	4.354	4.554	498.980	500.000	-0.2
Aroclor-1016-3	4.624	4.526	4.726	486.500	500.000	-2.7
Aroclor-1016-4	4.665	4.567	4.767	473.850	500.000	-5.2
Aroclor-1016-5	4.874	4.775	4.975	492.130	500.000	-1.6
Aroclor-1260-1	5.886	5.788	5.988	492.380	500.000	-1.5
Aroclor-1260-2	6.072	5.975	6.175	523.830	500.000	4.8
Aroclor-1260-3	6.222	6.125	6.325	489.760	500.000	-2.0
Aroclor-1260-4	6.686	6.589	6.789	513.100	500.000	2.6
Aroclor-1260-5	6.928	6.830	7.030	536.280	500.000	7.3
Decachlorobiphenyl	8.249	8.154	8.354	55.010	50.000	10.0
Tetrachloro-m-xylene	3.384	3.285	3.485	42.910	50.000	-14.2



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CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01

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

Continuing Calib Date: 03/14/2024 Initial Calibration Date(s): 03/12/2024 03/12/2024

Continuing Calib Time: 21:26 Initial Calibration Time(s): 15:06 22:50

GC Column: ZB-MR1 ID: 0.32 (mm)

COMPOUND		CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
Aroclor-1016-1	(1)	5.41	5.42	5.32	5.52	0.01
Aroclor-1016-2	(2)	5.43	5.44	5.34	5.54	0.01
Aroclor-1016-3	(3)	5.49	5.50	5.40	5.60	0.01
Aroclor-1016-4	(4)	5.59	5.60	5.50	5.70	0.01
Aroclor-1016-5	(5)	5.88	5.89	5.79	5.99	0.01
Aroclor-1260-1	(1)	6.99	7.00	6.90	7.10	0.01
Aroclor-1260-2	(2)	7.25	7.25	7.15	7.35	0.00
Aroclor-1260-3	(3)	7.60	7.61	7.51	7.71	0.01
Aroclor-1260-4	(4)	7.83	7.83	7.73	7.93	0.01
Aroclor-1260-5	(5)	8.13	8.14	8.04	8.24	0.01
Tetrachloro-m-xylene		4.27	4.27	4.17	4.37	0.00
Decachlorobiphenyl		9.81	9.81	9.71	9.91	0.00



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CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01

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

Continuing Calib Date: 03/14/2024 Initial Calibration Date(s): 03/12/2024 03/12/2024

Continuing Calib Time: 21:26 Initial Calibration Time(s): 15:06 22:50

GC Column: ZB-MR2 ID: 0.32 (mm)

COMPOUND		CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
Aroclor-1016-1	(1)	4.43	4.44	4.34	4.54	0.01
Aroclor-1016-2	(2)	4.45	4.45	4.35	4.55	0.00
Aroclor-1016-3	(3)	4.62	4.63	4.53	4.73	0.01
Aroclor-1016-4	(4)	4.66	4.67	4.57	4.77	0.01
Aroclor-1016-5	(5)	4.87	4.88	4.78	4.98	0.01
Aroclor-1260-1	(1)	5.88	5.89	5.79	5.99	0.01
Aroclor-1260-2	(2)	6.07	6.08	5.98	6.18	0.01
Aroclor-1260-3	(3)	6.22	6.23	6.13	6.33	0.01
Aroclor-1260-4	(4)	6.69	6.69	6.59	6.79	0.01
Aroclor-1260-5	(5)	6.93	6.93	6.83	7.03	0.00
Tetrachloro-m-xylene		3.38	3.39	3.29	3.49	0.01
Decachlorobiphenyl		8.25	8.25	8.15	8.35	0.00



CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01

Lab Code: CHEMCase No.: P1747SAS No.: P1747SDG NO.: P1747

GC Column: ZB-MR1ID: 0.32 (mm)Initi. Calib. Date(s): 03/12/202403/12/2024

Client Sample No.: CCAL02Date Analyzed: 03/14/2024

Lab Sample No.: AR1660CCC500Data File : PO102519.DTime Analyzed: 21:26

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	5.412	5.315	5.515	518.900	500.000	3.8
Aroclor-1016-2	5.433	5.338	5.538	525.450	500.000	5.1
Aroclor-1016-3	5.494	5.399	5.599	521.870	500.000	4.4
Aroclor-1016-4	5.592	5.496	5.696	525.750	500.000	5.2
Aroclor-1016-5	5.882	5.786	5.986	510.230	500.000	2.0
Aroclor-1260-1	6.992	6.897	7.097	507.780	500.000	1.6
Aroclor-1260-2	7.246	7.151	7.351	554.750	500.000	11.0
Aroclor-1260-3	7.602	7.506	7.706	541.090	500.000	8.2
Aroclor-1260-4	7.825	7.730	7.930	526.260	500.000	5.3
Aroclor-1260-5	8.131	8.035	8.235	558.260	500.000	11.7
Decachlorobiphenyl	9.806	9.714	9.914	56.590	50.000	13.2
Tetrachloro-m-xylene	4.268	4.171	4.371	45.410	50.000	-9.2

CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01
Lab Code: CHEM **Case No.:** P1747 **SAS No.:** P1747 **SDG NO.:** P1747
GC Column: ZB-MR2 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 03/12/2024 03/12/2024

Client Sample No.: CCAL02 **Date Analyzed:** 03/14/2024

Lab Sample No.: AR1660CCC500 **Data File :** PO102519.D **Time Analyzed:** 21:26

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	4.434	4.337	4.537	551.110	500.000	10.2
Aroclor-1016-2	4.451	4.354	4.554	560.140	500.000	12.0
Aroclor-1016-3	4.623	4.526	4.726	564.490	500.000	12.9
Aroclor-1016-4	4.664	4.567	4.767	536.960	500.000	7.4
Aroclor-1016-5	4.872	4.775	4.975	530.890	500.000	6.2
Aroclor-1260-1	5.884	5.788	5.988	531.160	500.000	6.2
Aroclor-1260-2	6.071	5.975	6.175	572.900	500.000	14.6
Aroclor-1260-3	6.221	6.125	6.325	528.890	500.000	5.8
Aroclor-1260-4	6.685	6.589	6.789	558.270	500.000	11.7
Aroclor-1260-5	6.926	6.830	7.030	600.600	500.000	20.1
Decachlorobiphenyl	8.248	8.154	8.354	60.660	50.000	21.3
Tetrachloro-m-xylene	3.383	3.285	3.485	45.210	50.000	-9.6



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CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01

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

Continuing Calib Date: 03/15/2024 Initial Calibration Date(s): 03/12/2024 03/12/2024

Continuing Calib Time: 01:49 Initial Calibration Time(s): 15:06 22:50

GC Column: ZB-MR1 ID: 0.32 (mm)

COMPOUND		CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
Aroclor-1016-1	(1)	5.41	5.42	5.32	5.52	0.01
Aroclor-1016-2	(2)	5.43	5.44	5.34	5.54	0.01
Aroclor-1016-3	(3)	5.49	5.50	5.40	5.60	0.01
Aroclor-1016-4	(4)	5.59	5.60	5.50	5.70	0.01
Aroclor-1016-5	(5)	5.88	5.89	5.79	5.99	0.01
Aroclor-1260-1	(1)	6.99	7.00	6.90	7.10	0.01
Aroclor-1260-2	(2)	7.25	7.25	7.15	7.35	0.00
Aroclor-1260-3	(3)	7.60	7.61	7.51	7.71	0.01
Aroclor-1260-4	(4)	7.83	7.83	7.73	7.93	0.01
Aroclor-1260-5	(5)	8.13	8.14	8.04	8.24	0.01
Tetrachloro-m-xylene		4.27	4.27	4.17	4.37	0.00
Decachlorobiphenyl		9.81	9.81	9.71	9.91	0.00



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CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01

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

Continuing Calib Date: 03/15/2024 Initial Calibration Date(s): 03/12/2024 03/12/2024

Continuing Calib Time: 01:49 Initial Calibration Time(s): 15:06 22:50

GC Column: ZB-MR2 ID: 0.32 (mm)

