



284 Sheffield Street, Mountainside, New Jersey - 07092

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

LAB CHRONICLE

OrderID: O1232	OrderDate: 1/19/2023 1:44:00 PM
Client: Louis Berger U.S., Inc., A WSP Company	Project: NYCDDC Phase II SCI Arthur Kill Road CEQR
Contact: Jonathan Ganz	Location: N11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
01232-01	B-P-17A	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/20/23	
01232-02	B-P-17B	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/20/23	
01232-03	WC-17	SOIL	Diesel Range Organics	8015D	01/18/23	01/20/23	01/20/23	01/19/23
			Gasoline Range Organics	8015D			01/20/23	
			PCB	8082A		01/20/23	01/20/23	
01232-04	B-P-18A	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/20/23	
01232-05	B-P-18B	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/20/23	
01232-06	B-P-19A	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/20/23	
01232-07	B-P-19B	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/23/23	
01232-08	B-P-35A	SOIL	PCB	8082A	01/18/23	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B		01/20/23	01/20/23	
01232-09	B-P-35B	SOIL			01/18/23			01/19/23



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LAB CHRONICLE							
O1232-10	DUP01	SOIL	PCB	8082A	01/20/23	01/20/23	01/19/23
			Pesticide-TCL	8081B	01/20/23	01/20/23	
			PCB	8082A	01/20/23	01/20/23	
			Pesticide-TCL	8081B	01/20/23	01/20/23	
				01/18/23			

A
B
C
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E
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G



Hit Summary Sheet
SW-846

SDG No.:	O1232	Order ID:	O1232
Client:	Louis Berger U.S., Inc., A WSP Company	Project ID:	NYCDDC Phase II SCI Arthur Kill Re

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	WC-17							
O1232-03	WC-17	SOIL	Aroclor-1242	42.6	P	2.60	18.6	ug/kg
Total Concentration:				42.600				
Client ID :	B-P-18B							
O1232-05	B-P-18B	SOIL	Aroclor-1242	20.4		2.60	18.6	ug/kg
Total Concentration:				20.400				

A
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G

SAMPLE DATA

A

B

C

D

E

F

G

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	B-P-17A		SDG No.:	O1232	
Lab Sample ID:	O1232-01		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	89.4	Decanted:
Sample Wt/Vol:	30.04	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054774.D	1	01/20/23 10:35	01/20/23 19:48	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.40	U	3.40	19.0	ug/kg
11104-28-2	Aroclor-1221	5.30	U	5.30	19.0	ug/kg
11141-16-5	Aroclor-1232	4.40	U	4.40	19.0	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	19.0	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	19.0	ug/kg
11097-69-1	Aroclor-1254	4.70	U	4.70	19.0	ug/kg
37324-23-5	Aroclor-1262	3.70	U	3.70	19.0	ug/kg
11100-14-4	Aroclor-1268	6.40	U	6.40	19.0	ug/kg
11096-82-5	Aroclor-1260	3.60	U	3.60	19.0	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.0		40 - 162	110%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.8		32 - 176	104%	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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	B-P-17B		SDG No.:	O1232	
Lab Sample ID:	O1232-02		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	86.9	Decanted:
Sample Wt/Vol:	30.08	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054777.D	1	01/20/23 10:35	01/20/23 20:38	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.5	ug/kg
11104-28-2	Aroclor-1221	5.40	U	5.40	19.5	ug/kg
11141-16-5	Aroclor-1232	4.50	U	4.50	19.5	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.5	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.5	ug/kg
11097-69-1	Aroclor-1254	4.80	U	4.80	19.5	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.5	ug/kg
11100-14-4	Aroclor-1268	6.60	U	6.60	19.5	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.5	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.9		40 - 162	114%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.3		32 - 176	107%	SPK: 20

Comments:

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() = Laboratory InHouse Limit

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	WC-17	SDG No.:	O1232
Lab Sample ID:	O1232-03	Matrix:	SOIL
Analytical Method:	SW8082A	% Solid:	91.4
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	SW3541B	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054778.D	1	01/20/23 10:35	01/20/23 20:54	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.30	U	3.30	18.6	ug/kg
11104-28-2	Aroclor-1221	5.10	U	5.10	18.6	ug/kg
11141-16-5	Aroclor-1232	4.30	U	4.30	18.6	ug/kg
53469-21-9	Aroclor-1242	42.6	P	2.60	18.6	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	18.6	ug/kg
11097-69-1	Aroclor-1254	4.60	U	4.60	18.6	ug/kg
37324-23-5	Aroclor-1262	3.60	U	3.60	18.6	ug/kg
11100-14-4	Aroclor-1268	6.30	U	6.30	18.6	ug/kg
11096-82-5	Aroclor-1260	3.50	U	3.50	18.6	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	21.8		40 - 162	109%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.0		32 - 176	105%	SPK: 20

Comments:

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LOD = Limit of Detection

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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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	B-P-18A		SDG No.:	O1232	
Lab Sample ID:	O1232-04		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	87.5	Decanted:
Sample Wt/Vol:	30.06	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054779.D	1	01/20/23 10:35	01/20/23 21:11	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.4	ug/kg
11104-28-2	Aroclor-1221	5.40	U	5.40	19.4	ug/kg
11141-16-5	Aroclor-1232	4.50	U	4.50	19.4	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.4	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.4	ug/kg
11097-69-1	Aroclor-1254	4.80	U	4.80	19.4	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.4	ug/kg
11100-14-4	Aroclor-1268	6.50	U	6.50	19.4	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.4	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.6		40 - 162	113%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.2		32 - 176	106%	SPK: 20

Comments:

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() = Laboratory InHouse Limit

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-18B	SDG No.:	O1232
Lab Sample ID:	O1232-05	Matrix:	SOIL
Analytical Method:	SW8082A	% Solid:	91.4
Sample Wt/Vol:	30.01 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	SW3541B		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054780.D	1	01/20/23 10:35	01/20/23 21:27	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.30	U	3.30	18.6	ug/kg
11104-28-2	Aroclor-1221	5.10	U	5.10	18.6	ug/kg
11141-16-5	Aroclor-1232	4.30	U	4.30	18.6	ug/kg
53469-21-9	Aroclor-1242	20.4		2.60	18.6	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	18.6	ug/kg
11097-69-1	Aroclor-1254	4.60	U	4.60	18.6	ug/kg
37324-23-5	Aroclor-1262	3.60	U	3.60	18.6	ug/kg
11100-14-4	Aroclor-1268	6.30	U	6.30	18.6	ug/kg
11096-82-5	Aroclor-1260	3.50	U	3.50	18.6	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.1		40 - 162	110%	SPK: 20
2051-24-3	Decachlorobiphenyl	22.4		32 - 176	112%	SPK: 20

Comments:

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8082A	% Solid:	88.2
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	
Prep Method :	SW3541B	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054781.D	1	01/20/23 10:35	01/20/23 21:43	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.2	ug/kg
11104-28-2	Aroclor-1221	5.30	U	5.30	19.2	ug/kg
11141-16-5	Aroclor-1232	4.40	U	4.40	19.2	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	19.2	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.2	ug/kg
11097-69-1	Aroclor-1254	4.80	U	4.80	19.2	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.2	ug/kg
11100-14-4	Aroclor-1268	6.50	U	6.50	19.2	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.2	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	20.9		40 - 162	104%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.4		32 - 176	87%	SPK: 20

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	B-P-19B		SDG No.:	O1232	
Lab Sample ID:	O1232-07		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	88	Decanted:
Sample Wt/Vol:	30.1	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054782.D	1	01/20/23 10:35	01/20/23 22:00	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.3	ug/kg
11104-28-2	Aroclor-1221	5.30	U	5.30	19.3	ug/kg
11141-16-5	Aroclor-1232	4.50	U	4.50	19.3	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	19.3	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.3	ug/kg
11097-69-1	Aroclor-1254	4.80	U	4.80	19.3	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.3	ug/kg
11100-14-4	Aroclor-1268	6.50	U	6.50	19.3	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.3	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	21.3		40 - 162	107%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.6		32 - 176	103%	SPK: 20

