



284 Sheffield Street, Mountainside, New Jersey - 07092

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LAB CHRONICLE

OrderID: O1233
Client: Louis Berger U.S., Inc., A WSP Company
Contact: Jonathan Ganz

OrderDate: 1/19/2023 1:53:00 PM
Project: NYCDDC Phase II SCI Arthur Kill Road CEQR
Location: N11,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1233-02	B-P34A	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/20/23	01/19/23
O1233-03	B-P34B	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/21/23	01/19/23
O1233-04	B-P36A	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/21/23	01/19/23
O1233-05	B-P36B	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/21/23	01/19/23
O1233-06	B-P37A	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/23/23	01/19/23
O1233-07	B-P37B	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/20/23	01/19/23
O1233-08	B-P38A	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/23/23	01/19/23
O1233-09	B-P38B	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/21/23	01/19/23
O1233-10	WC-38	SOIL	SVOC-PAH	8270E	01/18/23	01/20/23	01/24/23	01/19/23
O1233-11	B-P38C	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/21/23	01/19/23
O1233-11DL	B-P38CDL	SOIL	SVOC-TCL BNA -20	8270E	01/18/23	01/20/23	01/25/23	01/19/23

Hit Summary Sheet SW-846

SDG No.: O1233

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : B-P34A								
O1233-02	B-P34A	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	1,800.000	AB	0	0	ug/Kg
O1233-02	B-P34A	SOIL	Benzophenone *	790.000	J	0	0	ug/Kg
O1233-02	B-P34A	SOIL	Heptafluorobutyric acid, n-octadec *	300.000	J	0	0	ug/Kg
O1233-02	B-P34A	SOIL	Methanone, (1-hydroxycyclohexy *	100.000	J	0	0	ug/Kg
O1233-02	B-P34A	SOIL	n-Hexadecanoic acid *	220.000	J	0	0	ug/Kg
Total Tics :				3,210.00				
Total Concentration:				3,210.00				
Client ID : B-P34B								
O1233-03	B-P34B	SOIL	1-Dodecanol, 2-octyl- *	190.000	J	0	0	ug/Kg
O1233-03	B-P34B	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	1,300.000	AB	0	0	ug/Kg
O1233-03	B-P34B	SOIL	Benzophenone *	130.000	J	0	0	ug/Kg
O1233-03	B-P34B	SOIL	n-Hexadecanoic acid *	170.000	J	0	0	ug/Kg
Total Tics :				1,790.00				
Total Concentration:				1,790.00				
Client ID : B-P36A								
O1233-04	B-P36A	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	1,400.000	AB	0	0	ug/Kg
O1233-04	B-P36A	SOIL	Benzophenone *	140.000	J	0	0	ug/Kg
O1233-04	B-P36A	SOIL	n-Hexadecanoic acid *	160.000	J	0	0	ug/Kg
O1233-04	B-P36A	SOIL	Pentadecafluorooctanoic acid, oct: *	160.000	J	0	0	ug/Kg
Total Tics :				1,860.00				
Total Concentration:				1,860.00				
Client ID : B-P36B								
O1233-05	B-P36B	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	1,400.000	AB	0	0	ug/Kg
O1233-05	B-P36B	SOIL	3-Hexen-2-one *	79.300	J	0	0	ug/Kg
O1233-05	B-P36B	SOIL	Benzophenone *	99.200	J	0	0	ug/Kg
O1233-05	B-P36B	SOIL	Pentadecafluorooctanoic acid, oct: *	95.800	J	0	0	ug/Kg
Total Tics :				1,674.30				
Total Concentration:				1,674.30				
Client ID : B-P37A								
O1233-06	B-P37A	SOIL	Phenanthrene	120.000	J	95	190	ug/Kg
O1233-06	B-P37A	SOIL	Fluoranthene	220.000		90.7	190	ug/Kg
O1233-06	B-P37A	SOIL	Pyrene	190.000		84.3	190	ug/Kg
O1233-06	B-P37A	SOIL	Chrysene	110.000	J	97.1	190	ug/Kg
O1233-06	B-P37A	SOIL	Bis(2-ethylhexyl)phthalate	110.000	J	100	190	ug/Kg
O1233-06	B-P37A	SOIL	Benzo(b)fluoranthene	140.000	J	78.4	190	ug/Kg
O1233-06	B-P37A	SOIL	Benzo(a)pyrene	92.400	J	76.9	190	ug/Kg
Total Svoc :				982.40				
O1233-06	B-P37A	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	630.000	AB	0	0	ug/Kg

Hit Summary Sheet

SW-846

SDG No.: O1233

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
O1233-06	B-P37A	SOIL	Benzophenone	*	160.000	J 0	0	ug/Kg
O1233-06	B-P37A	SOIL	unknown21.522	*	110.000	J 0	0	ug/Kg
Total Tics :				900.00				
Total Concentration:				1,882.40				
Client ID : B-P37B								
O1233-07	B-P37B	SOIL	Bis(2-ethylhexyl)phthalate		150.000	J 110	200	ug/Kg
Total Svoc :				150.00				
O1233-07	B-P37B	SOIL	n-Hexadecanoic acid	*	310.000	J 0	0	ug/Kg
O1233-07	B-P37B	SOIL	Octadecanoic acid	*	130.000	J 0	0	ug/Kg
O1233-07	B-P37B	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	1,400.000	AB 0	0	ug/Kg
O1233-07	B-P37B	SOIL	Benzophenone	*	210.000	J 0	0	ug/Kg
Total Tics :				2,050.00				
Total Concentration:				2,200.00				
Client ID : B-P38A								
O1233-08	B-P38A	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	660.000	AB 0	0	ug/Kg
O1233-08	B-P38A	SOIL	Benzophenone	*	180.000	J 0	0	ug/Kg
O1233-08	B-P38A	SOIL	Cyclotetradecane	*	140.000	J 0	0	ug/Kg
Total Tics :				980.00				
Total Concentration:				980.00				
Client ID : B-P38B								
O1233-09	B-P38B	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	1,600.000	AB 0	0	ug/Kg
O1233-09	B-P38B	SOIL	Benzophenone	*	240.000	J 0	0	ug/Kg
O1233-09	B-P38B	SOIL	n-Hexadecanoic acid	*	160.000	J 0	0	ug/Kg
O1233-09	B-P38B	SOIL	Oxalic acid, cyclobutyl hexadecyl	*	220.000	J 0	0	ug/Kg
O1233-09	B-P38B	SOIL	Supraene	*	140.000	J 0	0	ug/Kg
O1233-09	B-P38B	SOIL	unknown12.807	*	380.000	J 0	0	ug/Kg
Total Tics :				2,740.00				
Total Concentration:				2,740.00				
Client ID : B-P38C								
O1233-11	B-P38C	SOIL	Naphthalene		4,600.000	E 85.9	200	ug/Kg
O1233-11	B-P38C	SOIL	2-Methylnaphthalene		4,300.000	E 87.2	200	ug/Kg
O1233-11	B-P38C	SOIL	Bis(2-ethylhexyl)phthalate		150.000	J 100	200	ug/Kg
Total Svoc :				9,050.00				
O1233-11	B-P38C	SOIL	Cyclohexane, 1-ethyl-2-methyl-	*	860.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Decane, 3-methyl-	*	1,000.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Heptane, 2,5-dimethyl-	*	800.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Heptane, 2-methyl-	*	910.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 1,2,3-trimethyl-	*	2,100.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 1,3-diethyl-5-methyl-	*	990.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 1-ethyl-2-methyl-	*	1,100.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 1-ethyl-3,5-dimethyl-	*	1,400.000	J 0	0	ug/Kg

Hit Summary Sheet

SW-846

SDG No.: O1233

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
O1233-11	B-P38C	SOIL	Benzene, 1-ethyl-3-methyl-	*	800.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 1-methyl-4-(1-methylpr	*	950.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 2-butenyl-	*	1,300.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Benzene, 4-ethyl-1,2-dimethyl-	*	890.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	1-Phenyl-1-butene	*	2,300.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Nonane	*	1,400.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Octane	*	1,400.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	Octane, 2,6-dimethyl-	*	1,900.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	o-Cymene	*	840.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	unknown7.748	*	1,600.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	unknown8.666	*	1,000.000	J 0	0	ug/Kg
O1233-11	B-P38C	SOIL	1-Methylnaphthalene	*	2,000.000	J 92.3	200	ug/Kg
Total Tics :					25,540.00			
Total Concentration:					34,590.00			
Client ID : B-P38CDL								
O1233-11DL	B-P38CDL	SOIL	Naphthalene		4,300.000	D 430	990	ug/Kg
O1233-11DL	B-P38CDL	SOIL	2-Methylnaphthalene		3,600.000	D 440	990	ug/Kg
Total Svoc :					7,900.00			
Total Concentration:					7,900.00			

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-P34A	SDG No.:	O1233
Lab Sample ID:	O1233-02	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132170.D	1	01/20/23 12:30	01/20/23 20:03	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	170	U	170	390	ug/Kg
108-95-2	Phenol	79.3	U	79.3	200	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	94.1	U	94.1	200	ug/Kg
95-57-8	2-Chlorophenol	80.0	U	80.0	200	ug/Kg
95-48-7	2-Methylphenol	130	U	130	200	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	200	ug/Kg
98-86-2	Acetophenone	93.9	U	93.9	200	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	390	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	89.2	U	89.2	93.8	ug/Kg
67-72-1	Hexachloroethane	86.4	U	86.4	200	ug/Kg
98-95-3	Nitrobenzene	86.6	U	86.6	200	ug/Kg
78-59-1	Isophorone	78.1	U	78.1	200	ug/Kg
88-75-5	2-Nitrophenol	110	U	110	200	ug/Kg
105-67-9	2,4-Dimethylphenol	120	U	120	200	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	130	U	130	200	ug/Kg
120-83-2	2,4-Dichlorophenol	95.7	U	95.7	200	ug/Kg
91-20-3	Naphthalene	86.6	U	86.6	200	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	200	ug/Kg
87-68-3	Hexachlorobutadiene	120	U	120	200	ug/Kg
105-60-2	Caprolactam	120	U	120	390	ug/Kg
59-50-7	4-Chloro-3-methylphenol	92.2	U	92.2	200	ug/Kg
91-57-6	2-Methylnaphthalene	87.9	U	87.9	200	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	390	ug/Kg
88-06-2	2,4,6-Trichlorophenol	100	U	100	200	ug/Kg
95-95-4	2,4,5-Trichlorophenol	98.0	U	98.0	200	ug/Kg
92-52-4	1,1-Biphenyl	100	U	100	200	ug/Kg
91-58-7	2-Chloronaphthalene	100	U	100	200	ug/Kg
88-74-4	2-Nitroaniline	130	U	130	200	ug/Kg
131-11-3	Dimethylphthalate	94.8	U	94.8	200	ug/Kg
208-96-8	Acenaphthylene	80.5	U	80.5	200	ug/Kg
606-20-2	2,6-Dinitrotoluene	91.5	U	91.5	200	ug/Kg

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-P34A	SDG No.:	O1233
Lab Sample ID:	O1233-02	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132170.D	1	01/20/23 12:30	01/20/23 20:03	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	120	U	120	200	ug/Kg
83-32-9	Acenaphthene	92.5	U	92.5	200	ug/Kg
51-28-5	2,4-Dinitrophenol	150	U	150	390	ug/Kg
100-02-7	4-Nitrophenol	160	U	160	390	ug/Kg
132-64-9	Dibenzofuran	87.0	U	87.0	200	ug/Kg
121-14-2	2,4-Dinitrotoluene	99.1	U	99.1	200	ug/Kg
84-66-2	Diethylphthalate	94.3	U	94.3	200	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	200	ug/Kg
86-73-7	Fluorene	92.3	U	92.3	200	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	200	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	100	U	100	390	ug/Kg
86-30-6	n-Nitrosodiphenylamine	96.3	U	96.3	200	ug/Kg
101-55-3	4-Bromophenyl-phenylether	120	U	120	200	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	200	ug/Kg
1912-24-9	Atrazine	110	U	110	200	ug/Kg
87-86-5	Pentachlorophenol	140	U	140	390	ug/Kg
85-01-8	Phenanthrene	98.0	U	98.0	200	ug/Kg
120-12-7	Anthracene	98.4	U	98.4	200	ug/Kg
86-74-8	Carbazole	98.7	U	98.7	200	ug/Kg
84-74-2	Di-n-butylphthalate	100	U	100	200	ug/Kg
206-44-0	Fluoranthene	93.5	U	93.5	200	ug/Kg
129-00-0	Pyrene	87.0	U	87.0	200	ug/Kg
85-68-7	Butylbenzylphthalate	96.9	U	96.9	200	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	390	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	100	U	100	200	ug/Kg
117-84-0	Di-n-octyl phthalate	110	U	110	390	ug/Kg
205-99-2	Benzo(b)fluoranthene	80.9	U	80.9	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	86.3	U	86.3	200	ug/Kg
50-32-8	Benzo(a)pyrene	79.3	U	79.3	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg

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-P34A	SDG No.:	O1233
Lab Sample ID:	O1233-02	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132170.D	1	01/20/23 12:30	01/20/23 20:03	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	110	U	110	200	ug/Kg
123-91-1	1,4-Dioxane	100	U	100	200	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	95.2	U	95.2	200	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	140		18 - 112	93%	SPK: 150
13127-88-3	Phenol-d6	149		21 - 104	99%	SPK: 150
4165-60-0	Nitrobenzene-d5	102		27 - 109	102%	SPK: 100
321-60-8	2-Fluorobiphenyl	81.2		30 - 103	81%	SPK: 100
118-79-6	2,4,6-Tribromophenol	163		10 - 121	109%	SPK: 150
1718-51-0	Terphenyl-d14	79.7		21 - 107	80%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	166000	7.09
1146-65-2	Naphthalene-d8	608000	8.378
15067-26-2	Acenaphthene-d10	329000	10.142
1517-22-2	Phenanthrene-d10	655000	11.636
1719-03-5	Chrysene-d12	483000	14.301
1520-96-3	Perylene-d12	385000	15.895

TENTATIVE IDENTIFIED COMPOUNDS

000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1800	AB	5.34	ug/Kg
000119-61-9	Benzophenone	790	J	10.9	ug/Kg
000947-19-3	Methanone, (1-hydroxycyclohexyl)ph	100	J	11.2	ug/Kg
000057-10-3	n-Hexadecanoic acid	220	J	12.1	ug/Kg
000400-57-7	Heptafluorobutyric acid, n-octadec	300	J	14.1	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P34B	SDG No.:	O1233
Lab Sample ID:	O1233-03	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.7
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132178.D	1	01/20/23 12:30	01/21/23 00:23	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	150	U	150	360	ug/Kg
108-95-2	Phenol	74.4	U	74.4	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	88.3	U	88.3	190	ug/Kg
95-57-8	2-Chlorophenol	75.1	U	75.1	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	190	ug/Kg
98-86-2	Acetophenone	88.0	U	88.0	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	360	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	83.7	U	83.7	87.9	ug/Kg
67-72-1	Hexachloroethane	81.0	U	81.0	190	ug/Kg
98-95-3	Nitrobenzene	81.2	U	81.2	190	ug/Kg
78-59-1	Isophorone	73.2	U	73.2	190	ug/Kg
88-75-5	2-Nitrophenol	100	U	100	190	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	190	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	120	U	120	190	ug/Kg
120-83-2	2,4-Dichlorophenol	89.8	U	89.8	190	ug/Kg
91-20-3	Naphthalene	81.2	U	81.2	190	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	190	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	190	ug/Kg
105-60-2	Caprolactam	110	U	110	360	ug/Kg
59-50-7	4-Chloro-3-methylphenol	86.5	U	86.5	190	ug/Kg
91-57-6	2-Methylnaphthalene	82.4	U	82.4	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	360	ug/Kg
88-06-2	2,4,6-Trichlorophenol	93.9	U	93.9	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	91.9	U	91.9	190	ug/Kg
92-52-4	1,1-Biphenyl	95.1	U	95.1	190	ug/Kg
91-58-7	2-Chloronaphthalene	94.0	U	94.0	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	88.9	U	88.9	190	ug/Kg
208-96-8	Acenaphthylene	75.5	U	75.5	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	85.9	U	85.9	190	ug/Kg

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-P34B	SDG No.:	O1233
Lab Sample ID:	O1233-03	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.7
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132178.D	1	01/20/23 12:30	01/21/23 00:23	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	110	U	110	190	ug/Kg
83-32-9	Acenaphthene	86.7	U	86.7	190	ug/Kg
51-28-5	2,4-Dinitrophenol	140	U	140	360	ug/Kg
100-02-7	4-Nitrophenol	150	U	150	360	ug/Kg
132-64-9	Dibenzofuran	81.6	U	81.6	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	93.0	U	93.0	190	ug/Kg
84-66-2	Diethylphthalate	88.5	U	88.5	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	86.6	U	86.6	190	ug/Kg
100-01-6	4-Nitroaniline	110	U	110	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	94.8	U	94.8	360	ug/Kg
86-30-6	n-Nitrosodiphenylamine	90.4	U	90.4	190	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	190	ug/Kg
118-74-1	Hexachlorobenzene	110	U	110	190	ug/Kg
1912-24-9	Atrazine	98.9	U	98.9	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	360	ug/Kg
85-01-8	Phenanthrene	91.9	U	91.9	190	ug/Kg
120-12-7	Anthracene	92.3	U	92.3	190	ug/Kg
86-74-8	Carbazole	92.6	U	92.6	190	ug/Kg
84-74-2	Di-n-butylphthalate	95.6	U	95.6	190	ug/Kg
206-44-0	Fluoranthene	87.7	U	87.7	190	ug/Kg
129-00-0	Pyrene	81.6	U	81.6	190	ug/Kg
85-68-7	Butylbenzylphthalate	90.9	U	90.9	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	360	ug/Kg
56-55-3	Benzo(a)anthracene	95.4	U	95.4	190	ug/Kg
218-01-9	Chrysene	94.0	U	94.0	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	97.4	U	97.4	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	360	ug/Kg
205-99-2	Benzo(b)fluoranthene	75.8	U	75.8	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	80.9	U	80.9	190	ug/Kg
50-32-8	Benzo(a)pyrene	74.4	U	74.4	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	190	ug/Kg

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-P34B		SDG No.:	O1233	
Lab Sample ID:	O1233-03		Matrix:	SOIL	
Analytical Method:	SW8270		% Solid:	90.7	
Sample Wt/Vol:	30.09	Units: g	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20	
Extraction Type :		Decanted : N	Level :	LOW	
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N	PH :
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132178.D	1	01/20/23 12:30	01/21/23 00:23	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	100	U	100	190	ug/Kg
123-91-1	1,4-Dioxane	97.9	U	97.9	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	89.3	U	89.3	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	101		18 - 112	67%	SPK: 150
13127-88-3	Phenol-d6	103		21 - 104	69%	SPK: 150
4165-60-0	Nitrobenzene-d5	72.2		27 - 109	72%	SPK: 100
321-60-8	2-Fluorobiphenyl	60.7		30 - 103	61%	SPK: 100
118-79-6	2,4,6-Tribromophenol	108		10 - 121	72%	SPK: 150
1718-51-0	Terphenyl-d14	64.8		21 - 107	65%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	186000		7.089		
1146-65-2	Naphthalene-d8	676000		8.378		
15067-26-2	Acenaphthene-d10	368000		10.142		
1517-22-2	Phenanthrene-d10	733000		11.636		
1719-03-5	Chrysene-d12	480000		14.301		
1520-96-3	Perylene-d12	398000		15.895		
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1300	AB		5.34	ug/Kg
000119-61-9	Benzophenone	130	J		10.9	ug/Kg
000057-10-3	n-Hexadecanoic acid	170	J		12.1	ug/Kg
005333-42-6	1-Dodecanol, 2-octyl-	190	J		14.1	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P36A	SDG No.:	O1233
Lab Sample ID:	O1233-04	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.6
Sample Wt/Vol:	30.03 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132179.D	1	01/20/23 12:30	01/21/23 00:56	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	160	U	160	370	ug/Kg
108-95-2	Phenol	75.5	U	75.5	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	89.5	U	89.5	190	ug/Kg
95-57-8	2-Chlorophenol	76.2	U	76.2	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	190	ug/Kg
98-86-2	Acetophenone	89.3	U	89.3	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	370	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	84.8	U	84.8	89.2	ug/Kg
67-72-1	Hexachloroethane	82.2	U	82.2	190	ug/Kg
98-95-3	Nitrobenzene	82.4	U	82.4	190	ug/Kg
78-59-1	Isophorone	74.3	U	74.3	190	ug/Kg
88-75-5	2-Nitrophenol	100	U	100	190	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	190	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	120	U	120	190	ug/Kg
120-83-2	2,4-Dichlorophenol	91.1	U	91.1	190	ug/Kg
91-20-3	Naphthalene	82.4	U	82.4	190	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	190	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	190	ug/Kg
105-60-2	Caprolactam	110	U	110	370	ug/Kg
59-50-7	4-Chloro-3-methylphenol	87.7	U	87.7	190	ug/Kg
91-57-6	2-Methylnaphthalene	83.6	U	83.6	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	370	ug/Kg
88-06-2	2,4,6-Trichlorophenol	95.2	U	95.2	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	93.2	U	93.2	190	ug/Kg
92-52-4	1,1-Biphenyl	96.4	U	96.4	190	ug/Kg
91-58-7	2-Chloronaphthalene	95.3	U	95.3	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	90.2	U	90.2	190	ug/Kg
208-96-8	Acenaphthylene	76.6	U	76.6	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	87.1	U	87.1	190	ug/Kg

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-P36A	SDG No.:	O1233
Lab Sample ID:	O1233-04	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.6
Sample Wt/Vol:	30.03 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132179.D	1	01/20/23 12:30	01/21/23 00:56	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	110	U	110	190	ug/Kg
83-32-9	Acenaphthene	88.0	U	88.0	190	ug/Kg
51-28-5	2,4-Dinitrophenol	140	U	140	370	ug/Kg
100-02-7	4-Nitrophenol	150	U	150	370	ug/Kg
132-64-9	Dibenzofuran	82.7	U	82.7	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	94.3	U	94.3	190	ug/Kg
84-66-2	Diethylphthalate	89.8	U	89.8	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	87.9	U	87.9	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	96.1	U	96.1	370	ug/Kg
86-30-6	n-Nitrosodiphenylamine	91.6	U	91.6	190	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	190	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	190	ug/Kg
1912-24-9	Atrazine	100	U	100	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	370	ug/Kg
85-01-8	Phenanthrene	93.2	U	93.2	190	ug/Kg
120-12-7	Anthracene	93.7	U	93.7	190	ug/Kg
86-74-8	Carbazole	93.9	U	93.9	190	ug/Kg
84-74-2	Di-n-butylphthalate	97.0	U	97.0	190	ug/Kg
206-44-0	Fluoranthene	89.0	U	89.0	190	ug/Kg
129-00-0	Pyrene	82.7	U	82.7	190	ug/Kg
85-68-7	Butylbenzylphthalate	92.2	U	92.2	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	370	ug/Kg
56-55-3	Benzo(a)anthracene	96.8	U	96.8	190	ug/Kg
218-01-9	Chrysene	95.3	U	95.3	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	98.8	U	98.8	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	370	ug/Kg
205-99-2	Benzo(b)fluoranthene	76.9	U	76.9	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	82.1	U	82.1	190	ug/Kg
50-32-8	Benzo(a)pyrene	75.5	U	75.5	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	190	ug/Kg

