

LAB CHRONICLE

OrderID:	Q1232	OrderDate:	1/30/2025 11:55:00 AM
Client:	RU2 Engineering, LLC	Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Contact:	Rutu Manani	Location:	E11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1232-04	JPP-46.2-012925	TCLP	TCLP BNA	8270E	01/29/25	01/31/25	02/03/25	01/30/25
Q1232-08	JPP-46.1-012925	TCLP	TCLP BNA	8270E	01/29/25	01/31/25	02/03/25	01/30/25
Q1232-12	JPP-42.1-012925	TCLP	TCLP BNA	8270E	01/29/25	01/31/25	02/03/25	01/30/25
Q1232-16	JPP-42.2-012925	TCLP	TCLP BNA	8270E	01/29/25	01/31/25	02/03/25	01/30/25
Q1232-20	JPP-51.1-012925	TCLP	TCLP BNA	8270E	01/29/25	01/31/25	02/03/25	01/30/25



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

Hit Summary Sheet
SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

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



SAMPLE DATA

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/31/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/31/25
Client Sample ID:	PB166356TB	SDG No.:	Q1232
Lab Sample ID:	PB166356TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141406.D	1	01/31/25 10:29	02/04/25 14:13	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	126		10 - 139	84%	SPK: 150
13127-88-3	Phenol-d6	123		10 - 134	82%	SPK: 150
4165-60-0	Nitrobenzene-d5	86.5		49 - 133	86%	SPK: 100
321-60-8	2-Fluorobiphenyl	86.2		52 - 132	86%	SPK: 100
118-79-6	2,4,6-Tribromophenol	136		44 - 137	90%	SPK: 150
1718-51-0	Terphenyl-d14	80.1		48 - 125	80%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	94500	6.787			
1146-65-2	Naphthalene-d8	389000	8.069			
15067-26-2	Acenaphthene-d10	210000	9.828			
1517-22-2	Phenanthrene-d10	364000	11.316			
1719-03-5	Chrysene-d12	282000	13.957			
1520-96-3	Perylene-d12	223000	15.421			

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/31/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/31/25
Client Sample ID:	PB166356TB	SDG No.:	Q1232
Lab Sample ID:	PB166356TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141406.D	1	01/31/25 10:29	02/04/25 14:13	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-46.2-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-04	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141380.D	1	01/31/25 10:29	02/03/25 20:24	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	135		10 - 139	90%	SPK: 150
13127-88-3	Phenol-d6	131		10 - 134	87%	SPK: 150
4165-60-0	Nitrobenzene-d5	107		49 - 133	107%	SPK: 100
321-60-8	2-Fluorobiphenyl	102		52 - 132	102%	SPK: 100
118-79-6	2,4,6-Tribromophenol	166		44 - 137	111%	SPK: 150
1718-51-0	Terphenyl-d14	99.5		48 - 125	100%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	93200	6.792			
1146-65-2	Naphthalene-d8	363000	8.075			
15067-26-2	Acenaphthene-d10	195000	9.828			
1517-22-2	Phenanthrene-d10	334000	11.316			
1719-03-5	Chrysene-d12	224000	13.957			
1520-96-3	Perylene-d12	156000	15.41			

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-46.2-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-04	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141380.D	1	01/31/25 10:29	02/03/25 20:24	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-46.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-08	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141381.D	1	01/31/25 10:29	02/03/25 20:51	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	136		10 - 139	91%	SPK: 150
13127-88-3	Phenol-d6	129		10 - 134	86%	SPK: 150
4165-60-0	Nitrobenzene-d5	106		49 - 133	106%	SPK: 100
321-60-8	2-Fluorobiphenyl	99.8		52 - 132	100%	SPK: 100
118-79-6	2,4,6-Tribromophenol	164		44 - 137	109%	SPK: 150
1718-51-0	Terphenyl-d14	98.5		48 - 125	99%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	86900	6.793			
1146-65-2	Naphthalene-d8	345000	8.075			
15067-26-2	Acenaphthene-d10	192000	9.828			
1517-22-2	Phenanthrene-d10	317000	11.316			
1719-03-5	Chrysene-d12	222000	13.957			
1520-96-3	Perylene-d12	160000	15.415			

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-46.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-08	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141381.D	1	01/31/25 10:29	02/03/25 20:51	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

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LOD = Limit of Detection

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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-42.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-12	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141382.D	1	01/31/25 10:29	02/03/25 21:17	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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TARGETS

110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L

SURROGATES

367-12-4	2-Fluorophenol	135		10 - 139	90%	SPK: 150
13127-88-3	Phenol-d6	128		10 - 134	85%	SPK: 150
4165-60-0	Nitrobenzene-d5	105		49 - 133	105%	SPK: 100
321-60-8	2-Fluorobiphenyl	103		52 - 132	103%	SPK: 100
118-79-6	2,4,6-Tribromophenol	163		44 - 137	108%	SPK: 150
1718-51-0	Terphenyl-d14	94.6		48 - 125	95%	SPK: 100

INTERNAL STANDARDS

3855-82-1	1,4-Dichlorobenzene-d4	89100	6.792
1146-65-2	Naphthalene-d8	352000	8.075
15067-26-2	Acenaphthene-d10	188000	9.827
1517-22-2	Phenanthrene-d10	319000	11.316
1719-03-5	Chrysene-d12	227000	13.957
1520-96-3	Perylene-d12	161000	15.409

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-42.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-12	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141382.D	1	01/31/25 10:29	02/03/25 21:17	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-42.2-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-16	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141383.D	1	01/31/25 10:29	02/03/25 21:44	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	137		10 - 139	91%	SPK: 150
13127-88-3	Phenol-d6	131		10 - 134	87%	SPK: 150
4165-60-0	Nitrobenzene-d5	104		49 - 133	104%	SPK: 100
321-60-8	2-Fluorobiphenyl	99.3		52 - 132	99%	SPK: 100
118-79-6	2,4,6-Tribromophenol	163		44 - 137	109%	SPK: 150
1718-51-0	Terphenyl-d14	96.7		48 - 125	97%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	84200	6.793			
1146-65-2	Naphthalene-d8	337000	8.075			
15067-26-2	Acenaphthene-d10	188000	9.828			
1517-22-2	Phenanthrene-d10	310000	11.316			
1719-03-5	Chrysene-d12	218000	13.957			
1520-96-3	Perylene-d12	158000	15.404			