COMPOUND		CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
Aroclor-1016-1	(1)	4.43	4.44	4.34	4.54	0.01
Aroclor-1016-2	(2)	4.45	4.45	4.35	4.55	0.00
Aroclor-1016-3	(3)	4.62	4.63	4.53	4.73	0.01
Aroclor-1016-4	(4)	4.66	4.67	4.57	4.77	0.01
Aroclor-1016-5	(5)	4.87	4.88	4.78	4.98	0.01
Aroclor-1260-1	(1)	5.88	5.89	5.79	5.99	0.01
Aroclor-1260-2	(2)	6.07	6.08	5.98	6.18	0.01
Aroclor-1260-3	(3)	6.22	6.23	6.13	6.33	0.01
Aroclor-1260-4	(4)	6.69	6.69	6.59	6.79	0.01
Aroclor-1260-5	(5)	6.93	6.93	6.83	7.03	0.00
Tetrachloro-m-xylene		3.38	3.39	3.29	3.49	0.01
Decachlorobiphenyl		8.25	8.25	8.15	8.35	0.00

CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01
Lab Code: CHEM **Case No.:** P1747 **SAS No.:** P1747 **SDG NO.:** P1747
GC Column: ZB-MR1 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 03/12/2024 03/12/2024

Client Sample No.: CCAL03 **Date Analyzed:** 03/15/2024

Lab Sample No.: AR1660CCC500 **Data File :** PO102531.D **Time Analyzed:** 01:49

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	5.412	5.315	5.515	559.530	500.000	11.9
Aroclor-1016-2	5.433	5.338	5.538	555.310	500.000	11.1
Aroclor-1016-3	5.494	5.399	5.599	565.210	500.000	13.0
Aroclor-1016-4	5.592	5.496	5.696	561.400	500.000	12.3
Aroclor-1016-5	5.882	5.786	5.986	540.280	500.000	8.1
Aroclor-1260-1	6.993	6.897	7.097	527.230	500.000	5.4
Aroclor-1260-2	7.246	7.151	7.351	567.320	500.000	13.5
Aroclor-1260-3	7.602	7.506	7.706	535.710	500.000	7.1
Aroclor-1260-4	7.825	7.730	7.930	408.210	500.000	-18.4
Aroclor-1260-5	8.129	8.035	8.235	564.010	500.000	12.8
Decachlorobiphenyl	9.806	9.714	9.914	57.440	50.000	14.9
Tetrachloro-m-xylene	4.267	4.171	4.371	47.380	50.000	-5.2

CALIBRATION VERIFICATION SUMMARY

Contract: LIRO01
Lab Code: CHEM **Case No.:** P1747 **SAS No.:** P1747 **SDG NO.:** P1747
GC Column: ZB-MR2 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 03/12/2024 03/12/2024

Client Sample No.: CCAL03 **Date Analyzed:** 03/15/2024

Lab Sample No.: AR1660CCC500 **Data File :** PO102531.D **Time Analyzed:** 01:49

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	4.433	4.337	4.537	575.750	500.000	15.2
Aroclor-1016-2	4.451	4.354	4.554	560.360	500.000	12.1
Aroclor-1016-3	4.622	4.526	4.726	546.360	500.000	9.3
Aroclor-1016-4	4.664	4.567	4.767	511.320	500.000	2.3
Aroclor-1016-5	4.872	4.775	4.975	551.350	500.000	10.3
Aroclor-1260-1	5.884	5.788	5.988	547.930	500.000	9.6
Aroclor-1260-2	6.071	5.975	6.175	599.370	500.000	19.9
Aroclor-1260-3	6.221	6.125	6.325	545.210	500.000	9.0
Aroclor-1260-4	6.685	6.589	6.789	567.870	500.000	13.6
Aroclor-1260-5	6.926	6.830	7.030	608.120	500.000	21.6
Decachlorobiphenyl	8.248	8.154	8.354	60.720	50.000	21.4
Tetrachloro-m-xylene	3.383	3.285	3.485	46.350	50.000	-7.3



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Analytical Sequence

Client: LiRo Engineers, Inc.

SDG No.: P1747

Project: Walter Gladwin Recreation Center, Bronx, N

Instrument ID: ECD_O

GC Column: ZB-MR1

ID: 0.32 (mm)

Inst. Calib. Date(s): 03/12/2024

03/12/2024

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
AND STANDARDS IS GIVEN BELOW:

EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATAFILE	DCB RT #	TCX RT #
IBLK	IBLK	03/12/2024	14:49	PO102408.D	9.81	4.27
AR1660ICC1000	AR1660ICC1000	03/12/2024	15:06	PO102409.D	9.82	4.27
AR1660ICC750	AR1660ICC750	03/12/2024	15:23	PO102410.D	9.81	4.27
AR1660ICC500	AR1660ICC500	03/12/2024	15:41	PO102411.D	9.81	4.27
AR1660ICC250	AR1660ICC250	03/12/2024	15:58	PO102412.D	9.82	4.27
AR1660ICC050	AR1660ICC050	03/12/2024	16:15	PO102413.D	9.82	4.27
AR1221ICC500	AR1221ICC500	03/12/2024	16:32	PO102414.D	9.82	4.27
AR1232ICC500	AR1232ICC500	03/12/2024	16:49	PO102415.D	9.82	4.27
AR1242ICC1000	AR1242ICC1000	03/12/2024	17:07	PO102416.D	9.82	4.27
AR1242ICC750	AR1242ICC750	03/12/2024	17:24	PO102417.D	9.82	4.27
AR1242ICC500	AR1242ICC500	03/12/2024	17:41	PO102418.D	9.82	4.27
AR1242ICC250	AR1242ICC250	03/12/2024	17:58	PO102419.D	9.81	4.27
AR1242ICC050	AR1242ICC050	03/12/2024	18:16	PO102420.D	9.81	4.27
AR1248ICC1000	AR1248ICC1000	03/12/2024	18:33	PO102421.D	9.81	4.27
AR1248ICC750	AR1248ICC750	03/12/2024	18:50	PO102422.D	9.84	4.29
AR1248ICC500	AR1248ICC500	03/12/2024	19:07	PO102423.D	9.81	4.27
AR1248ICC250	AR1248ICC250	03/12/2024	19:24	PO102424.D	9.82	4.27
AR1248ICC050	AR1248ICC050	03/12/2024	19:42	PO102425.D	9.82	4.27
AR1254ICC1000	AR1254ICC1000	03/12/2024	19:59	PO102426.D	9.81	4.27
AR1254ICC750	AR1254ICC750	03/12/2024	20:16	PO102427.D	9.81	4.27
AR1254ICC500	AR1254ICC500	03/12/2024	20:33	PO102428.D	9.81	4.27
AR1254ICC250	AR1254ICC250	03/12/2024	20:50	PO102429.D	9.81	4.27
AR1254ICC050	AR1254ICC050	03/12/2024	21:07	PO102430.D	9.81	4.27
AR1262ICC500	AR1262ICC500	03/12/2024	21:25	PO102431.D	9.81	4.27
AR1268ICC1000	AR1268ICC1000	03/12/2024	21:42	PO102432.D	9.81	4.27
AR1268ICC750	AR1268ICC750	03/12/2024	21:59	PO102433.D	9.81	4.27
AR1268ICC500	AR1268ICC500	03/12/2024	22:16	PO102434.D	9.81	4.27
AR1268ICC250	AR1268ICC250	03/12/2024	22:33	PO102435.D	9.81	4.27
AR1268ICC050	AR1268ICC050	03/12/2024	22:50	PO102436.D	9.81	4.27
AR1660CCC500	AR1660CCC500	03/14/2024	15:28	PO102499.D	9.81	4.27
IBLK	IBLK	03/14/2024	15:46	PO102500.D	9.81	4.27
PB159587BL	PB159587BL	03/14/2024	19:12	PO102512.D	9.81	4.27
PB159587BS	PB159587BS	03/14/2024	19:29	PO102513.D	9.81	4.27
PB159587BSD	PB159587BSD	03/14/2024	19:46	PO102514.D	9.81	4.27
MW-01	P1747-01	03/14/2024	20:04	PO102515.D	9.81	4.27
MW-01-DUP	P1747-02	03/14/2024	20:21	PO102516.D	9.81	4.27
MW-02	P1747-04	03/14/2024	20:38	PO102517.D	9.81	4.27
TWP-04	P1747-05	03/14/2024	20:55	PO102518.D	9.81	4.27
AR1660CCC500	AR1660CCC500	03/14/2024	21:26	PO102519.D	9.81	4.27
IBLK	IBLK	03/14/2024	21:43	PO102520.D	9.81	4.27
PB159600BS	PB159600BS	03/15/2024	00:12	PO102527.D	9.81	4.27
PB159600BSD	PB159600BSD	03/15/2024	00:29	PO102528.D	9.81	4.27
PB159600BL	PB159600BL	03/15/2024	00:46	PO102529.D	9.81	4.27
MW-01	P1747-03	03/15/2024	01:03	PO102530.D	9.81	4.27
AR1660CCC500	AR1660CCC500	03/15/2024	01:49	PO102531.D	9.81	4.27



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Analytical Sequence

IBLK	IBLK	03/15/2024	02:06	PO102532.D	9.81	4.27
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- A
- B
- C
- D
- E
- F
- G

Analytical Sequence

Client: LiRo Engineers, Inc.