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-P36A	SDG No.:	O1233
Lab Sample ID:	O1233-04	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.6
Sample Wt/Vol:	30.03 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132179.D	1	01/20/23 12:30	01/21/23 00:56	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	100	U	100	190	ug/Kg
123-91-1	1,4-Dioxane	99.3	U	99.3	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	90.5	U	90.5	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	117		18 - 112	78%	SPK: 150
13127-88-3	Phenol-d6	123		21 - 104	82%	SPK: 150
4165-60-0	Nitrobenzene-d5	86.0		27 - 109	86%	SPK: 100
321-60-8	2-Fluorobiphenyl	70.7		30 - 103	71%	SPK: 100
118-79-6	2,4,6-Tribromophenol	136		10 - 121	90%	SPK: 150
1718-51-0	Terphenyl-d14	76.2		21 - 107	76%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	189000		7.089		
1146-65-2	Naphthalene-d8	681000		8.378		
15067-26-2	Acenaphthene-d10	366000		10.142		
1517-22-2	Phenanthrene-d10	725000		11.636		
1719-03-5	Chrysene-d12	477000		14.301		
1520-96-3	Perylene-d12	393000		15.895		
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1400	AB		5.34	ug/Kg
000119-61-9	Benzophenone	140	J		10.9	ug/Kg
000057-10-3	n-Hexadecanoic acid	160	J		12.1	ug/Kg
1000406-04-8	Pentadecafluorooctanoic acid, octa	160	J		14.1	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P36B	SDG No.:	O1233
Lab Sample ID:	O1233-05	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.4
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132180.D	1	01/20/23 12:30	01/21/23 01:28	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	160	U	160	360	ug/Kg
108-95-2	Phenol	74.9	U	74.9	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	88.8	U	88.8	190	ug/Kg
95-57-8	2-Chlorophenol	75.5	U	75.5	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	190	ug/Kg
98-86-2	Acetophenone	88.6	U	88.6	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	360	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	84.2	U	84.2	88.5	ug/Kg
67-72-1	Hexachloroethane	81.5	U	81.5	190	ug/Kg
98-95-3	Nitrobenzene	81.7	U	81.7	190	ug/Kg
78-59-1	Isophorone	73.6	U	73.6	190	ug/Kg
88-75-5	2-Nitrophenol	100	U	100	190	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	190	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	120	U	120	190	ug/Kg
120-83-2	2,4-Dichlorophenol	90.3	U	90.3	190	ug/Kg
91-20-3	Naphthalene	81.7	U	81.7	190	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	190	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	190	ug/Kg
105-60-2	Caprolactam	110	U	110	360	ug/Kg
59-50-7	4-Chloro-3-methylphenol	87.0	U	87.0	190	ug/Kg
91-57-6	2-Methylnaphthalene	82.9	U	82.9	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	360	ug/Kg
88-06-2	2,4,6-Trichlorophenol	94.4	U	94.4	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	92.4	U	92.4	190	ug/Kg
92-52-4	1,1-Biphenyl	95.7	U	95.7	190	ug/Kg
91-58-7	2-Chloronaphthalene	94.5	U	94.5	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	89.5	U	89.5	190	ug/Kg
208-96-8	Acenaphthylene	76.0	U	76.0	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	86.4	U	86.4	190	ug/Kg

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-P36B	SDG No.:	O1233
Lab Sample ID:	O1233-05	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.4
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132180.D	1	01/20/23 12:30	01/21/23 01:28	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	110	U	110	190	ug/Kg
83-32-9	Acenaphthene	87.2	U	87.2	190	ug/Kg
51-28-5	2,4-Dinitrophenol	140	U	140	360	ug/Kg
100-02-7	4-Nitrophenol	150	U	150	360	ug/Kg
132-64-9	Dibenzofuran	82.1	U	82.1	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	93.6	U	93.6	190	ug/Kg
84-66-2	Diethylphthalate	89.0	U	89.0	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	87.1	U	87.1	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	95.3	U	95.3	360	ug/Kg
86-30-6	n-Nitrosodiphenylamine	90.9	U	90.9	190	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	190	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	190	ug/Kg
1912-24-9	Atrazine	99.5	U	99.5	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	360	ug/Kg
85-01-8	Phenanthrene	92.4	U	92.4	190	ug/Kg
120-12-7	Anthracene	92.9	U	92.9	190	ug/Kg
86-74-8	Carbazole	93.1	U	93.1	190	ug/Kg
84-74-2	Di-n-butylphthalate	96.2	U	96.2	190	ug/Kg
206-44-0	Fluoranthene	88.2	U	88.2	190	ug/Kg
129-00-0	Pyrene	82.1	U	82.1	190	ug/Kg
85-68-7	Butylbenzylphthalate	91.5	U	91.5	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	360	ug/Kg
56-55-3	Benzo(a)anthracene	96.0	U	96.0	190	ug/Kg
218-01-9	Chrysene	94.5	U	94.5	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	98.0	U	98.0	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	360	ug/Kg
205-99-2	Benzo(b)fluoranthene	76.3	U	76.3	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	81.4	U	81.4	190	ug/Kg
50-32-8	Benzo(a)pyrene	74.9	U	74.9	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	190	ug/Kg

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-P36B	SDG No.:	O1233
Lab Sample ID:	O1233-05	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.4
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132180.D	1	01/20/23 12:30	01/21/23 01:28	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	100	U	100	190	ug/Kg
123-91-1	1,4-Dioxane	98.5	U	98.5	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	89.8	U	89.8	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	87.7		18 - 112	58%	SPK: 150
13127-88-3	Phenol-d6	98.6		21 - 104	66%	SPK: 150
4165-60-0	Nitrobenzene-d5	69.2		27 - 109	69%	SPK: 100
321-60-8	2-Fluorobiphenyl	57.5		30 - 103	58%	SPK: 100
118-79-6	2,4,6-Tribromophenol	80.4		10 - 121	54%	SPK: 150
1718-51-0	Terphenyl-d14	61.3		21 - 107	61%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	179000	7.09			
1146-65-2	Naphthalene-d8	646000	8.378			
15067-26-2	Acenaphthene-d10	349000	10.142			
1517-22-2	Phenanthrene-d10	668000	11.636			
1719-03-5	Chrysene-d12	443000	14.301			
1520-96-3	Perylene-d12	381000	15.895			
TENTATIVE IDENTIFIED COMPOUNDS						
000763-93-9	3-Hexen-2-one	79.3	J		4.75	ug/Kg
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1400	AB		5.34	ug/Kg
000119-61-9	Benzophenone	99.2	J		10.9	ug/Kg
1000406-04-8	Pentadecafluorooctanoic acid, octa	95.8	J		14.1	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P37A	SDG No.:	O1233
Lab Sample ID:	O1233-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	87.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG056390.D	1	01/20/23 12:30	01/23/23 19:09	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	160	U	160	370	ug/Kg
108-95-2	Phenol	76.9	U	76.9	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	91.2	U	91.2	190	ug/Kg
95-57-8	2-Chlorophenol	77.6	U	77.6	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	190	ug/Kg
98-86-2	Acetophenone	91.0	U	91.0	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	370	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	86.5	U	86.5	90.9	ug/Kg
67-72-1	Hexachloroethane	83.7	U	83.7	190	ug/Kg
98-95-3	Nitrobenzene	84.0	U	84.0	190	ug/Kg
78-59-1	Isophorone	75.7	U	75.7	190	ug/Kg
88-75-5	2-Nitrophenol	110	U	110	190	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	190	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	120	U	120	190	ug/Kg
120-83-2	2,4-Dichlorophenol	92.8	U	92.8	190	ug/Kg
91-20-3	Naphthalene	84.0	U	84.0	190	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	190	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	190	ug/Kg
105-60-2	Caprolactam	110	U	110	370	ug/Kg
59-50-7	4-Chloro-3-methylphenol	89.4	U	89.4	190	ug/Kg
91-57-6	2-Methylnaphthalene	85.2	U	85.2	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	370	ug/Kg
88-06-2	2,4,6-Trichlorophenol	97.0	U	97.0	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	95.0	U	95.0	190	ug/Kg
92-52-4	1,1-Biphenyl	98.3	U	98.3	190	ug/Kg
91-58-7	2-Chloronaphthalene	97.1	U	97.1	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	91.9	U	91.9	190	ug/Kg
208-96-8	Acenaphthylene	78.1	U	78.1	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	88.7	U	88.7	190	ug/Kg

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-P37A	SDG No.:	O1233
Lab Sample ID:	O1233-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	87.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG056390.D	1	01/20/23 12:30	01/23/23 19:09	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	110	U	110	190	ug/Kg
83-32-9	Acenaphthene	89.6	U	89.6	190	ug/Kg
51-28-5	2,4-Dinitrophenol	150	U	150	370	ug/Kg
100-02-7	4-Nitrophenol	160	U	160	370	ug/Kg
132-64-9	Dibenzofuran	84.3	U	84.3	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	96.1	U	96.1	190	ug/Kg
84-66-2	Diethylphthalate	91.5	U	91.5	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	190	ug/Kg
86-73-7	Fluorene	89.5	U	89.5	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	97.9	U	97.9	370	ug/Kg
86-30-6	n-Nitrosodiphenylamine	93.4	U	93.4	190	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	190	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	190	ug/Kg
1912-24-9	Atrazine	100	U	100	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	370	ug/Kg
85-01-8	Phenanthrene	120	J	95.0	190	ug/Kg
120-12-7	Anthracene	95.4	U	95.4	190	ug/Kg
86-74-8	Carbazole	95.7	U	95.7	190	ug/Kg
84-74-2	Di-n-butylphthalate	98.8	U	98.8	190	ug/Kg
206-44-0	Fluoranthene	220		90.7	190	ug/Kg
129-00-0	Pyrene	190		84.3	190	ug/Kg
85-68-7	Butylbenzylphthalate	94.0	U	94.0	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	370	ug/Kg
56-55-3	Benzo(a)anthracene	98.6	U	98.6	190	ug/Kg
218-01-9	Chrysene	110	J	97.1	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	110	J	100	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	370	ug/Kg
205-99-2	Benzo(b)fluoranthene	140	J	78.4	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	83.6	U	83.6	190	ug/Kg
50-32-8	Benzo(a)pyrene	92.4	J	76.9	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	190	ug/Kg

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-P37A	SDG No.:	O1233
Lab Sample ID:	O1233-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	87.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG056390.D	1	01/20/23 12:30	01/23/23 19:09	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	100	U	100	190	ug/Kg
123-91-1	1,4-Dioxane	100	U	100	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	92.3	U	92.3	190	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	112		18 - 112	75%	SPK: 150
13127-88-3	Phenol-d6	102		21 - 104	68%	SPK: 150
4165-60-0	Nitrobenzene-d5	58.8		27 - 109	59%	SPK: 100
321-60-8	2-Fluorobiphenyl	63.1		30 - 103	63%	SPK: 100
118-79-6	2,4,6-Tribromophenol	101		10 - 121	67%	SPK: 150
1718-51-0	Terphenyl-d14	67.9		21 - 107	68%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	38500	8.296			
1146-65-2	Naphthalene-d8	156000	11.128			
15067-26-2	Acenaphthene-d10	129000	14.912			
1517-22-2	Phenanthrene-d10	336000	17.644			
1719-03-5	Chrysene-d12	299000	21.939			
1520-96-3	Perylene-d12	323000	25.37			

TENTATIVE IDENTIFIED COMPOUNDS

000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	630	AB		5.34	ug/Kg
000119-61-9	Benzophenone	160	J		16.2	ug/Kg
	unknown21.522	110	J		21.5	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P37B	SDG No.:	O1233
Lab Sample ID:	O1233-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	83.5
Sample Wt/Vol:	30.08 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132174.D	1	01/20/23 12:30	01/20/23 22:13	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	170	U	170	390	ug/Kg
108-95-2	Phenol	80.9	U	80.9	200	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	95.9	U	95.9	200	ug/Kg
95-57-8	2-Chlorophenol	81.6	U	81.6	200	ug/Kg
95-48-7	2-Methylphenol	130	U	130	200	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	200	ug/Kg
98-86-2	Acetophenone	95.7	U	95.7	200	ug/Kg
65794-96-9	3+4-Methylphenols	120	U	120	390	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	90.9	U	90.9	95.6	ug/Kg
67-72-1	Hexachloroethane	88.0	U	88.0	200	ug/Kg
98-95-3	Nitrobenzene	88.3	U	88.3	200	ug/Kg
78-59-1	Isophorone	79.5	U	79.5	200	ug/Kg
88-75-5	2-Nitrophenol	110	U	110	200	ug/Kg
105-67-9	2,4-Dimethylphenol	120	U	120	200	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	130	U	130	200	ug/Kg
120-83-2	2,4-Dichlorophenol	97.6	U	97.6	200	ug/Kg
91-20-3	Naphthalene	88.3	U	88.3	200	ug/Kg
106-47-8	4-Chloroaniline	120	U	120	200	ug/Kg
87-68-3	Hexachlorobutadiene	120	U	120	200	ug/Kg
105-60-2	Caprolactam	120	U	120	390	ug/Kg
59-50-7	4-Chloro-3-methylphenol	94.0	U	94.0	200	ug/Kg
91-57-6	2-Methylnaphthalene	89.6	U	89.6	200	ug/Kg
77-47-4	Hexachlorocyclopentadiene	210	U	210	390	ug/Kg
88-06-2	2,4,6-Trichlorophenol	100	U	100	200	ug/Kg
95-95-4	2,4,5-Trichlorophenol	99.9	U	99.9	200	ug/Kg
92-52-4	1,1-Biphenyl	100	U	100	200	ug/Kg
91-58-7	2-Chloronaphthalene	100	U	100	200	ug/Kg
88-74-4	2-Nitroaniline	130	U	130	200	ug/Kg
131-11-3	Dimethylphthalate	96.6	U	96.6	200	ug/Kg
208-96-8	Acenaphthylene	82.1	U	82.1	200	ug/Kg
606-20-2	2,6-Dinitrotoluene	93.3	U	93.3	200	ug/Kg

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-P37B	SDG No.:	O1233
Lab Sample ID:	O1233-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	83.5
Sample Wt/Vol:	30.08 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132174.D	1	01/20/23 12:30	01/20/23 22:13	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	120	U	120	200	ug/Kg
83-32-9	Acenaphthene	94.2	U	94.2	200	ug/Kg
51-28-5	2,4-Dinitrophenol	150	U	150	390	ug/Kg
100-02-7	4-Nitrophenol	160	U	160	390	ug/Kg
132-64-9	Dibenzofuran	88.6	U	88.6	200	ug/Kg
121-14-2	2,4-Dinitrotoluene	100	U	100	200	ug/Kg
84-66-2	Diethylphthalate	96.2	U	96.2	200	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	200	ug/Kg
86-73-7	Fluorene	94.1	U	94.1	200	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	200	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	100	U	100	390	ug/Kg
86-30-6	n-Nitrosodiphenylamine	98.2	U	98.2	200	ug/Kg
101-55-3	4-Bromophenyl-phenylether	120	U	120	200	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	200	ug/Kg
1912-24-9	Atrazine	110	U	110	200	ug/Kg
87-86-5	Pentachlorophenol	140	U	140	390	ug/Kg
85-01-8	Phenanthrene	99.9	U	99.9	200	ug/Kg
120-12-7	Anthracene	100	U	100	200	ug/Kg
86-74-8	Carbazole	100	U	100	200	ug/Kg
84-74-2	Di-n-butylphthalate	100	U	100	200	ug/Kg
206-44-0	Fluoranthene	95.3	U	95.3	200	ug/Kg
129-00-0	Pyrene	88.6	U	88.6	200	ug/Kg
85-68-7	Butylbenzylphthalate	98.8	U	98.8	200	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	390	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	150	J	110	200	ug/Kg
117-84-0	Di-n-octyl phthalate	110	U	110	390	ug/Kg
205-99-2	Benzo(b)fluoranthene	82.4	U	82.4	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	87.9	U	87.9	200	ug/Kg
50-32-8	Benzo(a)pyrene	80.9	U	80.9	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg

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-P37B	SDG No.:	O1233
Lab Sample ID:	O1233-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	83.5
Sample Wt/Vol:	30.08 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132174.D	1	01/20/23 12:30	01/20/23 22:13	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	120	U	120	200	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	110	U	110	200	ug/Kg
123-91-1	1,4-Dioxane	110	U	110	200	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	97.0	U	97.0	200	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	104		18 - 112	69%	SPK: 150
13127-88-3	Phenol-d6	106		21 - 104	71%	SPK: 150
4165-60-0	Nitrobenzene-d5	75.7		27 - 109	76%	SPK: 100
321-60-8	2-Fluorobiphenyl	63.8		30 - 103	64%	SPK: 100
118-79-6	2,4,6-Tribromophenol	114		10 - 121	76%	SPK: 150
1718-51-0	Terphenyl-d14	67.0		21 - 107	67%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	178000	7.089			
1146-65-2	Naphthalene-d8	632000	8.378			
15067-26-2	Acenaphthene-d10	342000	10.142			
1517-22-2	Phenanthrene-d10	670000	11.636			
1719-03-5	Chrysene-d12	444000	14.301			
1520-96-3	Perylene-d12	376000	15.895			

TENTATIVE IDENTIFIED COMPOUNDS

000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1400	AB		5.34	ug/Kg
000119-61-9	Benzophenone	210	J		10.9	ug/Kg
000057-10-3	n-Hexadecanoic acid	310	J		12.1	ug/Kg
000057-11-4	Octadecanoic acid	130	J		12.9	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P38A	SDG No.:	O1233
Lab Sample ID:	O1233-08	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.3
Sample Wt/Vol:	30.1 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG056392.D	1	01/20/23 12:30	01/23/23 20:31	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	160	U	160	370	ug/Kg
108-95-2	Phenol	75.6	U	75.6	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	89.6	U	89.6	190	ug/Kg
95-57-8	2-Chlorophenol	76.2	U	76.2	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	190	ug/Kg
98-86-2	Acetophenone	89.4	U	89.4	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	370	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	84.9	U	84.9	89.3	ug/Kg
67-72-1	Hexachloroethane	82.3	U	82.3	190	ug/Kg
98-95-3	Nitrobenzene	82.5	U	82.5	190	ug/Kg
78-59-1	Isophorone	74.3	U	74.3	190	ug/Kg
88-75-5	2-Nitrophenol	100	U	100	190	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	190	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	120	U	120	190	ug/Kg
120-83-2	2,4-Dichlorophenol	91.2	U	91.2	190	ug/Kg
91-20-3	Naphthalene	82.5	U	82.5	190	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	190	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	190	ug/Kg
105-60-2	Caprolactam	110	U	110	370	ug/Kg
59-50-7	4-Chloro-3-methylphenol	87.8	U	87.8	190	ug/Kg
91-57-6	2-Methylnaphthalene	83.7	U	83.7	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	370	ug/Kg
88-06-2	2,4,6-Trichlorophenol	95.3	U	95.3	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	93.3	U	93.3	190	ug/Kg
92-52-4	1,1-Biphenyl	96.5	U	96.5	190	ug/Kg
91-58-7	2-Chloronaphthalene	95.4	U	95.4	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	90.3	U	90.3	190	ug/Kg
208-96-8	Acenaphthylene	76.7	U	76.7	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	87.2	U	87.2	190	ug/Kg

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-P38A	SDG No.:	O1233
Lab Sample ID:	O1233-08	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.3
Sample Wt/Vol:	30.1 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG056392.D	1	01/20/23 12:30	01/23/23 20:31	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	110	U	110	190	ug/Kg
83-32-9	Acenaphthene	88.1	U	88.1	190	ug/Kg
51-28-5	2,4-Dinitrophenol	140	U	140	370	ug/Kg
100-02-7	4-Nitrophenol	150	U	150	370	ug/Kg
132-64-9	Dibenzofuran	82.8	U	82.8	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	94.4	U	94.4	190	ug/Kg
84-66-2	Diethylphthalate	89.8	U	89.8	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	87.9	U	87.9	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	96.2	U	96.2	370	ug/Kg
86-30-6	n-Nitrosodiphenylamine	91.7	U	91.7	190	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	190	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	190	ug/Kg
1912-24-9	Atrazine	100	U	100	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	370	ug/Kg
85-01-8	Phenanthrene	93.3	U	93.3	190	ug/Kg
120-12-7	Anthracene	93.8	U	93.8	190	ug/Kg
86-74-8	Carbazole	94.0	U	94.0	190	ug/Kg
84-74-2	Di-n-butylphthalate	97.1	U	97.1	190	ug/Kg
206-44-0	Fluoranthene	89.1	U	89.1	190	ug/Kg
129-00-0	Pyrene	82.8	U	82.8	190	ug/Kg
85-68-7	Butylbenzylphthalate	92.3	U	92.3	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	370	ug/Kg
56-55-3	Benzo(a)anthracene	96.9	U	96.9	190	ug/Kg
218-01-9	Chrysene	95.4	U	95.4	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	98.9	U	98.9	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	370	ug/Kg
205-99-2	Benzo(b)fluoranthene	77.0	U	77.0	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	82.1	U	82.1	190	ug/Kg
50-32-8	Benzo(a)pyrene	75.6	U	75.6	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	190	ug/Kg

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-P38A	SDG No.:	O1233
Lab Sample ID:	O1233-08	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.3
Sample Wt/Vol:	30.1 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG056392.D	1	01/20/23 12:30	01/23/23 20:31	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	100	U	100	190	ug/Kg
123-91-1	1,4-Dioxane	99.4	U	99.4	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	90.6	U	90.6	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	135		18 - 112	90%	SPK: 150
13127-88-3	Phenol-d6	119		21 - 104	80%	SPK: 150
4165-60-0	Nitrobenzene-d5	63.8		27 - 109	64%	SPK: 100
321-60-8	2-Fluorobiphenyl	65.9		30 - 103	66%	SPK: 100
118-79-6	2,4,6-Tribromophenol	94.2		10 - 121	63%	SPK: 150
1718-51-0	Terphenyl-d14	71.2		21 - 107	71%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	36800	8.3			
1146-65-2	Naphthalene-d8	158000	11.126			
15067-26-2	Acenaphthene-d10	127000	14.91			
1517-22-2	Phenanthrene-d10	313000	17.648			
1719-03-5	Chrysene-d12	276000	21.937			
1520-96-3	Perylene-d12	296000	25.362			
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	660	AB		5.33	ug/Kg
000119-61-9	Benzophenone	180	J		16.2	ug/Kg
000295-17-0	Cyclotetradecane	140	J		21.5	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P38B	SDG No.:	O1233
Lab Sample ID:	O1233-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	80.7
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132181.D	1	01/20/23 12:30	01/21/23 02:00	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	170	U	170	410	ug/Kg
108-95-2	Phenol	83.8	U	83.8	210	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	99.3	U	99.3	210	ug/Kg
95-57-8	2-Chlorophenol	84.5	U	84.5	210	ug/Kg
95-48-7	2-Methylphenol	130	U	130	210	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	120	U	120	210	ug/Kg
98-86-2	Acetophenone	99.1	U	99.1	210	ug/Kg
65794-96-9	3+4-Methylphenols	120	U	120	410	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	94.1	U	94.1	99.0	ug/Kg
67-72-1	Hexachloroethane	91.2	U	91.2	210	ug/Kg
98-95-3	Nitrobenzene	91.4	U	91.4	210	ug/Kg
78-59-1	Isophorone	82.4	U	82.4	210	ug/Kg
88-75-5	2-Nitrophenol	110	U	110	210	ug/Kg
105-67-9	2,4-Dimethylphenol	120	U	120	210	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	130	U	130	210	ug/Kg
120-83-2	2,4-Dichlorophenol	100	U	100	210	ug/Kg
91-20-3	Naphthalene	91.4	U	91.4	210	ug/Kg
106-47-8	4-Chloroaniline	120	U	120	210	ug/Kg
87-68-3	Hexachlorobutadiene	120	U	120	210	ug/Kg
105-60-2	Caprolactam	120	U	120	410	ug/Kg
59-50-7	4-Chloro-3-methylphenol	97.4	U	97.4	210	ug/Kg
91-57-6	2-Methylnaphthalene	92.8	U	92.8	210	ug/Kg
77-47-4	Hexachlorocyclopentadiene	220	U	220	410	ug/Kg
88-06-2	2,4,6-Trichlorophenol	110	U	110	210	ug/Kg
95-95-4	2,4,5-Trichlorophenol	100	U	100	210	ug/Kg
92-52-4	1,1-Biphenyl	110	U	110	210	ug/Kg
91-58-7	2-Chloronaphthalene	110	U	110	210	ug/Kg
88-74-4	2-Nitroaniline	130	U	130	210	ug/Kg
131-11-3	Dimethylphthalate	100	U	100	210	ug/Kg
208-96-8	Acenaphthylene	85.0	U	85.0	210	ug/Kg
606-20-2	2,6-Dinitrotoluene	96.6	U	96.6	210	ug/Kg

