CHEMTECH

284 Sheffield Street, Mountainside, New Jersey - 07092

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

LAB CHRONICLE

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

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1232-01	**B-P17A**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/20/23	
O1232-02	**B-P17B**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/24/23	
O1232-03	**WC-17**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-PAH	8270E		01/20/23	01/24/23	
			SVOC-TCL BNA -20			01/20/23	01/24/23	
O1232-04	**B-P18A**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/24/23	
O1232-05	**B-P18B**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/20/23	
O1232-06	**B-P19A**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/20/23	
O1232-07	**B-P19B**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/24/23	
O1232-08	**B-P35A**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/20/23	
O1232-09	**B-P35B**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/24/23	
O1232-10	**DUP01**	**SOIL**			**01/18/23**			**01/19/23**
			SVOC-TCL BNA -20	8270E		01/20/23	01/20/23	

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Hit Summary Sheet
SW-846

SDG No.: O1232

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	**B-P17A**							
O1232-01	B-P17A	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	1,200.000	AB	0	0	ug/Kg
O1232-01	B-P17A	SOIL	Carbonic acid, hexadecyl prop-1-e *	140.000	J	0	0	ug/Kg
O1232-01	B-P17A	SOIL	n-Hexadecanoic acid *	120.000	J	0	0	ug/Kg
			Total Tics :	**1,460.00**				
			Total Concentration:	**1,460.00**				
Client ID :	**B-P17B**							
O1232-02	B-P17B	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	1,000.000	AB	0	0	ug/Kg
O1232-02	B-P17B	SOIL	5-Eicosene, (E)- *	130.000	J	0	0	ug/Kg
O1232-02	B-P17B	SOIL	Butane, 2-methoxy-2-methyl- *	920.000	J	0	0	ug/Kg
O1232-02	B-P17B	SOIL	n-Hexadecanoic acid *	160.000	J	0	0	ug/Kg
			Total Tics :	**2,210.00**				
			Total Concentration:	**2,210.00**				
Client ID :	**B-P18A**							
O1232-04	B-P18A	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	920.000	AB	0	0	ug/Kg
O1232-04	B-P18A	SOIL	Benzene, 1,3-dimethyl- *	130.000	J	0	0	ug/Kg
O1232-04	B-P18A	SOIL	Butane, 2-methoxy-2-methyl- *	790.000	J	0	0	ug/Kg
O1232-04	B-P18A	SOIL	Heptadecyl heptafluorobutyrate *	200.000	J	0	0	ug/Kg
O1232-04	B-P18A	SOIL	n-Hexadecanoic acid *	86.200	J	0	0	ug/Kg
			Total Tics :	**2,126.20**				
			Total Concentration:	**2,126.20**				
Client ID :	**B-P18B**							
O1232-05	B-P18B	SOIL	Fluoranthene	95.300	J	87.1	190	ug/Kg
O1232-05	B-P18B	SOIL	Pyrene	110.000	J	81	190	ug/Kg
O1232-05	B-P18B	SOIL	Benzo(b)fluoranthene	100.000	J	75.3	190	ug/Kg
O1232-05	B-P18B	SOIL	Benzo(a)pyrene	74.200	J	73.9	190	ug/Kg
			Total Svoc :	**379.50**				
O1232-05	B-P18B	SOIL	2-Pentanone, 4-hydroxy-4-methyl *	660.000	AB	0	0	ug/Kg
O1232-05	B-P18B	SOIL	n-Hexadecanoic acid *	180.000	J	0	0	ug/Kg
O1232-05	B-P18B	SOIL	Pentafluoropropionic acid, pentad *	130.000	J	0	0	ug/Kg
O1232-05	B-P18B	SOIL	Butyl citrate *	150.000	J	0	0	ug/Kg
			Total Tics :	**1,120.00**				
			Total Concentration:	**1,499.50**				
Client ID :	**B-P19A**							
O1232-06	B-P19A	SOIL	Phenanthrene	1,000.000		94.7	190	ug/Kg
O1232-06	B-P19A	SOIL	Anthracene	210.000		95.2	190	ug/Kg
O1232-06	B-P19A	SOIL	Fluoranthene	790.000		90.4	190	ug/Kg
O1232-06	B-P19A	SOIL	Pyrene	1,200.000		84.1	190	ug/Kg
O1232-06	B-P19A	SOIL	Benzo(a)anthracene	520.000		98.3	190	ug/Kg

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Hit Summary Sheet
SW-846

SDG No.: O1232

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

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	RDL	Units
O1232-06	B-P19A	SOIL	Chrysene		570.000		96.9	190	ug/Kg
O1232-06	B-P19A	SOIL	Benzo(b)fluoranthene		390.000		78.2	190	ug/Kg
O1232-06	B-P19A	SOIL	Benzo(k)fluoranthene		130.000	J	83.4	190	ug/Kg
O1232-06	B-P19A	SOIL	Benzo(a)pyrene		400.000		76.7	190	ug/Kg
O1232-06	B-P19A	SOIL	Indeno(1,2,3-cd)pyrene		190.000		110	190	ug/Kg
O1232-06	B-P19A	SOIL	Benzo(g,h,i)perylene		250.000		110	190	ug/Kg
			Total Svoc :		**5,650.00**				
			Total Concentration:		**5,650.00**				
Client ID :	**B-P19B**								
O1232-07	B-P19B	SOIL	Phenanthrene		1,000.000		94.8	190	ug/Kg
O1232-07	B-P19B	SOIL	Anthracene		180.000	J	95.3	190	ug/Kg
O1232-07	B-P19B	SOIL	Fluoranthene		1,000.000		90.5	190	ug/Kg
O1232-07	B-P19B	SOIL	Pyrene		1,000.000		84.2	190	ug/Kg
O1232-07	B-P19B	SOIL	Benzo(a)anthracene		500.000		98.5	190	ug/Kg
O1232-07	B-P19B	SOIL	Chrysene		480.000		97	190	ug/Kg
O1232-07	B-P19B	SOIL	Benzo(b)fluoranthene		480.000		78.3	190	ug/Kg
O1232-07	B-P19B	SOIL	Benzo(k)fluoranthene		160.000	J	83.5	190	ug/Kg
O1232-07	B-P19B	SOIL	Benzo(a)pyrene		360.000		76.8	190	ug/Kg
O1232-07	B-P19B	SOIL	Indeno(1,2,3-cd)pyrene		190.000		110	190	ug/Kg
O1232-07	B-P19B	SOIL	Benzo(g,h,i)perylene		230.000		110	190	ug/Kg
			Total Svoc :		**5,580.00**				
O1232-07	B-P19B	SOIL	11H-Benzo[a]fluoren-11-one	*	96.100	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	660.000	AB	0	0	ug/Kg
O1232-07	B-P19B	SOIL	3,4-Dimethylphenanthrene	*	100.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	3-Octadecene, (E)-	*	160.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	7H-Benz[de]anthracen-7-one	*	93.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	9,10-Anthracenedione	*	110.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	9,10-Dimethylanthracene	*	280.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Anthracene, 1-methyl-	*	100.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Anthracene, 2-methyl-	*	310.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Benzo[e]pyrene	*	310.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Benzophenone	*	180.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Cyclopenta(def)phenanthrenone	*	180.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Naphthalene, 2-phenyl-	*	160.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Phenanthrene, 2-methyl-	*	370.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Phenanthrene, 4-methyl-	*	150.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Pyrene, 1-methyl-	*	130.000	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	Pyrene, 2-methyl-	*	87.400	J	0	0	ug/Kg
O1232-07	B-P19B	SOIL	unknown18.706	*	380.000	J	0	0	ug/Kg
			Total Tics :		**3,856.50**				
			Total Concentration:		**9,436.50**				

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Hit Summary Sheet
SW-846

SDG No.: O1232

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

Sample ID	Client ID	Matrix	Parameter		Concentration	C	MDL	RDL	Units
Client ID : B-P35A									
O1232-08	B-P35A	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	1,300.000	AB	0	0	ug/Kg
O1232-08	B-P35A	SOIL	Benzophenone	*	100.000	J	0	0	ug/Kg
O1232-08	B-P35A	SOIL	n-Hexadecanoic acid	*	120.000	J	0	0	ug/Kg
O1232-08	B-P35A	SOIL	Pentadecafluorooctanoic acid, oct	*	160.000	J	0	0	ug/Kg
			Total Tics :		**1,680.00**				
			Total Concentration:		**1,680.00**				
Client ID : B-P35B									
O1232-09	B-P35B	SOIL	Chrysene		98.900	J	91.5	180	ug/Kg
O1232-09	B-P35B	SOIL	Bis(2-ethylhexyl)phthalate		110.000	J	94.8	180	ug/Kg
			Total Svoc :		**208.90**				
O1232-09	B-P35B	SOIL	1-Tetracosene	*	190.000	J	0	0	ug/Kg
O1232-09	B-P35B	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	1,100.000	AB	0	0	ug/Kg
O1232-09	B-P35B	SOIL	Benzophenone	*	99.900	J	0	0	ug/Kg
O1232-09	B-P35B	SOIL	n-Hexadecanoic acid	*	94.200	J	0	0	ug/Kg
O1232-09	B-P35B	SOIL	Butane, 2-methoxy-2-methyl-	*	830.000	J	0	0	ug/Kg
			Total Tics :		**2,314.10**				
			Total Concentration:		**2,523.00**				
Client ID : DUP01									
O1232-10	DUP01	SOIL	Benzophenone	*	99.200	J	0	0	ug/Kg
O1232-10	DUP01	SOIL	Butyl citrate	*	210.000	J	0	0	ug/Kg
O1232-10	DUP01	SOIL	n-Hexadecanoic acid	*	160.000	J	0	0	ug/Kg
O1232-10	DUP01	SOIL	11-Methyldodecanol	*	130.000	J	0	0	ug/Kg
O1232-10	DUP01	SOIL	2-Pentanone, 4-hydroxy-4-methyl	*	580.000	AB	0	0	ug/Kg
			Total Tics :		**1,179.20**				
			Total Concentration:		**1,179.20**				

