

LAB CHRONICLE

OrderID:	Q1207	OrderDate:	1/28/2025 11:40:00 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
Q1207-02	JPP-2.1-012725	TCLP	TCLP VOA	8260D	01/27/25		01/29/25	01/28/25
Q1207-06	JPP-5.1-012725	TCLP	TCLP VOA	8260D	01/27/25		01/29/25	01/28/25
Q1207-10	JPP-4.5-012725	TCLP	TCLP VOA	8260D	01/27/25		01/29/25	01/28/25
Q1207-14	JPP-16.2-012725	TCLP	TCLP VOA	8260D	01/27/25		01/29/25	01/28/25
Q1207-18	JPP-20.2-012725	TCLP	TCLP VOA	8260D	01/27/25		01/29/25	01/28/25

Hit Summary Sheet
SW-846

SDG No.: Q1207
Client: RU2 Engineering, LLC

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID: Q1207-02	JPP-2.1-012725 JPP-2.1-012725	TCLP	2-Butanone	5.60	J	1.30	25.0	ug/L
			Total Voc :	5.60				
			Total Concentration:	5.60				
Client ID: Q1207-06	JPP-5.1-012725 JPP-5.1-012725	TCLP	2-Butanone	5.90	J	1.30	25.0	ug/L
			Total Voc :	5.90				
			Total Concentration:	5.90				
Client ID: Q1207-10	JPP-4.5-012725 JPP-4.5-012725	TCLP	2-Butanone	7.50	J	1.30	25.0	ug/L
			Total Voc :	7.50				
			Total Concentration:	7.50				
Client ID: Q1207-14	JPP-16.2-012725 JPP-16.2-012725	TCLP	2-Butanone	6.00	J	1.30	25.0	ug/L
			Total Voc :	6.00				
			Total Concentration:	6.00				
Client ID: Q1207-18	JPP-20.2-012725 JPP-20.2-012725	TCLP	2-Butanone	5.50	J	1.30	25.0	ug/L
			Total Voc :	5.50				
			Total Concentration:	5.50				



SAMPLE DATA

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-2.1-012725	SDG No.:	Q1207
Lab Sample ID:	Q1207-02	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085557.D	1		01/29/25 15:04	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	5.00	U	0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	5.00	U	0.26	5.00	ug/L
78-93-3	2-Butanone	5.60	J	1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	U	0.25	5.00	ug/L
67-66-3	Chloroform	5.00	U	0.26	5.00	ug/L
71-43-2	Benzene	5.00	U	0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	5.00	U	0.24	5.00	ug/L
79-01-6	Trichloroethene	5.00	U	0.32	5.00	ug/L
127-18-4	Tetrachloroethene	5.00	U	0.25	5.00	ug/L
108-90-7	Chlorobenzene	5.00	U	0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.3		74 - 125	115%	SPK: 50
1868-53-7	Dibromofluoromethane	51.0		75 - 124	102%	SPK: 50
2037-26-5	Toluene-d8	52.5		86 - 113	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.6		77 - 121	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	164000	8.224			
540-36-3	1,4-Difluorobenzene	317000	9.1			
3114-55-4	Chlorobenzene-d5	301000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	109000	13.788			

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:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-5.1-012725	SDG No.:	Q1207
Lab Sample ID:	Q1207-06	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085558.D	1		01/29/25 15:29	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	5.00	U	0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	5.00	U	0.26	5.00	ug/L
78-93-3	2-Butanone	5.90	J	1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	U	0.25	5.00	ug/L
67-66-3	Chloroform	5.00	U	0.26	5.00	ug/L
71-43-2	Benzene	5.00	U	0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	5.00	U	0.24	5.00	ug/L
79-01-6	Trichloroethene	5.00	U	0.32	5.00	ug/L
127-18-4	Tetrachloroethene	5.00	U	0.25	5.00	ug/L
108-90-7	Chlorobenzene	5.00	U	0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.0		74 - 125	114%	SPK: 50
1868-53-7	Dibromofluoromethane	52.2		75 - 124	104%	SPK: 50
2037-26-5	Toluene-d8	52.8		86 - 113	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.3		77 - 121	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	165000	8.224			
540-36-3	1,4-Difluorobenzene	316000	9.1			
3114-55-4	Chlorobenzene-d5	300000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	106000	13.788			