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-42.2-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-16	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141383.D	1	01/31/25 10:29	02/03/25 21:44	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected
 LOQ = Limit of Quantitation
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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-51.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-20	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141384.D	1	01/31/25 10:29	02/03/25 22:11	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	137		10 - 139	91%	SPK: 150
13127-88-3	Phenol-d6	130		10 - 134	87%	SPK: 150
4165-60-0	Nitrobenzene-d5	106		49 - 133	106%	SPK: 100
321-60-8	2-Fluorobiphenyl	101		52 - 132	101%	SPK: 100
118-79-6	2,4,6-Tribromophenol	165		44 - 137	110%	SPK: 150
1718-51-0	Terphenyl-d14	105		48 - 125	105%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	88600	6.793			
1146-65-2	Naphthalene-d8	355000	8.075			
15067-26-2	Acenaphthene-d10	194000	9.828			
1517-22-2	Phenanthrene-d10	331000	11.316			
1719-03-5	Chrysene-d12	211000	13.957			
1520-96-3	Perylene-d12	155000	15.404			

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-51.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-20	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
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
BF141384.D	1	01/31/25 10:29	02/03/25 22:11	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



QC SUMMARY

Surrogate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
PB166356TB	PB166356TB	2-Fluorophenol	150	126	84		10	139
		Phenol-d6	150	123	82		10	134
		Nitrobenzene-d5	100	86.5	86		49	133
		2-Fluorobiphenyl	100	86.2	86		52	132
		2,4,6-Tribromophenol	150	136	90		44	137
		Terphenyl-d14	100	80.1	80		48	125
PB166426BL	PB166426BL	2-Fluorophenol	150	159	106		10	139
		Phenol-d6	150	143	95		10	134
		Nitrobenzene-d5	100	103	103		49	133
		2-Fluorobiphenyl	100	100	100		52	132
		2,4,6-Tribromophenol	150	159	106		44	137
		Terphenyl-d14	100	84.0	84		48	125
PB166426BS	PB166426BS	2-Fluorophenol	150	132	88		10	139
		Phenol-d6	150	127	85		10	134
		Nitrobenzene-d5	100	92.2	92		49	133
		2-Fluorobiphenyl	100	93.5	94		52	132
		2,4,6-Tribromophenol	150	154	102		44	137
		Terphenyl-d14	100	89.9	90		48	125
Q1218-02MS	BELL-25-002MS	2-Fluorophenol	150	117	78		10	139
		Phenol-d6	150	108	72		10	134
		Nitrobenzene-d5	100	92.8	93		49	133
		2-Fluorobiphenyl	100	92.6	93		52	132
		2,4,6-Tribromophenol	150	120	80		44	137
		Terphenyl-d14	100	63.3	63		48	125
Q1218-02MSD	BELL-25-002MSD	2-Fluorophenol	150	124	83		10	139
		Phenol-d6	150	118	78		10	134
		Nitrobenzene-d5	100	89.4	89		49	133
		2-Fluorobiphenyl	100	85.7	86		52	132
		2,4,6-Tribromophenol	150	120	80		44	137
		Terphenyl-d14	100	68.2	68		48	125
Q1232-04	JPP-46.2-012925	2-Fluorophenol	150	135	90		10	139
		Phenol-d6	150	131	87		10	134
		Nitrobenzene-d5	100	107	107		49	133
		2-Fluorobiphenyl	100	102	102		52	132
		2,4,6-Tribromophenol	150	166	111		44	137
		Terphenyl-d14	100	99.5	100		48	125
Q1232-08	JPP-46.1-012925	2-Fluorophenol	150	136	91		10	139
		Phenol-d6	150	129	86		10	134
		Nitrobenzene-d5	100	106	106		49	133
		2-Fluorobiphenyl	100	99.8	100		52	132
		2,4,6-Tribromophenol	150	164	109		44	137
		Terphenyl-d14	100	98.5	99		48	125
Q1232-12	JPP-42.1-012925	2-Fluorophenol	150	135	90		10	139
		Phenol-d6	150	128	85		10	134
		Nitrobenzene-d5	100	105	105		49	133
		2-Fluorobiphenyl	100	103	103		52	132
		2,4,6-Tribromophenol	150	163	108		44	137
		Terphenyl-d14	100	94.6	95		48	125
Q1232-16	JPP-42.2-012925	2-Fluorophenol	150	137	91		10	139
		Phenol-d6	150	131	87		10	134
		Nitrobenzene-d5	100	104	104		49	133

Surrogate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%)	
							Low	High
Q1232-16	JPP-42.2-012925	2-Fluorobiphenyl	100	99.3	99		52	132
		2,4,6-Tribromophenol	150	163	109		44	137
		Terphenyl-d14	100	96.7	97		48	125
Q1232-20	JPP-51.1-012925	2-Fluorophenol	150	137	91		10	139
		Phenol-d6	150	130	87		10	134
		Nitrobenzene-d5	100	106	106		49	133
		2-Fluorobiphenyl	100	101	101		52	132
		2,4,6-Tribromophenol	150	165	110		44	137
		Terphenyl-d14	100	105	105		48	125

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Lab Sample ID:	Q1218-02MS	Client Sample ID:	BELL-25-002MS					DataFile:	BF141339.D		
Pyridine	500	0	210	ug/L	42				10	109	
1,4-Dichlorobenzene	500	0	360	ug/L	72				55	125	
2-Methylphenol	500	0	360	ug/L	72				37	126	
3+4-Methylphenols	500	0	350	ug/L	70				31	127	
Hexachloroethane	500	0	380	ug/L	76				49	110	
Nitrobenzene	500	0	480	ug/L	96				62	112	
Hexachlorobutadiene	500	0	340	ug/L	68				52	125	
2,4,6-Trichlorophenol	500	0	460	ug/L	92				78	112	
2,4,5-Trichlorophenol	500	0	420	ug/L	84				71	111	
2,4-Dinitrotoluene	500	0	380	ug/L	76				50	142	
Hexachlorobenzene	500	0	440	ug/L	88				72	115	
Pentachlorophenol	1000	0	980	ug/L	98				25	139	