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SAMPLE DATA

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P17A	SDG No.:	O1232
Lab Sample ID:	O1232-01	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.4
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
BF132175.D	1	01/20/23 12:30	01/20/23 22:46	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	82.2	U	82.2	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P17A	SDG No.:	O1232
Lab Sample ID:	O1232-01	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.4
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
BF132175.D	1	01/20/23 12:30	01/20/23 22:46	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	82.8	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	93.7	U	93.7	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P17A	SDG No.:	O1232
Lab Sample ID:	O1232-01	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	89.4
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
BF132175.D	1	01/20/23 12:30	01/20/23 22:46	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	91.9		18 - 112	61%	SPK: 150
13127-88-3	Phenol-d6	95.1		21 - 104	63%	SPK: 150
4165-60-0	Nitrobenzene-d5	65.3		27 - 109	65%	SPK: 100
321-60-8	2-Fluorobiphenyl	56.1		30 - 103	56%	SPK: 100
118-79-6	2,4,6-Tribromophenol	95.4		10 - 121	64%	SPK: 150
1718-51-0	Terphenyl-d14	59.5		21 - 107	59%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	179000	7.089			
1146-65-2	Naphthalene-d8	654000	8.378			
15067-26-2	Acenaphthene-d10	351000	10.142			
1517-22-2	Phenanthrene-d10	682000	11.636			
1719-03-5	Chrysene-d12	457000	14.301			
1520-96-3	Perylene-d12	397000	15.895			
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1200	AB		5.34	ug/Kg
000057-10-3	n-Hexadecanoic acid	120	J		12.1	ug/Kg
1000382-90-3	Carbonic acid, hexadecyl prop-1-en	140	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P17B	SDG No.:	O1232
Lab Sample ID:	O1232-02	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	86.9
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
BP013566.D	1	01/20/23 12:30	01/24/23 12:17	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	77.8	U	77.8	200	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	92.3	U	92.3	200	ug/Kg
95-57-8	2-Chlorophenol	78.5	U	78.5	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	92.0	U	92.0	200	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	380	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	87.4	U	87.4	91.9	ug/Kg
67-72-1	Hexachloroethane	84.7	U	84.7	200	ug/Kg
98-95-3	Nitrobenzene	84.9	U	84.9	200	ug/Kg
78-59-1	Isophorone	76.5	U	76.5	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	120	U	120	200	ug/Kg
120-83-2	2,4-Dichlorophenol	93.9	U	93.9	200	ug/Kg
91-20-3	Naphthalene	84.9	U	84.9	200	ug/Kg
106-47-8	4-Chloroaniline	110	U	110	200	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	200	ug/Kg
105-60-2	Caprolactam	110	U	110	380	ug/Kg
59-50-7	4-Chloro-3-methylphenol	90.4	U	90.4	200	ug/Kg
91-57-6	2-Methylnaphthalene	86.2	U	86.2	200	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	380	ug/Kg
88-06-2	2,4,6-Trichlorophenol	98.1	U	98.1	200	ug/Kg
95-95-4	2,4,5-Trichlorophenol	96.0	U	96.0	200	ug/Kg
92-52-4	1,1-Biphenyl	99.4	U	99.4	200	ug/Kg
91-58-7	2-Chloronaphthalene	98.2	U	98.2	200	ug/Kg
88-74-4	2-Nitroaniline	130	U	130	200	ug/Kg
131-11-3	Dimethylphthalate	92.9	U	92.9	200	ug/Kg
208-96-8	Acenaphthylene	78.9	U	78.9	200	ug/Kg
606-20-2	2,6-Dinitrotoluene	89.7	U	89.7	200	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P17B	SDG No.:	O1232
Lab Sample ID:	O1232-02	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	86.9
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
BP013566.D	1	01/20/23 12:30	01/24/23 12:17	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	90.6	U	90.6	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	85.2	U	85.2	200	ug/Kg
121-14-2	2,4-Dinitrotoluene	97.2	U	97.2	200	ug/Kg
84-66-2	Diethylphthalate	92.5	U	92.5	200	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	200	ug/Kg
86-73-7	Fluorene	90.5	U	90.5	200	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	200	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	99.0	U	99.0	380	ug/Kg
86-30-6	n-Nitrosodiphenylamine	94.4	U	94.4	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	130	U	130	380	ug/Kg
85-01-8	Phenanthrene	96.0	U	96.0	200	ug/Kg
120-12-7	Anthracene	96.5	U	96.5	200	ug/Kg
86-74-8	Carbazole	96.7	U	96.7	200	ug/Kg
84-74-2	Di-n-butylphthalate	99.9	U	99.9	200	ug/Kg
206-44-0	Fluoranthene	91.7	U	91.7	200	ug/Kg
129-00-0	Pyrene	85.2	U	85.2	200	ug/Kg
85-68-7	Butylbenzylphthalate	95.0	U	95.0	200	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	380	ug/Kg
56-55-3	Benzo(a)anthracene	99.7	U	99.7	200	ug/Kg
218-01-9	Chrysene	98.2	U	98.2	200	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	100	U	100	200	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	380	ug/Kg
205-99-2	Benzo(b)fluoranthene	79.3	U	79.3	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	84.6	U	84.6	200	ug/Kg
50-32-8	Benzo(a)pyrene	77.8	U	77.8	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P17B	SDG No.:	O1232
Lab Sample ID:	O1232-02	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	86.9
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
BP013566.D	1	01/20/23 12:30	01/24/23 12:17	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	100	U	100	200	ug/Kg
123-91-1	1,4-Dioxane	100	U	100	200	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	93.3	U	93.3	200	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	95.6		18 - 112	64%	SPK: 150
13127-88-3	Phenol-d6	89.3		21 - 104	60%	SPK: 150
4165-60-0	Nitrobenzene-d5	66.4		27 - 109	66%	SPK: 100
321-60-8	2-Fluorobiphenyl	60.1		30 - 103	60%	SPK: 100
118-79-6	2,4,6-Tribromophenol	104		10 - 121	69%	SPK: 150
1718-51-0	Terphenyl-d14	55.5		21 - 107	55%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	251000	8.157			
1146-65-2	Naphthalene-d8	955000	10.987			
15067-26-2	Acenaphthene-d10	504000	14.792			
1517-22-2	Phenanthrene-d10	1010000	17.545			
1719-03-5	Chrysene-d12	943000	21.621			
1520-96-3	Perylene-d12	1150000	24.21			
TENTATIVE IDENTIFIED COMPOUNDS						
000994-05-8	Butane, 2-methoxy-2-methyl-	920	J		3.22	ug/Kg
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1000	AB		5.22	ug/Kg
000057-10-3	n-Hexadecanoic acid	160	J		18.4	ug/Kg
074685-30-6	5-Eicosene, (E)-	130	J		21.3	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
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() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P18A	SDG No.:	O1232
Lab Sample ID:	O1232-04	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	87.5
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
BP013586.D	1	01/20/23 12:30	01/24/23 23:52	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	77.2	U	77.2	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	91.5	U	91.5	190	ug/Kg
95-57-8	2-Chlorophenol	77.8	U	77.8	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	91.3	U	91.3	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	380	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	86.7	U	86.7	91.2	ug/Kg
67-72-1	Hexachloroethane	84.0	U	84.0	190	ug/Kg
98-95-3	Nitrobenzene	84.2	U	84.2	190	ug/Kg
78-59-1	Isophorone	75.9	U	75.9	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	93.1	U	93.1	190	ug/Kg
91-20-3	Naphthalene	84.2	U	84.2	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	380	ug/Kg
59-50-7	4-Chloro-3-methylphenol	89.7	U	89.7	190	ug/Kg
91-57-6	2-Methylnaphthalene	85.5	U	85.5	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	380	ug/Kg
88-06-2	2,4,6-Trichlorophenol	97.3	U	97.3	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	95.3	U	95.3	190	ug/Kg
92-52-4	1,1-Biphenyl	98.6	U	98.6	190	ug/Kg
91-58-7	2-Chloronaphthalene	97.5	U	97.5	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	92.2	U	92.2	190	ug/Kg
208-96-8	Acenaphthylene	78.3	U	78.3	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	89.0	U	89.0	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P18A	SDG No.:	O1232
Lab Sample ID:	O1232-04	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	87.5
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
BP013586.D	1	01/20/23 12:30	01/24/23 23:52	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	120	U	120	190	ug/Kg
83-32-9	Acenaphthene	89.9	U	89.9	190	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	84.6	U	84.6	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	96.4	U	96.4	190	ug/Kg
84-66-2	Diethylphthalate	91.8	U	91.8	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	190	ug/Kg
86-73-7	Fluorene	89.8	U	89.8	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	98.3	U	98.3	380	ug/Kg
86-30-6	n-Nitrosodiphenylamine	93.7	U	93.7	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	380	ug/Kg
85-01-8	Phenanthrene	95.3	U	95.3	190	ug/Kg
120-12-7	Anthracene	95.7	U	95.7	190	ug/Kg
86-74-8	Carbazole	96.0	U	96.0	190	ug/Kg
84-74-2	Di-n-butylphthalate	99.2	U	99.2	190	ug/Kg
206-44-0	Fluoranthene	91.0	U	91.0	190	ug/Kg
129-00-0	Pyrene	84.6	U	84.6	190	ug/Kg
85-68-7	Butylbenzylphthalate	94.3	U	94.3	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	380	ug/Kg
56-55-3	Benzo(a)anthracene	98.9	U	98.9	190	ug/Kg
218-01-9	Chrysene	97.5	U	97.5	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	100	U	100	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	380	ug/Kg
205-99-2	Benzo(b)fluoranthene	78.6	U	78.6	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	83.9	U	83.9	190	ug/Kg
50-32-8	Benzo(a)pyrene	77.2	U	77.2	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P18A	SDG No.:	O1232
Lab Sample ID:	O1232-04	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	87.5
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