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-4.5-012725	SDG No.:	Q1207
Lab Sample ID:	Q1207-10	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085559.D	1		01/29/25 15:53	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	5.00	U	0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	5.00	U	0.26	5.00	ug/L
78-93-3	2-Butanone	7.50	J	1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	U	0.25	5.00	ug/L
67-66-3	Chloroform	5.00	U	0.26	5.00	ug/L
71-43-2	Benzene	5.00	U	0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	5.00	U	0.24	5.00	ug/L
79-01-6	Trichloroethene	5.00	U	0.32	5.00	ug/L
127-18-4	Tetrachloroethene	5.00	U	0.25	5.00	ug/L
108-90-7	Chlorobenzene	5.00	U	0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.3		74 - 125	115%	SPK: 50
1868-53-7	Dibromofluoromethane	52.8		75 - 124	106%	SPK: 50
2037-26-5	Toluene-d8	53.1		86 - 113	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.6		77 - 121	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	160000	8.224			
540-36-3	1,4-Difluorobenzene	303000	9.1			
3114-55-4	Chlorobenzene-d5	293000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	106000	13.794			

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-16.2-012725	SDG No.:	Q1207
Lab Sample ID:	Q1207-14	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085560.D	1		01/29/25 16:17	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	5.00	U	0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	5.00	U	0.26	5.00	ug/L
78-93-3	2-Butanone	6.00	J	1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	U	0.25	5.00	ug/L
67-66-3	Chloroform	5.00	U	0.26	5.00	ug/L
71-43-2	Benzene	5.00	U	0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	5.00	U	0.24	5.00	ug/L
79-01-6	Trichloroethene	5.00	U	0.32	5.00	ug/L
127-18-4	Tetrachloroethene	5.00	U	0.25	5.00	ug/L
108-90-7	Chlorobenzene	5.00	U	0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.5		74 - 125	115%	SPK: 50
1868-53-7	Dibromofluoromethane	52.5		75 - 124	105%	SPK: 50
2037-26-5	Toluene-d8	53.3		86 - 113	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.0		77 - 121	88%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	161000	8.224			
540-36-3	1,4-Difluorobenzene	309000	9.1			
3114-55-4	Chlorobenzene-d5	294000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	108000	13.788			

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-20.2-012725	SDG No.:	Q1207
Lab Sample ID:	Q1207-18	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085561.D	1		01/29/25 16:41	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	5.00	U	0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	5.00	U	0.26	5.00	ug/L
78-93-3	2-Butanone	5.50	J	1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	U	0.25	5.00	ug/L
67-66-3	Chloroform	5.00	U	0.26	5.00	ug/L
71-43-2	Benzene	5.00	U	0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	5.00	U	0.24	5.00	ug/L
79-01-6	Trichloroethene	5.00	U	0.32	5.00	ug/L
127-18-4	Tetrachloroethene	5.00	U	0.25	5.00	ug/L
108-90-7	Chlorobenzene	5.00	U	0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.3		74 - 125	117%	SPK: 50
1868-53-7	Dibromofluoromethane	51.7		75 - 124	103%	SPK: 50
2037-26-5	Toluene-d8	53.5		86 - 113	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.3		77 - 121	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	160000	8.224			
540-36-3	1,4-Difluorobenzene	312000	9.1			
3114-55-4	Chlorobenzene-d5	299000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	104000	13.788			

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QC SUMMARY

Surrogate Summary

SDG No.: Q1207

Client: RU2 Engineering, LLC

Analytical Method: SW8260D

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
Q1207-02	JPP-2.1-012725	1,2-Dichloroethane-d4	50	57.3	115	74	125
		Dibromofluoromethane	50	51.0	102	75	124
		Toluene-d8	50	52.5	105	86	113
		4-Bromofluorobenzene	50	44.6	89	77	121
Q1207-06	JPP-5.1-012725	1,2-Dichloroethane-d4	50	57.0	114	74	125
		Dibromofluoromethane	50	52.2	104	75	124
		Toluene-d8	50	52.8	106	86	113
		4-Bromofluorobenzene	50	44.3	89	77	121
Q1207-10	JPP-4.5-012725	1,2-Dichloroethane-d4	50	57.3	115	74	125
		Dibromofluoromethane	50	52.9	106	75	124
		Toluene-d8	50	53.1	106	86	113
		4-Bromofluorobenzene	50	46.6	93	77	121
Q1207-14	JPP-16.2-012725	1,2-Dichloroethane-d4	50	57.5	115	74	125
		Dibromofluoromethane	50	52.5	105	75	124
		Toluene-d8	50	53.3	107	86	113
		4-Bromofluorobenzene	50	44.0	88	77	121
Q1207-18	JPP-20.2-012725	1,2-Dichloroethane-d4	50	58.3	117	74	125
		Dibromofluoromethane	50	51.7	103	75	124
		Toluene-d8	50	53.5	107	86	113
		4-Bromofluorobenzene	50	44.3	89	77	121
VN0129WBL01	VN0129WBL01	1,2-Dichloroethane-d4	50	57.3	115	74	125
		Dibromofluoromethane	50	53.7	107	75	124
		Toluene-d8	50	50.2	100	86	113
		4-Bromofluorobenzene	50	48.3	97	77	121
VN0129WBS01	VN0129WBS01	1,2-Dichloroethane-d4	50	50.8	102	74	125
		Dibromofluoromethane	50	52.1	104	75	124
		Toluene-d8	50	53.0	106	86	113
		4-Bromofluorobenzene	50	55.3	111	77	121
VN0129WBSD0	VN0129WBSD01	1,2-Dichloroethane-d4	50	52.0	104	74	125
		Dibromofluoromethane	50	52.8	106	75	124
		Toluene-d8	50	53.1	106	86	113
		4-Bromofluorobenzene	50	54.8	110	77	121