SDG No.: P1747

Project: Walter Gladwin Recreation Center, Bronx, N

Instrument ID: ECD_O

GC Column: ZB-MR2

ID: 0.32 (mm)

Inst. Calib. Date(s): 03/12/2024

03/12/2024

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
AND STANDARDS IS GIVEN BELOW:

EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATAFILE	DCB RT #	TCX RT #
IBLK	IBLK	03/12/2024	14:49	PO102408.D	8.25	3.38
AR1660ICC1000	AR1660ICC1000	03/12/2024	15:06	PO102409.D	8.26	3.39
AR1660ICC750	AR1660ICC750	03/12/2024	15:23	PO102410.D	8.25	3.39
AR1660ICC500	AR1660ICC500	03/12/2024	15:41	PO102411.D	8.25	3.39
AR1660ICC250	AR1660ICC250	03/12/2024	15:58	PO102412.D	8.26	3.39
AR1660ICC050	AR1660ICC050	03/12/2024	16:15	PO102413.D	8.25	3.38
AR1221ICC500	AR1221ICC500	03/12/2024	16:32	PO102414.D	8.25	3.38
AR1232ICC500	AR1232ICC500	03/12/2024	16:49	PO102415.D	8.25	3.39
AR1242ICC1000	AR1242ICC1000	03/12/2024	17:07	PO102416.D	8.25	3.39
AR1242ICC750	AR1242ICC750	03/12/2024	17:24	PO102417.D	8.25	3.39
AR1242ICC500	AR1242ICC500	03/12/2024	17:41	PO102418.D	8.25	3.39
AR1242ICC250	AR1242ICC250	03/12/2024	17:58	PO102419.D	8.25	3.38
AR1242ICC050	AR1242ICC050	03/12/2024	18:16	PO102420.D	8.25	3.38
AR1248ICC1000	AR1248ICC1000	03/12/2024	18:33	PO102421.D	8.25	3.39
AR1248ICC750	AR1248ICC750	03/12/2024	18:50	PO102422.D	8.25	3.38
AR1248ICC500	AR1248ICC500	03/12/2024	19:07	PO102423.D	8.25	3.38
AR1248ICC250	AR1248ICC250	03/12/2024	19:24	PO102424.D	8.25	3.38
AR1248ICC050	AR1248ICC050	03/12/2024	19:42	PO102425.D	8.25	3.38
AR1254ICC1000	AR1254ICC1000	03/12/2024	19:59	PO102426.D	8.25	3.38
AR1254ICC750	AR1254ICC750	03/12/2024	20:16	PO102427.D	8.25	3.38
AR1254ICC500	AR1254ICC500	03/12/2024	20:33	PO102428.D	8.25	3.38
AR1254ICC250	AR1254ICC250	03/12/2024	20:50	PO102429.D	8.25	3.38
AR1254ICC050	AR1254ICC050	03/12/2024	21:07	PO102430.D	8.25	3.38
AR1262ICC500	AR1262ICC500	03/12/2024	21:25	PO102431.D	8.25	3.38
AR1268ICC1000	AR1268ICC1000	03/12/2024	21:42	PO102432.D	8.25	3.38
AR1268ICC750	AR1268ICC750	03/12/2024	21:59	PO102433.D	8.25	3.38
AR1268ICC500	AR1268ICC500	03/12/2024	22:16	PO102434.D	8.25	3.38
AR1268ICC250	AR1268ICC250	03/12/2024	22:33	PO102435.D	8.25	3.38
AR1268ICC050	AR1268ICC050	03/12/2024	22:50	PO102436.D	8.25	3.38
AR1660CCC500	AR1660CCC500	03/14/2024	15:28	PO102499.D	8.25	3.38
IBLK	IBLK	03/14/2024	15:46	PO102500.D	8.25	3.38
PB159587BL	PB159587BL	03/14/2024	19:12	PO102512.D	8.25	3.38
PB159587BS	PB159587BS	03/14/2024	19:29	PO102513.D	8.25	3.38
PB159587BSD	PB159587BSD	03/14/2024	19:46	PO102514.D	8.25	3.38
MW-01	P1747-01	03/14/2024	20:04	PO102515.D	8.25	3.38
MW-01-DUP	P1747-02	03/14/2024	20:21	PO102516.D	8.25	3.38
MW-02	P1747-04	03/14/2024	20:38	PO102517.D	8.25	3.38
TWP-04	P1747-05	03/14/2024	20:55	PO102518.D	8.25	3.38
AR1660CCC500	AR1660CCC500	03/14/2024	21:26	PO102519.D	8.25	3.38
IBLK	IBLK	03/14/2024	21:43	PO102520.D	8.25	3.38
PB159600BS	PB159600BS	03/15/2024	00:12	PO102527.D	8.25	3.38
PB159600BSD	PB159600BSD	03/15/2024	00:29	PO102528.D	8.25	3.38
PB159600BL	PB159600BL	03/15/2024	00:46	PO102529.D	8.25	3.38
MW-01	P1747-03	03/15/2024	01:03	PO102530.D	8.25	3.38
AR1660CCC500	AR1660CCC500	03/15/2024	01:49	PO102531.D	8.25	3.38