Comments:

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	B-P-35A		SDG No.:	O1232	
Lab Sample ID:	O1232-08		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	91.3	Decanted:
Sample Wt/Vol:	30.05	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054783.D	1	01/20/23 10:35	01/20/23 22:16	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.30	U	3.30	18.6	ug/kg
11104-28-2	Aroclor-1221	5.10	U	5.10	18.6	ug/kg
11141-16-5	Aroclor-1232	4.30	U	4.30	18.6	ug/kg
53469-21-9	Aroclor-1242	2.60	U	2.60	18.6	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	18.6	ug/kg
11097-69-1	Aroclor-1254	4.60	U	4.60	18.6	ug/kg
37324-23-5	Aroclor-1262	3.60	U	3.60	18.6	ug/kg
11100-14-4	Aroclor-1268	6.30	U	6.30	18.6	ug/kg
11096-82-5	Aroclor-1260	3.50	U	3.50	18.6	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.3		40 - 162	111%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.2		32 - 176	101%	SPK: 20

Comments:

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J = Estimated Value

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	B-P-35B		SDG No.:	O1232	
Lab Sample ID:	O1232-09		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	93.3	Decanted:
Sample Wt/Vol:	30.03	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054784.D	1	01/20/23 10:35	01/20/23 22:33	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.30	U	3.30	18.2	ug/kg
11104-28-2	Aroclor-1221	5.00	U	5.00	18.2	ug/kg
11141-16-5	Aroclor-1232	4.20	U	4.20	18.2	ug/kg
53469-21-9	Aroclor-1242	2.60	U	2.60	18.2	ug/kg
12672-29-6	Aroclor-1248	3.20	U	3.20	18.2	ug/kg
11097-69-1	Aroclor-1254	4.50	U	4.50	18.2	ug/kg
37324-23-5	Aroclor-1262	3.60	U	3.60	18.2	ug/kg
11100-14-4	Aroclor-1268	6.10	U	6.10	18.2	ug/kg
11096-82-5	Aroclor-1260	3.50	U	3.50	18.2	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	21.5		40 - 162	108%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.5		32 - 176	98%	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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23	
Client Sample ID:	DUP01		SDG No.:	O1232	
Lab Sample ID:	O1232-10		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	90.1	Decanted:
Sample Wt/Vol:	30.09	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054785.D	1	01/20/23 10:35	01/20/23 22:49	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.40	U	3.40	18.8	ug/kg
11104-28-2	Aroclor-1221	5.20	U	5.20	18.8	ug/kg
11141-16-5	Aroclor-1232	4.30	U	4.30	18.8	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	18.8	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	18.8	ug/kg
11097-69-1	Aroclor-1254	4.70	U	4.70	18.8	ug/kg
37324-23-5	Aroclor-1262	3.70	U	3.70	18.8	ug/kg
11100-14-4	Aroclor-1268	6.30	U	6.30	18.8	ug/kg
11096-82-5	Aroclor-1260	3.60	U	3.60	18.8	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	21.9		40 - 162	110%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.2		32 - 176	106%	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.: O1232

Client: Louis Berger U.S., Inc., A WSP Company

Analytical Method: 8082A

Lab Sample ID	Client ID	Parameter	Column	Spike	Result	Rec	Qual	Limits	
								Low	High
I.BLK-PP054621.D	PIBLK-PP054621.D	Tetrachloro-m-xylene	1	20	22.9	114		60	140
		Decachlorobiphenyl	1	20	24.6	123		60	140
		Tetrachloro-m-xylene	2	20	22.4	112		60	140
		Decachlorobiphenyl	2	20	24.8	124		60	140
I.BLK-PP054771.D	PIBLK-PP054771.D	Tetrachloro-m-xylene	1	20	21.7	109		60	140
		Decachlorobiphenyl	1	20	22.2	111		60	140
		Tetrachloro-m-xylene	2	20	20.0	100		60	140
		Decachlorobiphenyl	2	20	21.2	106		60	140
PB150372BL	PB150372BL	Tetrachloro-m-xylene	1	20	16.6	83		40	162
		Decachlorobiphenyl	1	20	17.6	88		32	176
		Tetrachloro-m-xylene	2	20	15.1	75		40	162
		Decachlorobiphenyl	2	20	16.6	83		32	176
PB150372BS	PB150372BS	Tetrachloro-m-xylene	1	20	17.1	86		40	162
		Decachlorobiphenyl	1	20	18.2	91		32	176
		Tetrachloro-m-xylene	2	20	14.6	73		40	162
		Decachlorobiphenyl	2	20	17.3	87		32	176
O1232-01	B-P-17A	Tetrachloro-m-xylene	1	20	22.0	110		40	162
		Decachlorobiphenyl	1	20	20.8	104		32	176
		Tetrachloro-m-xylene	2	20	20.3	102		40	162
		Decachlorobiphenyl	2	20	20.3	101		32	176
O1232-01MS	B-P-17AMS	Tetrachloro-m-xylene	1	20	22.2	111		40	162
		Decachlorobiphenyl	1	20	19.9	99		32	176
		Tetrachloro-m-xylene	2	20	19.0	95		40	162
		Decachlorobiphenyl	2	20	19.2	96		32	176
O1232-01MSD	B-P-17AMSD	Tetrachloro-m-xylene	1	20	22.3	111		40	162
		Decachlorobiphenyl	1	20	19.8	99		32	176
		Tetrachloro-m-xylene	2	20	18.8	94		40	162
		Decachlorobiphenyl	2	20	19.3	96		32	176
O1232-02	B-P-17B	Tetrachloro-m-xylene	1	20	22.9	114		40	162
		Decachlorobiphenyl	1	20	21.3	107		32	176
		Tetrachloro-m-xylene	2	20	21.0	105		40	162
		Decachlorobiphenyl	2	20	21.0	105		32	176
O1232-03	WC-17	Tetrachloro-m-xylene	1	20	21.8	109		40	162
		Decachlorobiphenyl	1	20	21.0	105		32	176
		Tetrachloro-m-xylene	2	20	20.1	101		40	162
		Decachlorobiphenyl	2	20	20.4	102		32	176
O1232-04	B-P-18A	Tetrachloro-m-xylene	1	20	22.6	113		40	162
		Decachlorobiphenyl	1	20	21.2	106		32	176
		Tetrachloro-m-xylene	2	20	20.8	104		40	162
		Decachlorobiphenyl	2	20	21.1	105		32	176
O1232-05	B-P-18B	Tetrachloro-m-xylene	1	20	22.1	110		40	162
		Decachlorobiphenyl	1	20	22.4	112		32	176
		Tetrachloro-m-xylene	2	20	19.6	98		40	162