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1207

Client: RU2 Engineering, LLC

Analytical Method: SW8260D

Datafile : VN085551.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VN0129WBS01	Vinyl chloride	20	16.6	ug/L	83			65	117	
	1,1-Dichloroethene	20	18.0	ug/L	90			74	110	
	2-Butanone	100	100	ug/L	100			65	122	
	Carbon Tetrachloride	20	19.5	ug/L	98			77	113	
	Chloroform	20	19.2	ug/L	96			79	113	
	Benzene	20	19.4	ug/L	97			82	109	
	1,2-Dichloroethane	20	20.0	ug/L	100			80	115	
	Trichloroethene	20	18.9	ug/L	95			77	113	
	Tetrachloroethene	20	19.4	ug/L	97			67	123	
	Chlorobenzene	20	19.3	ug/L	97			82	109	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1207

Client: RU2 Engineering, LLC

Analytical Method: SW8260D

Datafile : VN085552.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN0129WBSD01	Vinyl chloride	20	16.3	ug/L	81	2		65	117	20
	1,1-Dichloroethene	20	17.9	ug/L	90	0		74	110	20
	2-Butanone	100	110	ug/L	110	10		65	122	20
	Carbon Tetrachloride	20	18.8	ug/L	94	4		77	113	20
	Chloroform	20	19.4	ug/L	97	1		79	113	20
	Benzene	20	19.3	ug/L	97	0		82	109	20
	1,2-Dichloroethane	20	20.6	ug/L	103	3		80	115	20
	Trichloroethene	20	18.3	ug/L	92	3		77	113	20
	Tetrachloroethene	20	19.1	ug/L	96	1		67	123	20
	Chlorobenzene	20	19.2	ug/L	96	1		82	109	20

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VN0129WBL01

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM Case No.: Q1207

SAS No.: Q1207 SDG NO.: Q1207

Lab File ID: VN085550.D

Lab Sample ID: VN0129WBL01

Date Analyzed: 01/29/2025

Time Analyzed: 12:06

GC Column: RXI-624 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN0129WBS01	VN0129WBS01	VN085551.D	01/29/2025
VN0129WBSD01	VN0129WBSD01	VN085552.D	01/29/2025
JPP-2.1-012725	Q1207-02	VN085557.D	01/29/2025
JPP-5.1-012725	Q1207-06	VN085558.D	01/29/2025
JPP-4.5-012725	Q1207-10	VN085559.D	01/29/2025
JPP-16.2-012725	Q1207-14	VN085560.D	01/29/2025
JPP-20.2-012725	Q1207-18	VN085561.D	01/29/2025

COMMENTS: _____

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: RUTW01
Lab Code: CHEM Case No.: Q1207 SAS No.: Q1207 SDG NO.: Q1207
Lab File ID: VN085437.D BFB Injection Date: 01/14/2025
Instrument ID: MSVOA_N BFB Injection Time: 14:22
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.3
75	30.0 - 60.0% of mass 95	58
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	1.4 (1.8) 1
174	50.0 - 100.0% of mass 95	76
175	5.0 - 9.0% of mass 174	5.4 (7.1) 1
176	95.0 - 101.0% of mass 174	74.1 (97.4) 1
177	5.0 - 9.0% of mass 176	4.9 (6.7) 2