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Low	Limits High	RPD
Lab Sample ID:	Q1218-02MSD	Client Sample ID:	BELL-25-002MSD					DataFile:	BF141340.D		
Pyridine	500	0	220	ug/L	44		5		10	109	20
1,4-Dichlorobenzene	500	0	360	ug/L	72		0		55	125	20
2-Methylphenol	500	0	400	ug/L	80		11		37	126	20
3+4-Methylphenols	500	0	400	ug/L	80		13		31	127	20
Hexachloroethane	500	0	380	ug/L	76		0		49	110	20
Nitrobenzene	500	0	460	ug/L	92		4		62	112	20
Hexachlorobutadiene	500	0	320	ug/L	64		6		52	125	20
2,4,6-Trichlorophenol	500	0	450	ug/L	90		2		78	112	20
2,4,5-Trichlorophenol	500	0	440	ug/L	88		5		71	111	20
2,4-Dinitrotoluene	500	0	380	ug/L	76		0		50	142	20
Hexachlorobenzene	500	0	450	ug/L	90		2		72	115	20
Pentachlorophenol	1000	0	940	ug/L	94		4		25	139	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: 8270E

DataFile: BF141407.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD	Limits		RPD
								Qual	Low	High	
PB166426BS	Pyridine	50	39.6	ug/L	79				29	97	
	1,4-Dichlorobenzene	50	45.5	ug/L	91				76	103	
	2-Methylphenol	50	45.9	ug/L	92				69	109	
	3+4-Methylphenols	50	48.4	ug/L	97				67	106	
	Hexachloroethane	50	47.5	ug/L	95				76	118	
	Nitrobenzene	50	44.9	ug/L	90				58	106	
	Hexachlorobutadiene	50	48.0	ug/L	96				69	101	
	2,4,6-Trichlorophenol	50	48.8	ug/L	98				61	110	
	2,4,5-Trichlorophenol	50	47.3	ug/L	95				70	106	
	2,4-Dinitrotoluene	50	50.0	ug/L	100				60	115	
	Hexachlorobenzene	50	48.9	ug/L	98				73	106	
	Pentachlorophenol	100	100	ug/L	100				47	114	

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB166426BL

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM Case No.: Q1232

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: BF141362.D

Lab Sample ID: PB166426BL

Instrument ID: BNA_F

Date Extracted: 01/31/2025

Matrix: (soil/water) water

Date Analyzed: 02/03/2025

Level: (low/med) LOW

Time Analyzed: 11:51

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
JPP-46.2-012925	Q1232-04	BF141380.D	02/03/2025
JPP-46.1-012925	Q1232-08	BF141381.D	02/03/2025
JPP-42.1-012925	Q1232-12	BF141382.D	02/03/2025
JPP-42.2-012925	Q1232-16	BF141383.D	02/03/2025
JPP-51.1-012925	Q1232-20	BF141384.D	02/03/2025
PB166356TB	PB166356TB	BF141406.D	02/04/2025
PB166426BS	PB166426BS	BF141407.D	02/04/2025
BELL-25-002MS	Q1218-02MS	BF141339.D	01/31/2025
BELL-25-002MSD	Q1218-02MSD	BF141340.D	01/31/2025

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: BF141289.D

DFTPP Injection Date: 01/29/2025

Instrument ID: BNA_F

DFTPP Injection Time: 10:03

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.6 (1.7) 1
69	Mass 69 relative abundance	35.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	47.1
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	6.6
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	13.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	16.2 (19.4) 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	BF141290.D	01/29/2025	10:30
SSTDICC005	SSTDICC005	BF141291.D	01/29/2025	10:56
SSTDICC010	SSTDICC010	BF141292.D	01/29/2025	11:49
SSTDICC020	SSTDICC020	BF141293.D	01/29/2025	15:17
SSTDICCC040	SSTDICCC040	BF141294.D	01/29/2025	15:45
SSTDICC050	SSTDICC050	BF141295.D	01/29/2025	16:11
SSTDICC060	SSTDICC060	BF141296.D	01/29/2025	16:38
SSTDICC080	SSTDICC080	BF141297.D	01/29/2025	17:05

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: BF141335.D

DFTPP Injection Date: 01/31/2025

Instrument ID: BNA_F

DFTPP Injection Time: 16:53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	46.2
68	Less than 2.0% of mass 69	0.7 (1.9) 1
69	Mass 69 relative abundance	38.1
70	Less than 2.0% of mass 69	0.3 (0.7) 1
127	10.0 - 80.0% of mass 198	49
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	25.8
365	Greater than 1% of mass 198	2.8
441	Present, but less than mass 443	11.7
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14.6 (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	BF141336.D	01/31/2025	17:19
BELL-25-002MS	Q1218-02MS	BF141339.D	01/31/2025	18:44
BELL-25-002MSD	Q1218-02MSD	BF141340.D	01/31/2025	19:11

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM

SAS No.: Q1232

SDG NO.: Q1232

Lab File ID: BF141360.D

DFTPP Injection Date: 02/03/2025

Instrument ID: BNA_F

DFTPP Injection Time: 09:53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	43.2
68	Less than 2.0% of mass 69	0.6 (1.7) 1
69	Mass 69 relative abundance	35.5
70	Less than 2.0% of mass 69	0.2 (0.7) 1
127	10.0 - 80.0% of mass 198	47.9
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	6.6
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	12.3
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14.4 (18.6) 2

1-Value is % mass 69

2-Value is % mass 442

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BF141361.D	02/03/2025	11:24
PB166426BL	PB166426BL	BF141362.D	02/03/2025	11:51