Surrogate Summary

SDG No.: O1232

Client: Louis Berger U.S., Inc., A WSP Company

Analytical Method: 8082A

Lab Sample ID	Client ID	Parameter	Column	Spike	Result	Rec	Qual	Limits	
								Low	High
O1232-05	B-P-18B	Decachlorobiphenyl	2	20	21.3	107		32	176
O1232-06	B-P-19A	Tetrachloro-m-xylene	1	20	20.9	104		40	162
		Decachlorobiphenyl	1	20	17.4	87		32	176
		Tetrachloro-m-xylene	2	20	19.2	96		40	162
		Decachlorobiphenyl	2	20	16.5	82		32	176
O1232-07	B-P-19B	Tetrachloro-m-xylene	1	20	21.3	107		40	162
		Decachlorobiphenyl	1	20	20.6	103		32	176
		Tetrachloro-m-xylene	2	20	19.8	99		40	162
		Decachlorobiphenyl	2	20	19.4	97		32	176
O1232-08	B-P-35A	Tetrachloro-m-xylene	1	20	22.3	111		40	162
		Decachlorobiphenyl	1	20	20.2	101		32	176
		Tetrachloro-m-xylene	2	20	20.7	104		40	162
		Decachlorobiphenyl	2	20	19.4	97		32	176
O1232-09	B-P-35B	Tetrachloro-m-xylene	1	20	21.5	108		40	162
		Decachlorobiphenyl	1	20	19.5	98		32	176
		Tetrachloro-m-xylene	2	20	19.2	96		40	162
		Decachlorobiphenyl	2	20	19.3	97		32	176
O1232-10	DUP01	Tetrachloro-m-xylene	1	20	21.9	110		40	162
		Decachlorobiphenyl	1	20	21.2	106		32	176
		Tetrachloro-m-xylene	2	20	20.1	101		40	162
		Decachlorobiphenyl	2	20	19.8	99		32	176
I.BLK-PP054793.D	PIBLK-PP054793.D	Tetrachloro-m-xylene	1	20	23.1	115		60	140
		Decachlorobiphenyl	1	20	23.5	117		60	140
		Tetrachloro-m-xylene	2	20	21.0	105		60	140
		Decachlorobiphenyl	2	20	24.1	121		60	140



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Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: O1232

Client: Louis Berger U.S., Inc., A WSP Compan

Analytical Method: 8082A

DataFile : PP054775.D

Lab Sample ID:		Parameter	Spike	Sample Result	Result	Units	Rec	Qual	RPD	Qual	Low	Limits High	RPD
Client Sample ID:		B-P-17AMS											
O1232-01MS		AR1016	185.9	0	174	ug/kg	94				70	142	
		AR1260	185.9	0	161	ug/kg	87				50	147	



Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: O1232

Client: Louis Berger U.S., Inc., A WSP Compan

Analytical Method: 8082A

DataFile : PP054776.D

Lab Sample ID:		Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Client Sample ID: O1232-01MSD	B-P-17AMSD												
		AR1016	186	0	172	ug/kg	92		2		70	142	20
		AR1260	186	0	161	ug/kg	87		0		50	147	20



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

SDG No.: O1232
Client: Louis Berger U.S., Inc., A WSP Compan

Analytical Method: 8082A Datafile : PP054773.D

Lab Sample ID	Parameter	Spike	Result	Units	Rec	RPD	Qual	RPD	Low	Limits	RPD
								Qual		High	
PB150372BS	AR1016	166.6	119	ug/kg	71				71	120	
	AR1260	166.6	120	ug/kg	72				65	130	

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB150372BL

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM Case No.: O1232

SAS No.: O1232 SDG NO.: O1232

Lab Sample ID: PB150372BL

Lab File ID: PP054772.D

Matrix: (soil/water) Solid

Extraction: (Type) SOXH

Sulfur Cleanup: (Y/N) N

Date Extracted: 01/20/2023

Date Analyzed (1): 01/20/2023

Date Analyzed (2): 01/20/2023

Time Analyzed (1): 19:15

Time Analyzed (2): 19:15

Instrument ID (1): ECD_P

Instrument ID (2): ECD_P

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
PB150372BS	PB150372BS	PP054773.D	01/20/2023	01/20/2023
B-P-17A	O1232-01	PP054774.D	01/20/2023	01/20/2023
B-P-17AMS	O1232-01MS	PP054775.D	01/20/2023	01/20/2023
B-P-17AMSD	O1232-01MSD	PP054776.D	01/20/2023	01/20/2023
B-P-17B	O1232-02	PP054777.D	01/20/2023	01/20/2023
WC-17	O1232-03	PP054778.D	01/20/2023	01/20/2023
B-P-18A	O1232-04	PP054779.D	01/20/2023	01/20/2023
B-P-18B	O1232-05	PP054780.D	01/20/2023	01/20/2023
B-P-19A	O1232-06	PP054781.D	01/20/2023	01/20/2023
B-P-19B	O1232-07	PP054782.D	01/20/2023	01/20/2023
B-P-35A	O1232-08	PP054783.D	01/20/2023	01/20/2023
B-P-35B	O1232-09	PP054784.D	01/20/2023	01/20/2023
DUP01	O1232-10	PP054785.D	01/20/2023	01/20/2023

COMMENTS:

CALIBRATION SUMMARY



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RETENTION TIMES OF INITIAL CALIBRATION

Decachlorobiphenyl	10.10	10.10	10.10	10.10	10.10	10.10	10.00	10.20
Tetrachloro-m-xylene	4.33	4.33	4.33	4.33	4.33	4.33	4.23	4.43

A
B
C
D
E
F
G

RETENTION TIMES OF INITIAL CALIBRATION

Contract:	<u>loui01</u>						
Lab Code:	<u>CHEM</u>	Case No.:	<u>O1232</u>	SAS No.:	<u>O1232</u>	SDG NO.:	<u>O1232</u>
Instrument ID:	<u>ECD_P</u>	Calibration Date(s):		<u>01/17/2023</u>	<u>01/18/2023</u>		
		Calibration Times:		<u>19:14</u>	<u>02:39</u>		

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

LAB FILE ID: RT 1000 = PP054622.D RT 750 = PP054623.D
RT 500 = PP054624.D RT 250 = PP054625.D RT 050 = PP054626.D

[illegible]



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

RETENTION TIMES OF INITIAL CALIBRATION

Decachlorobiphenyl	8.60	8.60	8.60	8.60	8.60	8.60	8.50	8.70
Tetrachloro-m-xylene	3.58	3.58	3.58	3.58	3.58	3.58	3.48	3.68

A
B
C
D
E
F
G

CALIBRATION FACTOR OF INITIAL CALIBRATION

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Instrument ID: ECD_P Calibration Date(s): 01/17/2023 01/18/2023

Calibration Times: 19:14 02:39

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

LAB FILE ID: CF 1000 = <u>PP054622.D</u> CF 750 = <u>PP054623.D</u> CF 500 = <u>PP054624.D</u> CF 250 = <u>PP054625.D</u> CF 050 = <u>PP054626.D</u>							
COMPOUND		CF 1000	CF 750	CF 500	CF 250	CF 050	% RSD
Aroclor-1016-1	(1)	60994757	61617163	65555438	69557608	66086960	64762385
Aroclor-1016-2	(2)	89698776	91415513	95488362	100337572	95540200	94496085
Aroclor-1016-3	(3)	55770302	57035852	60394448	64434108	60548420	59636626
Aroclor-1016-4	(4)	45481753	46113448	48521374	51105992	46383960	47521305
Aroclor-1016-5	(5)	45060833	46319016	49079426	52666764	48937780	48412764
Aroclor-1260-1	(1)	63208139	64131257	68618860	73920032	73551140	68685886
Aroclor-1260-2	(2)	73618973	74006295	78778356	85364204	88083200	79970206
Aroclor-1260-3	(3)	57002616	57349332	60308428	64600060	61936160	60239319
Aroclor-1260-4	(4)	66249620	67120772	70758598	75398920	70316000	69968782
Aroclor-1260-5	(5)	126243057	124643740	130501186	136485244	133523920	130279429
Decachlorobiphenyl		1274969720	1274505000	1355090560	1428073880	1378697600	1342267352
Tetrachloro-m-xylene		1833116560	1821365480	1874138920	1904245840	1747971400	1836167640
Aroclor-1242-1	(1)	50809135	52021196	54810186	57831004	54879600	54070224
Aroclor-1242-2	(2)	73973970	74978488	79076574	83453528	78615140	78019540
Aroclor-1242-3	(3)	46155227	47067688	50035314	53190808	49172100	49124227
Aroclor-1242-4	(4)	37578215	38537477	40276172	42845280	39110980	39669625
Aroclor-1242-5	(5)	29832252	32681105	39082358	45312016	33492960	36080138
Decachlorobiphenyl		1251041510	1273988747	1344550800	1416939680	1385203200	1334344787
Tetrachloro-m-xylene		1811405100	1815934547	1861729720	1883700080	1773088000	1829171489
Aroclor-1248-1	(1)	37607776	39006492	40780610	43090024	38634340	39823848
Aroclor-1248-2	(2)	54475652	56989927	59770636	63999452	61541340	59355401
Aroclor-1248-3	(3)	60721667	62367509	66784284	71364928	68713780	65990434
Aroclor-1248-4	(4)	62162191	63537173	66947460	71225736	70218880	66818288
Aroclor-1248-5	(5)	60838553	60991893	64904352	68877936	69476000	65017747
Decachlorobiphenyl		1247706810	1281398533	1334691060	1413445920	1382528000	1331954065
Tetrachloro-m-xylene		1778703180	1796466640	1840391920	1855036880	1716680200	1797455764
Aroclor-1254-1	(1)	64876069	67358152	70187782	76230944	74744580	70679505
Aroclor-1254-2	(2)	79306440	82003113	93891248	112648900	110718960	95713732
Aroclor-1254-3	(3)	81892178	84489736	87129344	93066756	87230040	86761611
Aroclor-1254-4	(4)	58248595	60618040	62943304	67757892	63676880	62648942
Aroclor-1254-5	(5)	64415099	66907195	69281020	74033684	75257760	69978952
Decachlorobiphenyl		1254664020	1300116533	1341785500	1428088760	1371493400	1339229643
Tetrachloro-m-xylene		1792448220	1818331987	1827797180	1888829640	1734829400	1812447285
Aroclor-1268-1	(1)	175484193	178569517	187137462	192825248	188148800	184433044