BP013586.D	1	01/20/23 12:30	01/24/23 23:52	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	92.6	U	92.6	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	93.1		18 - 112	62%	SPK: 150
13127-88-3	Phenol-d6	88.9		21 - 104	59%	SPK: 150
4165-60-0	Nitrobenzene-d5	62.4		27 - 109	62%	SPK: 100
321-60-8	2-Fluorobiphenyl	53.4		30 - 103	53%	SPK: 100
118-79-6	2,4,6-Tribromophenol	114		10 - 121	76%	SPK: 150
1718-51-0	Terphenyl-d14	66.3		21 - 107	66%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	400000	8.158			
1146-65-2	Naphthalene-d8	1630000	10.987			
15067-26-2	Acenaphthene-d10	968000	14.792			
1517-22-2	Phenanthrene-d10	2090000	17.545			
1719-03-5	Chrysene-d12	1480000	21.622			
1520-96-3	Perylene-d12	1450000	24.204			
TENTATIVE IDENTIFIED COMPOUNDS						
000994-05-8	Butane, 2-methoxy-2-methyl-	790	J		3.22	ug/Kg
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	920	AB		5.22	ug/Kg
000108-38-3	Benzene, 1,3-dimethyl-	130	J		5.76	ug/Kg
000057-10-3	n-Hexadecanoic acid	86.2	J		18.4	ug/Kg
959085-66-6	Heptadecyl heptafluorobutyrate	200	J		21.3	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P18B	SDG No.:	O1232
Lab Sample ID:	O1232-05	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	91.4
Sample Wt/Vol:	30.06 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
BG056373.D	1	01/20/23 12:30	01/20/23 18:47	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	73.9	U	73.9	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	87.7	U	87.7	190	ug/Kg
95-57-8	2-Chlorophenol	74.6	U	74.6	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	100	U	100	190	ug/Kg
98-86-2	Acetophenone	87.5	U	87.5	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	360	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	83.1	U	83.1	87.4	ug/Kg
67-72-1	Hexachloroethane	80.5	U	80.5	190	ug/Kg
98-95-3	Nitrobenzene	80.7	U	80.7	190	ug/Kg
78-59-1	Isophorone	72.7	U	72.7	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	89.2	U	89.2	190	ug/Kg
91-20-3	Naphthalene	80.7	U	80.7	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	85.9	U	85.9	190	ug/Kg
91-57-6	2-Methylnaphthalene	81.9	U	81.9	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	360	ug/Kg
88-06-2	2,4,6-Trichlorophenol	93.2	U	93.2	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	91.3	U	91.3	190	ug/Kg
92-52-4	1,1-Biphenyl	94.5	U	94.5	190	ug/Kg
91-58-7	2-Chloronaphthalene	93.4	U	93.4	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	88.3	U	88.3	190	ug/Kg
208-96-8	Acenaphthylene	75.0	U	75.0	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	85.3	U	85.3	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P18B	SDG No.:	O1232
Lab Sample ID:	O1232-05	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	91.4
Sample Wt/Vol:	30.06 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
BG056373.D	1	01/20/23 12:30	01/20/23 18:47	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	86.2	U	86.2	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	81.0	U	81.0	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	92.4	U	92.4	190	ug/Kg
84-66-2	Diethylphthalate	87.9	U	87.9	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	86.0	U	86.0	190	ug/Kg
100-01-6	4-Nitroaniline	110	U	110	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	94.1	U	94.1	360	ug/Kg
86-30-6	n-Nitrosodiphenylamine	89.8	U	89.8	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	98.3	U	98.3	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	360	ug/Kg
85-01-8	Phenanthrene	91.3	U	91.3	190	ug/Kg
120-12-7	Anthracene	91.7	U	91.7	190	ug/Kg
86-74-8	Carbazole	91.9	U	91.9	190	ug/Kg
84-74-2	Di-n-butylphthalate	95.0	U	95.0	190	ug/Kg
206-44-0	Fluoranthene	95.3	J	87.1	190	ug/Kg
129-00-0	Pyrene	110	J	81.0	190	ug/Kg
85-68-7	Butylbenzylphthalate	90.3	U	90.3	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	360	ug/Kg
56-55-3	Benzo(a)anthracene	94.8	U	94.8	190	ug/Kg
218-01-9	Chrysene	93.4	U	93.4	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	96.7	U	96.7	190	ug/Kg
117-84-0	Di-n-octyl phthalate	99.4	U	99.4	360	ug/Kg
205-99-2	Benzo(b)fluoranthene	100	J	75.3	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	80.4	U	80.4	190	ug/Kg
50-32-8	Benzo(a)pyrene	74.2	J	73.9	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P18B	SDG No.:	O1232
Lab Sample ID:	O1232-05	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	91.4
Sample Wt/Vol:	30.06 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
BG056373.D	1	01/20/23 12:30	01/20/23 18:47	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	99.6	U	99.6	190	ug/Kg
123-91-1	1,4-Dioxane	97.3	U	97.3	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	88.7	U	88.7	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	159		18 - 112	106%	SPK: 150
13127-88-3	Phenol-d6	142		21 - 104	95%	SPK: 150
4165-60-0	Nitrobenzene-d5	85.4		27 - 109	85%	SPK: 100
321-60-8	2-Fluorobiphenyl	98.8		30 - 103	99%	SPK: 100
118-79-6	2,4,6-Tribromophenol	151		10 - 121	101%	SPK: 150
1718-51-0	Terphenyl-d14	100		21 - 107	100%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	44000	8.301			
1146-65-2	Naphthalene-d8	169000	11.133			
15067-26-2	Acenaphthene-d10	129000	14.916			
1517-22-2	Phenanthrene-d10	301000	17.654			
1719-03-5	Chrysene-d12	277000	21.944			
1520-96-3	Perylene-d12	301000	25.387			
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	660	AB		5.34	ug/Kg
000057-10-3	n-Hexadecanoic acid	180	J		18.5	ug/Kg
000077-94-1	Butyl citrate	150	J		19.9	ug/Kg
959092-08-1	Pentafluoropropionic acid, pentade	130	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88.2
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
BG056372.D	1	01/20/23 12:30	01/20/23 18:05	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	76.7	U	76.7	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	91.0	U	91.0	190	ug/Kg
95-57-8	2-Chlorophenol	77.4	U	77.4	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	90.8	U	90.8	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	370	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	86.2	U	86.2	90.6	ug/Kg
67-72-1	Hexachloroethane	83.5	U	83.5	190	ug/Kg
98-95-3	Nitrobenzene	83.7	U	83.7	190	ug/Kg
78-59-1	Isophorone	75.5	U	75.5	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	92.6	U	92.6	190	ug/Kg
91-20-3	Naphthalene	83.7	U	83.7	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	370	ug/Kg
59-50-7	4-Chloro-3-methylphenol	89.2	U	89.2	190	ug/Kg
91-57-6	2-Methylnaphthalene	85.0	U	85.0	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	370	ug/Kg
88-06-2	2,4,6-Trichlorophenol	96.8	U	96.8	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	94.7	U	94.7	190	ug/Kg
92-52-4	1,1-Biphenyl	98.0	U	98.0	190	ug/Kg
91-58-7	2-Chloronaphthalene	96.9	U	96.9	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	91.7	U	91.7	190	ug/Kg
208-96-8	Acenaphthylene	77.8	U	77.8	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	88.5	U	88.5	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88.2
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
BG056372.D	1	01/20/23 12:30	01/20/23 18:05	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	89.4	U	89.4	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	84.1	U	84.1	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	95.9	U	95.9	190	ug/Kg
84-66-2	Diethylphthalate	91.2	U	91.2	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	190	ug/Kg
86-73-7	Fluorene	89.3	U	89.3	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	97.7	U	97.7	370	ug/Kg
86-30-6	n-Nitrosodiphenylamine	93.1	U	93.1	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	1000		94.7	190	ug/Kg
120-12-7	Anthracene	210		95.2	190	ug/Kg
86-74-8	Carbazole	95.4	U	95.4	190	ug/Kg
84-74-2	Di-n-butylphthalate	98.6	U	98.6	190	ug/Kg
206-44-0	Fluoranthene	790		90.4	190	ug/Kg
129-00-0	Pyrene	1200		84.1	190	ug/Kg
85-68-7	Butylbenzylphthalate	93.7	U	93.7	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	370	ug/Kg
56-55-3	Benzo(a)anthracene	520		98.3	190	ug/Kg
218-01-9	Chrysene	570		96.9	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	100	U	100	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	370	ug/Kg
205-99-2	Benzo(b)fluoranthene	390		78.2	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	130	J	83.4	190	ug/Kg
50-32-8	Benzo(a)pyrene	400		76.7	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	190		110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88.2
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
BG056372.D	1	01/20/23 12:30	01/20/23 18:05	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	250		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	92.0	U	92.0	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	115		18 - 112	77%	SPK: 150
13127-88-3	Phenol-d6	105		21 - 104	70%	SPK: 150
4165-60-0	Nitrobenzene-d5	63.9		27 - 109	64%	SPK: 100
321-60-8	2-Fluorobiphenyl	69.1		30 - 103	69%	SPK: 100
118-79-6	2,4,6-Tribromophenol	113		10 - 121	75%	SPK: 150
1718-51-0	Terphenyl-d14	70.2		21 - 107	70%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	36900	8.302			
1146-65-2	Naphthalene-d8	139000	11.134			
15067-26-2	Acenaphthene-d10	115000	14.912			
1517-22-2	Phenanthrene-d10	282000	17.65			
1719-03-5	Chrysene-d12	266000	21.945			
1520-96-3	Perylene-d12	295000	25.382			
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	630	AB		5.34	ug/Kg
000119-61-9	Benzophenone	150	J		16.3	ug/Kg
067388-11-8	4-Methylnaphtho[1,2-b]thiophene	160	J		18.2	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	670	J		18.5	ug/Kg
001961-96-2	1H-Indene, 1-phenyl-	570	J		18.6	ug/Kg
000613-12-7	Anthracene, 2-methyl-	210	J		18.6	ug/Kg
000610-48-0	Anthracene, 1-methyl-	790	J		18.7	ug/Kg
000832-71-3	Phenanthrene, 3-methyl-	330	J		18.7	ug/Kg
000612-94-2	Naphthalene, 2-phenyl-	230	J		19.0	ug/Kg
000084-65-1	9,10-Anthracenedione	210	J		19.1	ug/Kg
003674-69-9	Phenanthrene, 4,5-dimethyl-	230	J		19.2	ug/Kg
003674-66-6	Phenanthrene, 2,5-dimethyl-	540	J		19.4	ug/Kg