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-P38B	SDG No.:	O1233
Lab Sample ID:	O1233-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	80.7
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132181.D	1	01/20/23 12:30	01/21/23 02:00	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	120	U	120	210	ug/Kg
83-32-9	Acenaphthene	97.6	U	97.6	210	ug/Kg
51-28-5	2,4-Dinitrophenol	160	U	160	410	ug/Kg
100-02-7	4-Nitrophenol	170	U	170	410	ug/Kg
132-64-9	Dibenzofuran	91.8	U	91.8	210	ug/Kg
121-14-2	2,4-Dinitrotoluene	100	U	100	210	ug/Kg
84-66-2	Diethylphthalate	99.6	U	99.6	210	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	120	U	120	210	ug/Kg
86-73-7	Fluorene	97.5	U	97.5	210	ug/Kg
100-01-6	4-Nitroaniline	130	U	130	210	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	110	U	110	410	ug/Kg
86-30-6	n-Nitrosodiphenylamine	100	U	100	210	ug/Kg
101-55-3	4-Bromophenyl-phenylether	120	U	120	210	ug/Kg
118-74-1	Hexachlorobenzene	130	U	130	210	ug/Kg
1912-24-9	Atrazine	110	U	110	210	ug/Kg
87-86-5	Pentachlorophenol	140	U	140	410	ug/Kg
85-01-8	Phenanthrene	100	U	100	210	ug/Kg
120-12-7	Anthracene	100	U	100	210	ug/Kg
86-74-8	Carbazole	100	U	100	210	ug/Kg
84-74-2	Di-n-butylphthalate	110	U	110	210	ug/Kg
206-44-0	Fluoranthene	98.7	U	98.7	210	ug/Kg
129-00-0	Pyrene	91.8	U	91.8	210	ug/Kg
85-68-7	Butylbenzylphthalate	100	U	100	210	ug/Kg
91-94-1	3,3-Dichlorobenzidine	170	U	170	410	ug/Kg
56-55-3	Benzo(a)anthracene	110	U	110	210	ug/Kg
218-01-9	Chrysene	110	U	110	210	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	110	U	110	210	ug/Kg
117-84-0	Di-n-octyl phthalate	110	U	110	410	ug/Kg
205-99-2	Benzo(b)fluoranthene	85.4	U	85.4	210	ug/Kg
207-08-9	Benzo(k)fluoranthene	91.1	U	91.1	210	ug/Kg
50-32-8	Benzo(a)pyrene	83.8	U	83.8	210	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	210	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	130	U	130	210	ug/Kg

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-P38B	SDG No.:	O1233
Lab Sample ID:	O1233-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	80.7
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132181.D	1	01/20/23 12:30	01/21/23 02:00	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	120	U	120	210	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	110	U	110	210	ug/Kg
123-91-1	1,4-Dioxane	110	U	110	210	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	100	U	100	210	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	125		18 - 112	84%	SPK: 150
13127-88-3	Phenol-d6	131		21 - 104	87%	SPK: 150
4165-60-0	Nitrobenzene-d5	92.0		27 - 109	92%	SPK: 100
321-60-8	2-Fluorobiphenyl	73.8		30 - 103	74%	SPK: 100
118-79-6	2,4,6-Tribromophenol	139		10 - 121	93%	SPK: 150
1718-51-0	Terphenyl-d14	76.1		21 - 107	76%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	175000	7.09
1146-65-2	Naphthalene-d8	627000	8.378
15067-26-2	Acenaphthene-d10	339000	10.142
1517-22-2	Phenanthrene-d10	668000	11.636
1719-03-5	Chrysene-d12	453000	14.301
1520-96-3	Perylene-d12	379000	15.895

TENTATIVE IDENTIFIED COMPOUNDS

000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1600	AB	5.34	ug/Kg
000119-61-9	Benzophenone	240	J	10.9	ug/Kg
000057-10-3	n-Hexadecanoic acid	160	J	12.1	ug/Kg
	unknown12.807	380	J	12.8	ug/Kg
1000309-70-6	Oxalic acid, cyclobutyl hexadecyl	220	J	14.1	ug/Kg
007683-64-9	Supraene	140	J	15.2	ug/Kg

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-P38B	SDG No.:	O1233
Lab Sample ID:	O1233-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	80.7
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132181.D	1	01/20/23 12:30	01/21/23 02:00	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P38C	SDG No.:	O1233
Lab Sample ID:	O1233-11	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132182.D	1	01/20/23 12:30	01/21/23 02:33	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	160	U	160	380	ug/Kg
108-95-2	Phenol	78.7	U	78.7	200	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	93.4	U	93.4	200	ug/Kg
95-57-8	2-Chlorophenol	79.4	U	79.4	200	ug/Kg
95-48-7	2-Methylphenol	120	U	120	200	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	110	U	110	200	ug/Kg
98-86-2	Acetophenone	93.1	U	93.1	200	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	380	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	88.5	U	88.5	93.0	ug/Kg
67-72-1	Hexachloroethane	85.7	U	85.7	200	ug/Kg
98-95-3	Nitrobenzene	85.9	U	85.9	200	ug/Kg
78-59-1	Isophorone	77.4	U	77.4	200	ug/Kg
88-75-5	2-Nitrophenol	110	U	110	200	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	200	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	130	U	130	200	ug/Kg
120-83-2	2,4-Dichlorophenol	95.0	U	95.0	200	ug/Kg
91-20-3	Naphthalene	4600	E	85.9	200	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	200	ug/Kg
87-68-3	Hexachlorobutadiene	120	U	120	200	ug/Kg
105-60-2	Caprolactam	120	U	120	380	ug/Kg
59-50-7	4-Chloro-3-methylphenol	91.5	U	91.5	200	ug/Kg
91-57-6	2-Methylnaphthalene	4300	E	87.2	200	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	380	ug/Kg
88-06-2	2,4,6-Trichlorophenol	99.3	U	99.3	200	ug/Kg
95-95-4	2,4,5-Trichlorophenol	97.2	U	97.2	200	ug/Kg
92-52-4	1,1-Biphenyl	100	U	100	200	ug/Kg
91-58-7	2-Chloronaphthalene	99.4	U	99.4	200	ug/Kg
88-74-4	2-Nitroaniline	130	U	130	200	ug/Kg
131-11-3	Dimethylphthalate	94.1	U	94.1	200	ug/Kg
208-96-8	Acenaphthylene	79.9	U	79.9	200	ug/Kg
606-20-2	2,6-Dinitrotoluene	90.8	U	90.8	200	ug/Kg

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-P38C	SDG No.:	O1233
Lab Sample ID:	O1233-11	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132182.D	1	01/20/23 12:30	01/21/23 02:33	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	120	U	120	200	ug/Kg
83-32-9	Acenaphthene	91.7	U	91.7	200	ug/Kg
51-28-5	2,4-Dinitrophenol	150	U	150	380	ug/Kg
100-02-7	4-Nitrophenol	160	U	160	380	ug/Kg
132-64-9	Dibenzofuran	86.3	U	86.3	200	ug/Kg
121-14-2	2,4-Dinitrotoluene	98.4	U	98.4	200	ug/Kg
84-66-2	Diethylphthalate	93.6	U	93.6	200	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	200	ug/Kg
86-73-7	Fluorene	91.6	U	91.6	200	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	200	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	100	U	100	380	ug/Kg
86-30-6	n-Nitrosodiphenylamine	95.6	U	95.6	200	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	200	ug/Kg
118-74-1	Hexachlorobenzene	120	U	120	200	ug/Kg
1912-24-9	Atrazine	100	U	100	200	ug/Kg
87-86-5	Pentachlorophenol	140	U	140	380	ug/Kg
85-01-8	Phenanthrene	97.2	U	97.2	200	ug/Kg
120-12-7	Anthracene	97.7	U	97.7	200	ug/Kg
86-74-8	Carbazole	97.9	U	97.9	200	ug/Kg
84-74-2	Di-n-butylphthalate	100	U	100	200	ug/Kg
206-44-0	Fluoranthene	92.8	U	92.8	200	ug/Kg
129-00-0	Pyrene	86.3	U	86.3	200	ug/Kg
85-68-7	Butylbenzylphthalate	96.1	U	96.1	200	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	380	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	99.4	U	99.4	200	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	150	J	100	200	ug/Kg
117-84-0	Di-n-octyl phthalate	110	U	110	380	ug/Kg
205-99-2	Benzo(b)fluoranthene	80.2	U	80.2	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	85.6	U	85.6	200	ug/Kg
50-32-8	Benzo(a)pyrene	78.7	U	78.7	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg

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-P38C	SDG No.:	O1233
Lab Sample ID:	O1233-11	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132182.D	1	01/20/23 12:30	01/21/23 02:33	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	110	U	110	200	ug/Kg
123-91-1	1,4-Dioxane	100	U	100	200	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	94.4	U	94.4	200	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	113		18 - 112	75%	SPK: 150
13127-88-3	Phenol-d6	123		21 - 104	82%	SPK: 150
4165-60-0	Nitrobenzene-d5	96.6		27 - 109	97%	SPK: 100
321-60-8	2-Fluorobiphenyl	65.0		30 - 103	65%	SPK: 100
118-79-6	2,4,6-Tribromophenol	134		10 - 121	89%	SPK: 150
1718-51-0	Terphenyl-d14	68.5		21 - 107	68%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	95900	7.101
1146-65-2	Naphthalene-d8	390000	8.389
15067-26-2	Acenaphthene-d10	294000	10.142
1517-22-2	Phenanthrene-d10	606000	11.636
1719-03-5	Chrysene-d12	412000	14.295
1520-96-3	Perylene-d12	356000	15.895

TENTATIVE IDENTIFIED COMPOUNDS

000592-27-8	Heptane, 2-methyl-	910	J	4.26	ug/Kg
000111-65-9	Octane	1400	J	4.82	ug/Kg
002216-30-0	Heptane, 2,5-dimethyl-	800	J	5.28	ug/Kg
000111-84-2	Nonane	1400	J	6.03	ug/Kg
002051-30-1	Octane, 2,6-dimethyl-	1900	J	6.36	ug/Kg
000611-14-3	Benzene, 1-ethyl-2-methyl-	1100	J	6.64	ug/Kg
003728-54-9	Cyclohexane, 1-ethyl-2-methyl-	860	J	6.85	ug/Kg
000526-73-8	Benzene, 1,2,3-trimethyl-	2100	J	6.94	ug/Kg
000620-14-4	Benzene, 1-ethyl-3-methyl-	800	J	7.17	ug/Kg
000934-74-7	Benzene, 1-ethyl-3,5-dimethyl-	1400	J	7.42	ug/Kg
013151-34-3	Decane, 3-methyl-	1000	J	7.49	ug/Kg
	unknown7.748	1600	J	7.75	ug/Kg
000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	890	J	7.79	ug/Kg

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-P38C		SDG No.:	O1233
Lab Sample ID:	O1233-11		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	85.9
Sample Wt/Vol:	30.04	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132182.D	1	01/20/23 12:30	01/21/23 02:33	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
000527-84-4	o-Cymene	840	J		7.90	ug/Kg
001595-16-0	Benzene, 1-methyl-4-(1-methylpropyl)-	950	J		7.98	ug/Kg
002050-24-0	Benzene, 1,3-diethyl-5-methyl-	990	J		8.04	ug/Kg
001560-06-1	Benzene, 2-butenyl-	1300	J		8.06	ug/Kg
000824-90-8	1-Phenyl-1-butene	2300	J		8.13	ug/Kg
	unknown8.666	1000	J		8.67	ug/Kg
90-12-0	1-Methylnaphthalene	2000	J		9.20	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P38CDL	SDG No.:	O1233
Lab Sample ID:	O1233-11DL	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013590.D	5	01/20/23 12:30	01/25/23 02:09	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	820	UD	820	1900	ug/Kg
108-95-2	Phenol	390	UD	390	990	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	470	UD	470	990	ug/Kg
95-57-8	2-Chlorophenol	400	UD	400	990	ug/Kg
95-48-7	2-Methylphenol	620	UD	620	990	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	560	UD	560	990	ug/Kg
98-86-2	Acetophenone	470	UD	470	990	ug/Kg
65794-96-9	3+4-Methylphenols	570	UD	570	1900	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	440	UD	440	470	ug/Kg
67-72-1	Hexachloroethane	430	UD	430	990	ug/Kg
98-95-3	Nitrobenzene	430	UD	430	990	ug/Kg
78-59-1	Isophorone	390	UD	390	990	ug/Kg
88-75-5	2-Nitrophenol	540	UD	540	990	ug/Kg
105-67-9	2,4-Dimethylphenol	570	UD	570	990	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	630	UD	630	990	ug/Kg
120-83-2	2,4-Dichlorophenol	470	UD	470	990	ug/Kg
91-20-3	Naphthalene	4300	D	430	990	ug/Kg
106-47-8	4-Chloroaniline	560	UD	560	990	ug/Kg
87-68-3	Hexachlorobutadiene	580	UD	580	990	ug/Kg
105-60-2	Caprolactam	580	UD	580	1900	ug/Kg
59-50-7	4-Chloro-3-methylphenol	460	UD	460	990	ug/Kg
91-57-6	2-Methylnaphthalene	3600	D	440	990	ug/Kg
77-47-4	Hexachlorocyclopentadiene	1000	UD	1000	1900	ug/Kg
88-06-2	2,4,6-Trichlorophenol	500	UD	500	990	ug/Kg
95-95-4	2,4,5-Trichlorophenol	490	UD	490	990	ug/Kg
92-52-4	1,1-Biphenyl	500	UD	500	990	ug/Kg
91-58-7	2-Chloronaphthalene	500	UD	500	990	ug/Kg
88-74-4	2-Nitroaniline	630	UD	630	990	ug/Kg
131-11-3	Dimethylphthalate	470	UD	470	990	ug/Kg
208-96-8	Acenaphthylene	400	UD	400	990	ug/Kg
606-20-2	2,6-Dinitrotoluene	450	UD	450	990	ug/Kg

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-P38CDL	SDG No.:	O1233
Lab Sample ID:	O1233-11DL	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013590.D	5	01/20/23 12:30	01/25/23 02:09	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	590	UD	590	990	ug/Kg
83-32-9	Acenaphthene	460	UD	460	990	ug/Kg
51-28-5	2,4-Dinitrophenol	750	UD	750	1900	ug/Kg
100-02-7	4-Nitrophenol	800	UD	800	1900	ug/Kg
132-64-9	Dibenzofuran	430	UD	430	990	ug/Kg
121-14-2	2,4-Dinitrotoluene	490	UD	490	990	ug/Kg
84-66-2	Diethylphthalate	470	UD	470	990	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	540	UD	540	990	ug/Kg
86-73-7	Fluorene	460	UD	460	990	ug/Kg
100-01-6	4-Nitroaniline	600	UD	600	990	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	500	UD	500	1900	ug/Kg
86-30-6	n-Nitrosodiphenylamine	480	UD	480	990	ug/Kg
101-55-3	4-Bromophenyl-phenylether	570	UD	570	990	ug/Kg
118-74-1	Hexachlorobenzene	600	UD	600	990	ug/Kg
1912-24-9	Atrazine	520	UD	520	990	ug/Kg
87-86-5	Pentachlorophenol	680	UD	680	1900	ug/Kg
85-01-8	Phenanthrene	490	UD	490	990	ug/Kg
120-12-7	Anthracene	490	UD	490	990	ug/Kg
86-74-8	Carbazole	490	UD	490	990	ug/Kg
84-74-2	Di-n-butylphthalate	510	UD	510	990	ug/Kg
206-44-0	Fluoranthene	460	UD	460	990	ug/Kg
129-00-0	Pyrene	430	UD	430	990	ug/Kg
85-68-7	Butylbenzylphthalate	480	UD	480	990	ug/Kg
91-94-1	3,3-Dichlorobenzidine	800	UD	800	1900	ug/Kg
56-55-3	Benzo(a)anthracene	500	UD	500	990	ug/Kg
218-01-9	Chrysene	500	UD	500	990	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	520	UD	520	990	ug/Kg
117-84-0	Di-n-octyl phthalate	530	UD	530	1900	ug/Kg
205-99-2	Benzo(b)fluoranthene	400	UD	400	990	ug/Kg
207-08-9	Benzo(k)fluoranthene	430	UD	430	990	ug/Kg
50-32-8	Benzo(a)pyrene	390	UD	390	990	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	590	UD	590	990	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	590	UD	590	990	ug/Kg

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-P38CDL	SDG No.:	O1233
Lab Sample ID:	O1233-11DL	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013590.D	5	01/20/23 12:30	01/25/23 02:09	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	560	UD	560	990	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	530	UD	530	990	ug/Kg
123-91-1	1,4-Dioxane	520	UD	520	990	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	470	UD	470	990	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	111		18 - 112	74%	SPK: 150
13127-88-3	Phenol-d6	103		21 - 104	69%	SPK: 150
4165-60-0	Nitrobenzene-d5	80.9		27 - 109	81%	SPK: 100
321-60-8	2-Fluorobiphenyl	61.8		30 - 103	62%	SPK: 100
118-79-6	2,4,6-Tribromophenol	112		10 - 121	75%	SPK: 150
1718-51-0	Terphenyl-d14	82.7		21 - 107	83%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	477000	8.157
1146-65-2	Naphthalene-d8	1980000	10.987
15067-26-2	Acenaphthene-d10	1240000	14.792
1517-22-2	Phenanthrene-d10	2590000	17.545
1719-03-5	Chrysene-d12	1670000	21.616
1520-96-3	Perylene-d12	1640000	24.204

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

QC SUMMARY



Surrogate Summary

SW-846

SDG No.: O1233

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

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
O1233-02	B-P34A	2-Fluorophenol	150	140	93		18	112
		Phenol-d6	150	149	99		21	104
		Nitrobenzene-d5	100	102	102		27	109
		2-Fluorobiphenyl	100	81.2	81		30	103
		2,4,6-Tribromophenol	150	163	109		10	121
		Terphenyl-d14	100	79.7	80		21	107
O1233-02MS	B-P34AMS	2-Fluorophenol	150	111	74		18	112
		Phenol-d6	150	118	79		21	104
		Nitrobenzene-d5	100	81.4	81		27	109
		2-Fluorobiphenyl	100	65.7	66		30	103
		2,4,6-Tribromophenol	150	131	88		10	121
		Terphenyl-d14	100	73.6	74		21	107
O1233-02MSD	B-P34AMSD	2-Fluorophenol	150	111	74		18	112
		Phenol-d6	150	117	78		21	104
		Nitrobenzene-d5	100	82.3	82		27	109
		2-Fluorobiphenyl	100	66.1	66		30	103
		2,4,6-Tribromophenol	150	131	87		10	121
		Terphenyl-d14	100	74.4	74		21	107
O1233-03	B-P34B	2-Fluorophenol	150	101	67		18	112
		Phenol-d6	150	103	69		21	104
		Nitrobenzene-d5	100	72.2	72		27	109
		2-Fluorobiphenyl	100	60.7	61		30	103
		2,4,6-Tribromophenol	150	108	72		10	121
		Terphenyl-d14	100	64.8	65		21	107
O1233-04	B-P36A	2-Fluorophenol	150	117	78		18	112
		Phenol-d6	150	123	82		21	104
		Nitrobenzene-d5	100	86.0	86		27	109
		2-Fluorobiphenyl	100	70.7	71		30	103
		2,4,6-Tribromophenol	150	136	90		10	121
		Terphenyl-d14	100	76.2	76		21	107
O1233-05	B-P36B	2-Fluorophenol	150	87.7	58		18	112
		Phenol-d6	150	98.6	66		21	104
		Nitrobenzene-d5	100	69.2	69		27	109
		2-Fluorobiphenyl	100	57.5	58		30	103
		2,4,6-Tribromophenol	150	80.4	54		10	121
		Terphenyl-d14	100	61.3	61		21	107
O1233-06	B-P37A	2-Fluorophenol	150	112	75		18	112
		Phenol-d6	150	102	68		21	104
		Nitrobenzene-d5	100	58.8	59		27	109
		2-Fluorobiphenyl	100	63.1	63		30	103
		2,4,6-Tribromophenol	150	101	67		10	121
		Terphenyl-d14	100	67.9	68		21	107
O1233-07	B-P37B	2-Fluorophenol	150	104	69		18	112
		Phenol-d6	150	106	71		21	104
		Nitrobenzene-d5	100	75.7	76		27	109
		2-Fluorobiphenyl	100	63.8	64		30	103
		2,4,6-Tribromophenol	150	114	76		10	121
		Terphenyl-d14	100	67.0	67		21	107
O1233-08	B-P38A	2-Fluorophenol	150	135	90		18	112
		Phenol-d6	150	119	80		21	104
		Nitrobenzene-d5	100	63.8	64		27	109
		2-Fluorobiphenyl	100	65.9	66		30	103



Surrogate Summary

SW-846

SDG No.: O1233

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

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
O1233-08	B-P38A	2,4,6-Tribromophenol	150	94.2	63		10	121
		Terphenyl-d14	100	71.2	71		21	107
O1233-09	B-P38B	2-Fluorophenol	150	125	84		18	112
		Phenol-d6	150	131	87		21	104
		Nitrobenzene-d5	100	92.0	92		27	109
		2-Fluorobiphenyl	100	73.8	74		30	103
		2,4,6-Tribromophenol	150	139	93		10	121
O1233-11	B-P38C	Terphenyl-d14	100	76.1	76		21	107
		2-Fluorophenol	150	113	75		18	112
		Phenol-d6	150	123	82		21	104
		Nitrobenzene-d5	100	96.6	97		27	109
		2-Fluorobiphenyl	100	65.0	65		30	103
		2,4,6-Tribromophenol	150	134	89		10	121
		Terphenyl-d14	100	68.5	68		21	107
O1233-11DL	B-P38CDL	2-Fluorophenol	150	111	74		18	112
		Phenol-d6	150	103	69		21	104
		Nitrobenzene-d5	100	80.9	81		27	109
		2-Fluorobiphenyl	100	61.8	62		30	103
		2,4,6-Tribromophenol	150	112	75		10	121
		Terphenyl-d14	100	82.7	83		21	107
PB150378BL	PB150378BL	2-Fluorophenol	150	128	85		18	112
		Phenol-d6	150	125	83		21	104
		Nitrobenzene-d5	100	78.9	79		27	109
		2-Fluorobiphenyl	100	67.6	68		30	103
		2,4,6-Tribromophenol	150	131	88		10	121
		Terphenyl-d14	100	70.3	70		21	107
PB150378BS	PB150378BS	2-Fluorophenol	150	146	97		18	112
		Phenol-d6	150	144	96		21	104
		Nitrobenzene-d5	100	90.3	90		27	109
		2-Fluorobiphenyl	100	85.2	85		30	103
		2,4,6-Tribromophenol	150	141	94		10	121
		Terphenyl-d14	100	103	103		21	107

Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: 01233

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

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Lab Sample ID:	01233-02MS	Client Sample ID:	B-P34AMS					DataFile:	BF132171.D		
Benzaldehyde	2000	0	1200	ug/Kg	60				26	163	
Phenol	2000	0	1700	ug/Kg	85				67	126	
bis(2-Chloroethyl)ether	2000	0	1700	ug/Kg	85				74	116	
2-Chlorophenol	2000	0	1800	ug/Kg	90				61	138	
2-Methylphenol	2000	0	1700	ug/Kg	85				66	122	
2,2-oxybis(1-Chloropropane)	2000	0	1700	ug/Kg	85				52	115	
Acetophenone	2000	0	1600	ug/Kg	80				75	111	
3+4-Methylphenols	2000	0	1700	ug/Kg	85				53	132	
N-Nitroso-di-n-propylamine	2000	0	1700	ug/Kg	85				59	119	
Hexachloroethane	2000	0	1800	ug/Kg	90				65	117	
Nitrobenzene	2000	0	1700	ug/Kg	85				70	119	
Isophorone	2000	0	1700	ug/Kg	85				76	122	
2-Nitrophenol	2000	0	2000	ug/Kg	100				54	145	
2,4-Dimethylphenol	2000	0	1700	ug/Kg	85				83	144	
bis(2-Chloroethoxy)methane	2000	0	1600	ug/Kg	80				68	112	
2,4-Dichlorophenol	2000	0	1700	ug/Kg	85				72	118	
Naphthalene	2000	0	1600	ug/Kg	80				72	110	
4-Chloroaniline	2000	0	590	ug/Kg	29				10	100	
Hexachlorobutadiene	2000	0	1600	ug/Kg	80				66	114	
Caprolactam	2000	0	2000	ug/Kg	100				51	134	
4-Chloro-3-methylphenol	2000	0	1800	ug/Kg	90				57	132	
2-Methylnaphthalene	2000	0	1500	ug/Kg	75				59	123	
Hexachlorocyclopentadiene	3900	0	3600	ug/Kg	92				10	175	
2,4,6-Trichlorophenol	2000	0	1700	ug/Kg	85				72	117	
2,4,5-Trichlorophenol	2000	0	1600	ug/Kg	80				72	117	
1,1-Biphenyl	2000	0	1600	ug/Kg	80				75	113	
2-Chloronaphthalene	2000	0	1600	ug/Kg	80				67	118	
2-Nitroaniline	2000	0	1800	ug/Kg	90				69	127	
Dimethylphthalate	2000	0	1600	ug/Kg	80				70	113	
Acenaphthylene	2000	0	1600	ug/Kg	80				79	118	
2,6-Dinitrotoluene	2000	0	2000	ug/Kg	100				70	125	
3-Nitroaniline	2000	0	1300	ug/Kg	65				20	111	
Acenaphthene	2000	0	1800	ug/Kg	90				70	121	
2,4-Dinitrophenol	3900	0	4200	ug/Kg	108				16	160	
4-Nitrophenol	3900	0	3900	ug/Kg	100				45	133	
Dibenzofuran	2000	0	1500	ug/Kg	75				72	110	
2,4-Dinitrotoluene	2000	0	2100	ug/Kg	105				55	128	
Diethylphthalate	2000	0	1700	ug/Kg	85				70	112	
4-Chlorophenyl-phenylether	2000	0	1600	ug/Kg	80				71	108	
Fluorene	2000	0	1600	ug/Kg	80				68	116	
4-Nitroaniline	2000	0	1900	ug/Kg	95				55	120	
4,6-Dinitro-2-methylphenol	2000	0	1900	ug/Kg	95				32	145	
N-Nitrosodiphenylamine	2000	0	1500	ug/Kg	75				73	118	
4-Bromophenyl-phenylether	2000	0	1500	ug/Kg	75				65	121	
Hexachlorobenzene	2000	0	1700	ug/Kg	85				67	118	
Atrazine	2000	0	1800	ug/Kg	90				79	127	
Pentachlorophenol	3900	0	3100	ug/Kg	79				47	128	



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Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: O1233

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

Analytical Method: SW8270E

Parameter	Spike	Sample	Result	Units	Rec	Rec	RPD	RPD	Limits		RPD
		Result				Qual		Qual	Low	High	
Phenanthrene	2000	0	1500	ug/Kg	75				72	113	
Anthracene	2000	0	1500	ug/Kg	75				62	124	
Carbazole	2000	0	1700	ug/Kg	85				59	119	
Di-n-butylphthalate	2000	0	1800	ug/Kg	90				69	118	
Fluoranthene	2000	0	1700	ug/Kg	85				59	125	
Pyrene	2000	0	1600	ug/Kg	80				52	128	
Butylbenzylphthalate	2000	0	1900	ug/Kg	95				64	126	
3,3-Dichlorobenzidine	2000	0	830	ug/Kg	42				10	164	
Benzo(a)anthracene	2000	0	1700	ug/Kg	85				71	114	
Chrysene	2000	0	1600	ug/Kg	80				57	121	
bis(2-Ethylhexyl)phthalate	2000	0	1800	ug/Kg	90				66	127	
Di-n-octyl phthalate	2000	0	1700	ug/Kg	85				71	126	
Benzo(b)fluoranthene	2000	0	1800	ug/Kg	90				67	121	
Benzo(k)fluoranthene	2000	0	1700	ug/Kg	85				74	114	
Benzo(a)pyrene	2000	0	1600	ug/Kg	80				70	142	
Indeno(1,2,3-cd)pyrene	2000	0	1500	ug/Kg	75				61	125	
Dibenz(a,h)anthracene	2000	0	1700	ug/Kg	85				67	130	
Benzo(g,h,i)perylene	2000	0	1500	ug/Kg	75				53	140	
1,2,4,5-Tetrachlorobenzene	2000	0	1500	ug/Kg	75				69	124	
1,4-Dioxane	2000	0	1500	ug/Kg	75				46	112	
2,3,4,6-Tetrachlorophenol	2000	0	1800	ug/Kg	90				56	133	

Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: **O1233**

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

Analytical Method: **SW8270E**

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Lab Sample ID:	O1233-02MSD	Client Sample ID:	B-P34AMSD					DataFile:	BF132172.D		
Benzaldehyde	1900	0	1200	ug/Kg	63		5		26	163	20
Phenol	1900	0	1700	ug/Kg	89		5		67	126	20
bis(2-Chloroethyl)ether	1900	0	1700	ug/Kg	89		5		74	116	20
2-Chlorophenol	1900	0	1800	ug/Kg	95		5		61	138	20
2-Methylphenol	1900	0	1700	ug/Kg	89		5		66	122	20
2,2-oxybis(1-Chloropropane)	1900	0	1700	ug/Kg	89		5		52	115	20
Acetophenone	1900	0	1600	ug/Kg	84		5		75	111	20
3+4-Methylphenols	1900	0	1700	ug/Kg	89		5		53	132	20
N-Nitroso-di-n-propylamine	1900	0	1600	ug/Kg	84		1		59	119	20
Hexachloroethane	1900	0	1800	ug/Kg	95		5		65	117	20
Nitrobenzene	1900	0	1700	ug/Kg	89		5		70	119	20
Isophorone	1900	0	1700	ug/Kg	89		5		76	122	20
2-Nitrophenol	1900	0	2000	ug/Kg	105		5		54	145	20
2,4-Dimethylphenol	1900	0	1700	ug/Kg	89		5		83	144	20
bis(2-Chloroethoxy)methane	1900	0	1600	ug/Kg	84		5		68	112	20
2,4-Dichlorophenol	1900	0	1700	ug/Kg	89		5		72	118	20
Naphthalene	1900	0	1600	ug/Kg	84		5		72	110	20
4-Chloroaniline	1900	0	600	ug/Kg	32		10		10	100	20
Hexachlorobutadiene	1900	0	1600	ug/Kg	84		5		66	114	20
Caprolactam	1900	0	2000	ug/Kg	105		5		51	134	20
4-Chloro-3-methylphenol	1900	0	1800	ug/Kg	95		5		57	132	20
2-Methylnaphthalene	1900	0	1500	ug/Kg	79		5		59	123	20
Hexachlorocyclopentadiene	3900	0	3700	ug/Kg	95		3		10	175	20
2,4,6-Trichlorophenol	1900	0	1700	ug/Kg	89		5		72	117	20
2,4,5-Trichlorophenol	1900	0	1600	ug/Kg	84		5		72	117	20
1,1-Biphenyl	1900	0	1600	ug/Kg	84		5		75	113	20
2-Chloronaphthalene	1900	0	1600	ug/Kg	84		5		67	118	20
2-Nitroaniline	1900	0	1800	ug/Kg	95		5		69	127	20
Dimethylphthalate	1900	0	1600	ug/Kg	84		5		70	113	20
Acenaphthylene	1900	0	1600	ug/Kg	84		5		79	118	20
2,6-Dinitrotoluene	1900	0	1900	ug/Kg	100		0		70	125	20
3-Nitroaniline	1900	0	1200	ug/Kg	63		3		20	111	20
Acenaphthene	1900	0	1800	ug/Kg	95		5		70	121	20
2,4-Dinitrophenol	3900	0	4200	ug/Kg	108		0		16	160	20
4-Nitrophenol	3900	0	3900	ug/Kg	100		0		45	133	20
Dibenzofuran	1900	0	1600	ug/Kg	84		11		72	110	20
2,4-Dinitrotoluene	1900	0	2100	ug/Kg	111		6		55	128	20
Diethylphthalate	1900	0	1600	ug/Kg	84		1		70	112	20
4-Chlorophenyl-phenylether	1900	0	1600	ug/Kg	84		5		71	108	20
Fluorene	1900	0	1600	ug/Kg	84		5		68	116	20
4-Nitroaniline	1900	0	1900	ug/Kg	100		5		55	120	20
4,6-Dinitro-2-methylphenol	1900	0	1900	ug/Kg	100		5		32	145	20
N-Nitrosodiphenylamine	1900	0	1500	ug/Kg	79		5		73	118	20
4-Bromophenyl-phenylether	1900	0	1500	ug/Kg	79		5		65	121	20
Hexachlorobenzene	1900	0	1600	ug/Kg	84		1		67	118	20
Atrazine	1900	0	1800	ug/Kg	95		5		79	127	20
Pentachlorophenol	3900	0	3100	ug/Kg	79		0		47	128	20



Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: O1233

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

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec		RPD		Limits	
						Qual	RPD	Qual	Low	High	RPD
Phenanthrene	1900	0	1500	ug/Kg	79		5		72	113	20
Anthracene	1900	0	1500	ug/Kg	79		5		62	124	20
Carbazole	1900	0	1600	ug/Kg	84		1		59	119	20
Di-n-butylphthalate	1900	0	1700	ug/Kg	89		1		69	118	20
Fluoranthene	1900	0	1700	ug/Kg	89		5		59	125	20
Pyrene	1900	0	1600	ug/Kg	84		5		52	128	20
Butylbenzylphthalate	1900	0	1900	ug/Kg	100		5		64	126	20
3,3-Dichlorobenzidine	1900	0	870	ug/Kg	46		9		10	164	20
Benzo(a)anthracene	1900	0	1600	ug/Kg	84		1		71	114	20
Chrysene	1900	0	1600	ug/Kg	84		5		57	121	20
bis(2-Ethylhexyl)phthalate	1900	0	1700	ug/Kg	89		1		66	127	20
Di-n-octyl phthalate	1900	0	1700	ug/Kg	89		5		71	126	20
Benzo(b)fluoranthene	1900	0	1800	ug/Kg	95		5		67	121	20
Benzo(k)fluoranthene	1900	0	1700	ug/Kg	89		5		74	114	20
Benzo(a)pyrene	1900	0	1600	ug/Kg	84		5		70	142	20
Indeno(1,2,3-cd)pyrene	1900	0	1500	ug/Kg	79		5		61	125	20
Dibenz(a,h)anthracene	1900	0	1600	ug/Kg	84		1		67	130	20
Benzo(g,h,i)perylene	1900	0	1500	ug/Kg	79		5		53	140	20
1,2,4,5-Tetrachlorobenzene	1900	0	1500	ug/Kg	79		5		69	124	20
1,4-Dioxane	1900	0	1500	ug/Kg	79		5		46	112	20
2,3,4,6-Tetrachlorophenol	1900	0	1800	ug/Kg	95		5		56	133	20



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

SDG No.: O1233

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

Analytical Method: 8270E DataFile: BP013684.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB150378BS	Benzaldehyde	1700	960	ug/Kg	56				10	109	
	Phenol	1700	1600	ug/Kg	94				62	112	
	bis(2-Chloroethyl)ether	1700	1500	ug/Kg	88				60	101	
	2-Chlorophenol	1700	1600	ug/Kg	94				65	112	
	2-Methylphenol	1700	1500	ug/Kg	88				61	108	
	2,2-oxybis(1-Chloropropane)	1700	1600	ug/Kg	94				51	100	
	Acetophenone	1700	1400	ug/Kg	82				55	104	
	3+4-Methylphenols	1700	1500	ug/Kg	88				58	111	
	N-Nitroso-di-n-propylamine	1700	1500	ug/Kg	88				63	95	
	Hexachloroethane	1700	1600	ug/Kg	94				59	102	
	Nitrobenzene	1700	1400	ug/Kg	82				57	101	
	Isophorone	1700	1400	ug/Kg	82				59	99	
	2-Nitrophenol	1700	1400	ug/Kg	82				61	111	
	2,4-Dimethylphenol	1700	1500	ug/Kg	88				67	119	
	bis(2-Chloroethoxy)methane	1700	1400	ug/Kg	82				53	105	
	2,4-Dichlorophenol	1700	1500	ug/Kg	88				62	107	
	Naphthalene	1700	1400	ug/Kg	82				62	100	
	4-Chloroaniline	1700	810	ug/Kg	48				16	100	
	Hexachlorobutadiene	1700	1500	ug/Kg	88				53	98	
	Caprolactam	1700	1400	ug/Kg	82				42	122	
	4-Chloro-3-methylphenol	1700	1500	ug/Kg	88				58	112	
	2-Methylnaphthalene	1700	1300	ug/Kg	76				60	104	
	Hexachlorocyclopentadiene	3300	3600	ug/Kg	109				45	134	
	2,4,6-Trichlorophenol	1700	1500	ug/Kg	88				59	102	
	2,4,5-Trichlorophenol	1700	1400	ug/Kg	82				61	98	
	1,1-Biphenyl	1700	1400	ug/Kg	82				57	103	
	2-Chloronaphthalene	1700	1400	ug/Kg	82				58	99	
	2-Nitroaniline	1700	1400	ug/Kg	82				53	105	
	Dimethylphthalate	1700	1400	ug/Kg	82				61	99	
	Acenaphthylene	1700	1400	ug/Kg	82				63	101	
	2,6-Dinitrotoluene	1700	1400	ug/Kg	82				61	104	
	3-Nitroaniline	1700	1100	ug/Kg	65				28	100	
	Acenaphthene	1700	1600	ug/Kg	94				57	104	
	2,4-Dinitrophenol	3300	2900	ug/Kg	88				37	128	
	4-Nitrophenol	3300	3100	ug/Kg	94				48	119	
	Dibenzofuran	1700	1400	ug/Kg	82				63	99	
	2,4-Dinitrotoluene	1700	1500	ug/Kg	88				60	106	
	Diethylphthalate	1700	1400	ug/Kg	82				60	101	
	4-Chlorophenyl-phenylether	1700	1400	ug/Kg	82				58	98	
	Fluorene	1700	1400	ug/Kg	82				61	101	
	4-Nitroaniline	1700	1300	ug/Kg	76				47	102	
	4,6-Dinitro-2-methylphenol	1700	1400	ug/Kg	82				48	132	
	N-Nitrosodiphenylamine	1700	1400	ug/Kg	82				56	107	
	4-Bromophenyl-phenylether	1700	1400	ug/Kg	82				55	99	
	Hexachlorobenzene	1700	1500	ug/Kg	88				64	98	
	Atrazine	1700	1600	ug/Kg	94				47	125	



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

SDG No.: O1233

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

Analytical Method: 8270E DataFile: BP013684.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB150378BS	Pentachlorophenol	3300	2800	ug/Kg	85				67	105	
	Phenanthrene	1700	1400	ug/Kg	82				59	103	
	Anthracene	1700	1400	ug/Kg	82				61	105	
	Carbazole	1700	1400	ug/Kg	82				61	99	
	Di-n-butylphthalate	1700	1400	ug/Kg	82				58	104	
	Fluoranthene	1700	1400	ug/Kg	82				57	107	
	Pyrene	1700	1600	ug/Kg	94				59	103	
	Butylbenzylphthalate	1700	1600	ug/Kg	94				55	103	
	3,3-Dichlorobenzidine	1700	1300	ug/Kg	76				30	89	
	Benzo(a)anthracene	1700	1500	ug/Kg	88				60	102	
	Chrysene	1700	1400	ug/Kg	82				59	101	
	bis(2-Ethylhexyl)phthalate	1700	1500	ug/Kg	88				51	114	
	Di-n-octyl phthalate	1700	1300	ug/Kg	76				52	114	
	Benzo(b)fluoranthene	1700	1700	ug/Kg	100				62	109	
	Benzo(k)fluoranthene	1700	1600	ug/Kg	94				62	109	
	Benzo(a)pyrene	1700	1400	ug/Kg	82				63	103	
	Indeno(1,2,3-cd)pyrene	1700	1300	ug/Kg	76				63	101	
	Dibenz(a,h)anthracene	1700	1300	ug/Kg	76				61	112	
	Benzo(g,h,i)perylene	1700	1200	ug/Kg	71				57	116	
	1,2,4,5-Tetrachlorobenzene	1700	1400	ug/Kg	82				53	101	
	1,4-Dioxane	1700	1100	ug/Kg	65				50	96	
	2,3,4,6-Tetrachlorophenol	1700	1500	ug/Kg	88				59	108	



4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB150378BL

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM Case No.: 01233

SAS No.: 01233 SDG NO.: 01233

Lab File ID: BP013572.D

Lab Sample ID: PB150378BL

Instrument ID: BNA_P

Date Extracted: 01/20/2023

Matrix: (soil/water) SOIL

Date Analyzed: 01/24/2023

Level: (low/med) LOW

Time Analyzed: 15:50

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB150378BS	PB150378BS	BP013684.D	01/31/2023
B-P34A	01233-02	BF132170.D	01/20/2023
B-P34AMS	01233-02MS	BF132171.D	01/20/2023
B-P34AMSD	01233-02MSD	BF132172.D	01/20/2023
B-P34B	01233-03	BF132178.D	01/21/2023
B-P36A	01233-04	BF132179.D	01/21/2023
B-P36B	01233-05	BF132180.D	01/21/2023
B-P37B	01233-07	BF132174.D	01/20/2023
B-P38B	01233-09	BF132181.D	01/21/2023
B-P38C	01233-11	BF132182.D	01/21/2023
B-P37A	01233-06	BG056390.D	01/23/2023
B-P38A	01233-08	BG056392.D	01/23/2023

COMMENTS:



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: 01233

SDG NO.: 01233

Lab File ID: BF132139.D

DFTPP Injection Date: 01/19/2023

Instrument ID: BNA_F

DFTPP Injection Time: 10:46

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.6
68	Less than 2.0% of mass 69	0.7 (1.8) 1
69	Mass 69 relative abundance	37.4
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	48.4
197	Less than 2.0% of mass 198	0.7
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	28.2
365	Greater than 1% of mass 198	3.9
441	Present, but less than mass 443	12.5
442	Greater than 50% of mass 198	82.8
443	15.0 - 24.0% of mass 442	16 (19.3) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC2.5	SSTDICC2.5	BF132140.D	01/19/2023	11:21
SSTDICC005	SSTDICC005	BF132141.D	01/19/2023	11:53
SSTDICC010	SSTDICC010	BF132142.D	01/19/2023	12:26
SSTDICC020	SSTDICC020	BF132143.D	01/19/2023	12:59
SSTDICCC040	SSTDICCC040	BF132144.D	01/19/2023	13:32
SSTDICC050	SSTDICC050	BF132145.D	01/19/2023	14:05
SSTDICC060	SSTDICC060	BF132146.D	01/19/2023	14:38
SSTDICC080	SSTDICC080	BF132147.D	01/19/2023	15:11



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: 01233 SDG NO.: 01233

Lab File ID: BF132163.D

DFTPP Injection Date: 01/20/2023

Instrument ID: BNA_F

DFTPP Injection Time: 16:08

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	38.5
68	Less than 2.0% of mass 69	0.7 (1.9) 1
69	Mass 69 relative abundance	36
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	46.9
197	Less than 2.0% of mass 198	0.7
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.3
365	Greater than 1% of mass 198	4.3
441	Present, but less than mass 443	13.9
442	Greater than 50% of mass 198	89.3
443	15.0 - 24.0% of mass 442	17.6 (19.7) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BF132164.D	01/20/2023	16:40
B-P34A	O1233-02	BF132170.D	01/20/2023	20:03
B-P34AMS	O1233-02MS	BF132171.D	01/20/2023	20:35
B-P34AMSD	O1233-02MSD	BF132172.D	01/20/2023	21:08
B-P37B	O1233-07	BF132174.D	01/20/2023	22:13
B-P34B	O1233-03	BF132178.D	01/21/2023	00:23
B-P36A	O1233-04	BF132179.D	01/21/2023	00:56
B-P36B	O1233-05	BF132180.D	01/21/2023	01:28
B-P38B	O1233-09	BF132181.D	01/21/2023	02:00
B-P38C	O1233-11	BF132182.D	01/21/2023	02:33



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: 01233 SDG NO.: 01233

Lab File ID: BG056125.D

DFTPP Injection Date: 12/27/2022

Instrument ID: BNA_G

DFTPP Injection Time: 14:13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	15.4
68	Less than 2.0% of mass 69	0.2 (0.7) 1
69	Mass 69 relative abundance	23.8
70	Less than 2.0% of mass 69	0.1 (0.6) 1
127	10.0 - 80.0% of mass 198	34.9
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	31.4
365	Greater than 1% of mass 198	4
441	Present, but less than mass 443	10.6
442	Greater than 50% of mass 198	69.2
443	15.0 - 24.0% of mass 442	14.8 (21.4) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC2.5	SSTDICC2.5	BG056126.D	12/27/2022	14:55
SSTDICC005	SSTDICC005	BG056127.D	12/27/2022	15:36
SSTDICC010	SSTDICC010	BG056128.D	12/27/2022	16:17
SSTDICC020	SSTDICC020	BG056129.D	12/27/2022	16:58
SSTDICCC040	SSTDICCC040	BG056130.D	12/27/2022	17:40
SSTDICC050	SSTDICC050	BG056131.D	12/27/2022	18:21
SSTDICC060	SSTDICC060	BG056132.D	12/27/2022	19:01
SSTDICC080	SSTDICC080	BG056133.D	12/27/2022	19:42