CALIBRATION FACTOR OF INITIAL CALIBRATION

Aroclor-1268-2	(2)	160551159	163997384	171189930	177103064	174642720	169496851	4
Aroclor-1268-3	(3)	140670488	143555869	150787190	155460048	154331920	148961103	4
Aroclor-1268-4	(4)	62374308	64150585	66875200	68369584	61005440	64555023	5
Aroclor-1268-5	(5)	472850074	479426876	492048528	498177556	470558160	482612239	3
Decachlorobiphenyl		2241360920	2290810347	2403495460	2504350200	2478617600	2383726905	5
Tetrachloro-m-xylene		1820885660	1841071600	1902207260	1899803000	1713261200	1835445744	4

CALIBRATION FACTOR OF INITIAL CALIBRATION

Contract: loui01
Lab Code: CHEM **Case No.:** O1232 **SAS No.:** O1232 **SDG NO.:** O1232
Instrument ID: ECD_P **Calibration Date(s):** 01/17/2023 01/18/2023
Calibration Times: 19:14 02:39
GC Column: ZB-MR2 **ID:** 0.32 (mm)

LAB FILE ID: CF 1000 = <u>PP054622.D</u> CF 750 = <u>PP054623.D</u> CF 500 = <u>PP054624.D</u> CF 250 = <u>PP054625.D</u> CF 050 = <u>PP054626.D</u>							
COMPOUND		CF 1000	CF 750	CF 500	CF 250	CF 050	% RSD
Aroclor-1016-1	(1)	48110900	48110107	50537560	54617184	50472120	5
Aroclor-1016-2	(2)	69111880	69642880	72798372	74770824	70622940	3
Aroclor-1016-3	(3)	37563855	37764157	39734264	41695432	37909600	5
Aroclor-1016-4	(4)	31567046	32159183	34386044	36537740	35170860	6
Aroclor-1016-5	(5)	41182153	41787627	44073134	47148696	44877720	6
Aroclor-1260-1	(1)	79365232	78844829	83633318	87879524	85377440	5
Aroclor-1260-2	(2)	88933725	87782645	92805916	97339284	93364340	4
Aroclor-1260-3	(3)	87602101	86249311	91183270	94760696	89598560	4
Aroclor-1260-4	(4)	73956541	72106947	75886624	78959280	75422320	3
Aroclor-1260-5	(5)	159388878	153900888	160536508	163728940	156965120	2
Decachlorobiphenyl		1372404250	1343669640	1421472540	1500508000	1522245600	5
Tetrachloro-m-xylene		1613419820	1600019107	1643383900	1655624320	1491050200	4
Aroclor-1242-1	(1)	39381881	40399891	43176434	45114300	42876980	5
Aroclor-1242-2	(2)	56142526	57034204	59998510	63074588	57331580	5
Aroclor-1242-3	(3)	30728980	31194883	32930514	34323884	31213980	5
Aroclor-1242-4	(4)	32535838	33258647	35808658	37654476	36175940	6
Aroclor-1242-5	(5)	36257488	36521681	38439862	40852864	37981200	5
Decachlorobiphenyl		1315958030	1336503627	1397426220	1474809520	1523899200	6
Tetrachloro-m-xylene		1598557950	1600123813	1632195220	1649415280	1503535600	4
Aroclor-1248-1	(1)	29968083	30528827	32630110	33078996	30239600	5
Aroclor-1248-2	(2)	42656411	46196937	48804598	52134512	50261680	8
Aroclor-1248-3	(3)	47442287	48618009	51003946	54494984	52529060	6
Aroclor-1248-4	(4)	58144594	56358249	59692022	62643004	60418260	4
Aroclor-1248-5	(5)	51788530	48406688	51046562	52821868	49982340	3
Decachlorobiphenyl		1312777750	1324791253	1399268980	1478112400	1469837800	6
Tetrachloro-m-xylene		1568868510	1578596160	1614623820	1618825400	1470404000	4
Aroclor-1254-1	(1)	79431366	81682171	83681748	89732044	90578220	6
Aroclor-1254-2	(2)	68328243	70260385	72293666	77989120	74967820	5
Aroclor-1254-3	(3)	107725360	111793424	114278880	119519708	112560740	4
Aroclor-1254-4	(4)	58850995	61251233	63196410	66474456	61431200	5
Aroclor-1254-5	(5)	90585374	93603605	94943324	100286216	94427640	4
Decachlorobiphenyl		1315840430	1351611280	1390806080	1481754480	1472256400	5
Tetrachloro-m-xylene		1573028330	1599438347	1606333020	1637352520	1467704000	4
Aroclor-1268-1	(1)	211800889	212068772	218805520	222295460	216088460	2

CALIBRATION FACTOR OF INITIAL CALIBRATION

Aroclor-1268-2	(2)	193204962	192623001	197813464	201698528	194072640	195882519	2
Aroclor-1268-3	(3)	173229843	174323716	178901816	182613184	175756480	176965008	2
Aroclor-1268-4	(4)	65506290	66378420	68913796	71791976	65601900	67638476	4
Aroclor-1268-5	(5)	517569534	517095833	523047182	523415748	491419840	514509627	3
Decachlorobiphenyl		2382750360	2420081013	2478549680	2574937120	2599484600	2491160555	4
Tetrachloro-m-xylene		1599008690	1617900053	1666311200	1654862560	1461882000	1599992901	5

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Instrument ID: ECD_P Date(s) Analyzed: 01/17/2023 01/18/2023

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

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW		CALIBRATION FACTOR
				FROM	TO	
Aroclor-1221	500	1	4.54	4.44	4.64	22885400
		2	4.63	4.53	4.73	17599600
		3	4.70	4.60	4.80	53152600
		4	0.00			0
		5	0.00			0
Aroclor-1232	500	1	4.70	4.60	4.80	44446000
		2	5.24	5.14	5.34	24106800
		3	5.53	5.43	5.63	43099800
		4	5.69	5.59	5.79	21462800
		5	5.78	5.68	5.88	17205600
Aroclor-1262	500	1	7.74	7.64	7.84	81857800
		2	8.28	8.18	8.38	141579000
		3	8.59	8.49	8.69	103096000
		4	8.68	8.58	8.78	49715200
		5	9.34	9.24	9.44	56956800