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: BF141372.D

DFTPP Injection Date: 02/03/2025

Instrument ID: BNA_F

DFTPP Injection Time: 16:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	44.1
68	Less than 2.0% of mass 69	0.8 (2) 1
69	Mass 69 relative abundance	37.8
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	50.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	26.7
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	12.1
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14.7 (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	BF141373.D	02/03/2025	17:14
JPP-46.2-012925	Q1232-04	BF141380.D	02/03/2025	20:24
JPP-46.1-012925	Q1232-08	BF141381.D	02/03/2025	20:51
JPP-42.1-012925	Q1232-12	BF141382.D	02/03/2025	21:17
JPP-42.2-012925	Q1232-16	BF141383.D	02/03/2025	21:44
JPP-51.1-012925	Q1232-20	BF141384.D	02/03/2025	22:11

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: BF141397.D

DFTPP Injection Date: 02/04/2025

Instrument ID: BNA_F

DFTPP Injection Time: 10:16

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	43.3
68	Less than 2.0% of mass 69	0.7 (1.9) 1
69	Mass 69 relative abundance	38.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	49.4
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	26.5
365	Greater than 1% of mass 198	3
441	Present, but less than mass 443	12.2
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14.4 (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	BF141398.D	02/04/2025	10:42
PB166356TB	PB166356TB	BF141406.D	02/04/2025	14:13
PB166426BS	PB166426BS	BF141407.D	02/04/2025	14:39

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 01/31/2025

Lab File ID: BF141336.D Time Analyzed: 17:19

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	140033	6.798	558386	8.08	299701	9.84
UPPER LIMIT	280066	7.298	1116770	8.581	599402	10.339
LOWER LIMIT	70016.5	6.298	279193	7.581	149851	9.339
EPA SAMPLE NO.						
01 BELL-25-002MS	131554	6.80	434471	8.08	208861	9.84
02 BELL-25-002MSD	142670	6.80	521314	8.09	271292	9.85

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

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 01/31/2025

Lab File ID: BF141336.D Time Analyzed: 17:19

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	493954	11.322	281629	13.968	286623	15.433
UPPER LIMIT	987908	11.822	563258	14.468	573246	15.933
LOWER LIMIT	246977	10.822	140815	13.468	143312	14.933
EPA SAMPLE NO.						
01 BELL-25-002MS	316494	11.32	287072	13.97	323532	15.43
02 BELL-25-002MSD	395783	11.33	279691	13.97	312761	15.42

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/03/2025

Lab File ID: BF141361.D Time Analyzed: 11:24

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	93803	6.798	362783	8.08	198566	9.83
UPPER LIMIT	187606	7.298	725566	8.581	397132	10.333
LOWER LIMIT	46901.5	6.298	181392	7.581	99283	9.333
EPA SAMPLE NO.						
01 PB166426BL	87343	6.79	347606	8.08	191809	9.83

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

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/03/2025

Lab File ID: BF141361.D Time Analyzed: 11:24

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	334466	11.322	243574	13.968	284769	15.427
UPPER LIMIT	668932	11.822	487148	14.468	569538	15.927
LOWER LIMIT	167233	10.822	121787	13.468	142385	14.927
EPA SAMPLE NO.						
01 PB166426BL	337058	11.32	285942	13.96	281061	15.42

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/03/2025

Lab File ID: BF141373.D Time Analyzed: 17:14

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	104167	6.798	414412	8.08	226326	9.83
UPPER LIMIT	208334	7.298	828824	8.581	452652	10.333
LOWER LIMIT	52083.5	6.298	207206	7.581	113163	9.333
EPA SAMPLE NO.						
01 JPP-46.2-012925	93170	6.79	362646	8.08	194869	9.83
02 JPP-46.1-012925	86900	6.79	344884	8.08	192037	9.83
03 JPP-42.1-012925	89109	6.79	351714	8.08	188139	9.83
04 JPP-42.2-012925	84155	6.79	336578	8.08	187844	9.83
05 JPP-51.1-012925	88557	6.79	354547	8.08	194446	9.83

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

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/03/2025

Lab File ID: BF141373.D Time Analyzed: 17:14

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	383558	11.322	233911	13.963	231577	15.415
UPPER LIMIT	767116	11.822	467822	14.463	463154	15.915
LOWER LIMIT	191779	10.822	116956	13.463	115789	14.915
EPA SAMPLE NO.						
01 JPP-46.2-012925	333909	11.32	223983	13.96	156310	15.41
02 JPP-46.1-012925	317485	11.32	222096	13.96	159639	15.42
03 JPP-42.1-012925	319169	11.32	226990	13.96	160771	15.41
04 JPP-42.2-012925	310260	11.32	217689	13.96	158450	15.40
05 JPP-51.1-012925	330562	11.32	210585	13.96	155102	15.40

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/04/2025

Lab File ID: BF141398.D Time Analyzed: 10:42

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	87552	6.793	331835	8.08	180473	9.83
UPPER LIMIT	175104	7.293	663670	8.575	360946	10.328
LOWER LIMIT	43776	6.293	165918	7.575	90236.5	9.328
EPA SAMPLE NO.						
01 PB166356TB	94457	6.79	389015	8.07	210477	9.83
02 PB166426BS	82681	6.79	331184	8.08	180993	9.83

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

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/04/2025

Lab File ID: BF141398.D Time Analyzed: 10:42

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	318826	11.316	235294	13.963	201713	15.421
UPPER LIMIT	637652	11.816	470588	14.463	403426	15.921
LOWER LIMIT	159413	10.816	117647	13.463	100857	14.921
EPA SAMPLE NO.						
01 PB166356TB	363737	11.32	282057	13.96	223254	15.42
02 PB166426BS	312610	11.32	234119	13.96	200536	15.42

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.