002789-88-0	di-p-Tolylacetylene	200	J		19.5	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88.2
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
BG056372.D	1	01/20/23 12:30	01/20/23 18:05	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
022360-62-9	1-Methyl-3-phenyl-1H-indene	360	J		19.6	ug/Kg
002381-21-7	Pyrene, 1-methyl-	180	J		20.4	ug/Kg
000243-17-4	11H-Benzo[b]fluorene	220	J		20.5	ug/Kg
003442-78-2	Pyrene, 2-methyl-	140	J		20.7	ug/Kg
003353-12-6	Pyrene, 4-methyl-	130	J		20.8	ug/Kg
018435-45-5	1-Nonadecene	180	J		21.5	ug/Kg
000192-97-2	Benzo[e]pyrene	380	J		25.1	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88
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
BG056414.D	1	01/20/23 12:30	01/24/23 22:35	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	76.8	U	76.8	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	91.1	U	91.1	190	ug/Kg
95-57-8	2-Chlorophenol	77.5	U	77.5	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	90.9	U	90.9	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	370	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	86.3	U	86.3	90.8	ug/Kg
67-72-1	Hexachloroethane	83.6	U	83.6	190	ug/Kg
98-95-3	Nitrobenzene	83.8	U	83.8	190	ug/Kg
78-59-1	Isophorone	75.6	U	75.6	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	92.7	U	92.7	190	ug/Kg
91-20-3	Naphthalene	83.8	U	83.8	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	89.3	U	89.3	190	ug/Kg
91-57-6	2-Methylnaphthalene	85.1	U	85.1	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	200	U	200	370	ug/Kg
88-06-2	2,4,6-Trichlorophenol	96.9	U	96.9	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	94.8	U	94.8	190	ug/Kg
92-52-4	1,1-Biphenyl	98.1	U	98.1	190	ug/Kg
91-58-7	2-Chloronaphthalene	97.0	U	97.0	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	91.8	U	91.8	190	ug/Kg
208-96-8	Acenaphthylene	77.9	U	77.9	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	88.6	U	88.6	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88
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
BG056414.D	1	01/20/23 12:30	01/24/23 22:35	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	89.5	U	89.5	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	84.2	U	84.2	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	96.0	U	96.0	190	ug/Kg
84-66-2	Diethylphthalate	91.3	U	91.3	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	110	U	110	190	ug/Kg
86-73-7	Fluorene	89.4	U	89.4	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	97.8	U	97.8	370	ug/Kg
86-30-6	n-Nitrosodiphenylamine	93.3	U	93.3	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	1000		94.8	190	ug/Kg
120-12-7	Anthracene	180	J	95.3	190	ug/Kg
86-74-8	Carbazole	95.5	U	95.5	190	ug/Kg
84-74-2	Di-n-butylphthalate	98.7	U	98.7	190	ug/Kg
206-44-0	Fluoranthene	1000		90.5	190	ug/Kg
129-00-0	Pyrene	1000		84.2	190	ug/Kg
85-68-7	Butylbenzylphthalate	93.8	U	93.8	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	160	U	160	370	ug/Kg
56-55-3	Benzo(a)anthracene	500		98.5	190	ug/Kg
218-01-9	Chrysene	480		97.0	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	100	U	100	190	ug/Kg
117-84-0	Di-n-octyl phthalate	100	U	100	370	ug/Kg
205-99-2	Benzo(b)fluoranthene	480		78.3	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	160	J	83.5	190	ug/Kg
50-32-8	Benzo(a)pyrene	360		76.8	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	190		110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88
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
BG056414.D	1	01/20/23 12:30	01/24/23 22:35	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	230		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	92.1	U	92.1	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	120		18 - 112	80%	SPK: 150
13127-88-3	Phenol-d6	110		21 - 104	73%	SPK: 150
4165-60-0	Nitrobenzene-d5	63.3		27 - 109	63%	SPK: 100
321-60-8	2-Fluorobiphenyl	67.7		30 - 103	68%	SPK: 100
118-79-6	2,4,6-Tribromophenol	110		10 - 121	74%	SPK: 150
1718-51-0	Terphenyl-d14	65.3		21 - 107	65%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	40800	8.288			
1146-65-2	Naphthalene-d8	165000	11.126			
15067-26-2	Acenaphthene-d10	127000	14.904			
1517-22-2	Phenanthrene-d10	292000	17.642			
1719-03-5	Chrysene-d12	275000	21.931			
1520-96-3	Perylene-d12	300000	25.363			
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
002531-84-2	Phenanthrene, 2-methyl-	370	J		18.5	ug/Kg
000613-12-7	Anthracene, 2-methyl-	310	J		18.6	ug/Kg
000610-48-0	Anthracene, 1-methyl-	100	J		18.6	ug/Kg
	unknown18.706	380	J		18.7	ug/Kg
000832-64-4	Phenanthrene, 4-methyl-	150	J		18.7	ug/Kg
000612-94-2	Naphthalene, 2-phenyl-	160	J		19.0	ug/Kg
000084-65-1	9,10-Anthracenedione	110	J		19.0	ug/Kg
1000452-24-5	3,4-Dimethylphenanthrene	100	J		19.2	ug/Kg
000781-43-1	9,10-Dimethylanthracene	280	J		19.4	ug/Kg
005737-13-3	Cyclopenta(def)phenanthrenone	180	J		19.6	ug/Kg
002381-21-7	Pyrene, 1-methyl-	130	J		20.4	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	88
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
BG056414.D	1	01/20/23 12:30	01/24/23 22:35	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
003442-78-2	Pyrene, 2-methyl-	87.4	J		20.7	ug/Kg
000479-79-8	11H-Benzo[a]fluoren-11-one	96.1	J		21.3	ug/Kg
007206-19-1	3-Octadecene, (E)-	160	J		21.5	ug/Kg
000082-05-3	7H-Benz[de]anthracen-7-one	93.0	J		21.6	ug/Kg
000192-97-2	Benzo[e]pyrene	310	J		25.0	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P35A	SDG No.:	O1232
Lab Sample ID:	O1232-08	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	91.3
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
BF132177.D	1	01/20/23 12:30	01/20/23 23:51	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	74.0	U	74.0	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	87.7	U	87.7	190	ug/Kg
95-57-8	2-Chlorophenol	74.6	U	74.6	190	ug/Kg
95-48-7	2-Methylphenol	120	U	120	190	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	100	U	100	190	ug/Kg
98-86-2	Acetophenone	87.5	U	87.5	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	360	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	83.1	U	83.1	87.4	ug/Kg
67-72-1	Hexachloroethane	80.5	U	80.5	190	ug/Kg
98-95-3	Nitrobenzene	80.7	U	80.7	190	ug/Kg
78-59-1	Isophorone	72.8	U	72.8	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	89.2	U	89.2	190	ug/Kg
91-20-3	Naphthalene	80.7	U	80.7	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	86.0	U	86.0	190	ug/Kg
91-57-6	2-Methylnaphthalene	81.9	U	81.9	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	360	ug/Kg
88-06-2	2,4,6-Trichlorophenol	93.3	U	93.3	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	91.3	U	91.3	190	ug/Kg
92-52-4	1,1-Biphenyl	94.5	U	94.5	190	ug/Kg
91-58-7	2-Chloronaphthalene	93.4	U	93.4	190	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	190	ug/Kg
131-11-3	Dimethylphthalate	88.4	U	88.4	190	ug/Kg
208-96-8	Acenaphthylene	75.0	U	75.0	190	ug/Kg
606-20-2	2,6-Dinitrotoluene	85.3	U	85.3	190	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P35A	SDG No.:	O1232
Lab Sample ID:	O1232-08	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	91.3
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
BF132177.D	1	01/20/23 12:30	01/20/23 23:51	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	86.2	U	86.2	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	81.1	U	81.1	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	92.4	U	92.4	190	ug/Kg
84-66-2	Diethylphthalate	87.9	U	87.9	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	86.1	U	86.1	190	ug/Kg
100-01-6	4-Nitroaniline	110	U	110	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	94.2	U	94.2	360	ug/Kg
86-30-6	n-Nitrosodiphenylamine	89.8	U	89.8	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	98.3	U	98.3	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	360	ug/Kg
85-01-8	Phenanthrene	91.3	U	91.3	190	ug/Kg
120-12-7	Anthracene	91.8	U	91.8	190	ug/Kg
86-74-8	Carbazole	92.0	U	92.0	190	ug/Kg
84-74-2	Di-n-butylphthalate	95.0	U	95.0	190	ug/Kg
206-44-0	Fluoranthene	87.2	U	87.2	190	ug/Kg
129-00-0	Pyrene	81.1	U	81.1	190	ug/Kg
85-68-7	Butylbenzylphthalate	90.3	U	90.3	190	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	360	ug/Kg
56-55-3	Benzo(a)anthracene	94.8	U	94.8	190	ug/Kg
218-01-9	Chrysene	93.4	U	93.4	190	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	96.8	U	96.8	190	ug/Kg
117-84-0	Di-n-octyl phthalate	99.4	U	99.4	360	ug/Kg
205-99-2	Benzo(b)fluoranthene	75.4	U	75.4	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	80.4	U	80.4	190	ug/Kg
50-32-8	Benzo(a)pyrene	74.0	U	74.0	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P35A	SDG No.:	O1232
Lab Sample ID:	O1232-08	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	91.3
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
BF132177.D	1	01/20/23 12:30	01/20/23 23:51	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	99.6	U	99.6	190	ug/Kg
123-91-1	1,4-Dioxane	97.3	U	97.3	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	88.7	U	88.7	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	101		18 - 112	68%	SPK: 150
13127-88-3	Phenol-d6	105		21 - 104	70%	SPK: 150
4165-60-0	Nitrobenzene-d5	71.8		27 - 109	72%	SPK: 100
321-60-8	2-Fluorobiphenyl	60.6		30 - 103	61%	SPK: 100
118-79-6	2,4,6-Tribromophenol	107		10 - 121	71%	SPK: 150
1718-51-0	Terphenyl-d14	64.3		21 - 107	64%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	185000	7.09			
1146-65-2	Naphthalene-d8	675000	8.378			
15067-26-2	Acenaphthene-d10	372000	10.142			
1517-22-2	Phenanthrene-d10	724000	11.636			
1719-03-5	Chrysene-d12	486000	14.301			
1520-96-3	Perylene-d12	396000	15.895			
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1300	AB		5.34	ug/Kg
000119-61-9	Benzophenone	100	J		10.9	ug/Kg
000057-10-3	n-Hexadecanoic acid	120	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