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INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Instrument ID: ECD_P Date(s) Analyzed: 01/17/2023 01/18/2023

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

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW		CALIBRATION FACTOR
				FROM	TO	
Aroclor-1221	500	1	3.79	3.69	3.89	19786500
		2	3.88	3.78	3.98	15022200
		3	3.95	3.85	4.05	45959600
		4	0.00			0
		5	0.00			0
Aroclor-1232	500	1	3.95	3.85	4.05	38578200
		2	4.69	4.59	4.79	32690000
		3	4.86	4.76	4.96	17196900
		4	4.95	4.85	5.05	17323300
		5	5.12	5.02	5.22	18925700
Aroclor-1262	500	1	6.77	6.67	6.87	42418000
		2	6.97	6.87	7.07	91943600
		3	7.50	7.40	7.60	71841200
		4	7.56	7.46	7.66	129314000
		5	8.06	7.96	8.16	59579600



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CALIBRATION VERIFICATION SUMMARY

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Continuing Calib Date: 01/20/2023 Initial Calibration Date(s): 01/17/2023 01/18/2023

Continuing Calib Time: 18:26 Initial Calibration Time(s): 19:14 02:39

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

COMPOUND		CCAL RT	AVG RT	RT WINDOW		DIFF RT
				FROM	TO	
Aroclor-1016-1	(1)	5.51	5.51	5.41	5.61	0.00
Aroclor-1016-2	(2)	5.53	5.53	5.43	5.63	0.00
Aroclor-1016-3	(3)	5.59	5.59	5.49	5.69	0.00
Aroclor-1016-4	(4)	5.69	5.69	5.59	5.79	0.00
Aroclor-1016-5	(5)	5.98	5.99	5.89	6.09	0.01
Aroclor-1260-1	(1)	7.12	7.12	7.02	7.22	0.00
Aroclor-1260-2	(2)	7.38	7.38	7.28	7.48	0.00
Aroclor-1260-3	(3)	7.74	7.74	7.64	7.84	0.00
Aroclor-1260-4	(4)	7.96	7.96	7.86	8.06	0.00
Aroclor-1260-5	(5)	8.28	8.28	8.18	8.38	0.00
Tetrachloro-m-xylene		4.33	4.33	4.23	4.43	0.00
Decachlorobiphenyl		10.10	10.09	9.99	10.19	-0.01



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CALIBRATION VERIFICATION SUMMARY

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Continuing Calib Date: 01/20/2023 Initial Calibration Date(s): 01/17/2023 01/18/2023

Continuing Calib Time: 18:26 Initial Calibration Time(s): 19:14 02:39

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

COMPOUND		CCAL RT	AVG RT	RT WINDOW		DIFF RT
				FROM	TO	
Aroclor-1016-1	(1)	4.67	4.67	4.57	4.77	0.00
Aroclor-1016-2	(2)	4.69	4.68	4.58	4.78	0.00
Aroclor-1016-3	(3)	4.86	4.86	4.76	4.96	0.00
Aroclor-1016-4	(4)	4.90	4.90	4.80	5.00	0.00
Aroclor-1016-5	(5)	5.12	5.12	5.02	5.22	0.00
Aroclor-1260-1	(1)	6.15	6.16	6.06	6.26	0.01
Aroclor-1260-2	(2)	6.34	6.34	6.24	6.44	0.00
Aroclor-1260-3	(3)	6.50	6.50	6.40	6.60	0.00
Aroclor-1260-4	(4)	6.97	6.97	6.87	7.07	0.00
Aroclor-1260-5	(5)	7.21	7.22	7.12	7.32	0.01
Tetrachloro-m-xylene		3.58	3.58	3.48	3.68	0.00
Decachlorobiphenyl		8.60	8.60	8.50	8.70	0.00



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CALIBRATION VERIFICATION SUMMARY

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

GC Column: ZB-MR1 ID: 0.32 (mm) Initi. Calib. Date(s): 01/17/2023 01/17/2023

Client Sample No.: CCAL01 Date Analyzed: 01/20/2023

Lab Sample No.: AR1660CCC500 Data File : PP054770.D Time Analyzed: 18:26

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	5.505	5.405	5.605	458.730	500.000	-8.3
Aroclor-1016-2	5.527	5.427	5.627	444.190	500.000	-11.2
Aroclor-1016-3	5.590	5.490	5.690	425.180	500.000	-15.0
Aroclor-1016-4	5.688	5.588	5.788	424.530	500.000	-15.1
Aroclor-1016-5	5.984	5.885	6.085	406.460	500.000	-18.7
Aroclor-1260-1	7.117	7.017	7.217	516.460	500.000	3.3
Aroclor-1260-2	7.375	7.275	7.475	523.750	500.000	4.8
Aroclor-1260-3	7.737	7.637	7.837	518.920	500.000	3.8
Aroclor-1260-4	7.962	7.863	8.063	512.200	500.000	2.4
Aroclor-1260-5	8.280	8.181	8.381	509.420	500.000	1.9
Decachlorobiphenyl	10.095	9.994	10.194	49.100	50.000	-1.8
Tetrachloro-m-xylene	4.332	4.231	4.431	53.290	50.000	6.6

CALIBRATION VERIFICATION SUMMARY

Contract: loui01
Lab Code: CHEM **Case No.:** O1232 **SAS No.:** O1232 **SDG NO.:** O1232
GC Column: ZB-MR2 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 01/17/2023 01/17/2023

Client Sample No.: CCAL01 **Date Analyzed:** 01/20/2023

Lab Sample No.: AR1660CCC500 **Data File :** PP054770.D **Time Analyzed:** 18:26

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	4.666	4.565	4.765	516.300	500.000	3.3
Aroclor-1016-2	4.685	4.584	4.784	518.240	500.000	3.6
Aroclor-1016-3	4.861	4.761	4.961	513.600	500.000	2.7
Aroclor-1016-4	4.903	4.804	5.004	471.600	500.000	-5.7
Aroclor-1016-5	5.116	5.017	5.217	540.130	500.000	8.0
Aroclor-1260-1	6.154	6.055	6.255	492.450	500.000	-1.5
Aroclor-1260-2	6.342	6.243	6.443	501.120	500.000	0.2
Aroclor-1260-3	6.497	6.398	6.598	480.660	500.000	-3.9
Aroclor-1260-4	6.971	6.872	7.072	476.120	500.000	-4.8
Aroclor-1260-5	7.214	7.115	7.315	484.720	500.000	-3.1
Decachlorobiphenyl	8.599	8.502	8.702	46.500	50.000	-7.0
Tetrachloro-m-xylene	3.579	3.478	3.678	49.930	50.000	-0.1



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CALIBRATION VERIFICATION SUMMARY

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Continuing Calib Date: 01/21/2023 Initial Calibration Date(s): 01/17/2023 01/18/2023

Continuing Calib Time: 01:05 Initial Calibration Time(s): 19:14 02:39

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

COMPOUND		CCAL RT	AVG RT	RT WINDOW		DIFF RT
				FROM	TO	
Aroclor-1016-1	(1)	5.50	5.51	5.41	5.61	0.01
Aroclor-1016-2	(2)	5.53	5.53	5.43	5.63	0.00
Aroclor-1016-3	(3)	5.59	5.59	5.49	5.69	0.00
Aroclor-1016-4	(4)	5.69	5.69	5.59	5.79	0.00
Aroclor-1016-5	(5)	5.98	5.99	5.89	6.09	0.01
Aroclor-1260-1	(1)	7.12	7.12	7.02	7.22	0.00
Aroclor-1260-2	(2)	7.37	7.38	7.28	7.48	0.01
Aroclor-1260-3	(3)	7.74	7.74	7.64	7.84	0.00
Aroclor-1260-4	(4)	7.96	7.96	7.86	8.06	0.00
Aroclor-1260-5	(5)	8.28	8.28	8.18	8.38	0.00
Tetrachloro-m-xylene		4.33	4.33	4.23	4.43	0.00
Decachlorobiphenyl		10.09	10.09	9.99	10.19	0.00