QC SAMPLE DATA

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166426BL	SDG No.:	Q1232
Lab Sample ID:	PB166426BL	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141362.D	1	01/31/25 10:29	02/03/25 11:51	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	5.00	U	1.60	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	U	0.84	5.00	ug/L
95-48-7	2-Methylphenol	5.00	U	1.10	5.00	ug/L
65794-96-9	3+4-Methylphenols	10.0	U	1.20	10.0	ug/L
67-72-1	Hexachloroethane	5.00	U	1.00	5.00	ug/L
98-95-3	Nitrobenzene	5.00	U	1.30	5.00	ug/L
87-68-3	Hexachlorobutadiene	5.00	U	1.30	5.00	ug/L
88-06-2	2,4,6-Trichlorophenol	5.00	U	0.89	5.00	ug/L
95-95-4	2,4,5-Trichlorophenol	5.00	U	1.00	5.00	ug/L
121-14-2	2,4-Dinitrotoluene	5.00	U	1.50	5.00	ug/L
118-74-1	Hexachlorobenzene	5.00	U	1.10	5.00	ug/L
87-86-5	Pentachlorophenol	10.0	U	1.90	10.0	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	159		10 - 139	106%	SPK: 150
13127-88-3	Phenol-d6	143		10 - 134	95%	SPK: 150
4165-60-0	Nitrobenzene-d5	103		49 - 133	103%	SPK: 100
321-60-8	2-Fluorobiphenyl	100		52 - 132	100%	SPK: 100
118-79-6	2,4,6-Tribromophenol	159		44 - 137	106%	SPK: 150
1718-51-0	Terphenyl-d14	84.0		48 - 125	84%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	87300	6.793			
1146-65-2	Naphthalene-d8	348000	8.075			
15067-26-2	Acenaphthene-d10	192000	9.828			
1517-22-2	Phenanthrene-d10	337000	11.316			
1719-03-5	Chrysene-d12	286000	13.957			
1520-96-3	Perylene-d12	281000	15.421			

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166426BL	SDG No.:	Q1232
Lab Sample ID:	PB166426BL	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141362.D	1	01/31/25 10:29	02/03/25 11:51	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166426BS	SDG No.:	Q1232
Lab Sample ID:	PB166426BS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141407.D	1	01/31/25 10:29	02/04/25 14:39	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	39.6		1.60	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	45.5		0.84	5.00	ug/L
95-48-7	2-Methylphenol	45.9		1.10	5.00	ug/L
65794-96-9	3+4-Methylphenols	48.4		1.20	10.0	ug/L
67-72-1	Hexachloroethane	47.5		1.00	5.00	ug/L
98-95-3	Nitrobenzene	44.9		1.30	5.00	ug/L
87-68-3	Hexachlorobutadiene	48.0		1.30	5.00	ug/L
88-06-2	2,4,6-Trichlorophenol	48.8		0.89	5.00	ug/L
95-95-4	2,4,5-Trichlorophenol	47.3		1.00	5.00	ug/L
121-14-2	2,4-Dinitrotoluene	50.0		1.50	5.00	ug/L
118-74-1	Hexachlorobenzene	48.9		1.10	5.00	ug/L
87-86-5	Pentachlorophenol	100	E	1.90	10.0	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	132		10 - 139	88%	SPK: 150
13127-88-3	Phenol-d6	127		10 - 134	85%	SPK: 150
4165-60-0	Nitrobenzene-d5	92.2		49 - 133	92%	SPK: 100
321-60-8	2-Fluorobiphenyl	93.5		52 - 132	94%	SPK: 100
118-79-6	2,4,6-Tribromophenol	154		44 - 137	102%	SPK: 150
1718-51-0	Terphenyl-d14	89.9		48 - 125	90%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	82700		6.787		
1146-65-2	Naphthalene-d8	331000		8.075		
15067-26-2	Acenaphthene-d10	181000		9.827		
1517-22-2	Phenanthrene-d10	313000		11.316		
1719-03-5	Chrysene-d12	234000		13.963		
1520-96-3	Perylene-d12	201000		15.421		

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166426BS	SDG No.:	Q1232
Lab Sample ID:	PB166426BS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141407.D	1	01/31/25 10:29	02/04/25 14:39	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	BELL-25-002MS	SDG No.:	Q1232
Lab Sample ID:	Q1218-02MS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141339.D	1	01/31/25 10:29	01/31/25 18:44	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	210		15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	360		8.40	50.0	ug/L
95-48-7	2-Methylphenol	360		11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	350		11.5	100	ug/L
67-72-1	Hexachloroethane	380		10.1	50.0	ug/L
98-95-3	Nitrobenzene	480		12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	340		12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	460		8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	420		10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	380		15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	440		11.4	50.0	ug/L
87-86-5	Pentachlorophenol	980	E	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	117		10 - 139	78%	SPK: 150
13127-88-3	Phenol-d6	108		10 - 134	72%	SPK: 150
4165-60-0	Nitrobenzene-d5	92.8		49 - 133	93%	SPK: 100
321-60-8	2-Fluorobiphenyl	92.6		52 - 132	93%	SPK: 100
118-79-6	2,4,6-Tribromophenol	120		44 - 137	80%	SPK: 150
1718-51-0	Terphenyl-d14	63.3		48 - 125	63%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	132000		6.804		
1146-65-2	Naphthalene-d8	434000		8.081		
15067-26-2	Acenaphthene-d10	209000		9.839		
1517-22-2	Phenanthrene-d10	316000		11.322		
1719-03-5	Chrysene-d12	287000		13.968		
1520-96-3	Perylene-d12	324000		15.427		

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	BELL-25-002MS	SDG No.:	Q1232
Lab Sample ID:	Q1218-02MS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141339.D	1	01/31/25 10:29	01/31/25 18:44	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	BELL-25-002MSD	SDG No.:	Q1232
Lab Sample ID:	Q1218-02MSD	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141340.D	1	01/31/25 10:29	01/31/25 19:11	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	220		15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	360		8.40	50.0	ug/L
95-48-7	2-Methylphenol	400		11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	400		11.5	100	ug/L
67-72-1	Hexachloroethane	380		10.1	50.0	ug/L
98-95-3	Nitrobenzene	460		12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	320		12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	450		8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	440		10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	380		15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	450		11.4	50.0	ug/L
87-86-5	Pentachlorophenol	940	E	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	124		10 - 139	83%	SPK: 150
13127-88-3	Phenol-d6	118		10 - 134	78%	SPK: 150
4165-60-0	Nitrobenzene-d5	89.4		49 - 133	89%	SPK: 100
321-60-8	2-Fluorobiphenyl	85.7		52 - 132	86%	SPK: 100
118-79-6	2,4,6-Tribromophenol	120		44 - 137	80%	SPK: 150
1718-51-0	Terphenyl-d14	68.2		48 - 125	68%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	143000		6.804		
1146-65-2	Naphthalene-d8	521000		8.086		
15067-26-2	Acenaphthene-d10	271000		9.845		
1517-22-2	Phenanthrene-d10	396000		11.327		
1719-03-5	Chrysene-d12	280000		13.968		
1520-96-3	Perylene-d12	313000		15.421		