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Analytical Sequence

LBLK	LBLK	03/15/2024	02:06	PO102532.D	8.25	3.38
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- A
- B
- C
- D
- E
- F
- G

QC SAMPLE DATA

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	
Client Sample ID:	PB159587BL	SDG No.:	P1747
Lab Sample ID:	PB159587BL	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102512.D	1	03/14/24 10:51	03/14/24 19:12	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.50	U	0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
11096-82-5	Aroclor-1260	0.50	U	0.15	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.1		21 - 155	96%	SPK: 20
2051-24-3	Decachlorobiphenyl	25.0		10 - 173	125%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.		Date Collected:		
Project:	Walter Gladwin Recreation Center, Bronx, NY		Date Received:		
Client Sample ID:	PB159600BL		SDG No.:	P1747	
Lab Sample ID:	PB159600BL		Matrix:	WATER	
Analytical Method:	608.3		% Solid:	0	Decanted:
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	5030				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102529.D	1	03/14/24 10:05	03/15/24 00:46	PB159600

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.050	U	0.015	0.050	ug/L
11104-28-2	Aroclor-1221	0.050	U	0.023	0.050	ug/L
11141-16-5	Aroclor-1232	0.050	U	0.037	0.050	ug/L
53469-21-9	Aroclor-1242	0.050	U	0.016	0.050	ug/L
12672-29-6	Aroclor-1248	0.050	U	0.012	0.050	ug/L
11097-69-1	Aroclor-1254	0.050	U	0.011	0.050	ug/L
11096-82-5	Aroclor-1260	0.050	U	0.015	0.050	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.6		60 - 140	78%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.6		60 - 140	103%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/12/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/12/24
Client Sample ID:	PIBLK-PO102408.D	SDG No.:	P1747
Lab Sample ID:	I.BLK-PO102408.D	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	5030		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102408.D	1		03/12/24	po031224

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.50	U	0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
11096-82-5	Aroclor-1260	0.50	U	0.15	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	17.6		60 - 140	88%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.3		60 - 140	92%	SPK: 20

Comments:

U = Not Detected

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LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/14/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/14/24
Client Sample ID:	PIBLK-PO102500.D	SDG No.:	P1747
Lab Sample ID:	I.BLK-PO102500.D	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	5030		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102500.D	1		03/14/24	PO031424

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.50	U	0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
11096-82-5	Aroclor-1260	0.50	U	0.15	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.9		60 - 140	100%	SPK: 20
2051-24-3	Decachlorobiphenyl	26.1		60 - 140	131%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/14/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/14/24
Client Sample ID:	PIBLK-PO102520.D	SDG No.:	P1747
Lab Sample ID:	I.BLK-PO102520.D	Matrix:	WATER
Analytical Method:	608.3	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:		uL	
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	5030	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102520.D	1		03/14/24	PO031424

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.50	U	0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
11096-82-5	Aroclor-1260	0.50	U	0.15	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	20.7		60 - 140	104%	SPK: 20
2051-24-3	Decachlorobiphenyl	27.7		60 - 140	138%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