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: O1233 SDG NO.: O1233

Lab File ID: BG056379.D

DFTPP Injection Date: 01/23/2023

Instrument ID: BNA_G

DFTPP Injection Time: 10:46

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	14
68	Less than 2.0% of mass 69	0.1 (0.4) 1
69	Mass 69 relative abundance	21.6
70	Less than 2.0% of mass 69	0.2 (0.8) 1
127	10.0 - 80.0% of mass 198	33.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	32.6
365	Greater than 1% of mass 198	4
441	Present, but less than mass 443	12.8
442	Greater than 50% of mass 198	78.9
443	15.0 - 24.0% of mass 442	15.9 (20.1) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BG056380.D	01/23/2023	11:41
B-P37A	O1233-06	BG056390.D	01/23/2023	19:09
B-P38A	O1233-08	BG056392.D	01/23/2023	20:31



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: 01233 SDG NO.: 01233

Lab File ID: BP013544.D

DFTPP Injection Date: 01/23/2023

Instrument ID: BNA_P

DFTPP Injection Time: 10:51

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	38.2
68	Less than 2.0% of mass 69	0.6 (1.7) 1
69	Mass 69 relative abundance	34.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	46.8
197	Less than 2.0% of mass 198	0.6
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	15.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	19.9 (19.9) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC2.5	SSTDICC2.5	BP013545.D	01/23/2023	11:25
SSTDICC005	SSTDICC005	BP013546.D	01/23/2023	12:00
SSTDICC010	SSTDICC010	BP013547.D	01/23/2023	12:34
SSTDICC020	SSTDICC020	BP013548.D	01/23/2023	13:08
SSTDICCC040	SSTDICCC040	BP013549.D	01/23/2023	13:42
SSTDICC050	SSTDICC050	BP013550.D	01/23/2023	14:17
SSTDICC060	SSTDICC060	BP013551.D	01/23/2023	14:51
SSTDICC080	SSTDICC080	BP013552.D	01/23/2023	16:01



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: O1233 SDG NO.: O1233

Lab File ID: BP013570.D

DFTPP Injection Date: 01/24/2023

Instrument ID: BNA_P

DFTPP Injection Time: 14:38

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.8
68	Less than 2.0% of mass 69	0.5 (1.7) 1
69	Mass 69 relative abundance	32.2
70	Less than 2.0% of mass 69	0.2 (0.5) 1
127	10.0 - 80.0% of mass 198	44.7
197	Less than 2.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	25.6
365	Greater than 1% of mass 198	3.3
441	Present, but less than mass 443	15.4
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	19.5 (19.5) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BP013571.D	01/24/2023	15:13
PB150378BL	PB150378BL	BP013572.D	01/24/2023	15:50
B-P38CDL	O1233-11DL	BP013590.D	01/25/2023	02:09



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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM

SAS No.: 01233 SDG NO.: 01233

Lab File ID: BP013668.D

DFTPP Injection Date: 01/31/2023

Instrument ID: BNA_P

DFTPP Injection Time: 10:47

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24
68	Less than 2.0% of mass 69	0.5 (1.8) 1
69	Mass 69 relative abundance	27.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	34.4
197	Less than 2.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1% of mass 198	3.7
441	Present, but less than mass 443	15.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	19.5 (19.5) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC2.5	SSTDICC2.5	BP013669.D	01/31/2023	11:21
SSTDICC005	SSTDICC005	BP013670.D	01/31/2023	11:55
SSTDICC010	SSTDICC010	BP013671.D	01/31/2023	12:30
SSTDICC020	SSTDICC020	BP013672.D	01/31/2023	13:04
SSTDICCC040	SSTDICCC040	BP013673.D	01/31/2023	13:38
SSTDICC050	SSTDICC050	BP013674.D	01/31/2023	14:12
SSTDICC060	SSTDICC060	BP013675.D	01/31/2023	14:47
SSTDICC080	SSTDICC080	BP013676.D	01/31/2023	15:56
PB150378BS	PB150378BS	BP013684.D	01/31/2023	21:04



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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233

EPA Sample No.: SSTDCCC040 Date Analyzed: 01/20/2023

Lab File ID: BF132164.D Time Analyzed: 16:40

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

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	175584	7.09	590884	8.38	314145	10.14
UPPER LIMIT	351168	7.59	1181770	8.878	628290	10.642
LOWER LIMIT	87792	6.59	295442	7.878	157073	9.642
EPA SAMPLE NO.						
01 B-P34A	165824	7.09	608025	8.38	328729	10.14
02 B-P34AMS	184212	7.09	674454	8.38	369043	10.14
03 B-P34AMSD	185010	7.09	669898	8.38	363370	10.14
04 B-P37B	177955	7.09	631961	8.38	341753	10.14
05 B-P34B	185742	7.09	675652	8.38	368118	10.14
06 B-P36A	189363	7.09	681160	8.38	365830	10.14
07 B-P36B	179392	7.09	645668	8.38	348624	10.14
08 B-P38B	175268	7.09	626552	8.38	338703	10.14
09 B-P38C	95858	7.10	389884	8.39	294398	10.14

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233

EPA Sample No.: SSTDCCC040 Date Analyzed: 01/20/2023

Lab File ID: BF132164.D Time Analyzed: 16:40

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

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	631542	11.642	364265	14.307	316916	15.901
UPPER LIMIT	1263080	12.142	728530	14.807	633832	16.401
LOWER LIMIT	315771	11.142	182133	13.807	158458	15.401
EPA SAMPLE NO.						
01 B-P34A	655100	11.64	482863	14.30	384782	15.90
02 B-P34AMS	748390	11.64	455426	14.31	405760	15.90
03 B-P34AMSD	736982	11.64	439968	14.31	406965	15.90
04 B-P37B	670384	11.64	444362	14.30	375935	15.90
05 B-P34B	732948	11.64	480445	14.30	398304	15.90
06 B-P36A	725377	11.64	477461	14.30	393144	15.90
07 B-P36B	667878	11.64	443182	14.30	380998	15.90
08 B-P38B	667544	11.64	452870	14.30	378822	15.90
09 B-P38C	605609	11.64	411820	14.30	355739	15.90

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH
 Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233
 EPA Sample No.: SSTDCCC040 Date Analyzed: 01/23/2023
 Lab File ID: BG056380.D Time Analyzed: 11:41
 Instrument ID: BNA_G GC Column: ZB-GR ID: 0.25 (mm)

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	35880	8.299	143339	11.14	121624	14.92
UPPER LIMIT	71760	8.799	286678	11.637	243248	15.42
LOWER LIMIT	17940	7.799	71669.5	10.637	60812	14.42
EPA SAMPLE NO.						
01 B-P37A	38461	8.30	155511	11.13	129252	14.91
02 B-P38A	36838	8.30	157784	11.13	127381	14.91

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233

EPA Sample No.: SSTDCCC040 Date Analyzed: 01/23/2023

Lab File ID: BG056380.D Time Analyzed: 11:41

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

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	314903	17.652	266234	21.947	293224	25.384
UPPER LIMIT	629806	18.152	532468	22.447	586448	25.884
LOWER LIMIT	157452	17.152	133117	21.447	146612	24.884
EPA SAMPLE NO.						
01 B-P37A	335669	17.64	299254	21.94	323323	25.37
02 B-P38A	312833	17.65	275682	21.94	296075	25.36

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH
 Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233
 EPA Sample No.: SSTDCCC040 Date Analyzed: 01/24/2023
 Lab File ID: BP013571.D Time Analyzed: 15:13
 Instrument ID: BNA_P GC Column: ZB-GR ID: 0.25 (mm)

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	306718	8.163	1319960	10.99	845480	14.80
UPPER LIMIT	613436	8.663	2639920	11.493	1690960	15.298
LOWER LIMIT	153359	7.663	659980	10.493	422740	14.298
EPA SAMPLE NO.						
01 PB150378BL	291029	8.16	1295640	10.99	837908	14.80
02 B-P38CDL	476799	8.16	1980990	10.99	1235300	14.79

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233

EPA Sample No.: SSTDCCC040 Date Analyzed: 01/24/2023

Lab File ID: BP013571.D Time Analyzed: 15:13

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

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	1830850	17.551	1775330	21.627	1903850	24.215
UPPER LIMIT	3661700	18.051	3550660	22.127	3807700	24.715
LOWER LIMIT	915425	17.051	887665	21.127	951925	23.715
EPA SAMPLE NO.						
01 PB150378BL	1910080	17.55	1883140	21.63	2131870	24.22
02 B-P38CDL	2590770	17.55	1671770	21.62	1637100	24.20

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.



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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233

EPA Sample No.: SSTDICCC040 Date Analyzed: 01/31/2023

Lab File ID: BP013673.D Time Analyzed: 13:38

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

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	222064	8.14	832306	10.97	549003	14.78
UPPER LIMIT	444128	8.64	1664610	11.469	1098010	15.281
LOWER LIMIT	111032	7.64	416153	10.469	274502	14.281
EPA SAMPLE NO.						
01 PB150378BS	297815	8.14	1192600	10.97	801024	14.78

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG NO.: O1233

EPA Sample No.: SSTDICCC040 Date Analyzed: 01/31/2023

Lab File ID: BP013673.D Time Analyzed: 13:38

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

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	1258360	17.533	1280890	21.61	1494510	24.186
UPPER LIMIT	2516720	18.033	2561780	22.11	2989020	24.686
LOWER LIMIT	629180	17.033	640445	21.11	747255	23.686
EPA SAMPLE NO.						
01 PB150378BS	1851080	17.53	1639740	21.61	1453640	24.18

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

QC SAMPLE DATA

A

B

C

D

E

F

G

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:	PB150378BL		SDG No.:	O1233
Lab Sample ID:	PB150378BL		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	100
Sample Wt/Vol:	30.01	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013572.D	1	01/20/23 12:30	01/24/23 15:50	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	140	U	140	330	ug/Kg
108-95-2	Phenol	67.7	U	67.7	170	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	80.3	U	80.3	170	ug/Kg
95-57-8	2-Chlorophenol	68.3	U	68.3	170	ug/Kg
95-48-7	2-Methylphenol	110	U	110	170	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	95.9	U	95.9	170	ug/Kg
98-86-2	Acetophenone	80.1	U	80.1	170	ug/Kg
65794-96-9	3+4-Methylphenols	97.4	U	97.4	330	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	76.1	U	76.1	80.0	ug/Kg
67-72-1	Hexachloroethane	73.7	U	73.7	170	ug/Kg
98-95-3	Nitrobenzene	73.9	U	73.9	170	ug/Kg
78-59-1	Isophorone	66.6	U	66.6	170	ug/Kg
88-75-5	2-Nitrophenol	92.8	U	92.8	170	ug/Kg
105-67-9	2,4-Dimethylphenol	98.8	U	98.8	170	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	110	U	110	170	ug/Kg
120-83-2	2,4-Dichlorophenol	81.7	U	81.7	170	ug/Kg
91-20-3	Naphthalene	73.9	U	73.9	170	ug/Kg
106-47-8	4-Chloroaniline	96.3	U	96.3	170	ug/Kg
87-68-3	Hexachlorobutadiene	99.4	U	99.4	170	ug/Kg
105-60-2	Caprolactam	100	U	100	330	ug/Kg
59-50-7	4-Chloro-3-methylphenol	78.7	U	78.7	170	ug/Kg
91-57-6	2-Methylnaphthalene	75.0	U	75.0	170	ug/Kg
77-47-4	Hexachlorocyclopentadiene	170	U	170	330	ug/Kg
88-06-2	2,4,6-Trichlorophenol	85.4	U	85.4	170	ug/Kg
95-95-4	2,4,5-Trichlorophenol	83.6	U	83.6	170	ug/Kg
92-52-4	1,1-Biphenyl	86.5	U	86.5	170	ug/Kg
91-58-7	2-Chloronaphthalene	85.5	U	85.5	170	ug/Kg
88-74-4	2-Nitroaniline	110	U	110	170	ug/Kg
131-11-3	Dimethylphthalate	80.9	U	80.9	170	ug/Kg
208-96-8	Acenaphthylene	68.7	U	68.7	170	ug/Kg
606-20-2	2,6-Dinitrotoluene	78.1	U	78.1	170	ug/Kg

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:	PB150378BL		SDG No.:	O1233
Lab Sample ID:	PB150378BL		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	100
Sample Wt/Vol:	30.01	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013572.D	1	01/20/23 12:30	01/24/23 15:50	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	100	U	100	170	ug/Kg
83-32-9	Acenaphthene	78.9	U	78.9	170	ug/Kg
51-28-5	2,4-Dinitrophenol	130	U	130	330	ug/Kg
100-02-7	4-Nitrophenol	140	U	140	330	ug/Kg
132-64-9	Dibenzofuran	74.2	U	74.2	170	ug/Kg
121-14-2	2,4-Dinitrotoluene	84.6	U	84.6	170	ug/Kg
84-66-2	Diethylphthalate	80.5	U	80.5	170	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	93.6	U	93.6	170	ug/Kg
86-73-7	Fluorene	78.8	U	78.8	170	ug/Kg
100-01-6	4-Nitroaniline	100	U	100	170	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	86.2	U	86.2	330	ug/Kg
86-30-6	n-Nitrosodiphenylamine	82.2	U	82.2	170	ug/Kg
101-55-3	4-Bromophenyl-phenylether	98.4	U	98.4	170	ug/Kg
118-74-1	Hexachlorobenzene	100	U	100	170	ug/Kg
1912-24-9	Atrazine	90.0	U	90.0	170	ug/Kg
87-86-5	Pentachlorophenol	120	U	120	330	ug/Kg
85-01-8	Phenanthrene	83.6	U	83.6	170	ug/Kg
120-12-7	Anthracene	84.0	U	84.0	170	ug/Kg
86-74-8	Carbazole	84.2	U	84.2	170	ug/Kg
84-74-2	Di-n-butylphthalate	87.0	U	87.0	170	ug/Kg
206-44-0	Fluoranthene	79.8	U	79.8	170	ug/Kg
129-00-0	Pyrene	74.2	U	74.2	170	ug/Kg
85-68-7	Butylbenzylphthalate	82.7	U	82.7	170	ug/Kg
91-94-1	3,3-Dichlorobenzidine	140	U	140	330	ug/Kg
56-55-3	Benzo(a)anthracene	86.8	U	86.8	170	ug/Kg
218-01-9	Chrysene	85.5	U	85.5	170	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	88.6	U	88.6	170	ug/Kg
117-84-0	Di-n-octyl phthalate	91.0	U	91.0	330	ug/Kg
205-99-2	Benzo(b)fluoranthene	69.0	U	69.0	170	ug/Kg
207-08-9	Benzo(k)fluoranthene	73.6	U	73.6	170	ug/Kg
50-32-8	Benzo(a)pyrene	67.7	U	67.7	170	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	100	U	100	170	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	100	U	100	170	ug/Kg

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:	PB150378BL		SDG No.:	O1233
Lab Sample ID:	PB150378BL		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	100
Sample Wt/Vol:	30.01	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013572.D	1	01/20/23 12:30	01/24/23 15:50	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	96.9	U	96.9	170	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	91.2	U	91.2	170	ug/Kg
123-91-1	1,4-Dioxane	89.1	U	89.1	170	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	81.2	U	81.2	170	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	128		18 - 112	85%	SPK: 150
13127-88-3	Phenol-d6	125		21 - 104	83%	SPK: 150
4165-60-0	Nitrobenzene-d5	78.9		27 - 109	79%	SPK: 100
321-60-8	2-Fluorobiphenyl	67.6		30 - 103	68%	SPK: 100
118-79-6	2,4,6-Tribromophenol	131		10 - 121	88%	SPK: 150
1718-51-0	Terphenyl-d14	70.3		21 - 107	70%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	291000	8.163	
1146-65-2	Naphthalene-d8	1300000	10.993	
15067-26-2	Acenaphthene-d10	838000	14.798	
1517-22-2	Phenanthrene-d10	1910000	17.551	
1719-03-5	Chrysene-d12	1880000	21.627	
1520-96-3	Perylene-d12	2130000	24.216	

TENTATIVE IDENTIFIED COMPOUNDS

000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1000	A		5.22	ug/Kg
055124-79-3	Heptadecane, 9-hexyl-	120	J		24.1	ug/Kg
000629-97-0	Docosane	140	J		24.9	ug/Kg
013475-77-9	Eicosane, 9-octyl-	170	J		25.9	ug/Kg
000629-78-7	Heptadecane	120	J		27.0	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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:	PB150378BS		SDG No.:	O1233
Lab Sample ID:	PB150378BS		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	100
Sample Wt/Vol:	30.02	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013684.D	1	01/20/23 12:30	01/31/23 21:04	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	960		140	330	ug/Kg
108-95-2	Phenol	1600		67.7	170	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	1500		80.2	170	ug/Kg
95-57-8	2-Chlorophenol	1600		68.3	170	ug/Kg
95-48-7	2-Methylphenol	1500		110	170	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	1600		95.8	170	ug/Kg
98-86-2	Acetophenone	1400		80.0	170	ug/Kg
65794-96-9	3+4-Methylphenols	1500		97.3	330	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	1500		76.0	79.9	ug/Kg
67-72-1	Hexachloroethane	1600		73.7	170	ug/Kg
98-95-3	Nitrobenzene	1400		73.9	170	ug/Kg
78-59-1	Isophorone	1400		66.6	170	ug/Kg
88-75-5	2-Nitrophenol	1400		92.7	170	ug/Kg
105-67-9	2,4-Dimethylphenol	1500		98.7	170	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	1400		110	170	ug/Kg
120-83-2	2,4-Dichlorophenol	1500		81.6	170	ug/Kg
91-20-3	Naphthalene	1400		73.9	170	ug/Kg
106-47-8	4-Chloroaniline	810		96.2	170	ug/Kg
87-68-3	Hexachlorobutadiene	1500		99.3	170	ug/Kg
105-60-2	Caprolactam	1400		99.9	330	ug/Kg
59-50-7	4-Chloro-3-methylphenol	1500		78.6	170	ug/Kg
91-57-6	2-Methylnaphthalene	1300		75.0	170	ug/Kg
77-47-4	Hexachlorocyclopentadiene	3600	E	170	330	ug/Kg
88-06-2	2,4,6-Trichlorophenol	1500		85.3	170	ug/Kg
95-95-4	2,4,5-Trichlorophenol	1400		83.5	170	ug/Kg
92-52-4	1,1-Biphenyl	1400		86.4	170	ug/Kg
91-58-7	2-Chloronaphthalene	1400		85.4	170	ug/Kg
88-74-4	2-Nitroaniline	1400		110	170	ug/Kg
131-11-3	Dimethylphthalate	1400		80.8	170	ug/Kg
208-96-8	Acenaphthylene	1400		68.7	170	ug/Kg
606-20-2	2,6-Dinitrotoluene	1400		78.0	170	ug/Kg

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:	PB150378BS		SDG No.:	O1233
Lab Sample ID:	PB150378BS		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	100
Sample Wt/Vol:	30.02	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013684.D	1	01/20/23 12:30	01/31/23 21:04	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	1100		100	170	ug/Kg
83-32-9	Acenaphthene	1600		78.8	170	ug/Kg
51-28-5	2,4-Dinitrophenol	2900	E	130	330	ug/Kg
100-02-7	4-Nitrophenol	3100	E	140	330	ug/Kg
132-64-9	Dibenzofuran	1400		74.2	170	ug/Kg
121-14-2	2,4-Dinitrotoluene	1500		84.5	170	ug/Kg
84-66-2	Diethylphthalate	1400		80.4	170	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	1400		93.5	170	ug/Kg
86-73-7	Fluorene	1400		78.7	170	ug/Kg
100-01-6	4-Nitroaniline	1300		100	170	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	1400		86.1	330	ug/Kg
86-30-6	n-Nitrosodiphenylamine	1400		82.1	170	ug/Kg
101-55-3	4-Bromophenyl-phenylether	1400		98.3	170	ug/Kg
118-74-1	Hexachlorobenzene	1500		100	170	ug/Kg
1912-24-9	Atrazine	1600		89.9	170	ug/Kg
87-86-5	Pentachlorophenol	2800	E	120	330	ug/Kg
85-01-8	Phenanthrene	1400		83.5	170	ug/Kg
120-12-7	Anthracene	1400		83.9	170	ug/Kg
86-74-8	Carbazole	1400		84.1	170	ug/Kg
84-74-2	Di-n-butylphthalate	1400		86.9	170	ug/Kg
206-44-0	Fluoranthene	1400		79.7	170	ug/Kg
129-00-0	Pyrene	1600		74.2	170	ug/Kg
85-68-7	Butylbenzylphthalate	1600		82.6	170	ug/Kg
91-94-1	3,3-Dichlorobenzidine	1300		140	330	ug/Kg
56-55-3	Benzo(a)anthracene	1500		86.7	170	ug/Kg
218-01-9	Chrysene	1400		85.4	170	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	1500		88.5	170	ug/Kg
117-84-0	Di-n-octyl phthalate	1300		90.9	330	ug/Kg
205-99-2	Benzo(b)fluoranthene	1700		69.0	170	ug/Kg
207-08-9	Benzo(k)fluoranthene	1600		73.6	170	ug/Kg
50-32-8	Benzo(a)pyrene	1400		67.7	170	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1300		100	170	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	1300		100	170	ug/Kg

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:	PB150378BS		SDG No.:	O1233
Lab Sample ID:	PB150378BS		Matrix:	SOIL
Analytical Method:	SW8270		% Solid:	100
Sample Wt/Vol:	30.02	Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted : N	Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP013684.D	1	01/20/23 12:30	01/31/23 21:04	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	1200		96.8	170	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	1400		91.1	170	ug/Kg
123-91-1	1,4-Dioxane	1100		89.0	170	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	1500		81.1	170	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	146		18 - 112	97%	SPK: 150
13127-88-3	Phenol-d6	144		21 - 104	96%	SPK: 150
4165-60-0	Nitrobenzene-d5	90.3		27 - 109	90%	SPK: 100
321-60-8	2-Fluorobiphenyl	85.2		30 - 103	85%	SPK: 100
118-79-6	2,4,6-Tribromophenol	141		10 - 121	94%	SPK: 150
1718-51-0	Terphenyl-d14	103		21 - 107	103%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	298000	8.14
1146-65-2	Naphthalene-d8	1190000	10.969
15067-26-2	Acenaphthene-d10	801000	14.775
1517-22-2	Phenanthrene-d10	1850000	17.528
1719-03-5	Chrysene-d12	1640000	21.61
1520-96-3	Perylene-d12	1450000	24.18

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P34AMS	SDG No.:	O1233
Lab Sample ID:	O1233-02MS	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132171.D	1	01/20/23 12:30	01/20/23 20:35	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	1200		170	390	ug/Kg
108-95-2	Phenol	1700		79.2	200	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	1700		94.0	200	ug/Kg
95-57-8	2-Chlorophenol	1800		79.9	200	ug/Kg
95-48-7	2-Methylphenol	1700		130	200	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	1700		110	200	ug/Kg
98-86-2	Acetophenone	1600		93.7	200	ug/Kg
65794-96-9	3+4-Methylphenols	1700		110	390	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	1700		89.1	93.6	ug/Kg
67-72-1	Hexachloroethane	1800		86.3	200	ug/Kg
98-95-3	Nitrobenzene	1700		86.5	200	ug/Kg
78-59-1	Isophorone	1700		77.9	200	ug/Kg
88-75-5	2-Nitrophenol	2000		110	200	ug/Kg
105-67-9	2,4-Dimethylphenol	1700		120	200	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	1600		130	200	ug/Kg
120-83-2	2,4-Dichlorophenol	1700		95.6	200	ug/Kg
91-20-3	Naphthalene	1600		86.5	200	ug/Kg
106-47-8	4-Chloroaniline	590		110	200	ug/Kg
87-68-3	Hexachlorobutadiene	1600		120	200	ug/Kg
105-60-2	Caprolactam	2000		120	390	ug/Kg
59-50-7	4-Chloro-3-methylphenol	1800		92.1	200	ug/Kg
91-57-6	2-Methylnaphthalene	1500		87.8	200	ug/Kg
77-47-4	Hexachlorocyclopentadiene	3600	E	200	390	ug/Kg
88-06-2	2,4,6-Trichlorophenol	1700		100	200	ug/Kg
95-95-4	2,4,5-Trichlorophenol	1600		97.8	200	ug/Kg
92-52-4	1,1-Biphenyl	1600		100	200	ug/Kg
91-58-7	2-Chloronaphthalene	1600		100	200	ug/Kg
88-74-4	2-Nitroaniline	1800		130	200	ug/Kg
131-11-3	Dimethylphthalate	1600		94.7	200	ug/Kg
208-96-8	Acenaphthylene	1600		80.4	200	ug/Kg
606-20-2	2,6-Dinitrotoluene	2000		91.4	200	ug/Kg