1-Value is % mass 174

2-Value is % mass 176

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
VSTDICC100	VSTDICC100	VN085438.D	01/14/2025	14:56
VSTDICCC050	VSTDICCC050	VN085439.D	01/14/2025	15:19
VSTDICC020	VSTDICC020	VN085440.D	01/14/2025	15:43
VSTDICC010	VSTDICC010	VN085441.D	01/14/2025	16:07
VSTDICC005	VSTDICC005	VN085442.D	01/14/2025	16:31
VSTDICC001	VSTDICC001	VN085443.D	01/14/2025	17:19

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: RUTW01
Lab Code: CHEM Case No.: Q1207 SAS No.: Q1207 SDG NO.: Q1207
Lab File ID: VN085547.D BFB Injection Date: 01/29/2025
Instrument ID: MSVOA_N BFB Injection Time: 10:35
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.3
75	30.0 - 60.0% of mass 95	54
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	1.5 (2) 1
174	50.0 - 100.0% of mass 95	73.6
175	5.0 - 9.0% of mass 174	5 (6.8) 1
176	95.0 - 101.0% of mass 174	70.7 (96) 1
177	5.0 - 9.0% of mass 176	5.2 (7.3) 2

1-Value is % mass 174

2-Value is % mass 176

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
VSTDCCC050	VSTDCCC050	VN085548.D	01/29/2025	11:08
VN0129WBL01	VN0129WBL01	VN085550.D	01/29/2025	12:06
VN0129WBS01	VN0129WBS01	VN085551.D	01/29/2025	12:30
VN0129WBSD01	VN0129WBSD01	VN085552.D	01/29/2025	13:04
JPP-2.1-012725	Q1207-02	VN085557.D	01/29/2025	15:04
JPP-5.1-012725	Q1207-06	VN085558.D	01/29/2025	15:29
JPP-4.5-012725	Q1207-10	VN085559.D	01/29/2025	15:53
JPP-16.2-012725	Q1207-14	VN085560.D	01/29/2025	16:17
JPP-20.2-012725	Q1207-18	VN085561.D	01/29/2025	16:41

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: RUTW01
 Lab Code: CHEM Case No.: Q1207 SAS No.: Q1207 SDG NO.: Q1207
 Lab File ID: VN085548.D Date Analyzed: 01/29/2025
 Instrument ID: MSVOA_N Time Analyzed: 11:08
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	190920	8.22	314840	9.10	285899	11.87
UPPER LIMIT	381840	8.724	629680	9.6	571798	12.365
LOWER LIMIT	95460	7.724	157420	8.6	142950	11.365
EPA SAMPLE NO.						
JPP-2.1-012725	163592	8.22	317371	9.10	301389	11.87
JPP-5.1-012725	164603	8.22	316400	9.10	299930	11.87
JPP-4.5-012725	160119	8.22	302819	9.10	292646	11.87
JPP-16.2-012725	161120	8.22	308507	9.10	293568	11.87
JPP-20.2-012725	159671	8.22	312230	9.10	298965	11.87
VN0129WBL01	180587	8.22	341456	9.10	305749	11.87
VN0129WBS01	209601	8.22	351459	9.10	313028	11.87
VN0129WBSD01	199890	8.22	334279	9.10	300606	11.87

IS1 = Pentafluorobenzene
 IS2 = 1,4-Difluorobenzene
 IS3 = Chlorobenzene-d5

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 LOWER LIMIT = -0.50 minutes of internal standard RT

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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: RUTW01
 Lab Code: CHEM Case No.: Q1207 SAS No.: Q1207 SDG NO.: Q1207
 Lab File ID: VN085548.D Date Analyzed: 01/29/2025
 Instrument ID: MSVOA_N Time Analyzed: 11:08
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	149148	13.788				
UPPER LIMIT	298296	14.288				
LOWER LIMIT	74574	13.288				
EPA SAMPLE NO.						
JPP-2.1-012725	108730	13.79				
JPP-5.1-012725	105803	13.79				
JPP-4.5-012725	106369	13.79				
JPP-16.2-012725	107567	13.79				
JPP-20.2-012725	104378	13.79				
VN0129WBL01	123478	13.79				
VN0129WBS01	156507	13.79				
VN0129WBSD01	149604	13.79				