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/29/25
Client Sample ID:	BELL-25-002MSD	SDG No.:	Q1232
Lab Sample ID:	Q1218-02MSD	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141340.D	1	01/31/25 10:29	01/31/25 19:11	PB166426

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



CALIBRATION SUMMARY

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
 Method File : 8270-BF012925.M
 Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 Last Update : Wed Jan 29 17:41:25 2025
 Response Via : Initial Calibration

Calibration Files

2.5 =BF141290.D 5 =BF141291.D 10 =BF141292.D 20 =BF141293.D 40 =BF141294.D 50 =BF141295.D 60 =BF141296.D 80 =BF141297.D

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

1) I 1,4-Dichlorobenzen...	-----ISTD-----									
2) 1,4-Dioxane	0.600	0.603	0.597	0.538	0.574	0.569	0.530	0.573	5.19	
3) Pyridine	1.364	1.410	1.450	1.320	1.394	1.404	1.322	1.380	3.46	
4) n-Nitrosodimet...	0.770	0.789	0.824	0.751	0.803	0.813	0.771	0.789	3.32	
5) S 2-Fluorophenol	1.428	1.391	1.402	1.201	1.267	1.268	1.163	1.303	8.03	
6) Aniline	1.480	1.511	1.542	1.359	1.404	1.350	1.174	1.403	8.93	
7) S Phenol-d6	1.841	1.800	1.743	1.520	1.611	1.611	1.475	1.657	8.47	
8) 2-Chlorophenol	1.535	1.510	1.487	1.297	1.353	1.355	1.237	1.396	8.24	
9) Benzaldehyde	1.166	1.130	1.104	0.895	0.861	0.837	0.727	0.960	17.81	
10) C Phenol	1.938	1.879	1.884	1.643	1.696	1.704	1.554	1.757	8.22	
11) bis(2-Chloroet...	1.478	1.413	1.426	1.232	1.299	1.329	1.253	1.347	6.93	
12) 1,3-Dichlorobe...	1.697	1.668	1.648	1.429	1.499	1.474	1.362	1.540	8.49	
13) C 1,4-Dichlorobe...	1.719	1.663	1.659	1.432	1.502	1.487	1.365	1.547	8.66	
14) 1,2-Dichlorobe...	1.629	1.609	1.565	1.338	1.392	1.366	1.240	1.448	10.46	
15) Benzyl Alcohol	1.138	1.201	1.216	1.082	1.137	1.125	1.028	1.133	5.72	
16) 2,2'-oxybis(1-...	2.533	2.484	2.495	2.189	2.296	2.287	2.112	2.342	7.01	
17) 2-Methylphenol	1.237	1.175	1.210	1.042	1.107	1.120	1.053	1.135	6.62	
18) Hexachloroethane	0.609	0.612	0.610	0.530	0.560	0.561	0.513	0.571	7.09	
19) P n-Nitroso-di-n...	1.084	1.052	1.060	1.032	0.895	0.936	0.945	0.874	0.985	8.27
20) 3+4-Methylphenols	1.561	1.564	1.502	1.287	1.331	1.323	1.186	1.393	10.65	
21) I Naphthalene-d8	-----ISTD-----									
22) Acetophenone	0.547	0.523	0.517	0.436	0.449	0.443	0.412	0.475	11.06	
23) S Nitrobenzene-d5	0.405	0.396	0.406	0.354	0.373	0.373	0.349	0.379	6.14	
24) Nitrobenzene	0.418	0.411	0.420	0.371	0.385	0.389	0.358	0.393	6.14	
25) Isophorone	0.698	0.685	0.694	0.611	0.640	0.648	0.615	0.656	5.62	
26) C 2-Nitrophenol	0.176	0.187	0.199	0.177	0.189	0.191	0.179	0.185	4.66	
27) 2,4-Dimethylph...	0.244	0.239	0.249	0.224	0.235	0.238	0.223	0.236	4.12	
28) bis(2-Chloroet...	0.454	0.440	0.445	0.389	0.405	0.411	0.384	0.418	6.70	
29) C 2,4-Dichloroph...	0.307	0.300	0.312	0.271	0.284	0.286	0.262	0.289	6.39	
30) 1,2,4-Trichlor...	0.372	0.354	0.354	0.304	0.318	0.316	0.292	0.330	9.11	
31) Naphthalene	1.193	1.145	1.140	0.976	1.020	1.002	0.919	1.057	9.72	
32) Benzoic acid	0.140	0.178	0.238	0.221	0.241	0.259	0.242	0.217	19.59	
33) 4-Chloroaniline	0.382	0.378	0.391	0.338	0.351	0.349	0.318	0.358	7.38	
34) C Hexachlorobuta...	0.209	0.207	0.209	0.179	0.190	0.187	0.174	0.194	7.52	
35) Caprolactam	0.097	0.095	0.102	0.089	0.094	0.096	0.089	0.094	4.89	
36) C 4-Chloro-3-met...	0.328	0.328	0.334	0.287	0.301	0.307	0.283	0.310	6.71	
37) 2-Methylnaphth...	0.755	0.732	0.724	0.624	0.643	0.639	0.583	0.672	9.68	
38) 1-Methylnaphth...	0.757	0.723	0.711	0.606	0.625	0.623	0.573	0.660	10.56	

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
 Method File : 8270-BF012925.M