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-P34AMS	SDG No.:	O1233
Lab Sample ID:	O1233-02MS	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132171.D	1	01/20/23 12:30	01/20/23 20:35	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	1300		120	200	ug/Kg
83-32-9	Acenaphthene	1800		92.3	200	ug/Kg
51-28-5	2,4-Dinitrophenol	4200	E	150	390	ug/Kg
100-02-7	4-Nitrophenol	3900	E	160	390	ug/Kg
132-64-9	Dibenzofuran	1500		86.8	200	ug/Kg
121-14-2	2,4-Dinitrotoluene	2100		99.0	200	ug/Kg
84-66-2	Diethylphthalate	1700		94.2	200	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	1600		110	200	ug/Kg
86-73-7	Fluorene	1600		92.2	200	ug/Kg
100-01-6	4-Nitroaniline	1900		120	200	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	1900		100	390	ug/Kg
86-30-6	n-Nitrosodiphenylamine	1500		96.2	200	ug/Kg
101-55-3	4-Bromophenyl-phenylether	1500		120	200	ug/Kg
118-74-1	Hexachlorobenzene	1700		120	200	ug/Kg
1912-24-9	Atrazine	1800		110	200	ug/Kg
87-86-5	Pentachlorophenol	3100		140	390	ug/Kg
85-01-8	Phenanthrene	1500		97.8	200	ug/Kg
120-12-7	Anthracene	1500		98.3	200	ug/Kg
86-74-8	Carbazole	1700		98.5	200	ug/Kg
84-74-2	Di-n-butylphthalate	1800		100	200	ug/Kg
206-44-0	Fluoranthene	1700		93.4	200	ug/Kg
129-00-0	Pyrene	1600		86.8	200	ug/Kg
85-68-7	Butylbenzylphthalate	1900		96.8	200	ug/Kg
91-94-1	3,3-Dichlorobenzidine	830		160	390	ug/Kg
56-55-3	Benzo(a)anthracene	1700		100	200	ug/Kg
218-01-9	Chrysene	1600		100	200	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	1800		100	200	ug/Kg
117-84-0	Di-n-octyl phthalate	1700		110	390	ug/Kg
205-99-2	Benzo(b)fluoranthene	1800		80.8	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	1700		86.1	200	ug/Kg
50-32-8	Benzo(a)pyrene	1600		79.2	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1500		120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	1700		120	200	ug/Kg

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-P34AMS	SDG No.:	O1233
Lab Sample ID:	O1233-02MS	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132171.D	1	01/20/23 12:30	01/20/23 20:35	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	1500		110	200	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	1500		110	200	ug/Kg
123-91-1	1,4-Dioxane	1500		100	200	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	1800		95.0	200	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	111		18 - 112	74%	SPK: 150
13127-88-3	Phenol-d6	118		21 - 104	79%	SPK: 150
4165-60-0	Nitrobenzene-d5	81.4		27 - 109	81%	SPK: 100
321-60-8	2-Fluorobiphenyl	65.7		30 - 103	66%	SPK: 100
118-79-6	2,4,6-Tribromophenol	131		10 - 121	88%	SPK: 150
1718-51-0	Terphenyl-d14	73.6		21 - 107	74%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	184000	7.09			
1146-65-2	Naphthalene-d8	674000	8.378			
15067-26-2	Acenaphthene-d10	369000	10.142			
1517-22-2	Phenanthrene-d10	748000	11.642			
1719-03-5	Chrysene-d12	455000	14.307			
1520-96-3	Perylene-d12	406000	15.901			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

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-P34AMSD	SDG No.:	O1233
Lab Sample ID:	O1233-02MSD	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132172.D	1	01/20/23 12:30	01/20/23 21:08	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	1200		160	390	ug/Kg
108-95-2	Phenol	1700		79.2	200	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	1700		93.9	200	ug/Kg
95-57-8	2-Chlorophenol	1800		79.9	200	ug/Kg
95-48-7	2-Methylphenol	1700		130	200	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	1700		110	200	ug/Kg
98-86-2	Acetophenone	1600		93.7	200	ug/Kg
65794-96-9	3+4-Methylphenols	1700		110	390	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	1600		89.0	93.6	ug/Kg
67-72-1	Hexachloroethane	1800		86.2	200	ug/Kg
98-95-3	Nitrobenzene	1700		86.4	200	ug/Kg
78-59-1	Isophorone	1700		77.9	200	ug/Kg
88-75-5	2-Nitrophenol	2000		110	200	ug/Kg
105-67-9	2,4-Dimethylphenol	1700		120	200	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	1600		130	200	ug/Kg
120-83-2	2,4-Dichlorophenol	1700		95.6	200	ug/Kg
91-20-3	Naphthalene	1600		86.4	200	ug/Kg
106-47-8	4-Chloroaniline	600		110	200	ug/Kg
87-68-3	Hexachlorobutadiene	1600		120	200	ug/Kg
105-60-2	Caprolactam	2000		120	390	ug/Kg
59-50-7	4-Chloro-3-methylphenol	1800		92.0	200	ug/Kg
91-57-6	2-Methylnaphthalene	1500		87.7	200	ug/Kg
77-47-4	Hexachlorocyclopentadiene	3700	E	200	390	ug/Kg
88-06-2	2,4,6-Trichlorophenol	1700		99.9	200	ug/Kg
95-95-4	2,4,5-Trichlorophenol	1600		97.8	200	ug/Kg
92-52-4	1,1-Biphenyl	1600		100	200	ug/Kg
91-58-7	2-Chloronaphthalene	1600		100	200	ug/Kg
88-74-4	2-Nitroaniline	1800		130	200	ug/Kg
131-11-3	Dimethylphthalate	1600		94.6	200	ug/Kg
208-96-8	Acenaphthylene	1600		80.4	200	ug/Kg
606-20-2	2,6-Dinitrotoluene	1900		91.3	200	ug/Kg

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-P34AMSD	SDG No.:	O1233
Lab Sample ID:	O1233-02MSD	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132172.D	1	01/20/23 12:30	01/20/23 21:08	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	1200		120	200	ug/Kg
83-32-9	Acenaphthene	1800		92.3	200	ug/Kg
51-28-5	2,4-Dinitrophenol	4200	E	150	390	ug/Kg
100-02-7	4-Nitrophenol	3900	E	160	390	ug/Kg
132-64-9	Dibenzofuran	1600		86.8	200	ug/Kg
121-14-2	2,4-Dinitrotoluene	2100		98.9	200	ug/Kg
84-66-2	Diethylphthalate	1600		94.2	200	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	1600		110	200	ug/Kg
86-73-7	Fluorene	1600		92.2	200	ug/Kg
100-01-6	4-Nitroaniline	1900		120	200	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	1900		100	390	ug/Kg
86-30-6	n-Nitrosodiphenylamine	1500		96.1	200	ug/Kg
101-55-3	4-Bromophenyl-phenylether	1500		120	200	ug/Kg
118-74-1	Hexachlorobenzene	1600		120	200	ug/Kg
1912-24-9	Atrazine	1800		110	200	ug/Kg
87-86-5	Pentachlorophenol	3100		140	390	ug/Kg
85-01-8	Phenanthrene	1500		97.8	200	ug/Kg
120-12-7	Anthracene	1500		98.2	200	ug/Kg
86-74-8	Carbazole	1600		98.5	200	ug/Kg
84-74-2	Di-n-butylphthalate	1700		100	200	ug/Kg
206-44-0	Fluoranthene	1700		93.3	200	ug/Kg
129-00-0	Pyrene	1600		86.8	200	ug/Kg
85-68-7	Butylbenzylphthalate	1900		96.7	200	ug/Kg
91-94-1	3,3-Dichlorobenzidine	870		160	390	ug/Kg
56-55-3	Benzo(a)anthracene	1600		100	200	ug/Kg
218-01-9	Chrysene	1600		100	200	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	1700		100	200	ug/Kg
117-84-0	Di-n-octyl phthalate	1700		110	390	ug/Kg
205-99-2	Benzo(b)fluoranthene	1800		80.7	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	1700		86.1	200	ug/Kg
50-32-8	Benzo(a)pyrene	1600		79.2	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1500		120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	1600		120	200	ug/Kg

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-P34AMSD	SDG No.:	O1233
Lab Sample ID:	O1233-02MSD	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	85.3
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF132172.D	1	01/20/23 12:30	01/20/23 21:08	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	1500		110	200	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	1500		110	200	ug/Kg
123-91-1	1,4-Dioxane	1500		100	200	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	1800		95.0	200	ug/Kg

SURROGATES

367-12-4	2-Fluorophenol	111		18 - 112	74%	SPK: 150
13127-88-3	Phenol-d6	117		21 - 104	78%	SPK: 150
4165-60-0	Nitrobenzene-d5	82.3		27 - 109	82%	SPK: 100
321-60-8	2-Fluorobiphenyl	66.1		30 - 103	66%	SPK: 100
118-79-6	2,4,6-Tribromophenol	131		10 - 121	87%	SPK: 150
1718-51-0	Terphenyl-d14	74.4		21 - 107	74%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	185000	7.089
1146-65-2	Naphthalene-d8	670000	8.378
15067-26-2	Acenaphthene-d10	363000	10.142
1517-22-2	Phenanthrene-d10	737000	11.642
1719-03-5	Chrysene-d12	440000	14.307
1520-96-3	Perylene-d12	407000	15.901

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

CALIBRATION SUMMARY

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
 Method File : 8270-BF011923.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Fri Jan 20 00:50:42 2023
 Response Via : Initial Calibration

Calibration Files

2.5 =BF132140.D 5 =BF132141.D 10 =BF132142.D 20 =BF132143.D 40 =BF132144.D 50 =BF132145.D 60 =BF132146.D 80 =BF132147.D

	Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD
1) I	1,4-Dichlorobenzen...	-----ISTD-----									
2)	1,4-Dioxane	0.624	0.591	0.586	0.580	0.553	0.575	0.553	0.580	4.24	
3)	Pyridine	1.663	1.539	1.599	1.567	1.496	1.554	1.480	1.557	3.98	
4)	n-Nitrosodimet...	0.731	0.705	0.733	0.730	0.724	0.761	0.742	0.732	2.31	
5) S	2-Fluorophenol	1.301	1.246	1.204	1.116	1.063	1.077	1.009	1.145	9.35	
6)	Aniline	2.241	2.090	2.044	1.937	1.865	1.940	1.857	1.996	6.91	
7) S	Phenol-d6	1.696	1.541	1.516	1.404	1.325	1.352	1.254	1.441	10.54	
8)	2-Chlorophenol	1.351	1.306	1.286	1.183	1.129	1.136	1.034	1.203	9.50	
9)	Benzaldehyde		1.086	1.022	0.903	0.814	0.812		0.927	13.33	
10) C	Phenol	1.733	1.636	1.580	1.468	1.375	1.408	1.303	1.500	10.29	
11)	bis(2-Chloroet...	1.461	1.341	1.325	1.236	1.178	1.219	1.131	1.270	8.87	
12)	1,3-Dichlorobe...	1.556	1.458	1.406	1.312	1.242	1.269	1.174	1.345	9.97	
13) C	1,4-Dichlorobe...	1.544	1.451	1.419	1.314	1.238	1.266	1.163	1.342	9.99	
14)	1,2-Dichlorobe...	1.495	1.391	1.326	1.200	1.128	1.134	1.014	1.241	13.62	
15)	Benzyl Alcohol	1.128	1.103	1.125	1.106	1.090	1.105	1.060	1.102	2.07	
16)	2,2'-oxybis(1-...	2.119	1.959	1.937	1.815	1.731	1.743	1.617	1.846	9.20	
17)	2-Methylphenol	1.172	1.098	1.104	1.042	0.990	1.019	0.955	1.054	7.08	
18)	Hexachloroethane	0.503	0.486	0.495	0.489	0.466	0.485	0.449	0.482	3.82	
19) P	n-Nitroso-di-n...	0.922	1.015	0.971	0.921	0.847	0.797	0.814	0.776	0.883	9.86
20)	3+4-Methylphenols	1.509	1.435	1.426	1.317	1.235	1.258	1.119	1.328	10.25	
21) I	Naphthalene-d8	-----ISTD-----									
22)	Acetophenone	0.579	0.528	0.504	0.462	0.431	0.442	0.419	0.481	12.18	
23) S	Nitrobenzene-d5	0.363	0.366	0.383	0.383	0.371	0.388	0.381	0.376	2.54	
24)	Nitrobenzene	0.397	0.392	0.410	0.406	0.388	0.406	0.391	0.399	2.20	
25)	Isophorone	0.767	0.740	0.738	0.719	0.711	0.739	0.743	0.737	2.45	
26) C	2-Nitrophenol	0.099	0.105	0.128	0.148	0.154			0.127	19.49	
27)	2,4-Dimethylph...	0.334	0.330	0.324	0.322	0.308	0.313	0.300	0.319	3.82	
28)	bis(2-Chloroet...	0.497	0.471	0.461	0.430	0.407	0.421	0.406	0.442	7.97	
29) C	2,4-Dichloroph...	0.303	0.298	0.313	0.309	0.294	0.305	0.296	0.303	2.28	
30)	1,2,4-Trichlor...	0.388	0.360	0.355	0.338	0.320	0.328	0.316	0.344	7.49	
31)	Naphthalene	1.185	1.119	1.075	0.998	0.942	0.965	0.907	1.027	9.89	
32)	Benzoic acid		0.118	0.151	0.188	0.200	0.228	0.235	0.187	24.10	
33)	4-Chloroaniline	0.496	0.474	0.458	0.437	0.411	0.410	0.390	0.440	8.72	
34) C	Hexachlorobuta...	0.252	0.234	0.234	0.227	0.220	0.230	0.220	0.231	4.75	
35)	Caprolactam	0.075	0.081	0.086	0.090	0.089	0.090	0.089	0.086	6.65	
36) C	4-Chloro-3-met...	0.299	0.305	0.314	0.309	0.305	0.302	0.298	0.305	1.80	
37)	2-Methylnaphth...	0.828	0.783	0.739	0.684	0.643	0.655	0.619	0.707	11.04	
38)	1-Methylnaphth...	0.774	0.719	0.690	0.638	0.599	0.609	0.577	0.658	10.93	

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
 Method File : 8270-BF011923.M

39) I	Acenaphthene-d10	-----ISTD-----									
40)	1,2,4,5-Tetrac...	0.789	0.737	0.719	0.684	0.641	0.667	0.634	0.696	8.04	
41) P	Hexachlorocycl...	0.306	0.342	0.390	0.389	0.422	0.428	0.380		12.43	
42) S	2,4,6-Tribromo...	0.197	0.207	0.222	0.221	0.217	0.219	0.212	0.214	4.25	
43) C	2,4,6-Trichlor...	0.392	0.414	0.445	0.448	0.437	0.451	0.436	0.432	4.95	
44)	2,4,5-Trichlor...	0.475	0.487	0.519	0.523	0.504	0.524	0.504	0.505	3.69	
45) S	2-Fluorobiphenyl	1.669	1.529	1.407	1.250	1.162	1.197		1.369	14.76	
46)	1,1'-Biphenyl	1.813	1.710	1.657	1.537	1.450	1.490	1.388	1.578	9.70	
47)	2-Chloronaphth...	1.372	1.294	1.270	1.195	1.131	1.167	1.110	1.220	7.81	
48)	2-Nitroaniline	0.245	0.288	0.354	0.380	0.391	0.405	0.395	0.351	17.42	
49)	Acenaphthylene	2.180	2.078	2.033	1.912	1.834	1.851	1.771	1.951	7.63	
50)	Dimethylphthalate	1.562	1.520	1.519	1.435	1.369	1.396	1.338	1.449	5.95	
51)	2,6-Dinitrotol...	0.224	0.253	0.286	0.301	0.300	0.307	0.296	0.281	10.95	
52) C	Acenaphthene	1.315	1.269	1.214	1.141	1.085	1.123	1.070	1.174	8.01	
53)	3-Nitroaniline	0.256	0.289	0.318	0.322	0.319	0.307	0.291	0.300	7.88	
54) P	2,4-Dinitrophenol	0.078	0.097	0.111	0.124	0.131		0.108		19.86	
55)	Dibenzofuran	2.079	1.971	1.883	1.771	1.692	1.707	1.594	1.814	9.44	
56) P	4-Nitrophenol	0.172	0.191	0.221	0.232	0.242	0.239	0.233	0.218	12.18	
57)	2,4-Dinitrotol...	0.266	0.281	0.340	0.355	0.372	0.379	0.366	0.337	13.46	
58)	Fluorene	1.619	1.504	1.416	1.282	1.219	1.221	1.148	1.344	12.87	
59)	2,3,4,6-Tetrac...	0.344	0.366	0.400	0.405	0.393	0.399	0.382	0.384	5.77	
60)	Diethylphthalate	1.495	1.493	1.485	1.423	1.389	1.362	1.296	1.420	5.37	
61)	4-Chlorophenyl...	0.838	0.783	0.750	0.704	0.664	0.673	0.625	0.720	10.37	
62)	4-Nitroaniline	0.258	0.275	0.293	0.282	0.290	0.283	0.276	0.279	4.12	
63)	Azobenzene	1.594	1.515	1.498	1.401	1.349	1.354	1.268	1.426	8.00	
64) I	Phenanthrene-d10	-----ISTD-----									
65)	4,6-Dinitro-2-...	0.058	0.072	0.085	0.094	0.103	0.109	0.087		22.26	
66) c	n-Nitrosodiphe...	0.705	0.681	0.655	0.614	0.598	0.628	0.601	0.641	6.46	
67)	4-Bromophenyl-...	0.260	0.253	0.247	0.237	0.230	0.244	0.236	0.244	4.25	
68)	Hexachlorobenzene	0.260	0.248	0.243	0.235	0.229	0.242	0.237	0.242	4.22	
69)	Atrazine	0.204	0.202	0.203	0.197	0.190	0.198	0.190	0.198	2.96	
70) C	Pentachlorophenol	0.123	0.136	0.156	0.162	0.167	0.174	0.172	0.156	12.45	
71)	Phenanthrene	1.231	1.134	1.083	0.997	0.960	1.003	0.939	1.050	10.02	
72)	Anthracene	1.244	1.150	1.104	1.007	0.965	1.006	0.956	1.062	10.15	
73)	Carbazole	1.046	0.997	0.952	0.865	0.829	0.852	0.808	0.907	10.07	
74)	Di-n-butylphth...	1.021	1.052	1.071	0.990	0.977	1.001	0.955	1.010	4.07	
75) C	Fluoranthene	1.297	1.190	1.123	1.008	0.979	1.002	0.949	1.078	11.96	
76) I	Chrysene-d12	-----ISTD-----									
77)	Benzydine	0.607	0.635	0.615	0.682	0.569	0.574	0.521	0.600	8.60	
78)	Pyrene	1.905	1.890	1.961	1.847	1.820	1.833	1.646	1.843	5.41	
79) S	Terphenyl-d14	1.378	1.298	1.274	1.157	1.116	1.127	1.007	1.194	10.71	
80)	Butylbenzylpht...	0.360	0.428	0.535	0.582	0.598	0.624	0.612	0.534	19.03	
81)	Benzo(a)anthra...	1.454	1.419	1.446	1.403	1.402	1.471	1.406	1.429	1.95	
82)	3,3'-Dichlorob...	0.310	0.345	0.403	0.422	0.418	0.456	0.430	0.398	12.91	
83)	Chrysene	1.457	1.365	1.351	1.331	1.310	1.380	1.325	1.360	3.62	
84)	Bis(2-ethylhex...	0.472	0.547	0.691	0.768	0.788	0.841	0.830	0.705	20.44	
85) c	Di-n-octyl pht...	0.595	0.816	1.093	1.187	1.360	1.445	1.083		30.01#	

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF011923.M

86) I	Perylene-d12	-----ISTD-----								
87)	Indeno(1,2,3-c...	1.093	1.197	1.461	1.579	1.556	1.661	1.613	1.451	15.17
88)	Benzo(b)fluora...	1.288	1.234	1.181	1.230	1.164	1.212	1.214	1.218	3.28
89)	Benzo(k)fluora...	1.336	1.302	1.303	1.211	1.157	1.208	1.177	1.242	5.66
90) C	Benzo(a)pyrene	1.124	1.102	1.157	1.195	1.167	1.243	1.212	1.171	4.23
91)	Dibenzo(a,h)an...	0.926	1.009	1.215	1.294	1.249	1.323	1.268	1.184	12.94
92)	Benzo(g,h,i)pe...	0.925	1.038	1.267	1.354	1.328	1.422	1.385	1.246	15.21

(#) = Out of Range

Method Path : Z:\svoasrv\HPCHEM1\BNA_G\Methods\
 Method File : 8270-BG122722.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Wed Dec 28 05:20:14 2022
 Response Via : Initial Calibration

Calibration Files

2.5 =BG056126.D 5 =BG056127.D 10 =BG056128.D 20 =BG056129.D 40 =BG056130.D 50 =BG056131.D 60 =BG056132.D 80 =BG056133.D

Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD

1) I 1,4-Dichlorobenzen...	-----ISTD-----									
2) 1,4-Dioxane	0.534	0.553	0.535	0.538	0.502	0.477	0.442	0.512	7.80	
3) Pyridine	1.468	1.554	1.680	1.617	1.599	1.528	1.462	1.558	5.13	
4) n-Nitrosodimet...	0.311	0.311	0.330	0.335	0.331	0.301	0.300	0.317	4.70	
5) S 2-Fluorophenol	1.169	1.169	1.157	1.128	1.128	1.061	1.029	1.120	4.90	
6) Aniline	2.284	2.358	2.331	2.300	2.228	2.176	2.114	2.256	3.88	
7) S Phenol-d6	1.750	1.738	1.781	1.786	1.729	1.653	1.605	1.720	3.90	
8) 2-Chlorophenol	1.120	1.124	1.156	1.137	1.119	1.098	1.048	1.115	3.08	
9) Benzaldehyde	1.168	1.151	1.108	1.001	0.997	0.899	0.837	1.023	12.35	
10) C Phenol	1.756	1.808	1.805	1.796	1.756	1.682	1.608	1.745	4.25	
11) bis(2-Chloroet...	1.212	1.248	1.285	1.195	1.162	1.103	1.070	1.182	6.48	
12) 1,3-Dichlorobe...	1.421	1.485	1.384	1.355	1.353	1.278	1.220	1.357	6.48	
13) C 1,4-Dichlorobe...	1.411	1.428	1.394	1.383	1.362	1.302	1.256	1.362	4.54	
14) 1,2-Dichlorobe...	1.358	1.364	1.374	1.332	1.321	1.249	1.202	1.314	4.95	
15) Benzyl Alcohol	1.241	1.231	1.290	1.315	1.268	1.220	1.199	1.252	3.28	
16) 2,2'-oxybis(1-...	0.241	0.227	0.216	0.210	0.201	0.187	0.181	0.209	10.28	
17) 2-Methylphenol	1.283	1.274	1.327	1.330	1.275	1.247	1.225	1.280	3.01	
18) Hexachloroethane	0.446	0.427	0.430	0.418	0.420	0.386	0.371	0.414	6.36	
19) P n-Nitroso-di-n...	1.042	1.116	1.102	1.088	1.060	1.051	0.963	0.947	1.046	5.88
20) 3+4-Methylphenols	1.764	1.762	1.838	1.872	1.825	1.781	1.756	1.800	2.52	