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CALIBRATION VERIFICATION SUMMARY

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Continuing Calib Date: 01/21/2023 Initial Calibration Date(s): 01/17/2023 01/18/2023

Continuing Calib Time: 01:05 Initial Calibration Time(s): 19:14 02:39

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

COMPOUND		CCAL RT	AVG RT	RT WINDOW FROM TO		DIFF RT
Aroclor-1016-1	(1)	4.67	4.67	4.57	4.77	0.01
Aroclor-1016-2	(2)	4.68	4.68	4.58	4.78	0.00
Aroclor-1016-3	(3)	4.86	4.86	4.76	4.96	0.00
Aroclor-1016-4	(4)	4.90	4.90	4.80	5.00	0.00
Aroclor-1016-5	(5)	5.12	5.12	5.02	5.22	0.00
Aroclor-1260-1	(1)	6.15	6.16	6.06	6.26	0.01
Aroclor-1260-2	(2)	6.34	6.34	6.24	6.44	0.00
Aroclor-1260-3	(3)	6.50	6.50	6.40	6.60	0.00
Aroclor-1260-4	(4)	6.97	6.97	6.87	7.07	0.00
Aroclor-1260-5	(5)	7.21	7.22	7.12	7.32	0.01
Tetrachloro-m-xylene		3.58	3.58	3.48	3.68	0.00
Decachlorobiphenyl		8.60	8.60	8.50	8.70	0.00

CALIBRATION VERIFICATION SUMMARY

Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

GC Column: ZB-MR1 ID: 0.32 (mm) Initi. Calib. Date(s): 01/17/2023 01/17/2023

Client Sample No.: CCAL02 Date Analyzed: 01/21/2023

Lab Sample No.: AR1660CCC500 Data File : PP054792.D Time Analyzed: 01:05

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	5.504	5.405	5.605	519.700	500.000	3.9
Aroclor-1016-2	5.527	5.427	5.627	512.830	500.000	2.6
Aroclor-1016-3	5.589	5.490	5.690	508.530	500.000	1.7
Aroclor-1016-4	5.688	5.588	5.788	516.130	500.000	3.2
Aroclor-1016-5	5.984	5.885	6.085	515.860	500.000	3.2
Aroclor-1260-1	7.116	7.017	7.217	531.020	500.000	6.2
Aroclor-1260-2	7.374	7.275	7.475	501.820	500.000	0.4
Aroclor-1260-3	7.735	7.637	7.837	501.240	500.000	0.2
Aroclor-1260-4	7.961	7.863	8.063	499.040	500.000	-0.2
Aroclor-1260-5	8.278	8.181	8.381	485.150	500.000	-3.0
Decachlorobiphenyl	10.092	9.994	10.194	46.080	50.000	-7.8
Tetrachloro-m-xylene	4.333	4.231	4.431	50.890	50.000	1.8

CALIBRATION VERIFICATION SUMMARY

Contract: loui01
Lab Code: CHEM **Case No.:** O1232 **SAS No.:** O1232 **SDG NO.:** O1232
GC Column: ZB-MR2 **ID:** 0.32 (mm) **Initi. Calib. Date(s):** 01/17/2023 01/17/2023

Client Sample No.: CCAL02 **Date Analyzed:** 01/21/2023

Lab Sample No.: AR1660CCC500 **Data File :** PP054792.D **Time Analyzed:** 01:05

COMPOUND	RT	RT WINDOW		CALC AMOUNT(ng)	NOM AMOUNT(ng)	%D
		FROM	TO			
Aroclor-1016-1	4.665	4.565	4.765	489.800	500.000	-2.0
Aroclor-1016-2	4.684	4.584	4.784	491.850	500.000	-1.6
Aroclor-1016-3	4.860	4.761	4.961	487.940	500.000	-2.4
Aroclor-1016-4	4.902	4.804	5.004	463.880	500.000	-7.2
Aroclor-1016-5	5.116	5.017	5.217	492.150	500.000	-1.6
Aroclor-1260-1	6.153	6.055	6.255	480.180	500.000	-4.0
Aroclor-1260-2	6.342	6.243	6.443	498.600	500.000	-0.3
Aroclor-1260-3	6.496	6.398	6.598	491.130	500.000	-1.8
Aroclor-1260-4	6.970	6.872	7.072	492.710	500.000	-1.5
Aroclor-1260-5	7.213	7.115	7.315	496.280	500.000	-0.7
Decachlorobiphenyl	8.598	8.502	8.702	47.510	50.000	-5.0
Tetrachloro-m-xylene	3.579	3.478	3.678	47.200	50.000	-5.6

Analytical Sequence

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CE

Instrument ID: ECD_P

GC Column: ZB-MR1

ID: 0.32 (mm)

Inst. Calib. Date(s): 01/17/2023

01/17/2023

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	01/17/2023	18:58	PP054621.D	10.10	4.33
AR1660ICC1000	AR1660ICC1000	01/17/2023	19:14	PP054622.D	10.10	4.33
AR1660ICC750	AR1660ICC750	01/17/2023	19:31	PP054623.D	10.10	4.33
AR1660ICC500	AR1660ICC500	01/17/2023	19:47	PP054624.D	10.09	4.33
AR1660ICC250	AR1660ICC250	01/17/2023	20:04	PP054625.D	10.10	4.33
AR1660ICC050	AR1660ICC050	01/17/2023	20:20	PP054626.D	10.10	4.33
AR1221ICC500	AR1221ICC500	01/17/2023	20:37	PP054627.D	10.10	4.33
AR1232ICC500	AR1232ICC500	01/17/2023	20:53	PP054628.D	10.10	4.33
AR1242ICC1000	AR1242ICC1000	01/17/2023	21:10	PP054629.D	10.10	4.33
AR1242ICC750	AR1242ICC750	01/17/2023	21:26	PP054630.D	10.10	4.33
AR1242ICC500	AR1242ICC500	01/17/2023	21:43	PP054631.D	10.10	4.33
AR1242ICC250	AR1242ICC250	01/17/2023	21:59	PP054632.D	10.10	4.33
AR1242ICC050	AR1242ICC050	01/17/2023	22:15	PP054633.D	10.10	4.33
AR1248ICC1000	AR1248ICC1000	01/17/2023	22:32	PP054634.D	10.10	4.33
AR1248ICC750	AR1248ICC750	01/17/2023	22:48	PP054635.D	10.10	4.33
AR1248ICC500	AR1248ICC500	01/17/2023	23:05	PP054636.D	10.10	4.33
AR1248ICC250	AR1248ICC250	01/17/2023	23:22	PP054637.D	10.10	4.33
AR1248ICC050	AR1248ICC050	01/17/2023	23:38	PP054638.D	10.10	4.33
AR1254ICC1000	AR1254ICC1000	01/17/2023	23:55	PP054639.D	10.10	4.33
AR1254ICC750	AR1254ICC750	01/18/2023	00:11	PP054640.D	10.10	4.33
AR1254ICC500	AR1254ICC500	01/18/2023	00:27	PP054641.D	10.10	4.33
AR1254ICC250	AR1254ICC250	01/18/2023	00:44	PP054642.D	10.10	4.33
AR1254ICC050	AR1254ICC050	01/18/2023	01:00	PP054643.D	10.10	4.33
AR1262ICC500	AR1262ICC500	01/18/2023	01:17	PP054644.D	10.10	4.33
AR1268ICC1000	AR1268ICC1000	01/18/2023	01:33	PP054645.D	10.10	4.33
AR1268ICC750	AR1268ICC750	01/18/2023	01:50	PP054646.D	10.10	4.33
AR1268ICC500	AR1268ICC500	01/18/2023	02:06	PP054647.D	10.10	4.33
AR1268ICC250	AR1268ICC250	01/18/2023	02:22	PP054648.D	10.10	4.33
AR1268ICC050	AR1268ICC050	01/18/2023	02:39	PP054649.D	10.10	4.33
AR1660CCC500	AR1660CCC500	01/20/2023	18:26	PP054770.D	10.10	4.33
IBLK	IBLK	01/20/2023	18:59	PP054771.D	10.10	4.33
PB150372BL	PB150372BL	01/20/2023	19:15	PP054772.D	10.10	4.33
PB150372BS	PB150372BS	01/20/2023	19:32	PP054773.D	10.09	4.33
B-P-17A	O1232-01	01/20/2023	19:48	PP054774.D	10.09	4.33
B-P-17AMS	O1232-01MS	01/20/2023	20:05	PP054775.D	10.09	4.33
B-P-17AMSD	O1232-01MSD	01/20/2023	20:21	PP054776.D	10.09	4.33
B-P-17B	O1232-02	01/20/2023	20:38	PP054777.D	10.09	4.33
WC-17	O1232-03	01/20/2023	20:54	PP054778.D	10.10	4.33
B-P-18A	O1232-04	01/20/2023	21:11	PP054779.D	10.10	4.33
B-P-18B	O1232-05	01/20/2023	21:27	PP054780.D	10.09	4.33
B-P-19A	O1232-06	01/20/2023	21:43	PP054781.D	10.09	4.33
B-P-19B	O1232-07	01/20/2023	22:00	PP054782.D	10.09	4.33
B-P-35A	O1232-08	01/20/2023	22:16	PP054783.D	10.09	4.33
B-P-35B	O1232-09	01/20/2023	22:33	PP054784.D	10.09	4.33
DUP01	O1232-10	01/20/2023	22:49	PP054785.D	10.09	4.33