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

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-P35B	SDG No.:	O1232
Lab Sample ID:	O1232-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	93.3
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
BP013581.D	1	01/20/23 12:30	01/24/23 21:02	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
100-52-7	Benzaldehyde	150	U	150	350	ug/Kg
108-95-2	Phenol	72.5	U	72.5	180	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	86.0	U	86.0	180	ug/Kg
95-57-8	2-Chlorophenol	73.1	U	73.1	180	ug/Kg
95-48-7	2-Methylphenol	110	U	110	180	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	100	U	100	180	ug/Kg
98-86-2	Acetophenone	85.7	U	85.7	180	ug/Kg
65794-96-9	3+4-Methylphenols	100	U	100	350	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	81.5	U	81.5	85.6	ug/Kg
67-72-1	Hexachloroethane	78.9	U	78.9	180	ug/Kg
98-95-3	Nitrobenzene	79.1	U	79.1	180	ug/Kg
78-59-1	Isophorone	71.3	U	71.3	180	ug/Kg
88-75-5	2-Nitrophenol	99.3	U	99.3	180	ug/Kg
105-67-9	2,4-Dimethylphenol	110	U	110	180	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	120	U	120	180	ug/Kg
120-83-2	2,4-Dichlorophenol	87.5	U	87.5	180	ug/Kg
91-20-3	Naphthalene	79.1	U	79.1	180	ug/Kg
106-47-8	4-Chloroaniline	100	U	100	180	ug/Kg
87-68-3	Hexachlorobutadiene	110	U	110	180	ug/Kg
105-60-2	Caprolactam	110	U	110	350	ug/Kg
59-50-7	4-Chloro-3-methylphenol	84.2	U	84.2	180	ug/Kg
91-57-6	2-Methylnaphthalene	80.3	U	80.3	180	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	350	ug/Kg
88-06-2	2,4,6-Trichlorophenol	91.4	U	91.4	180	ug/Kg
95-95-4	2,4,5-Trichlorophenol	89.5	U	89.5	180	ug/Kg
92-52-4	1,1-Biphenyl	92.6	U	92.6	180	ug/Kg
91-58-7	2-Chloronaphthalene	91.5	U	91.5	180	ug/Kg
88-74-4	2-Nitroaniline	120	U	120	180	ug/Kg
131-11-3	Dimethylphthalate	86.6	U	86.6	180	ug/Kg
208-96-8	Acenaphthylene	73.5	U	73.5	180	ug/Kg
606-20-2	2,6-Dinitrotoluene	83.6	U	83.6	180	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P35B	SDG No.:	O1232
Lab Sample ID:	O1232-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	93.3
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
BP013581.D	1	01/20/23 12:30	01/24/23 21:02	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
99-09-2	3-Nitroaniline	110	U	110	180	ug/Kg
83-32-9	Acenaphthene	84.5	U	84.5	180	ug/Kg
51-28-5	2,4-Dinitrophenol	140	U	140	350	ug/Kg
100-02-7	4-Nitrophenol	150	U	150	350	ug/Kg
132-64-9	Dibenzofuran	79.4	U	79.4	180	ug/Kg
121-14-2	2,4-Dinitrotoluene	90.6	U	90.6	180	ug/Kg
84-66-2	Diethylphthalate	86.2	U	86.2	180	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	180	ug/Kg
86-73-7	Fluorene	84.3	U	84.3	180	ug/Kg
100-01-6	4-Nitroaniline	110	U	110	180	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	92.3	U	92.3	350	ug/Kg
86-30-6	n-Nitrosodiphenylamine	88.0	U	88.0	180	ug/Kg
101-55-3	4-Bromophenyl-phenylether	110	U	110	180	ug/Kg
118-74-1	Hexachlorobenzene	110	U	110	180	ug/Kg
1912-24-9	Atrazine	96.3	U	96.3	180	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	350	ug/Kg
85-01-8	Phenanthrene	89.5	U	89.5	180	ug/Kg
120-12-7	Anthracene	89.9	U	89.9	180	ug/Kg
86-74-8	Carbazole	90.1	U	90.1	180	ug/Kg
84-74-2	Di-n-butylphthalate	93.1	U	93.1	180	ug/Kg
206-44-0	Fluoranthene	85.4	U	85.4	180	ug/Kg
129-00-0	Pyrene	79.4	U	79.4	180	ug/Kg
85-68-7	Butylbenzylphthalate	88.5	U	88.5	180	ug/Kg
91-94-1	3,3-Dichlorobenzidine	150	U	150	350	ug/Kg
56-55-3	Benzo(a)anthracene	92.9	U	92.9	180	ug/Kg
218-01-9	Chrysene	98.9	J	91.5	180	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	110	J	94.8	180	ug/Kg
117-84-0	Di-n-octyl phthalate	97.4	U	97.4	350	ug/Kg
205-99-2	Benzo(b)fluoranthene	73.9	U	73.9	180	ug/Kg
207-08-9	Benzo(k)fluoranthene	78.8	U	78.8	180	ug/Kg
50-32-8	Benzo(a)pyrene	72.5	U	72.5	180	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	180	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	180	ug/Kg

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P35B	SDG No.:	O1232
Lab Sample ID:	O1232-09	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	93.3
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
BP013581.D	1	01/20/23 12:30	01/24/23 21:02	PB150378

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
191-24-2	Benzo(g,h,i)perylene	100	U	100	180	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene	97.6	U	97.6	180	ug/Kg
123-91-1	1,4-Dioxane	95.4	U	95.4	180	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	86.9	U	86.9	180	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	118		18 - 112	79%	SPK: 150
13127-88-3	Phenol-d6	112		21 - 104	75%	SPK: 150
4165-60-0	Nitrobenzene-d5	79.8		27 - 109	80%	SPK: 100
321-60-8	2-Fluorobiphenyl	68.9		30 - 103	69%	SPK: 100
118-79-6	2,4,6-Tribromophenol	135		10 - 121	90%	SPK: 150
1718-51-0	Terphenyl-d14	75.4		21 - 107	75%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	365000	8.158			
1146-65-2	Naphthalene-d8	1460000	10.987			
15067-26-2	Acenaphthene-d10	861000	14.792			
1517-22-2	Phenanthrene-d10	1870000	17.545			
1719-03-5	Chrysene-d12	1650000	21.622			
1520-96-3	Perylene-d12	1470000	24.204			
TENTATIVE IDENTIFIED COMPOUNDS						
000994-05-8	Butane, 2-methoxy-2-methyl-	830	J		3.22	ug/Kg
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1100	AB		5.22	ug/Kg
000119-61-9	Benzophenone	99.9	J		16.1	ug/Kg
000057-10-3	n-Hexadecanoic acid	94.2	J		18.4	ug/Kg
010192-32-2	1-Tetracosene	190	J		21.3	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	DUP01	SDG No.:	O1232
Lab Sample ID:	O1232-10	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.1
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
BG056375.D	1	01/20/23 12:30	01/20/23 20:09	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	74.9	U	74.9	190	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	88.9	U	88.9	190	ug/Kg
95-57-8	2-Chlorophenol	75.6	U	75.6	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	88.6	U	88.6	190	ug/Kg
65794-96-9	3+4-Methylphenols	110	U	110	370	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	84.2	U	84.2	88.5	ug/Kg
67-72-1	Hexachloroethane	81.6	U	81.6	190	ug/Kg
98-95-3	Nitrobenzene	81.8	U	81.8	190	ug/Kg
78-59-1	Isophorone	73.7	U	73.7	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	90.4	U	90.4	190	ug/Kg
91-20-3	Naphthalene	81.8	U	81.8	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	87.1	U	87.1	190	ug/Kg
91-57-6	2-Methylnaphthalene	83.0	U	83.0	190	ug/Kg
77-47-4	Hexachlorocyclopentadiene	190	U	190	370	ug/Kg
88-06-2	2,4,6-Trichlorophenol	94.5	U	94.5	190	ug/Kg
95-95-4	2,4,5-Trichlorophenol	92.5	U	92.5	190	ug/Kg
92-52-4	1,1-Biphenyl	95.7	U	95.7	190	ug/Kg
91-58-7	2-Chloronaphthalene	94.6	U	94.6	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	DUP01	SDG No.:	O1232
Lab Sample ID:	O1232-10	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.1
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
BG056375.D	1	01/20/23 12:30	01/20/23 20:09	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	87.3	U	87.3	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	82.1	U	82.1	190	ug/Kg
121-14-2	2,4-Dinitrotoluene	93.6	U	93.6	190	ug/Kg
84-66-2	Diethylphthalate	89.1	U	89.1	190	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	100	U	100	190	ug/Kg
86-73-7	Fluorene	87.2	U	87.2	190	ug/Kg
100-01-6	4-Nitroaniline	120	U	120	190	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	95.4	U	95.4	370	ug/Kg
86-30-6	n-Nitrosodiphenylamine	91.0	U	91.0	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	99.6	U	99.6	190	ug/Kg
87-86-5	Pentachlorophenol	130	U	130	370	ug/Kg
85-01-8	Phenanthrene	92.5	U	92.5	190	ug/Kg
120-12-7	Anthracene	93.0	U	93.0	190	ug/Kg
86-74-8	Carbazole	93.2	U	93.2	190	ug/Kg
84-74-2	Di-n-butylphthalate	96.3	U	96.3	190	ug/Kg
206-44-0	Fluoranthene	88.3	U	88.3	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	370	ug/Kg
56-55-3	Benzo(a)anthracene	96.0	U	96.0	190	ug/Kg
218-01-9	Chrysene	94.6	U	94.6	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	370	ug/Kg
205-99-2	Benzo(b)fluoranthene	76.4	U	76.4	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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	DUP01	SDG No.:	O1232
Lab Sample ID:	O1232-10	Matrix:	SOIL
Analytical Method:	SW8270	% Solid:	90.1
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
BG056375.D	1	01/20/23 12:30	01/20/23 20:09	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	98.6	U	98.6	190	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol	89.9	U	89.9	190	ug/Kg
SURROGATES						
367-12-4	2-Fluorophenol	111		18 - 112	74%	SPK: 150
13127-88-3	Phenol-d6	99.1		21 - 104	66%	SPK: 150
4165-60-0	Nitrobenzene-d5	61.4		27 - 109	61%	SPK: 100
321-60-8	2-Fluorobiphenyl	73.7		30 - 103	74%	SPK: 100
118-79-6	2,4,6-Tribromophenol	107		10 - 121	71%	SPK: 150
1718-51-0	Terphenyl-d14	70.9		21 - 107	71%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	47000	8.302			
1146-65-2	Naphthalene-d8	178000	11.134			
15067-26-2	Acenaphthene-d10	128000	14.918			
1517-22-2	Phenanthrene-d10	294000	17.656			
1719-03-5	Chrysene-d12	270000	21.945			
1520-96-3	Perylene-d12	286000	25.388			
TENTATIVE IDENTIFIED COMPOUNDS						
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	580	AB		5.34	ug/Kg
000119-61-9	Benzophenone	99.2	J		16.3	ug/Kg
000057-10-3	n-Hexadecanoic acid	160	J		18.5	ug/Kg
000077-94-1	Butyl citrate	210	J		19.9	ug/Kg
085763-57-1	11-Methyldodecanol	130	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