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P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	03/15/24
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	03/15/24
Client Sample ID:	PIBLK-PO102532.D	SDG No.:	P1747
Lab Sample ID:	I.BLK-PO102532.D	Matrix:	WATER
Analytical Method:	608.3	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:		uL	
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	5030	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102532.D	1		03/15/24	PO031424

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.50	U	0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
11096-82-5	Aroclor-1260	0.50	U	0.15	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	21.2		60 - 140	106%	SPK: 20
2051-24-3	Decachlorobiphenyl	28.0		60 - 140	140%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	
Client Sample ID:	PB159587BS	SDG No.:	P1747
Lab Sample ID:	PB159587BS	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102513.D	1	03/14/24 10:51	03/14/24 19:29	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	5.30		0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
11096-82-5	Aroclor-1260	5.20		0.15	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	20.0		21 - 155	100%	SPK: 20
2051-24-3	Decachlorobiphenyl	25.7		10 - 173	128%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.		Date Collected:		
Project:	Walter Gladwin Recreation Center, Bronx, NY		Date Received:		
Client Sample ID:	PB159600BS		SDG No.:	P1747	
Lab Sample ID:	PB159600BS		Matrix:	WATER	
Analytical Method:	608.3		% Solid:	0	Decanted:
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	5030				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102527.D	1	03/14/24 10:05	03/15/24 00:12	PB159600

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.053		0.015	0.050	ug/L
11104-28-2	Aroclor-1221	0.050	U	0.023	0.050	ug/L
11141-16-5	Aroclor-1232	0.050	U	0.037	0.050	ug/L
53469-21-9	Aroclor-1242	0.050	U	0.016	0.050	ug/L
12672-29-6	Aroclor-1248	0.050	U	0.012	0.050	ug/L
11097-69-1	Aroclor-1254	0.050	U	0.011	0.050	ug/L
11096-82-5	Aroclor-1260	0.050	J	0.015	0.050	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.7		60 - 140	79%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.7		60 - 140	103%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	Walter Gladwin Recreation Center, Bronx, NY	Date Received:	
Client Sample ID:	PB159587BSD	SDG No.:	P1747
Lab Sample ID:	PB159587BSD	Matrix:	WATER
Analytical Method:	SW8082A	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102514.D	1	03/14/24 10:51	03/14/24 19:46	PB159587

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	5.20		0.15	0.50	ug/L
11104-28-2	Aroclor-1221	0.50	U	0.23	0.50	ug/L
11141-16-5	Aroclor-1232	0.50	U	0.37	0.50	ug/L
53469-21-9	Aroclor-1242	0.50	U	0.16	0.50	ug/L
12672-29-6	Aroclor-1248	0.50	U	0.12	0.50	ug/L
11097-69-1	Aroclor-1254	0.50	U	0.11	0.50	ug/L
37324-23-5	Aroclor-1262	0.50	U	0.14	0.50	ug/L
11100-14-4	Aroclor-1268	0.50	U	0.12	0.50	ug/L
11096-82-5	Aroclor-1260	5.20		0.15	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	19.5		21 - 155	97%	SPK: 20
2051-24-3	Decachlorobiphenyl	25.1		10 - 173	126%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

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LOD = Limit of Detection

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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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	LiRo Engineers, Inc.		Date Collected:		
Project:	Walter Gladwin Recreation Center, Bronx, NY		Date Received:		
Client Sample ID:	PB159600BSD		SDG No.:	P1747	
Lab Sample ID:	PB159600BSD		Matrix:	WATER	
Analytical Method:	608.3		% Solid:	0	Decanted:
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	5030				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO102528.D	1	03/14/24 10:05	03/15/24 00:29	PB159600

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.055		0.015	0.050	ug/L
11104-28-2	Aroclor-1221	0.050	U	0.023	0.050	ug/L
11141-16-5	Aroclor-1232	0.050	U	0.037	0.050	ug/L
53469-21-9	Aroclor-1242	0.050	U	0.016	0.050	ug/L
12672-29-6	Aroclor-1248	0.050	U	0.012	0.050	ug/L
11097-69-1	Aroclor-1254	0.050	U	0.011	0.050	ug/L
11096-82-5	Aroclor-1260	0.051		0.015	0.050	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.4		60 - 140	77%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.5		60 - 140	103%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

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J = Estimated Value

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