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Analytical Sequence

AR1660CCC500	AR1660CCC500	01/21/2023	01:05	PP054792.D	10.09	4.33
LBLK	LBLK	01/21/2023	01:54	PP054793.D	10.09	4.33

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Analytical Sequence

Client: Louis Berger U.S., Inc., A WSP Company

SDG No.: O1232

Project: NYCDDC Phase II SCI Arthur Kill Road CE

Instrument ID: ECD_P

GC Column: ZB-MR2

ID: 0.32 (mm)

Inst. Calib. Date(s): 01/17/2023

01/17/2023

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	01/17/2023	18:58	PP054621.D	8.60	3.58
AR1660ICC1000	AR1660ICC1000	01/17/2023	19:14	PP054622.D	8.60	3.58
AR1660ICC750	AR1660ICC750	01/17/2023	19:31	PP054623.D	8.60	3.58
AR1660ICC500	AR1660ICC500	01/17/2023	19:47	PP054624.D	8.60	3.58
AR1660ICC250	AR1660ICC250	01/17/2023	20:04	PP054625.D	8.60	3.58
AR1660ICC050	AR1660ICC050	01/17/2023	20:20	PP054626.D	8.60	3.58
AR1221ICC500	AR1221ICC500	01/17/2023	20:37	PP054627.D	8.60	3.58
AR1232ICC500	AR1232ICC500	01/17/2023	20:53	PP054628.D	8.60	3.58
AR1242ICC1000	AR1242ICC1000	01/17/2023	21:10	PP054629.D	8.60	3.58
AR1242ICC750	AR1242ICC750	01/17/2023	21:26	PP054630.D	8.60	3.58
AR1242ICC500	AR1242ICC500	01/17/2023	21:43	PP054631.D	8.60	3.58
AR1242ICC250	AR1242ICC250	01/17/2023	21:59	PP054632.D	8.60	3.58
AR1242ICC050	AR1242ICC050	01/17/2023	22:15	PP054633.D	8.60	3.58
AR1248ICC1000	AR1248ICC1000	01/17/2023	22:32	PP054634.D	8.60	3.58
AR1248ICC750	AR1248ICC750	01/17/2023	22:48	PP054635.D	8.60	3.58
AR1248ICC500	AR1248ICC500	01/17/2023	23:05	PP054636.D	8.60	3.58
AR1248ICC250	AR1248ICC250	01/17/2023	23:22	PP054637.D	8.60	3.58
AR1248ICC050	AR1248ICC050	01/17/2023	23:38	PP054638.D	8.60	3.58
AR1254ICC1000	AR1254ICC1000	01/17/2023	23:55	PP054639.D	8.60	3.58
AR1254ICC750	AR1254ICC750	01/18/2023	00:11	PP054640.D	8.60	3.58
AR1254ICC500	AR1254ICC500	01/18/2023	00:27	PP054641.D	8.60	3.58
AR1254ICC250	AR1254ICC250	01/18/2023	00:44	PP054642.D	8.60	3.58
AR1254ICC050	AR1254ICC050	01/18/2023	01:00	PP054643.D	8.60	3.58
AR1262ICC500	AR1262ICC500	01/18/2023	01:17	PP054644.D	8.60	3.58
AR1268ICC1000	AR1268ICC1000	01/18/2023	01:33	PP054645.D	8.60	3.58
AR1268ICC750	AR1268ICC750	01/18/2023	01:50	PP054646.D	8.60	3.58
AR1268ICC500	AR1268ICC500	01/18/2023	02:06	PP054647.D	8.60	3.58
AR1268ICC250	AR1268ICC250	01/18/2023	02:22	PP054648.D	8.60	3.58
AR1268ICC050	AR1268ICC050	01/18/2023	02:39	PP054649.D	8.60	3.58
AR1660CCC500	AR1660CCC500	01/20/2023	18:26	PP054770.D	8.60	3.58
IBLK	IBLK	01/20/2023	18:59	PP054771.D	8.60	3.58
PB150372BL	PB150372BL	01/20/2023	19:15	PP054772.D	8.60	3.58
PB150372BS	PB150372BS	01/20/2023	19:32	PP054773.D	8.60	3.58
B-P-17A	O1232-01	01/20/2023	19:48	PP054774.D	8.60	3.58
B-P-17AMS	O1232-01MS	01/20/2023	20:05	PP054775.D	8.60	3.58
B-P-17AMSD	O1232-01MSD	01/20/2023	20:21	PP054776.D	8.60	3.58
B-P-17B	O1232-02	01/20/2023	20:38	PP054777.D	8.60	3.58
WC-17	O1232-03	01/20/2023	20:54	PP054778.D	8.60	3.58
B-P-18A	O1232-04	01/20/2023	21:11	PP054779.D	8.60	3.58
B-P-18B	O1232-05	01/20/2023	21:27	PP054780.D	8.60	3.58
B-P-19A	O1232-06	01/20/2023	21:43	PP054781.D	8.60	3.58
B-P-19B	O1232-07	01/20/2023	22:00	PP054782.D	8.60	3.58
B-P-35A	O1232-08	01/20/2023	22:16	PP054783.D	8.60	3.58
B-P-35B	O1232-09	01/20/2023	22:33	PP054784.D	8.60	3.58
DUP01	O1232-10	01/20/2023	22:49	PP054785.D	8.60	3.58