21) I Naphthalene-d8	-----ISTD-----									
22) Acetophenone	0.571	0.584	0.572	0.567	0.564	0.557	0.543	0.566	2.28	
23) S Nitrobenzene-d5	0.405	0.387	0.401	0.389	0.386	0.391	0.378	0.391	2.38	
24) Nitrobenzene	0.408	0.387	0.390	0.383	0.387	0.381	0.376	0.387	2.58	
25) Isophorone	0.868	0.842	0.828	0.819	0.814	0.807	0.781	0.823	3.33	
26) C 2-Nitrophenol	0.198	0.193	0.195	0.198	0.200	0.202	0.202	0.198	1.72	
27) 2,4-Dimethylph...	0.352	0.381	0.372	0.359	0.356	0.358	0.353	0.362	2.99	
28) bis(2-Chloroet...	0.451	0.427	0.450	0.420	0.424	0.412	0.409	0.428	3.95	
29) C 2,4-Dichloroph...	0.381	0.385	0.397	0.411	0.413	0.414	0.398	0.400	3.39	
30) 1,2,4-Trichlor...	0.473	0.453	0.452	0.448	0.457	0.447	0.445	0.454	2.06	
31) Naphthalene	1.075	1.041	1.064	1.036	1.055	1.057	1.040	1.053	1.36	
32) Benzoic acid	0.226	0.235	0.284	0.279	0.288	0.291	0.276	0.268	9.91	
33) 4-Chloroaniline	0.519	0.490	0.501	0.502	0.501	0.505	0.500	0.503	1.71	
34) C Hexachlorobuta...	0.340	0.326	0.327	0.330	0.322	0.322	0.317	0.326	2.20	
35) Caprolactam	0.140	0.135	0.145	0.134	0.130	0.135	0.129	0.135	4.15	
36) C 4-Chloro-3-met...	0.404	0.384	0.417	0.402	0.413	0.417	0.401	0.406	2.86	
37) 2-Methylnaphth...	0.914	0.894	0.878	0.890	0.888	0.885	0.872	0.889	1.49	
38) 1-Methylnaphth...	0.825	0.824	0.844	0.817	0.828	0.829	0.810	0.825	1.29	

Method Path : Z:\svoasrv\HPCHEM1\BNA_G\Methods\
 Method File : 8270-BG122722.M

39) I	Acenaphthene-d10	-----ISTD-----								
40)	1,2,4,5-Tetrac...	0.761	0.719	0.750	0.765	0.776	0.755	0.721	0.750	2.89
41) P	Hexachlorocycl...	0.384	0.371	0.415	0.456	0.472	0.450	0.443	0.427	8.98
42) S	2,4,6-Tribromo...	0.249	0.249	0.258	0.257	0.260	0.254	0.246	0.253	2.09
43) C	2,4,6-Trichlor...	0.470	0.462	0.494	0.517	0.527	0.508	0.492	0.496	4.78
44)	2,4,5-Trichlor...	0.579	0.570	0.578	0.597	0.616	0.590	0.573	0.586	2.76
45) S	2-Fluorobiphenyl	1.505	1.433	1.451	1.469	1.486	1.430	1.365	1.448	3.18
46)	1,1'-Biphenyl	1.455	1.398	1.448	1.457	1.463	1.426	1.380	1.432	2.26
47)	2-Chloronaphth...	1.158	1.106	1.117	1.149	1.159	1.134	1.090	1.131	2.41
48)	2-Nitroaniline	0.229	0.226	0.244	0.246	0.252	0.252	0.236	0.241	4.32
49)	Acenaphthylene	1.888	1.808	1.841	1.872	1.893	1.827	1.749	1.840	2.78
50)	Dimethylphthalate	1.665	1.624	1.674	1.624	1.627	1.581	1.506	1.615	3.52
51)	2,6-Dinitrotol...	0.353	0.342	0.342	0.341	0.354	0.345	0.331	0.344	2.25
52) C	Acenaphthene	1.216	1.126	1.202	1.223	1.243	1.208	1.157	1.197	3.40
53)	3-Nitroaniline	0.336	0.308	0.329	0.334	0.339	0.331	0.315	0.327	3.54
54) P	2,4-Dinitrophenol	0.209	0.229	0.249	0.261	0.262	0.260	0.251	0.246	8.00
55)	Dibenzofuran	2.038	1.939	2.015	2.022	2.016	1.959	1.872	1.980	3.01
56) P	4-Nitrophenol	0.251	0.240	0.256	0.261	0.252	0.256	0.246	0.252	2.73
57)	2,4-Dinitrotol...	0.467	0.461	0.488	0.496	0.498	0.491	0.466	0.481	3.28
58)	Fluorene	1.679	1.588	1.623	1.601	1.606	1.559	1.491	1.593	3.63
59)	2,3,4,6-Tetrac...	0.535	0.531	0.569	0.559	0.569	0.561	0.528	0.551	3.33
60)	Diethylphthalate	1.633	1.519	1.533	1.531	1.523	1.467	1.393	1.514	4.82
61)	4-Chlorophenyl...	1.011	0.975	1.007	1.012	1.019	0.985	0.948	0.994	2.61
62)	4-Nitroaniline	0.335	0.336	0.347	0.345	0.333	0.333	0.318	0.335	2.87
63)	Azobenzene	1.227	1.199	1.207	1.169	1.177	1.128	1.072	1.168	4.54
64) I	Phenanthrene-d10	-----ISTD-----								
65)	4,6-Dinitro-2-...	0.124	0.120	0.135	0.141	0.141	0.142	0.139	0.135	6.60
66) c	n-Nitrosodiphe...	0.559	0.545	0.556	0.560	0.568	0.553	0.543	0.555	1.54
67)	4-Bromophenyl-...	0.258	0.248	0.254	0.258	0.261	0.253	0.252	0.255	1.78
68)	Hexachlorobenzene	0.245	0.229	0.235	0.241	0.242	0.237	0.235	0.238	2.21
69)	Atrazine	0.229	0.235	0.232	0.238	0.230	0.226	0.221	0.230	2.53
70) C	Pentachlorophenol	0.161	0.169	0.181	0.190	0.193	0.195	0.190	0.183	7.14
71)	Phenanthrene	1.069	1.039	1.044	1.049	1.039	1.024	0.991	1.036	2.33
72)	Anthracene	1.126	1.064	1.088	1.081	1.067	1.047	1.011	1.069	3.32
73)	Carbazole	0.955	0.902	0.905	0.913	0.887	0.881	0.849	0.899	3.63
74)	Di-n-butylphth...	0.913	0.884	0.913	0.914	0.898	0.889	0.860	0.896	2.26
75) C	Fluoranthene	1.422	1.370	1.385	1.373	1.331	1.319	1.265	1.352	3.82
76) I	Chrysene-d12	-----ISTD-----								
77)	Benzidine	0.731	0.700	0.698	0.732	0.698	0.690	0.656	0.701	3.67
78)	Pyrene	1.497	1.431	1.424	1.404	1.419	1.365	1.329	1.410	3.76
79) S	Terphenyl-d14	1.209	1.145	1.140	1.113	1.105	1.072	1.033	1.117	5.04
80)	Butylbenzylphth...	0.406	0.388	0.401	0.409	0.418	0.409	0.401	0.404	2.31
81)	Benzo(a)anthra...	1.449	1.398	1.401	1.416	1.424	1.392	1.354	1.405	2.10
82)	3,3'-Dichlorob...	0.517	0.499	0.505	0.526	0.512	0.497	0.484	0.506	2.76
83)	Chrysene	1.350	1.311	1.314	1.333	1.334	1.299	1.269	1.316	2.04
84)	Bis(2-ethylhex...	0.608	0.567	0.565	0.590	0.601	0.578	0.570	0.583	2.96
85) c	Di-n-octyl pht...	0.994	0.973	0.976	1.000	1.008	0.973	0.962	0.984	1.73

Method Path : Z:\svoasrv\HPCHEM1\BNA_G\Methods\
Method File : 8270-BG122722.M

86) I	Perylene-d12	-----ISTD-----								
87)	Indeno(1,2,3-c...	1.482	1.429	1.447	1.484	1.447	1.479	1.414	1.455	1.90
88)	Benzo(b)fluora...	1.310	1.235	1.285	1.297	1.277	1.289	1.201	1.271	3.03
89)	Benzo(k)fluora...	1.300	1.284	1.245	1.283	1.284	1.244	1.218	1.265	2.36
90) C	Benzo(a)pyrene	1.277	1.233	1.230	1.261	1.258	1.226	1.191	1.239	2.30
91)	Dibenzo(a,h)an...	1.270	1.222	1.221	1.234	1.198	1.217	1.174	1.219	2.43
92)	Benzo(g,h,i)pe...	1.215	1.162	1.179	1.213	1.169	1.192	1.148	1.183	2.14

(#) = Out of Range

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
 Method File : 8270E-BP012323.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Tue Jan 24 04:44:15 2023
 Response Via : Initial Calibration

Calibration Files

2.5 =BP013545.D 5 =BP013546.D 10 =BP013547.D 20 =BP013548.D 40 =BP013549.D 50 =BP013550.D 60 =BP013551.D 80 =BP013552.D

Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD

1) I 1,4-Dichlorobenzen...	-----ISTD-----									
2) 1,4-Dioxane		0.496	0.484	0.477	0.495	0.475	0.451	0.417	0.471	5.98
3) Pyridine		1.435	1.372	1.356	1.479	1.425	1.385	1.327	1.397	3.73
4) n-Nitrosodimet...		0.665	0.639	0.646	0.662	0.634	0.607	0.569	0.632	5.34
5) S 2-Fluorophenol		1.214	1.132	1.167	1.231	1.185	1.153	1.090	1.167	4.12
6) Aniline		2.143	2.087	2.149	2.168	2.121	2.080	2.027	2.110	2.32
7) S Phenol-d6		1.602	1.516	1.588	1.626	1.590	1.559	1.517	1.571	2.69
8) 2-Chlorophenol		1.272	1.247	1.312	1.334	1.311	1.285	1.254	1.288	2.52
9) Benzaldehyde		1.173	1.061	1.015	0.916	0.809			0.995	13.95
10) C Phenol		1.647	1.588	1.649	1.678	1.650	1.615	1.567	1.628	2.42
11) bis(2-Chloroet...		1.406	1.327	1.359	1.360	1.327	1.285	1.253	1.331	3.81
12) 1,3-Dichlorobe...		1.507	1.421	1.454	1.479	1.419	1.374	1.318	1.424	4.49
13) C 1,4-Dichlorobe...		1.534	1.462	1.461	1.496	1.434	1.390	1.333	1.444	4.62
14) 1,2-Dichlorobe...		1.496	1.415	1.424	1.440	1.386	1.345	1.283	1.399	4.94
15) Benzyl Alcohol		1.139	1.068	1.135	1.139	1.137	1.127	1.114	1.122	2.29
16) 2,2'-oxybis(1-...		1.981	1.864	1.888	1.837	1.785	1.729	1.674	1.822	5.64
17) 2-Methylphenol		1.194	1.152	1.210	1.208	1.194	1.171	1.146	1.182	2.19
18) Hexachloroethane		0.479	0.468	0.485	0.506	0.495	0.480	0.467	0.483	2.93
19) P n-Nitroso-di-n...	0.854	1.090	1.050	1.084	1.023	1.017	0.998	0.978	1.012	7.40
20) 3+4-Methylphenols		1.531	1.497	1.574	1.582	1.587	1.561	1.559	1.556	2.05
21) I Naphthalene-d8	-----ISTD-----									
22) Acetophenone		0.519	0.502	0.520	0.532	0.524	0.510	0.485	0.513	3.08
23) S Nitrobenzene-d5		0.231	0.255	0.297	0.330	0.340	0.337	0.331	0.303	14.54
24) Nitrobenzene		0.267	0.285	0.324	0.351	0.356	0.353	0.345	0.326	11.09
25) Isophorone		0.730	0.700	0.727	0.718	0.726	0.716	0.712	0.719	1.46
26) C 2-Nitrophenol		0.057	0.064	0.085	0.106	0.122	0.130		0.094	32.19#
27) 2,4-Dimethylph...		0.291	0.292	0.312	0.321	0.323	0.319	0.312	0.310	4.29
28) bis(2-Chloroet...		0.436	0.416	0.437	0.439	0.443	0.434	0.426	0.433	2.11
29) C 2,4-Dichloroph...		0.247	0.260	0.282	0.298	0.303	0.303	0.305	0.285	8.26
30) 1,2,4-Trichlor...		0.325	0.311	0.324	0.336	0.335	0.329	0.320	0.326	2.64
31) Naphthalene		1.084	1.044	1.078	1.108	1.103	1.075	1.035	1.075	2.56
32) Benzoic acid			0.077	0.106	0.131	0.155	0.166	0.196	0.138	31.08
33) 4-Chloroaniline		0.475	0.456	0.476	0.482	0.486	0.478	0.477	0.476	1.98
34) C Hexachlorobuta...		0.189	0.183	0.189	0.198	0.194	0.189	0.184	0.189	2.76
35) Caprolactam		0.085	0.081	0.091	0.091	0.094	0.097	0.110	0.093	9.99
36) C 4-Chloro-3-met...		0.283	0.281	0.315	0.314	0.325	0.323	0.334	0.311	6.68
37) 2-Methylnaphth...		0.770	0.744	0.769	0.772	0.778	0.762	0.755	0.764	1.48
38) 1-Methylnaphth...		0.731	0.701	0.727	0.717	0.728	0.715	0.707	0.718	1.57

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
 Method File : 8270E-BP012323.M

39) I	Acenaphthene-d10	-----ISTD-----									
40)	1,2,4,5-Tetrac...	0.594	0.591	0.604	0.652	0.653	0.627	0.590	0.616	4.55	
41) P	Hexachlorocycl...	0.218	0.252	0.302	0.325	0.325	0.317	0.290		15.30	
42) S	2,4,6-Tribromo...	0.167	0.172	0.199	0.213	0.226	0.227		0.201	13.18	
43) C	2,4,6-Trichlor...	0.289	0.310	0.351	0.381	0.401	0.396	0.395	0.360	12.51	
44)	2,4,5-Trichlor...	0.337	0.369	0.415	0.453	0.474	0.467	0.465	0.426	12.70	
45) S	2-Fluorobiphenyl	1.472	1.448	1.468	1.532	1.524	1.454	1.302	1.457	5.22	
46)	1,1'-Biphenyl	1.616	1.566	1.596	1.677	1.672	1.614	1.503	1.606	3.76	
47)	2-Chloronaphth...	1.202	1.171	1.201	1.253	1.251	1.209	1.137	1.203	3.45	
48)	2-Nitroaniline	0.125	0.152	0.213	0.263	0.295	0.305	0.332	0.241	33.07	
49)	Acenaphthylene	1.931	1.901	1.972	2.038	2.042	1.989	1.903	1.968	3.00	
50)	Dimethylphthalate	1.492	1.429	1.487	1.499	1.518	1.477	1.506	1.487	1.93	
51)	2,6-Dinitrotol...	0.125	0.165	0.233	0.264	0.287	0.291	0.315	0.240	29.36	
52) C	Acenaphthene	1.197	1.165	1.200	1.251	1.263	1.229	1.205	1.216	2.80	
53)	3-Nitroaniline	0.154	0.194	0.260	0.301	0.323	0.328	0.366	0.275	27.92	
54) P	2,4-Dinitrophenol	0.033	0.038	0.051	0.065	0.078	0.087		0.058	37.60	
55)	Dibenzofuran	1.905	1.832	1.863	1.902	1.911	1.840	1.797	1.864	2.34	
56) P	4-Nitrophenol	0.145	0.195	0.229	0.241	0.249			0.212	20.07	
57)	2,4-Dinitrotol...	0.133	0.175	0.263	0.313	0.351	0.362		0.266	35.50	
58)	Fluorene	1.523	1.445	1.503	1.509	1.513	1.456	1.420	1.482	2.71	
59)	2,3,4,6-Tetrac...	0.273	0.284	0.318	0.337	0.348	0.352	0.377	0.327	11.49	
60)	Diethylphthalate	1.471	1.383	1.460	1.450	1.458	1.427	1.516	1.452	2.79	
61)	4-Chlorophenyl...	0.745	0.705	0.732	0.736	0.744	0.723	0.714	0.729	2.06	
62)	4-Nitroaniline	0.168	0.198	0.267	0.311	0.323	0.323		0.265	25.44	
63)	Azobenzene	1.474	1.388	1.432	1.420	1.417	1.372	1.373	1.411	2.58	
64) I	Phenanthrene-d10	-----ISTD-----									
65)	4,6-Dinitro-2-...	0.027	0.040	0.053	0.065	0.072	0.090	0.058		39.19	
66) c	n-Nitrosodiphe...	0.634	0.631	0.663	0.675	0.686	0.672	0.604	0.652	4.54	
67)	4-Bromophenyl-...	0.214	0.210	0.220	0.226	0.233	0.233	0.216	0.222	4.15	
68)	Hexachlorobenzene	0.235	0.227	0.237	0.243	0.250	0.248	0.235	0.239	3.44	
69)	Atrazine	0.174	0.171	0.189	0.199	0.194	0.191	0.189	0.187	5.42	
70) C	Pentachlorophenol	0.099	0.127	0.143	0.151	0.153	0.163	0.139		16.51	
71)	Phenanthrene	1.134	1.075	1.111	1.151	1.145	1.121	1.053	1.113	3.29	
72)	Anthracene	1.115	1.085	1.132	1.181	1.167	1.151	1.075	1.129	3.56	
73)	Carbazole	1.018	0.962	1.001	1.066	1.042	1.014	1.002	1.015	3.25	
74)	Di-n-butylphth...	1.055	0.996	1.116	1.186	1.186	1.165	1.204	1.130	6.94	
75) C	Fluoranthene	1.200	1.090	1.134	1.255	1.206	1.174	1.224	1.183	4.75	
76) I	Chrysene-d12	-----ISTD-----									
77)	Benzidine	0.546	0.523	0.502	0.528	0.458	0.476	0.488	0.503	6.22	
78)	Pyrene	1.598	1.534	1.636	1.482	1.539	1.498	1.418	1.529	4.75	
79) S	Terphenyl-d14	1.183	1.124	1.204	1.112	1.126	1.093	0.940	1.112	7.67	
80)	Butylbenzylpht...	0.404	0.407	0.487	0.527	0.545	0.552		0.487	13.72	
81)	Benzo(a)anthra...	1.403	1.336	1.388	1.431	1.430	1.410	1.355	1.393	2.62	
82)	3,3'-Dichlorob...	0.392	0.390	0.439	0.482	0.487	0.486	0.466	0.449	9.51	
83)	Chrysene	1.337	1.294	1.343	1.376	1.366	1.338	1.275	1.333	2.74	
84)	Bis(2-ethylhex...	0.691	0.677	0.751	0.814	0.821	0.820	0.881	0.779	9.65	
85) c	Di-n-octyl pht...	1.022	1.041	1.144	1.362	1.374	1.380	1.472	1.256	14.56	

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
Method File : 8270E-BP012323.M

86) I	Perylene-d12	-----ISTD-----								
87)	Indeno(1,2,3-c...	1.332	1.396	1.481	1.589	1.607	1.584	1.324	1.473	8.39
88)	Benzo(b)fluora...	1.203	1.148	1.199	1.268	1.267	1.244	1.283	1.230	3.96
89)	Benzo(k)fluora...	1.250	1.198	1.250	1.263	1.266	1.243	1.314	1.255	2.75
90) C	Benzo(a)pyrene	1.154	1.118	1.177	1.240	1.242	1.219	1.204	1.194	3.86
91)	Dibenzo(a,h)an...	1.101	1.171	1.240	1.331	1.355	1.335	1.118	1.236	8.70
92)	Benzo(g,h,i)pe...	1.097	1.162	1.219	1.297	1.319	1.293	1.056	1.206	8.63

(#) = Out of Range

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
 Method File : 8270E-BP013123.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Wed Feb 01 03:43:48 2023
 Response Via : Initial Calibration

Calibration Files

2.5 =BP013669.D 5 =BP013670.D 10 =BP013671.D 20 =BP013672.D 40 =BP013673.D 50 =BP013674.D 60 =BP013675.D 80 =BP013676.D

Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD

1) I 1,4-Dichlorobenzen...	-----ISTD-----									
2) 1,4-Dioxane	0.540	0.526	0.508	0.501	0.486	0.470	0.433	0.495	7.29	
3) Pyridine	1.486	1.425	1.438	1.500	1.456	1.353	1.317	1.425	4.73	
4) n-Nitrosodimet...	0.524	0.509	0.519	0.526	0.518	0.497	0.485	0.511	3.02	
5) S 2-Fluorophenol	1.265	1.187	1.186	1.213	1.160	1.117	1.060	1.170	5.68	
6) Aniline	2.056	2.015	2.068	2.094	2.105	1.949	1.937	2.032	3.32	
7) S Phenol-d6	1.648	1.553	1.571	1.610	1.589	1.488	1.452	1.559	4.39	
8) 2-Chlorophenol	1.283	1.244	1.252	1.271	1.250	1.181	1.141	1.232	4.17	
9) Benzaldehyde	1.148	1.020	0.949	0.840	0.747	0.668		0.895	19.92	
10) C Phenol	1.684	1.624	1.644	1.685	1.679	1.554	1.528	1.628	3.94	
11) bis(2-Chloroet...	1.389	1.317	1.310	1.328	1.316	1.236	1.210	1.301	4.60	
12) 1,3-Dichlorobe...	1.501	1.431	1.411	1.420	1.373	1.314	1.263	1.387	5.70	
13) C 1,4-Dichlorobe...	1.503	1.432	1.439	1.437	1.399	1.338	1.279	1.404	5.28	
14) 1,2-Dichlorobe...	1.461	1.362	1.370	1.383	1.353	1.270	1.205	1.343	6.16	
15) Benzyl Alcohol	1.054	1.042	1.087	1.151	1.194	1.101	1.097	1.104	4.82	
16) 2,2'-oxybis(1-...	1.631	1.535	1.545	1.557	1.547	1.428	1.390	1.519	5.41	
17) 2-Methylphenol	1.152	1.112	1.159	1.188	1.203	1.098	1.075	1.141	4.18	
18) Hexachloroethane	0.485	0.461	0.460	0.467	0.471	0.458	0.439	0.463	3.02	
19) P n-Nitroso-di-n...	0.859	0.984	0.973	1.003	1.033	1.073	0.957	0.942	0.978	6.54
20) 3+4-Methylphenols	1.528	1.513	1.576	1.621	1.660	1.502	1.496	1.557	4.11	