39) I	Acenaphthene-d10	-----ISTD-----									
40)	1,2,4,5-Tetrac...	0.615	0.613	0.603	0.534	0.555	0.551	0.512	0.569	7.25	
41) P	Hexachlorocycl...	0.136	0.157	0.174	0.172	0.182	0.181	0.174	0.168	9.69	
42) S	2,4,6-Tribromo...	0.198	0.198	0.198	0.173	0.175	0.179	0.163	0.183	7.98	
43) C	2,4,6-Trichlor...	0.381	0.380	0.390	0.364	0.375	0.369	0.347	0.372	3.79	
44)	2,4,5-Trichlor...	0.429	0.425	0.429	0.377	0.391	0.403	0.383	0.405	5.50	
45) S	2-Fluorobiphenyl	1.597	1.464	1.398	1.184	1.202	1.168	1.083	1.299	14.48	
46)	1,1'-Biphenyl	1.810	1.692	1.650	1.454	1.492	1.460	1.360	1.560	10.27	
47)	2-Chloronaphth...	1.396	1.310	1.290	1.122	1.159	1.156	1.077	1.216	9.59	
48)	2-Nitroaniline	0.386	0.389	0.407	0.364	0.382	0.385	0.364	0.382	3.91	
49)	Acenaphthylene	1.921	1.854	1.815	1.595	1.620	1.612	1.495	1.702	9.38	
50)	Dimethylphthalate	1.498	1.456	1.445	1.239	1.299	1.296	1.223	1.351	8.34	
51)	2,6-Dinitrotol...	0.333	0.331	0.333	0.296	0.304	0.309	0.290	0.314	5.90	
52) C	Acenaphthene	1.361	1.300	1.291	1.128	1.170	1.180	1.079	1.216	8.46	
53)	3-Nitroaniline	0.321	0.330	0.341	0.303	0.293	0.298	0.264	0.307	8.44	
54) P	2,4-Dinitrophenol		0.102	0.136	0.147	0.156	0.169	0.164	0.146	16.81	
55)	Dibenzofuran	1.869	1.788	1.755	1.518	1.525	1.539	1.398	1.627	10.72	
56) P	4-Nitrophenol	0.187	0.215	0.251	0.224	0.231	0.244	0.222	0.225	9.21	
57)	2,4-Dinitrotol...	0.424	0.431	0.443	0.386	0.392	0.404	0.362	0.406	7.03	
58)	Fluorene	1.512	1.410	1.353	1.167	1.164	1.172	1.059	1.262	12.96	
59)	2,3,4,6-Tetrac...	0.325	0.343	0.341	0.304	0.305	0.324	0.291	0.319	6.11	
60)	Diethylphthalate	1.470	1.417	1.412	1.225	1.238	1.260	1.146	1.310	9.32	
61)	4-Chlorophenyl...	0.738	0.694	0.659	0.567	0.565	0.571	0.522	0.617	13.04	
62)	4-Nitroaniline	0.297	0.312	0.330	0.290	0.294	0.311	0.281	0.302	5.45	
63)	Azobenzene	1.464	1.411	1.390	1.224	1.249	1.276	1.162	1.311	8.51	
64) I	Phenanthrene-d10	-----ISTD-----									
65)	4,6-Dinitro-2-...	0.080	0.105	0.122	0.125	0.131	0.134	0.131	0.118	16.29	
66) c	n-Nitrosodiphe...	0.716	0.684	0.674	0.626	0.622	0.614	0.593	0.647	6.89	
67)	4-Bromophenyl-...	0.235	0.234	0.234	0.217	0.218	0.220	0.210	0.224	4.57	
68)	Hexachlorobenzene	0.257	0.250	0.248	0.229	0.229	0.232	0.217	0.238	6.07	
69)	Atrazine	0.211	0.202	0.213	0.213	0.215	0.235	0.224	0.216	4.86	
70) C	Pentachlorophenol	0.112	0.136	0.146	0.143	0.146	0.149	0.141	0.139	9.08	
71)	Phenanthrene	1.233	1.170	1.142	1.025	1.008	1.010	0.937	1.075	9.96	
72)	Anthracene	1.179	1.146	1.120	1.009	0.999	0.996	0.924	1.053	9.00	
73)	Carbazole	1.019	1.014	1.021	0.899	0.878	0.900	0.807	0.934	9.04	
74)	Di-n-butylphth...	1.244	1.239	1.245	1.086	1.051	1.081	0.978	1.132	9.65	
75) C	Fluoranthene	1.195	1.202	1.196	1.013	0.963	0.982	0.880	1.062	12.57	
76) I	Chrysene-d12	-----ISTD-----									
77)	Benzidine	0.882	0.480	0.210	0.730	0.906	0.724	0.556	0.641	38.34	
78)	Pyrene	2.178	2.063	2.002	1.754	1.870	1.898	1.674	1.920	9.14	
79) S	Terphenyl-d14	1.543	1.411	1.370	1.183	1.238	1.230	1.103	1.297	11.68	
80)	Butylbenzylphth...	0.686	0.690	0.739	0.626	0.657	0.688	0.610	0.671	6.49	
81)	Benzo(a)anthra...	1.532	1.410	1.453	1.270	1.375	1.355	1.265	1.380	6.96	
82)	3,3'-Dichlorob...	0.412	0.422	0.427	0.418	0.478	0.466	0.449	0.439	5.82	
83)	Chrysene	1.332	1.325	1.342	1.136	1.267	1.243	1.210	1.265	5.98	
84)	Bis(2-ethylhex...	0.882	0.903	0.956	0.785	0.831	0.834	0.764	0.851	7.93	
85) c	Di-n-octyl pht...	1.194	1.267	1.438	1.230	1.365	1.406	1.352	1.321	6.98	