QC SUMMARY

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

Surrogate Summary

SW-846

SDG No.: O1232

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
O1232-01	B-P17A	2-Fluorophenol	150	91.9	61		18	112
		Phenol-d6	150	95.1	63		21	104
		Nitrobenzene-d5	100	65.3	65		27	109
		2-Fluorobiphenyl	100	56.1	56		30	103
		2,4,6-Tribromophenol	150	95.4	64		10	121
		Terphenyl-d14	100	59.5	59		21	107
O1232-02	B-P17B	2-Fluorophenol	150	95.6	64		18	112
		Phenol-d6	150	89.3	60		21	104
		Nitrobenzene-d5	100	66.4	66		27	109
		2-Fluorobiphenyl	100	60.1	60		30	103
		2,4,6-Tribromophenol	150	104	69		10	121
		Terphenyl-d14	100	55.5	55		21	107
O1232-04	B-P18A	2-Fluorophenol	150	93.1	62		18	112
		Phenol-d6	150	88.9	59		21	104
		Nitrobenzene-d5	100	62.4	62		27	109
		2-Fluorobiphenyl	100	53.4	53		30	103
		2,4,6-Tribromophenol	150	114	76		10	121
		Terphenyl-d14	100	66.3	66		21	107
O1232-05	B-P18B	2-Fluorophenol	150	159	106		18	112
		Phenol-d6	150	142	95		21	104
		Nitrobenzene-d5	100	85.4	85		27	109
		2-Fluorobiphenyl	100	98.8	99		30	103
		2,4,6-Tribromophenol	150	151	101		10	121
		Terphenyl-d14	100	100	100		21	107
O1232-06	B-P19A	2-Fluorophenol	150	115	77		18	112
		Phenol-d6	150	105	70		21	104
		Nitrobenzene-d5	100	63.9	64		27	109
		2-Fluorobiphenyl	100	69.1	69		30	103
		2,4,6-Tribromophenol	150	113	75		10	121
		Terphenyl-d14	100	70.2	70		21	107
O1232-07	B-P19B	2-Fluorophenol	150	120	80		18	112
		Phenol-d6	150	110	73		21	104
		Nitrobenzene-d5	100	63.3	63		27	109
		2-Fluorobiphenyl	100	67.7	68		30	103
		2,4,6-Tribromophenol	150	110	74		10	121
		Terphenyl-d14	100	65.3	65		21	107
O1232-08	B-P35A	2-Fluorophenol	150	101	68		18	112
		Phenol-d6	150	105	70		21	104
		Nitrobenzene-d5	100	71.8	72		27	109
		2-Fluorobiphenyl	100	60.6	61		30	103
		2,4,6-Tribromophenol	150	107	71		10	121
		Terphenyl-d14	100	64.3	64		21	107
O1232-09	B-P35B	2-Fluorophenol	150	118	79		18	112
		Phenol-d6	150	112	75		21	104
		Nitrobenzene-d5	100	79.8	80		27	109
		2-Fluorobiphenyl	100	68.9	69		30	103
		2,4,6-Tribromophenol	150	135	90		10	121
		Terphenyl-d14	100	75.4	75		21	107
O1232-10	DUP01	2-Fluorophenol	150	111	74		18	112
		Phenol-d6	150	99.1	66		21	104
		Nitrobenzene-d5	100	61.4	61		27	109
		2-Fluorobiphenyl	100	73.7	74		30	103

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Surrogate Summary

SW-846

SDG No.: O1232

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	Limits (%) High
O1232-10	DUP01	2,4,6-Tribromophenol	150	107	71		10	121
		Terphenyl-d14	100	70.9	71		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
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

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Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: O1232

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

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Limits Low	Limits High	RPD
Lab Sample ID: O1233-02MS		**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.: O1232

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

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Limits Low	Limits High	RPD
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	

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Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: O1232

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

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Limits 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

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Matrix Spike/Matrix Spike Duplicate Summary
SW-846

SDG No.: O1232

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

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Limits Low	Limits High	Limits 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.: O1232

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 Qual	Limits Low	Limits High	RPD
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.: O1232

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 Qual	Limits Low	Limits High	RPD
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	

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SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB150378BL

Lab Name: CHEMTECH Contract: loui01

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

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
B-P35B	O1232-09	BP013581.D	01/24/2023
B-P18A	O1232-04	BP013586.D	01/24/2023
PB150378BS	PB150378BS	BP013684.D	01/31/2023
B-P17A	O1232-01	BF132175.D	01/20/2023
B-P35A	O1232-08	BF132177.D	01/20/2023
B-P34AMS	O1233-02MS	BF132171.D	01/20/2023
B-P34AMSD	O1233-02MSD	BF132172.D	01/20/2023
B-P19A	O1232-06	BG056372.D	01/20/2023
B-P18B	O1232-05	BG056373.D	01/20/2023
DUP01	O1232-10	BG056375.D	01/20/2023
B-P19B	O1232-07	BG056414.D	01/24/2023
B-P17B	O1232-02	BP013566.D	01/24/2023

COMMENTS:

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: loui01

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

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.: O1232 SDG NO.: O1232

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-P34AMS	O1233-02MS	BF132171.D	01/20/2023	20:35
B-P34AMSD	O1233-02MSD	BF132172.D	01/20/2023	21:08
B-P17A	O1232-01	BF132175.D	01/20/2023	22:46
B-P35A	O1232-08	BF132177.D	01/20/2023	23:51

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: loui01

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

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.: O1232 SDG NO.: O1232

Lab File ID: BG056362.D DFTPP Injection Date: 01/20/2023

Instrument ID: BNA_G DFTPP Injection Time: 11:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	14.1
68	Less than 2.0% of mass 69	0.1 (0.4) 1
69	Mass 69 relative abundance	20.1
70	Less than 2.0% of mass 69	0.1 (0.3) 1
127	10.0 - 80.0% of mass 198	34.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	35.3
365	Greater than 1% of mass 198	4.4
441	Present, but less than mass 443	13.1
442	Greater than 50% of mass 198	80.9
443	15.0 - 24.0% of mass 442	16.8 (20.8) 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	BG056363.D	01/20/2023	11:44
B-P19A	O1232-06	BG056372.D	01/20/2023	18:05
B-P18B	O1232-05	BG056373.D	01/20/2023	18:47
DUP01	O1232-10	BG056375.D	01/20/2023	20:09

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: loui01

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

Lab File ID: BG056402.D DFTPP Injection Date: 01/24/2023

Instrument ID: BNA_G DFTPP Injection Time: 14:15

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	13.5
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	19.6
70	Less than 2.0% of mass 69	0.1 (0.3) 1
127	10.0 - 80.0% of mass 198	33.6
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	6.9
275	10.0 - 60.0% of mass 198	34.5
365	Greater than 1% of mass 198	4.3
441	Present, but less than mass 443	13.7
442	Greater than 50% of mass 198	81.6
443	15.0 - 24.0% of mass 442	16.9 (20.8) 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	BG056403.D	01/24/2023	14:59
B-P19B	O1232-07	BG056414.D	01/24/2023	22:35