21) I Naphthalene-d8	-----ISTD-----									
22) Acetophenone	0.530	0.508	0.529	0.531	0.540	0.522	0.492	0.522	3.13	
23) S Nitrobenzene-d5	0.290	0.302	0.339	0.360	0.383	0.377	0.357	0.344	10.38	
24) Nitrobenzene	0.331	0.337	0.372	0.387	0.409	0.400	0.374	0.373	7.94	
25) Isophorone	0.746	0.730	0.764	0.778	0.814	0.767	0.736	0.762	3.78	
26) C 2-Nitrophenol	0.121	0.129	0.147	0.163	0.180	0.176	0.176	0.156	15.31	
27) 2,4-Dimethylph...	0.296	0.296	0.308	0.317	0.324	0.311	0.300	0.308	3.47	
28) bis(2-Chloroet...	0.465	0.450	0.461	0.456	0.477	0.457	0.431	0.457	3.11	
29) C 2,4-Dichloroph...	0.318	0.319	0.334	0.341	0.356	0.347	0.328	0.335	4.28	
30) 1,2,4-Trichlor...	0.382	0.367	0.373	0.372	0.380	0.374	0.353	0.371	2.56	
31) Naphthalene	1.097	1.040	1.066	1.060	1.077	1.033	0.989	1.052	3.33	
32) Benzoic acid		0.170	0.207	0.232	0.260	0.250	0.253	0.229	15.14	
33) 4-Chloroaniline	0.450	0.445	0.464	0.472	0.492	0.464	0.447	0.462	3.59	
34) C Hexachlorobuta...	0.242	0.232	0.234	0.233	0.240	0.241	0.228	0.236	2.17	
35) Caprolactam	0.103	0.099	0.107	0.112	0.123	0.113	0.113	0.110	7.07	
36) C 4-Chloro-3-met...	0.328	0.324	0.352	0.358	0.387	0.361	0.355	0.352	5.97	
37) 2-Methylnaphth...	0.808	0.762	0.801	0.792	0.824	0.788	0.759	0.791	2.98	
38) 1-Methylnaphth...	0.757	0.723	0.753	0.743	0.775	0.738	0.710	0.743	2.94	

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
 Method File : 8270E-BP013123.M

39) I	Acenaphthene-d10	-----ISTD-----								
40)	1,2,4,5-Tetrac...	0.659	0.652	0.685	0.695	0.702	0.705	0.681	0.683	3.03
41) P	Hexachlorocycl...	0.240	0.274	0.311	0.335	0.353	0.357	0.312		14.91
42) S	2,4,6-Tribromo...	0.273	0.279	0.295	0.306	0.323	0.313	0.311	0.300	6.16
43) C	2,4,6-Trichlor...	0.409	0.410	0.450	0.466	0.478	0.473	0.462	0.450	6.43
44)	2,4,5-Trichlor...	0.480	0.476	0.527	0.543	0.562	0.553	0.543	0.526	6.60
45) S	2-Fluorobiphenyl	1.473	1.429	1.477	1.458	1.438	1.414	1.316	1.429	3.85
46)	1,1'-Biphenyl	1.545	1.486	1.551	1.539	1.535	1.509	1.430	1.513	2.88
47)	2-Chloronaphth...	1.181	1.143	1.198	1.191	1.188	1.173	1.115	1.170	2.56
48)	2-Nitroaniline	0.164	0.179	0.227	0.267	0.303	0.300	0.309	0.250	24.21
49)	Acenaphthylene	1.892	1.815	1.924	1.922	1.938	1.901	1.815	1.887	2.71
50)	Dimethylphthalate	1.558	1.482	1.571	1.570	1.609	1.542	1.496	1.547	2.87
51)	2,6-Dinitrotol...	0.167	0.208	0.274	0.306	0.332	0.324	0.325	0.276	23.48
52) C	Acenaphthene	1.225	1.184	1.210	1.225	1.246	1.231	1.181	1.215	2.01
53)	3-Nitroaniline	0.204	0.247	0.297	0.327	0.352	0.343	0.340	0.302	18.60
54) P	2,4-Dinitrophenol	0.102	0.131	0.169	0.201	0.197	0.210	0.168		25.88
55)	Dibenzofuran	1.959	1.911	1.935	1.903	1.926	1.884	1.789	1.901	2.88
56) P	4-Nitrophenol	0.211	0.249	0.276	0.300	0.287	0.286	0.268		12.20
57)	2,4-Dinitrotol...	0.214	0.262	0.342	0.400	0.446	0.436	0.441	0.363	25.76
58)	Fluorene	1.549	1.492	1.547	1.505	1.506	1.463	1.384	1.492	3.78
59)	2,3,4,6-Tetrac...	0.430	0.428	0.453	0.466	0.489	0.472	0.465	0.458	4.85
60)	Diethylphthalate	1.499	1.450	1.496	1.494	1.544	1.473	1.425	1.483	2.59
61)	4-Chlorophenyl...	0.844	0.807	0.812	0.813	0.831	0.807	0.776	0.813	2.65
62)	4-Nitroaniline	0.195	0.236	0.298	0.329	0.352	0.343	0.344	0.299	20.47
63)	Azobenzene	1.344	1.335	1.411	1.395	1.421	1.372	1.311	1.370	3.03
64) I	Phenanthrene-d10	-----ISTD-----								
65)	4,6-Dinitro-2-...	0.069	0.088	0.107	0.120	0.119	0.124	0.104		20.90
66) c	n-Nitrosodiphe...	0.597	0.602	0.591	0.584	0.581	0.575	0.543	0.582	3.37
67)	4-Bromophenyl-...	0.224	0.221	0.230	0.230	0.238	0.234	0.228	0.229	2.52
68)	Hexachlorobenzene	0.259	0.247	0.252	0.251	0.259	0.257	0.250	0.254	1.90
69)	Atrazine	0.184	0.188	0.195	0.201	0.194	0.187	0.178	0.189	4.12
70) C	Pentachlorophenol	0.162	0.168	0.185	0.195	0.203	0.200	0.198	0.187	8.87
71)	Phenanthrene	1.125	1.080	1.097	1.075	1.071	1.058	0.998	1.072	3.64
72)	Anthracene	1.102	1.080	1.101	1.101	1.095	1.080	1.017	1.082	2.80
73)	Carbazole	0.990	1.002	1.006	0.999	0.994	0.972	0.917	0.983	3.17
74)	Di-n-butylphth...	1.044	1.055	1.085	1.097	1.117	1.091	1.039	1.075	2.74
75) C	Fluoranthene	1.358	1.328	1.355	1.346	1.356	1.337	1.262	1.335	2.53
76) I	Chrysene-d12	-----ISTD-----								
77)	Benzidine	0.446	0.468	0.411	0.471	0.421	0.392	0.415	0.432	6.98
78)	Pyrene	1.361	1.313	1.355	1.378	1.373	1.355	1.284	1.346	2.55
79) S	Terphenyl-d14	1.050	1.020	1.043	1.034	1.021	0.995	0.887	1.007	5.55
80)	Butylbenzylpht...	0.321	0.321	0.347	0.378	0.403	0.398	0.403	0.367	10.08
81)	Benzo(a)anthra...	1.414	1.353	1.399	1.417	1.421	1.394	1.326	1.389	2.60
82)	3,3'-Dichlorob...	0.398	0.405	0.447	0.463	0.465	0.452	0.443	0.439	6.10
83)	Chrysene	1.370	1.311	1.336	1.342	1.334	1.324	1.247	1.324	2.90
84)	Bis(2-ethylhex...	0.584	0.576	0.608	0.643	0.666	0.653	0.647	0.625	5.71
85) c	Di-n-octyl pht...	1.069	1.047	1.108	1.173	1.220	1.198	1.180	1.142	5.88

Method Path : Z:\svoasrv\HPCHEM1\BNA_P\Methods\
Method File : 8270E-BP013123.M

86) I	Perylene-d12	-----ISTD-----									
87)	Indeno(1,2,3-c...	1.562	1.482	1.517	1.530	1.549	1.531	1.476	1.521	2.11	
88)	Benzo(b)fluora...	1.187	1.140	1.231	1.201	1.262	1.228	1.165	1.202	3.47	
89)	Benzo(k)fluora...	1.243	1.138	1.216	1.248	1.208	1.200	1.174	1.204	3.19	
90) C	Benzo(a)pyrene	1.194	1.153	1.199	1.207	1.223	1.208	1.168	1.193	2.06	
91)	Dibenzo(a,h)an...	1.290	1.236	1.263	1.274	1.288	1.271	1.215	1.263	2.18	
92)	Benzo(g,h,i)pe...	1.297	1.221	1.249	1.258	1.274	1.258	1.221	1.254	2.19	

(#) = Out of Range



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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG No.: O1233

Instrument ID: BNA_F Calibration Date/Time: 01/20/2023 16:40

Lab File ID: BF132164.D Init. Calib. Date(s): 01/19/2023 01/19/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 11:21 15:11

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.145	1.115		-2.6	
Benzaldehyde	0.927	0.917		-1.1	
Phenol-d6	1.441	1.412		-2.0	
Phenol	1.500	1.494		-0.4	20.0
bis(2-Chloroethyl)ether	1.270	1.244		-2.0	
2-Chlorophenol	1.203	1.195		-0.7	
2-Methylphenol	1.054	1.045		-0.9	
2,2-oxybis(1-Chloropropane)	1.846	1.776		-3.8	
Acetophenone	0.481	0.460		-4.4	
3+4-Methylphenols	1.329	1.328		-0.1	
n-Nitroso-di-n-propylamine	0.883	0.833	0.050	-5.7	
Nitrobenzene-d5	0.376	0.393		4.5	
Hexachloroethane	0.482	0.488		1.2	
Nitrobenzene	0.399	0.408		2.3	
Isophorone	0.737	0.726		-1.5	
2-Nitrophenol	0.127	0.175		37.8	20.0
2,4-Dimethylphenol	0.319	0.319		0.0	
bis(2-Chloroethoxy)methane	0.442	0.434		-1.8	
2,4-Dichlorophenol	0.303	0.311		2.6	20.0
Naphthalene	1.027	1.008		-1.9	
4-Chloroaniline	0.440	0.445		1.1	
Hexachlorobutadiene	0.231	0.224		-3.0	20.0
Caprolactam	0.086	0.098		14.0	
4-Chloro-3-methylphenol	0.305	0.312		2.3	20.0
2-Methylnaphthalene	0.707	0.688		-2.7	
Hexachlorocyclopentadiene	0.380	0.382	0.050	0.5	
2,4,6-Trichlorophenol	0.432	0.453		4.9	20.0
2-Fluorobiphenyl	1.369	1.224		-10.6	
2,4,5-Trichlorophenol	0.505	0.523		3.6	
1,1-Biphenyl	1.578	1.498		-5.1	
2-Chloronaphthalene	1.220	1.186		-2.8	
2-Nitroaniline	0.351	0.417		18.8	
Dimethylphthalate	1.449	1.451		0.1	
Acenaphthylene	1.951	1.915		-1.8	
2,6-Dinitrotoluene	0.281	0.329		17.1	
3-Nitroaniline	0.300	0.354		18.0	
Acenaphthene	1.174	1.145		-2.5	20.0
2,4-Dinitrophenol	0.108	0.144	0.050	33.3	
4-Nitrophenol	0.218	0.262	0.050	20.2	
Dibenzofuran	1.814	1.750		-3.5	
2,4-Dinitrotoluene	0.337	0.414		22.8	



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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG No.: O1233

Instrument ID: BNA_F Calibration Date/Time: 01/20/2023 16:40

Lab File ID: BF132164.D Init. Calib. Date(s): 01/19/2023 01/19/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 11:21 15:11

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Diethylphthalate	1.420	1.458		2.7	
4-Chlorophenyl-phenylether	0.720	0.700		-2.8	
Fluorene	1.344	1.292		-3.9	
4-Nitroaniline	0.279	0.333		19.4	
4,6-Dinitro-2-methylphenol	0.087	0.107		23.0	
n-Nitrosodiphenylamine	0.641	0.597		-6.9	20.0
2,4,6-Tribromophenol	0.214	0.231		7.9	
4-Bromophenyl-phenylether	0.244	0.229		-6.1	
Hexachlorobenzene	0.242	0.229		-5.4	
Atrazine	0.198	0.203		2.5	
Pentachlorophenol	0.156	0.174		11.5	20.0
Phenanthrene	1.050	1.000		-4.8	
Anthracene	1.062	1.012		-4.7	
Carbazole	0.907	0.914		0.8	
Di-n-butylphthalate	1.010	1.056		4.6	
Fluoranthene	1.078	1.118		3.7	20.0
Pyrene	1.843	1.942		5.4	
Terphenyl-d14	1.194	1.203		0.8	
Butylbenzylphthalate	0.534	0.671		25.7	
3,3-Dichlorobenzidine	0.398	0.413		3.8	
Benzo(a)anthracene	1.429	1.449		1.4	
Chrysene	1.360	1.334		-1.9	
Bis(2-ethylhexyl)phthalate	0.705	0.824		16.9	
Di-n-octyl phthalate	1.083	1.018		-6.0	20.0
Benzo(b)fluoranthene	1.218	1.276		4.8	
Benzo(k)fluoranthene	1.242	1.197		-3.6	
Benzo(a)pyrene	1.171	1.185		1.2	20.0
Indeno(1,2,3-cd)pyrene	1.451	1.547		6.6	
Dibenzo(a,h)anthracene	1.184	1.248		5.4	
Benzo(g,h,i)perylene	1.246	1.338		7.4	
1,2,4,5-Tetrachlorobenzene	0.696	0.669		-3.9	
1,4-Dioxane	0.580	0.596		2.8	20.0
2,3,4,6-Tetrachlorophenol	0.384	0.414		7.8	

All other compounds must meet a minimum RRF of 0.010.



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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: louie01

Lab Code: CHEM Case No.: 01233 SAS No.: 01233 SDG No.: 01233

Instrument ID: BNA_G Calibration Date/Time: 01/23/2023 11:41

Lab File ID: BG056380.D Init. Calib. Date(s): 12/27/2022 12/27/2022

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 14:55 19:42

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.120	1.132		1.1	
Benzaldehyde	1.023	0.872		-14.8	
Phenol-d6	1.720	1.744		1.4	
Phenol	1.745	1.758		0.7	20.0
bis(2-Chloroethyl) ether	1.182	1.213		2.6	
2-Chlorophenol	1.115	1.201		7.7	
2-Methylphenol	1.280	1.321		3.2	
2,2-oxybis(1-Chloropropane)	0.209	0.293		40.2	
Acetophenone	0.566	0.559		-1.2	
3+4-Methylphenols	1.800	1.881		4.5	
n-Nitroso-di-n-propylamine	1.046	1.021	0.050	-2.4	
Nitrobenzene-d5	0.391	0.386		-1.3	
Hexachloroethane	0.414	0.443		7.0	
Nitrobenzene	0.387	0.377		-2.6	
Isophorone	0.823	0.791		-3.9	
2-Nitrophenol	0.198	0.207		4.5	20.0
2,4-Dimethylphenol	0.362	0.362		0.0	
bis(2-Chloroethoxy) methane	0.428	0.424		-0.9	
2,4-Dichlorophenol	0.400	0.401		0.3	20.0
Naphthalene	1.053	1.098		4.3	
4-Chloroaniline	0.503	0.527		4.8	
Hexachlorobutadiene	0.326	0.297		-8.9	20.0
Caprolactam	0.135	0.146		8.1	
4-Chloro-3-methylphenol	0.406	0.419		3.2	20.0
2-Methylnaphthalene	0.889	0.891		0.2	
Hexachlorocyclopentadiene	0.427	0.348	0.050	-18.5	
2,4,6-Trichlorophenol	0.496	0.488		-1.6	20.0
2-Fluorobiphenyl	1.448	1.434		-1.0	
2,4,5-Trichlorophenol	0.586	0.576		-1.7	
1,1-Biphenyl	1.432	1.478		3.2	
2-Chloronaphthalene	1.131	1.161		2.7	
2-Nitroaniline	0.241	0.275		14.1	
Dimethylphthalate	1.615	1.659		2.7	
Acenaphthylene	1.840	1.914		4.0	
2,6-Dinitrotoluene	0.344	0.365		6.1	
3-Nitroaniline	0.327	0.367		12.2	
Acenaphthene	1.197	1.258		5.1	20.0
2,4-Dinitrophenol	0.246	0.234	0.050	-4.9	
4-Nitrophenol	0.252	0.260	0.050	3.2	
Dibenzofuran	1.980	2.038		2.9	
2,4-Dinitrotoluene	0.481	0.526		9.4	



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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG No.: O1233

Instrument ID: BNA_G Calibration Date/Time: 01/23/2023 11:41

Lab File ID: BG056380.D Init. Calib. Date(s): 12/27/2022 12/27/2022

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 14:55 19:42

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Diethylphthalate	1.514	1.580		4.4	
4-Chlorophenyl-phenylether	0.994	0.999		0.5	
Fluorene	1.593	1.630		2.3	
4-Nitroaniline	0.335	0.371		10.7	
4,6-Dinitro-2-methylphenol	0.135	0.142		5.2	
n-Nitrosodiphenylamine	0.555	0.581		4.7	20.0
2,4,6-Tribromophenol	0.253	0.268		5.9	
4-Bromophenyl-phenylether	0.255	0.261		2.4	
Hexachlorobenzene	0.238	0.252		5.9	
Atrazine	0.230	0.230		0.0	
Pentachlorophenol	0.183	0.160		-12.6	20.0
Phenanthrene	1.036	1.065		2.8	
Anthracene	1.069	1.095		2.4	
Carbazole	0.899	0.921		2.4	
Di-n-butylphthalate	0.896	0.949		5.9	
Fluoranthene	1.352	1.259		-6.9	20.0
Pyrene	1.410	1.502		6.5	
Terphenyl-d14	1.117	1.177		5.4	
Butylbenzylphthalate	0.404	0.436		7.9	
3,3-Dichlorobenzidine	0.506	0.512		1.2	
Benzo(a)anthracene	1.405	1.445		2.8	
Chrysene	1.316	1.353		2.8	
Bis(2-ethylhexyl)phthalate	0.583	0.620		6.3	
Di-n-octyl phthalate	0.984	1.042		5.9	20.0
Benzo(b)fluoranthene	1.271	1.279		0.6	
Benzo(k)fluoranthene	1.265	1.269		0.3	
Benzo(a)pyrene	1.239	1.250		0.9	20.0
Indeno(1,2,3-cd)pyrene	1.455	1.493		2.5	
Dibenzo(a,h)anthracene	1.219	1.257		3.1	
Benzo(g,h,i)perylene	1.183	1.213		2.5	
1,2,4,5-Tetrachlorobenzene	0.750	0.733		-2.3	
1,4-Dioxane	0.512	0.460		-10.2	20.0
2,3,4,6-Tetrachlorophenol	0.551	0.508		-7.8	

All other compounds must meet a minimum RRF of 0.010.



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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: 01233 SAS No.: 01233 SDG No.: 01233

Instrument ID: BNA_P Calibration Date/Time: 01/24/2023 15:13

Lab File ID: BP013571.D Init. Calib. Date(s): 01/23/2023 01/23/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 11:25 16:01

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
2-Fluorophenol	1.167	1.147		-1.7	
Benzaldehyde	0.995	0.888		-10.8	
Phenol-d6	1.571	1.597		1.7	
Phenol	1.628	1.651		1.4	20.0
bis(2-Chloroethyl) ether	1.331	1.329		-0.2	
2-Chlorophenol	1.288	1.323		2.7	
2-Methylphenol	1.182	1.208		2.2	
2,2-oxybis(1-Chloropropane)	1.822	1.794		-1.5	
Acetophenone	0.513	0.490		-4.5	
3+4-Methylphenols	1.556	1.656		6.4	
n-Nitroso-di-n-propylamine	1.012	1.063	0.050	5.0	
Nitrobenzene-d5	0.303	0.333		9.9	
Hexachloroethane	0.483	0.491		1.7	
Nitrobenzene	0.326	0.344		5.5	
Isophorone	0.719	0.697		-3.1	
2-Nitrophenol	0.094	0.142		51.1	20.0
2,4-Dimethylphenol	0.310	0.311		0.3	
bis(2-Chloroethoxy) methane	0.433	0.428		-1.2	
2,4-Dichlorophenol	0.285	0.299		4.9	20.0
Naphthalene	1.075	1.033		-3.9	
4-Chloroaniline	0.476	0.475		-0.2	
Hexachlorobutadiene	0.189	0.179		-5.3	20.0
Caprolactam	0.093	0.109		17.2	
4-Chloro-3-methylphenol	0.311	0.339		9.0	20.0
2-Methylnaphthalene	0.764	0.764		0.0	
Hexachlorocyclopentadiene	0.290	0.295	0.050	1.7	
2,4,6-Trichlorophenol	0.360	0.382		6.1	20.0
2-Fluorobiphenyl	1.457	1.331		-8.6	
2,4,5-Trichlorophenol	0.426	0.453		6.3	
1,1-Biphenyl	1.606	1.480		-7.8	
2-Chloronaphthalene	1.203	1.104		-8.2	
2-Nitroaniline	0.241	0.326		35.3	
Dimethylphthalate	1.487	1.504		1.1	
Acenaphthylene	1.968	1.875		-4.7	
2,6-Dinitrotoluene	0.240	0.313		30.4	
3-Nitroaniline	0.275	0.361		31.3	
Acenaphthene	1.216	1.183		-2.7	20.0
2,4-Dinitrophenol	0.058	0.118	0.050	103.4	
4-Nitrophenol	0.212	0.288	0.050	35.8	
Dibenzofuran	1.864	1.797		-3.6	
2,4-Dinitrotoluene	0.266	0.421		58.3	



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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: O1233 SAS No.: O1233 SDG No.: O1233

Instrument ID: BNA_P Calibration Date/Time: 01/24/2023 15:13

Lab File ID: BP013571.D Init. Calib. Date(s): 01/23/2023 01/23/2023

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 11:25 16:01

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Diethylphthalate	1.452	1.521		4.8	
4-Chlorophenyl-phenylether	0.729	0.712		-2.3	
Fluorene	1.482	1.443		-2.6	
4-Nitroaniline	0.265	0.376		41.9	
4,6-Dinitro-2-methylphenol	0.058	0.084		44.8	
n-Nitrosodiphenylamine	0.652	0.591		-9.4	20.0
2,4,6-Tribromophenol	0.201	0.241		19.9	
4-Bromophenyl-phenylether	0.222	0.200		-9.9	
Hexachlorobenzene	0.239	0.222		-7.1	
Atrazine	0.187	0.197		5.3	
Pentachlorophenol	0.139	0.160		15.1	20.0
Phenanthrene	1.113	1.061		-4.7	
Anthracene	1.129	1.078		-4.5	
Carbazole	1.015	1.015		0.0	
Di-n-butylphthalate	1.130	1.228		8.7	
Fluoranthene	1.183	1.251		5.7	20.0
Pyrene	1.529	1.345		-12.0	
Terphenyl-d14	1.112	1.000		-10.1	
Butylbenzylphthalate	0.487	0.567		16.4	
3,3-Dichlorobenzidine	0.449	0.464		3.3	
Benzo(a)anthracene	1.393	1.340		-3.8	
Chrysene	1.333	1.268		-4.9	
Bis(2-ethylhexyl)phthalate	0.779	0.839		7.7	
Di-n-octyl phthalate	1.256	1.423		13.3	20.0
Benzo(b)fluoranthene	1.230	1.204		-2.1	
Benzo(k)fluoranthene	1.255	1.230		-2.0	
Benzo(a)pyrene	1.194	1.155		-3.3	20.0
Indeno(1,2,3-cd)pyrene	1.473	1.333		-9.5	
Dibenzo(a,h)anthracene	1.236	1.129		-8.7	
Benzo(g,h,i)perylene	1.206	1.048		-13.1	
1,2,4,5-Tetrachlorobenzene	0.616	0.561		-8.9	
1,4-Dioxane	0.471	0.449		-4.7	20.0
2,3,4,6-Tetrachlorophenol	0.327	0.373		14.1	

All other compounds must meet a minimum RRF of 0.010.