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF012925.M

86) I	Perylene-d12	-----ISTD-----								
87)	Indeno(1,2,3-c...	1.217	1.268	1.337	1.257	1.348	1.322	1.287	1.291	3.67
88)	Benzo(b)fluora...	1.358	1.382	1.328	1.120	1.265	1.218	1.136	1.258	8.33
89)	Benzo(k)fluora...	1.167	1.114	1.274	1.083	1.049	1.060	1.054	1.114	7.32
90) C	Benzo(a)pyrene	1.118	1.059	1.131	1.011	1.061	1.051	1.010	1.063	4.44
91)	Dibenzo(a,h)an...	0.966	1.001	1.101	1.016	1.087	1.071	1.028	1.039	4.73
92)	Benzo(g,h,i)pe...	1.011	1.075	1.139	1.043	1.123	1.105	1.063	1.080	4.22

(#) = Out of Range

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG No.: Q1232

Instrument ID: BNA_F Calibration Date/Time: 01/31/2025 17:19

Lab File ID: BF141336.D Init. Calib. Date(s): 01/29/2025 01/29/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 17:05

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Pyridine	1.380	1.326		-3.9	
2-Fluorophenol	1.303	1.218		-6.5	
Phenol-d6	1.657	1.534		-7.4	
1,4-Dichlorobenzene	1.547	1.437		-7.2	20.0
2-Methylphenol	1.135	1.062		-6.4	
3+4-Methylphenols	1.393	1.318		-5.4	
Nitrobenzene-d5	0.379	0.348		-8.2	
Hexachloroethane	0.571	0.536		-6.1	
Nitrobenzene	0.393	0.365		-7.1	
Hexachlorobutadiene	0.194	0.179		-7.7	20.0
2,4,6-Trichlorophenol	0.372	0.365		-1.9	20.0
2-Fluorobiphenyl	1.299	1.148		-11.6	
2,4,5-Trichlorophenol	0.405	0.381		-5.9	
2,4-Dinitrotoluene	0.406	0.427		5.2	
2,4,6-Tribromophenol	0.183	0.177		-3.3	
Hexachlorobenzene	0.238	0.232		-2.5	
Pentachlorophenol	0.139	0.186		33.8	20.0
Terphenyl-d14	1.297	1.177		-9.3	

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG No.: Q1232

Instrument ID: BNA_F Calibration Date/Time: 02/03/2025 11:24

Lab File ID: BF141361.D Init. Calib. Date(s): 01/29/2025 01/29/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 17:05

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Pyridine	1.380	1.326		-3.9	
2-Fluorophenol	1.303	1.313		0.8	
Phenol-d6	1.657	1.641		-1.0	
1,4-Dichlorobenzene	1.547	1.568		1.4	20.0
2-Methylphenol	1.135	1.098		-3.3	
3+4-Methylphenols	1.393	1.446		3.8	
Nitrobenzene-d5	0.379	0.397		4.7	
Hexachloroethane	0.571	0.590		3.3	
Nitrobenzene	0.393	0.407		3.6	
Hexachlorobutadiene	0.194	0.207		6.7	20.0
2,4,6-Trichlorophenol	0.372	0.384		3.2	20.0
2-Fluorobiphenyl	1.299	1.315		1.2	
2,4,5-Trichlorophenol	0.405	0.416		2.7	
2,4-Dinitrotoluene	0.406	0.426		4.9	
2,4,6-Tribromophenol	0.183	0.200		9.3	
Hexachlorobenzene	0.238	0.249		4.6	
Pentachlorophenol	0.139	0.152		9.4	20.0
Terphenyl-d14	1.297	1.144		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG No.: Q1232

Instrument ID: BNA_F Calibration Date/Time: 02/03/2025 17:14

Lab File ID: BF141373.D Init. Calib. Date(s): 01/29/2025 01/29/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 17:05

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Pyridine	1.380	1.232		-10.7	
2-Fluorophenol	1.303	1.302		-0.1	
Phenol-d6	1.657	1.598		-3.6	
1,4-Dichlorobenzene	1.547	1.570		1.5	20.0
2-Methylphenol	1.135	1.109		-2.3	
3+4-Methylphenols	1.393	1.420		1.9	
Nitrobenzene-d5	0.379	0.382		0.8	
Hexachloroethane	0.571	0.590		3.3	
Nitrobenzene	0.393	0.389		-1.0	
Hexachlorobutadiene	0.194	0.204		5.2	20.0
2,4,6-Trichlorophenol	0.372	0.380		2.2	20.0
2-Fluorobiphenyl	1.299	1.292		-0.5	
2,4,5-Trichlorophenol	0.405	0.413		2.0	
2,4-Dinitrotoluene	0.406	0.423		4.2	
2,4,6-Tribromophenol	0.183	0.194		6.0	
Hexachlorobenzene	0.238	0.244		2.5	
Pentachlorophenol	0.139	0.157		12.9	20.0
Terphenyl-d14	1.297	1.274		-1.8	

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG No.: Q1232

Instrument ID: BNA_F Calibration Date/Time: 02/04/2025 10:42

Lab File ID: BF141398.D Init. Calib. Date(s): 01/29/2025 01/29/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 17:05

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

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Pyridine	1.380	1.270		-8.0	
2-Fluorophenol	1.303	1.302		-0.1	
Phenol-d6	1.657	1.560		-5.9	
1,4-Dichlorobenzene	1.547	1.539		-0.5	20.0
2-Methylphenol	1.135	1.074		-5.4	
3+4-Methylphenols	1.393	1.375		-1.3	
Nitrobenzene-d5	0.379	0.391		3.2	
Hexachloroethane	0.571	0.583		2.1	
Nitrobenzene	0.393	0.398		1.3	
Hexachlorobutadiene	0.194	0.208		7.2	20.0
2,4,6-Trichlorophenol	0.372	0.382		2.7	20.0
2-Fluorobiphenyl	1.299	1.328		2.2	
2,4,5-Trichlorophenol	0.405	0.421		4.0	
2,4-Dinitrotoluene	0.406	0.441		8.6	
2,4,6-Tribromophenol	0.183	0.202		10.4	
Hexachlorobenzene	0.238	0.243		2.1	
Pentachlorophenol	0.139	0.161		15.8	20.0
Terphenyl-d14	1.297	1.200		-7.5	

All other compounds must meet a minimum RRF of 0.010.