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: loui01

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

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.: O1232 SDG NO.: O1232

Lab File ID: BP013561.D DFTPP Injection Date: 01/24/2023

Instrument ID: BNA_P DFTPP Injection Time: 09:20

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.8
68	Less than 2.0% of mass 69	0.4 (1.6) 1
69	Mass 69 relative abundance	27.3
70	Less than 2.0% of mass 69	0.1 (0.5) 1
127	10.0 - 80.0% of mass 198	39.7
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	6.1
275	10.0 - 60.0% of mass 198	24.3
365	Greater than 1% of mass 198	3.3
441	Present, but less than mass 443	15.3
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	BP013562.D	01/24/2023	09:53
B-P17B	O1232-02	BP013566.D	01/24/2023	12:17

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: loui01

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

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-P35B	O1232-09	BP013581.D	01/24/2023	21:02
B-P18A	O1232-04	BP013586.D	01/24/2023	23:52

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: loui01

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

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.: O1232 SAS No.: O1232 SDG NO.: O1232

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-P17A	179173	7.09	654165	8.38	350949	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-P35A	185310	7.09	674589	8.38	371842	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.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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-P17A	681798	11.64	457343	14.30	397282	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-P35A	723544	11.64	486031	14.30	396449	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.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

Lab File ID: BG056363.D Time Analyzed: 11:44

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	37412	8.307	143761	11.14	115862	14.92
	UPPER LIMIT	74824	8.807	287522	11.639	231724	15.423
	LOWER LIMIT	18706	7.807	71880.5	10.639	57931	14.423
	EPA SAMPLE NO.						
01	B-P18B	44014	8.30	169116	11.13	128743	14.92
02	B-P19A	36892	8.30	139086	11.13	114800	14.91
03	DUP01	47011	8.30	177848	11.13	127856	14.92

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

Lab File ID: BG056363.D Time Analyzed: 11:44

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	283626	17.661	257188	21.956	278421	25.399
	UPPER LIMIT	567252	18.161	514376	22.456	556842	25.899
	LOWER LIMIT	141813	17.161	128594	21.456	139211	24.899
	EPA SAMPLE NO.						
01	B-P18B	300749	17.65	276762	21.94	300974	25.39
02	B-P19A	281635	17.65	266133	21.95	294871	25.38
03	DUP01	293543	17.66	269833	21.95	285669	25.39

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

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* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

Lab File ID: BG056403.D Time Analyzed: 14:59

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	39529	8.294	145808	11.13	117421	14.91
	UPPER LIMIT	79058	8.794	291616	11.626	234842	15.41
	LOWER LIMIT	19764.5	7.794	72904	10.626	58710.5	14.41
	EPA SAMPLE NO.						
01	B-P19B	40835	8.29	164752	11.13	126513	14.90

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

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* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

Lab File ID: BG056403.D Time Analyzed: 14:59

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	289164	17.648	265057	21.943	286788	25.369
	UPPER LIMIT	578328	18.148	530114	22.443	573576	25.869
	LOWER LIMIT	144582	17.148	132529	21.443	143394	24.869
	EPA SAMPLE NO.						
01	B-P19B	291766	17.64	274867	21.93	299958	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.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

Lab File ID: BP013562.D Time Analyzed: 09:53

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	306826	8.164	1252680	10.99	763071	14.80
	UPPER LIMIT	613652	8.664	2505360	11.493	1526140	15.299
	LOWER LIMIT	153413	7.664	626340	10.493	381536	14.299
	EPA SAMPLE NO.						
01	B-P17B	250560	8.16	955341	10.99	503514	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.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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

Lab File ID: BP013562.D Time Analyzed: 09:53

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	1590580	17.551	1270420	21.628	1120190	24.216
	UPPER LIMIT	3181160	18.051	2540840	22.128	2240380	24.716
	LOWER LIMIT	795290	17.051	635210	21.128	560095	23.716
	EPA SAMPLE NO.						
01	B-P17B	1009560	17.55	942607	21.62	1148370	24.21

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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-P18A	399746	8.16	1629410	10.99	968292	14.79
03	B-P35B	364997	8.16	1463840	10.99	861008	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.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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-P18A	2094750	17.55	1475320	21.62	1445620	24.20
03	B-P35B	1874320	17.55	1653010	21.62	1474510	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.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

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

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.

CHEMTECH

A
B
C
D
E
F
G

QC SAMPLE DATA

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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.:	O1232
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

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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.:	O1232
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

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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.:	O1232
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

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

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.:	O1232
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

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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.:	O1232
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

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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.:	O1232
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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34AMS	SDG No.:	O1232
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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34AMS	SDG No.:	O1232
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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34AMS	SDG No.:	O1232
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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34AMSD	SDG No.:	O1232
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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34AMSD	SDG No.:	O1232
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

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Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34AMSD	SDG No.:	O1232
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

CHEMTECH

A
B
C
D
E
F
G

CALIBRATION SUMMARY

Response Factor Report BNA_F

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 =BF1321
47.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)		Benzidine	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

Response Factor Report GC/MS Ins

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 =BG0561
33.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)		Butylbenzylpht...	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

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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

Response Factor Report MSBNA_P

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 =BP0135
52.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\
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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

Response Factor Report MSBNA_P

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.: O1232 SAS No.: O1232 SDG No.: O1232

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.: O1232 SAS No.: O1232 SDG No.: O1232

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: loui01

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

Instrument ID: BNA_G Calibration Date/Time: 01/20/2023 11:44

Lab File ID: BG056363.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	1.128		0.7	
Benzaldehyde	1.023	1.075		5.1	
Phenol-d6	1.720	1.621		-5.8	
Phenol	1.745	1.643		-5.8	20.0
bis(2-Chloroethyl)ether	1.182	1.148		-2.9	
2-Chlorophenol	1.115	1.174		5.3	
2-Methylphenol	1.280	1.277		-0.2	
2,2-oxybis(1-Chloropropane)	0.209	0.242		15.8	
Acetophenone	0.566	0.529		-6.5	
3+4-Methylphenols	1.800	1.743		-3.2	
n-Nitroso-di-n-propylamine	1.046	0.924	0.050	-11.7	
Nitrobenzene-d5	0.391	0.363		-7.2	
Hexachloroethane	0.414	0.435		5.1	
Nitrobenzene	0.387	0.355		-8.3	
Isophorone	0.823	0.721		-12.4	
2-Nitrophenol	0.198	0.207		4.5	20.0
2,4-Dimethylphenol	0.362	0.358		-1.1	
bis(2-Chloroethoxy)methane	0.428	0.411		-4.0	
2,4-Dichlorophenol	0.400	0.404		1.0	20.0
Naphthalene	1.053	1.086		3.1	
4-Chloroaniline	0.503	0.493		-2.0	
Hexachlorobutadiene	0.326	0.332		1.8	20.0
Caprolactam	0.135	0.123		-8.9	
4-Chloro-3-methylphenol	0.406	0.380		-6.4	20.0
2-Methylnaphthalene	0.889	0.881		-0.9	
Hexachlorocyclopentadiene	0.427	0.408	0.050	-4.4	
2,4,6-Trichlorophenol	0.496	0.499		0.6	20.0
2-Fluorobiphenyl	1.448	1.497		3.4	
2,4,5-Trichlorophenol	0.586	0.583		-0.5	
1,1-Biphenyl	1.432	1.484		3.6	
2-Chloronaphthalene	1.131	1.163		2.8	
2-Nitroaniline	0.241	0.239		-0.8	
Dimethylphthalate	1.615	1.581		-2.1	
Acenaphthylene	1.840	1.901		3.3	
2,6-Dinitrotoluene	0.344	0.348		1.2	
3-Nitroaniline	0.327	0.340		4.0	
Acenaphthene	1.197	1.227		2.5	20.0
2,4-Dinitrophenol	0.246	0.231	0.050	-6.1	
4-Nitrophenol	0.252	0.249	0.050	-1.2	
Dibenzofuran	1.980	1.989		0.5	
2,4-Dinitrotoluene	0.481	0.489		1.7	

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

Instrument ID: BNA_G Calibration Date/Time: 01/20/2023 11:44

Lab File ID: BG056363.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	1.499		-1.0	
4-Chlorophenyl-phenylether	0.994	0.986		-0.8	
Fluorene	1.593	1.567		-1.6	
4-Nitroaniline	0.335	0.347		3.6	
4,6-Dinitro-2-methylphenol	0.135	0.145		7.4	
n-Nitrosodiphenylamine	0.555	0.591		6.5	20.0
2,4,6-Tribromophenol	0.253	0.271		7.1	
4-Bromophenyl-phenylether	0.255	0.270		5.9	
Hexachlorobenzene	0.238	0.261		9.2	
Atrazine	0.230	0.236		2.6	
Pentachlorophenol	0.183	0.167		-8.7	20.0
Phenanthrene	1.036	1.068		3.1	
Anthracene	1.069	1.099		2.8	
Carbazole	0.899	0.920		2.3	
Di-n-butylphthalate	0.896	0.973		8.6	
Fluoranthene	1.352	1.325		-2.0	20.0
Pyrene	1.410	1.469		4.2	
Terphenyl-d14	1.117	1.181		5.7	
Butylbenzylphthalate	0.404	0.441		9.2	
3,3-Dichlorobenzidine	0.506	0.515		1.8	
Benzo(a)anthracene	1.405	1.426		1.5	
Chrysene	1.316	1.357		3.1	
Bis(2-ethylhexyl)phthalate	0.583	0.616		5.7	
Di-n-octyl phthalate	0.984	1.036		5.3	20.0
Benzo(b)fluoranthene	1.271	1.308		2.9	
Benzo(k)fluoranthene	1.265	1.286		1.7	
Benzo(a)pyrene	1.239	1.267		2.3	20.0
Indeno(1,2,3-cd)pyrene	1.455	1.521		4.5	
Dibenzo(a,h)anthracene	1.219	1.272		4.3	
Benzo(g,h,i)perylene	1.183	1.237		4.6	
1,2,4,5-Tetrachlorobenzene	0.750	0.775		3.3	
1,4-Dioxane	0.512	0.458		-10.5	20.0
2,3,4,6-Tetrachlorophenol	0.551	0.526		-4.5	

All other compounds must meet a minimum RRF of 0.010.