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Analytical Sequence

AR1660CCC500	AR1660CCC500	01/21/2023	01:05	PP054792.D	8.60	3.58
LBLK	LBLK	01/21/2023	01:54	PP054793.D	8.60	3.58

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QC SAMPLE DATA

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:		
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:		
Client Sample ID:	PB150372BL		SDG No.:	O1232	
Lab Sample ID:	PB150372BL		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	100	Decanted:
Sample Wt/Vol:	30	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054772.D	1	01/20/23 10:35	01/20/23 19:15	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	3.10	U	3.10	17.0	ug/kg
11104-28-2	Aroclor-1221	4.70	U	4.70	17.0	ug/kg
11141-16-5	Aroclor-1232	3.90	U	3.90	17.0	ug/kg
53469-21-9	Aroclor-1242	2.40	U	2.40	17.0	ug/kg
12672-29-6	Aroclor-1248	3.00	U	3.00	17.0	ug/kg
11097-69-1	Aroclor-1254	4.20	U	4.20	17.0	ug/kg
37324-23-5	Aroclor-1262	3.30	U	3.30	17.0	ug/kg
11100-14-4	Aroclor-1268	5.70	U	5.70	17.0	ug/kg
11096-82-5	Aroclor-1260	3.20	U	3.20	17.0	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	16.6		40 - 162	83%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.6		32 - 176	88%	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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/17/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/17/23	
Client Sample ID:	PIBLK-PP054621.D		SDG No.:	O1232	
Lab Sample ID:	I.BLK-PP054621.D		Matrix:	WATER	
Analytical Method:	SW8082A		% Solid:	0	Decanted:
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
PP054621.D	1		01/17/23	PP011723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.14	U	0.14	0.50	ug/L
11104-28-2	Aroclor-1221	0.14	U	0.14	0.50	ug/L
11141-16-5	Aroclor-1232	0.17	U	0.17	0.50	ug/L
53469-21-9	Aroclor-1242	0.12	U	0.12	0.50	ug/L
12672-29-6	Aroclor-1248	0.15	U	0.15	0.50	ug/L
11097-69-1	Aroclor-1254	0.22	U	0.22	0.50	ug/L
11096-82-5	Aroclor-1260	0.11	U	0.11	0.50	ug/L
37324-23-5	Aroclor-1262	0.17	U	0.17	0.50	ug/L
11100-14-4	Aroclor-1268	0.13	U	0.13	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.4		60 - 140	112%	SPK: 20
2051-24-3	Decachlorobiphenyl	24.6		60 - 140	123%	SPK: 20

Comments:

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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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/20/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/20/23	
Client Sample ID:	PIBLK-PP054771.D		SDG No.:	O1232	
Lab Sample ID:	I.BLK-PP054771.D		Matrix:	WATER	
Analytical Method:	SW8082A		% Solid:	0	Decanted:
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
PP054771.D	1		01/20/23	pp012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.14	U	0.14	0.50	ug/L
11104-28-2	Aroclor-1221	0.14	U	0.14	0.50	ug/L
11141-16-5	Aroclor-1232	0.17	U	0.17	0.50	ug/L
53469-21-9	Aroclor-1242	0.12	U	0.12	0.50	ug/L
12672-29-6	Aroclor-1248	0.15	U	0.15	0.50	ug/L
11097-69-1	Aroclor-1254	0.22	U	0.22	0.50	ug/L
11096-82-5	Aroclor-1260	0.11	U	0.11	0.50	ug/L
37324-23-5	Aroclor-1262	0.17	U	0.17	0.50	ug/L
11100-14-4	Aroclor-1268	0.13	U	0.13	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	20.0		60 - 140	100%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.2		60 - 140	106%	SPK: 20

Comments:

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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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/21/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/21/23	
Client Sample ID:	PIBLK-PP054793.D		SDG No.:	O1232	
Lab Sample ID:	I.BLK-PP054793.D		Matrix:	WATER	
Analytical Method:	SW8082A		% Solid:	0	Decanted:
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
PP054793.D	1		01/21/23	pp012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
12674-11-2	Aroclor-1016	0.14	U	0.14	0.50	ug/L
11104-28-2	Aroclor-1221	0.14	U	0.14	0.50	ug/L
11141-16-5	Aroclor-1232	0.17	U	0.17	0.50	ug/L
53469-21-9	Aroclor-1242	0.12	U	0.12	0.50	ug/L
12672-29-6	Aroclor-1248	0.15	U	0.15	0.50	ug/L
11097-69-1	Aroclor-1254	0.22	U	0.22	0.50	ug/L
11096-82-5	Aroclor-1260	0.11	U	0.11	0.50	ug/L
37324-23-5	Aroclor-1262	0.17	U	0.17	0.50	ug/L
11100-14-4	Aroclor-1268	0.13	U	0.13	0.50	ug/L
SURROGATES						
877-09-8	Tetrachloro-m-xylene	21.0		60 - 140	105%	SPK: 20
2051-24-3	Decachlorobiphenyl	23.5		60 - 140	117%	SPK: 20

Comments:

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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

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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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:		
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:		
Client Sample ID:	PB150372BS		SDG No.:	O1232	
Lab Sample ID:	PB150372BS		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	100	Decanted:
Sample Wt/Vol:	30.02	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054773.D	1	01/20/23 10:35	01/20/23 19:32	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	119		3.00	17.0	ug/kg
11104-28-2	Aroclor-1221	4.70	U	4.70	17.0	ug/kg
11141-16-5	Aroclor-1232	3.90	U	3.90	17.0	ug/kg
53469-21-9	Aroclor-1242	2.40	U	2.40	17.0	ug/kg
12672-29-6	Aroclor-1248	3.00	U	3.00	17.0	ug/kg
11097-69-1	Aroclor-1254	4.20	U	4.20	17.0	ug/kg
37324-23-5	Aroclor-1262	3.30	U	3.30	17.0	ug/kg
11100-14-4	Aroclor-1268	5.70	U	5.70	17.0	ug/kg
11096-82-5	Aroclor-1260	120		3.20	17.0	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	17.1		40 - 162	86%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.2		32 - 176	91%	SPK: 20

Comments:

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MDL = Method Detection Limit

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17AMS	SDG No.:	O1232
Lab Sample ID:	O1232-01MS	Matrix:	SOIL
Analytical Method:	SW8082A	% Solid:	89.4
Sample Wt/Vol:	30.09 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	SW3541B		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054775.D	1	01/20/23 10:35	01/20/23 20:05	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	174		3.40	19.0	ug/kg
11104-28-2	Aroclor-1221	5.20	U	5.20	19.0	ug/kg
11141-16-5	Aroclor-1232	4.40	U	4.40	19.0	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	19.0	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	19.0	ug/kg
11097-69-1	Aroclor-1254	4.70	U	4.70	19.0	ug/kg
37324-23-5	Aroclor-1262	3.70	U	3.70	19.0	ug/kg
11100-14-4	Aroclor-1268	6.40	U	6.40	19.0	ug/kg
11096-82-5	Aroclor-1260	161		3.60	19.0	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.2		40 - 162	111%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.9		32 - 176	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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17AMSD	SDG No.:	O1232
Lab Sample ID:	O1232-01MSD	Matrix:	SOIL
Analytical Method:	SW8082A	% Solid:	89.4
Sample Wt/Vol:	30.07 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0	PH :	
Prep Method :	SW3541B		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP054776.D	1	01/20/23 10:35	01/20/23 20:21	PB150372

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	172		3.40	19.0	ug/kg
11104-28-2	Aroclor-1221	5.20	U	5.20	19.0	ug/kg
11141-16-5	Aroclor-1232	4.40	U	4.40	19.0	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	19.0	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	19.0	ug/kg
11097-69-1	Aroclor-1254	4.70	U	4.70	19.0	ug/kg
37324-23-5	Aroclor-1262	3.70	U	3.70	19.0	ug/kg
11100-14-4	Aroclor-1268	6.40	U	6.40	19.0	ug/kg
11096-82-5	Aroclor-1260	161		3.60	19.0	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	22.3		40 - 162	111%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.8		32 - 176	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