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

Instrument ID: BNA_G Calibration Date/Time: 01/24/2023 14:59

Lab File ID: BG056403.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	1.109		-1.0	
Benzaldehyde	1.023	0.998		-2.4	
Phenol-d6	1.720	1.592		-7.4	
Phenol	1.745	1.627		-6.8	20.0
bis(2-Chloroethyl)ether	1.182	1.088		-8.0	
2-Chlorophenol	1.115	1.165		4.5	
2-Methylphenol	1.280	1.206		-5.8	
2,2-oxybis(1-Chloropropane)	0.209	0.240		14.8	
Acetophenone	0.566	0.540		-4.6	
3+4-Methylphenols	1.800	1.653		-8.2	
n-Nitroso-di-n-propylamine	1.046	0.896	0.050	-14.3	
Nitrobenzene-d5	0.391	0.362		-7.4	
Hexachloroethane	0.414	0.420		1.4	
Nitrobenzene	0.387	0.355		-8.3	
Isophorone	0.823	0.711		-13.6	
2-Nitrophenol	0.198	0.215		8.6	20.0
2,4-Dimethylphenol	0.362	0.347		-4.1	
bis(2-Chloroethoxy)methane	0.428	0.400		-6.5	
2,4-Dichlorophenol	0.400	0.407		1.8	20.0
Naphthalene	1.053	1.092		3.7	
4-Chloroaniline	0.503	0.492		-2.2	
Hexachlorobutadiene	0.326	0.326		0.0	20.0
Caprolactam	0.135	0.123		-8.9	
4-Chloro-3-methylphenol	0.406	0.377		-7.1	20.0
2-Methylnaphthalene	0.889	0.882		-0.8	
Hexachlorocyclopentadiene	0.427	0.441	0.050	3.3	
2,4,6-Trichlorophenol	0.496	0.497		0.2	20.0
2-Fluorobiphenyl	1.448	1.481		2.3	
2,4,5-Trichlorophenol	0.586	0.577		-1.5	
1,1-Biphenyl	1.432	1.499		4.7	
2-Chloronaphthalene	1.131	1.160		2.6	
2-Nitroaniline	0.241	0.246		2.1	
Dimethylphthalate	1.615	1.571		-2.7	
Acenaphthylene	1.840	1.893		2.9	
2,6-Dinitrotoluene	0.344	0.342		-0.6	
3-Nitroaniline	0.327	0.339		3.7	
Acenaphthene	1.197	1.224		2.3	20.0
2,4-Dinitrophenol	0.246	0.220	0.050	-10.6	
4-Nitrophenol	0.252	0.237	0.050	-6.0	
Dibenzofuran	1.980	1.963		-0.9	
2,4-Dinitrotoluene	0.481	0.496		3.1	

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

Instrument ID: BNA_G Calibration Date/Time: 01/24/2023 14:59

Lab File ID: BG056403.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	1.472		-2.8	
4-Chlorophenyl-phenylether	0.994	0.959		-3.5	
Fluorene	1.593	1.570		-1.4	
4-Nitroaniline	0.335	0.352		5.1	
4,6-Dinitro-2-methylphenol	0.135	0.140		3.7	
n-Nitrosodiphenylamine	0.555	0.580		4.5	20.0
2,4,6-Tribromophenol	0.253	0.269		6.3	
4-Bromophenyl-phenylether	0.255	0.264		3.5	
Hexachlorobenzene	0.238	0.255		7.1	
Atrazine	0.230	0.232		0.9	
Pentachlorophenol	0.183	0.179		-2.2	20.0
Phenanthrene	1.036	1.059		2.2	
Anthracene	1.069	1.091		2.1	
Carbazole	0.899	0.925		2.9	
Di-n-butylphthalate	0.896	0.972		8.5	
Fluoranthene	1.352	1.316		-2.7	20.0
Pyrene	1.410	1.440		2.1	
Terphenyl-d14	1.117	1.165		4.3	
Butylbenzylphthalate	0.404	0.431		6.7	
3,3-Dichlorobenzidine	0.506	0.514		1.6	
Benzo(a)anthracene	1.405	1.426		1.5	
Chrysene	1.316	1.343		2.1	
Bis(2-ethylhexyl)phthalate	0.583	0.614		5.3	
Di-n-octyl phthalate	0.984	1.024		4.1	20.0
Benzo(b)fluoranthene	1.271	1.288		1.3	
Benzo(k)fluoranthene	1.265	1.285		1.6	
Benzo(a)pyrene	1.239	1.268		2.3	20.0
Indeno(1,2,3-cd)pyrene	1.455	1.513		4.0	
Dibenzo(a,h)anthracene	1.219	1.270		4.2	
Benzo(g,h,i)perylene	1.183	1.201		1.5	
1,2,4,5-Tetrachlorobenzene	0.750	0.768		2.4	
1,4-Dioxane	0.512	0.448		-12.5	20.0
2,3,4,6-Tetrachlorophenol	0.551	0.513		-6.9	

All other compounds must meet a minimum RRF of 0.010.

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: 01232 SAS No.: 01232 SDG No.: 01232

Instrument ID: BNA_P Calibration Date/Time: 01/24/2023 09:53

Lab File ID: BP013562.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	1.219		4.5	
Benzaldehyde	0.995	0.927		-6.8	
Phenol-d6	1.571	1.646		4.8	
Phenol	1.628	1.701		4.5	20.0
bis(2-Chloroethyl)ether	1.331	1.374		3.2	
2-Chlorophenol	1.288	1.368		6.2	
2-Methylphenol	1.182	1.237		4.7	
2,2-oxybis(1-Chloropropane)	1.822	1.854		1.8	
Acetophenone	0.513	0.525		2.3	
3+4-Methylphenols	1.556	1.667		7.1	
n-Nitroso-di-n-propylamine	1.012	1.069	0.050	5.6	
Nitrobenzene-d5	0.303	0.350		15.5	
Hexachloroethane	0.483	0.515		6.6	
Nitrobenzene	0.326	0.367		12.6	
Isophorone	0.719	0.734		2.1	
2-Nitrophenol	0.094	0.137		45.7	20.0
2,4-Dimethylphenol	0.310	0.328		5.8	
bis(2-Chloroethoxy)methane	0.433	0.453		4.6	
2,4-Dichlorophenol	0.285	0.313		9.8	20.0
Naphthalene	1.075	1.106		2.9	
4-Chloroaniline	0.476	0.496		4.2	
Hexachlorobutadiene	0.189	0.195		3.2	20.0
Caprolactam	0.093	0.108		16.1	
4-Chloro-3-methylphenol	0.311	0.343		10.3	20.0
2-Methylnaphthalene	0.764	0.801		4.8	
Hexachlorocyclopentadiene	0.290	0.314	0.050	8.3	
2,4,6-Trichlorophenol	0.360	0.398		10.6	20.0
2-Fluorobiphenyl	1.457	1.460		0.2	
2,4,5-Trichlorophenol	0.426	0.479		12.4	
1,1-Biphenyl	1.606	1.621		0.9	
2-Chloronaphthalene	1.203	1.208		0.4	
2-Nitroaniline	0.241	0.333		38.2	
Dimethylphthalate	1.487	1.591		7.0	
Acenaphthylene	1.968	2.011		2.2	
2,6-Dinitrotoluene	0.240	0.324		35.0	
3-Nitroaniline	0.275	0.365		32.7	
Acenaphthene	1.216	1.264		3.9	20.0
2,4-Dinitrophenol	0.058	0.106	0.050	82.8	
4-Nitrophenol	0.212	0.283	0.050	33.5	
Dibenzofuran	1.864	1.911		2.5	
2,4-Dinitrotoluene	0.266	0.423		59.0	

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

Instrument ID: BNA_P Calibration Date/Time: 01/24/2023 09:53

Lab File ID: BP013562.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	1.590		9.5	
4-Chlorophenyl-phenylether	0.729	0.759		4.1	
Fluorene	1.482	1.533		3.4	
4-Nitroaniline	0.265	0.372		40.4	
4,6-Dinitro-2-methylphenol	0.058	0.080		37.9	
n-Nitrosodiphenylamine	0.652	0.650		-0.3	20.0
2,4,6-Tribromophenol	0.201	0.225		11.9	
4-Bromophenyl-phenylether	0.222	0.207		-6.8	
Hexachlorobenzene	0.239	0.241		0.8	
Atrazine	0.187	0.211		12.8	
Pentachlorophenol	0.139	0.158		13.7	20.0
Phenanthrene	1.113	1.138		2.2	
Anthracene	1.129	1.148		1.7	
Carbazole	1.015	1.060		4.4	
Di-n-butylphthalate	1.130	1.253		10.9	
Fluoranthene	1.183	1.258		6.3	20.0
Pyrene	1.529	1.627		6.4	
Terphenyl-d14	1.112	1.205		8.4	
Butylbenzylphthalate	0.487	0.596		22.4	
3,3-Dichlorobenzidine	0.449	0.453		0.9	
Benzo(a)anthracene	1.393	1.436		3.1	
Chrysene	1.333	1.354		1.6	
Bis(2-ethylhexyl)phthalate	0.779	0.834		7.1	
Di-n-octyl phthalate	1.256	1.234		-1.8	20.0
Benzo(b)fluoranthene	1.230	1.312		6.7	
Benzo(k)fluoranthene	1.255	1.399		11.5	
Benzo(a)pyrene	1.194	1.252		4.9	20.0
Indeno(1,2,3-cd)pyrene	1.473	1.497		1.6	
Dibenzo(a,h)anthracene	1.236	1.268		2.6	
Benzo(g,h,i)perylene	1.206	1.225		1.6	
1,2,4,5-Tetrachlorobenzene	0.616	0.623		1.1	
1,4-Dioxane	0.471	0.491		4.2	20.0
2,3,4,6-Tetrachlorophenol	0.327	0.375		14.7	

All other compounds must meet a minimum RRF of 0.010.

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

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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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

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.