IS4 = 1,4-Dichlorobenzene-d4

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 LOWER 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:	VN0129WBL01		SDG No.:	Q1207
Lab Sample ID:	VN0129WBL01		Matrix:	TCLP
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	TCLP VOA
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085550.D	1		01/29/25 12:06	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	5.00	U	0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	5.00	U	0.26	5.00	ug/L
78-93-3	2-Butanone	25.0	U	1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	5.00	U	0.25	5.00	ug/L
67-66-3	Chloroform	5.00	U	0.26	5.00	ug/L
71-43-2	Benzene	5.00	U	0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	5.00	U	0.24	5.00	ug/L
79-01-6	Trichloroethene	5.00	U	0.32	5.00	ug/L
127-18-4	Tetrachloroethene	5.00	U	0.25	5.00	ug/L
108-90-7	Chlorobenzene	5.00	U	0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.3		74 - 125	115%	SPK: 50
1868-53-7	Dibromofluoromethane	53.7		75 - 124	107%	SPK: 50
2037-26-5	Toluene-d8	50.2		86 - 113	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.3		77 - 121	97%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	181000	8.224			
540-36-3	1,4-Difluorobenzene	341000	9.1			
3114-55-4	Chlorobenzene-d5	306000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	123000	13.788			

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:	VN0129WBS01		SDG No.:	Q1207
Lab Sample ID:	VN0129WBS01		Matrix:	TCLP
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	TCLP VOA
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085551.D	1		01/29/25 12:30	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	16.6		0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	18.0		0.26	5.00	ug/L
78-93-3	2-Butanone	100		1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	19.5		0.25	5.00	ug/L
67-66-3	Chloroform	19.2		0.26	5.00	ug/L
71-43-2	Benzene	19.4		0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	20.0		0.24	5.00	ug/L
79-01-6	Trichloroethene	18.9		0.32	5.00	ug/L
127-18-4	Tetrachloroethene	19.4		0.25	5.00	ug/L
108-90-7	Chlorobenzene	19.3		0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.8		74 - 125	102%	SPK: 50
1868-53-7	Dibromofluoromethane	52.1		75 - 124	104%	SPK: 50
2037-26-5	Toluene-d8	53.0		86 - 113	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.3		77 - 121	111%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	210000	8.224			
540-36-3	1,4-Difluorobenzene	351000	9.1			
3114-55-4	Chlorobenzene-d5	313000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	157000	13.788			

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M = MS/MSD acceptance criteria did not meet requirements

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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:	VN0129WBSD01		SDG No.:	Q1207
Lab Sample ID:	VN0129WBSD01		Matrix:	TCLP
Analytical Method:	SW8260		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	TCLP VOA
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085552.D	1		01/29/25 13:04	VN012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	16.3		0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	17.9		0.26	5.00	ug/L
78-93-3	2-Butanone	110		1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	18.8		0.25	5.00	ug/L
67-66-3	Chloroform	19.4		0.26	5.00	ug/L
71-43-2	Benzene	19.3		0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	20.6		0.24	5.00	ug/L
79-01-6	Trichloroethene	18.3		0.32	5.00	ug/L
127-18-4	Tetrachloroethene	19.1		0.25	5.00	ug/L
108-90-7	Chlorobenzene	19.2		0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.9		74 - 125	104%	SPK: 50
1868-53-7	Dibromofluoromethane	52.8		75 - 124	106%	SPK: 50
2037-26-5	Toluene-d8	53.2		86 - 113	106%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.8		77 - 121	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	200000	8.224			
540-36-3	1,4-Difluorobenzene	334000	9.1			
3114-55-4	Chlorobenzene-d5	301000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	150000	13.788			

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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: RUTW01
 Lab Code: CHEM Case No.: Q1207 SAS No.: Q1207 SDG No.: Q1207
 Instrument ID: MSVOA_N Calibration Date(s): 01/14/2025 01/14/2025
 Heated Purge: (Y/N) N Calibration Time(s): 14:56 17:19
 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF100 = VN085438.D		RRF050 = VN085439.D		RRF020 = VN085440.D			
		RRF010 = VN085441.D		RRF005 = VN085442.D		RRF001 = VN085443.D			
COMPOUND	RRF100	RRF050	RRF020	RRF010	RRF005	RRF001	RRF	% RSD	
Vinyl Chloride	0.697	0.686	0.727	0.711	0.781	0.819	0.737	7.1	
1,1-Dichloroethene	0.548	0.533	0.556	0.526	0.559	0.497	0.537	4.3	
2-Butanone	0.378	0.390	0.398	0.363	0.387	0.386	0.384	3.1	
Carbon Tetrachloride	0.574	0.530	0.579	0.529	0.565	0.567	0.557	4	
Chloroform	1.197	1.175	1.241	1.169	1.253	1.273	1.218	3.6	
Benzene	1.551	1.449	1.527	1.376	1.474	1.400	1.463	4.7	
1,2-Dichloroethane	0.569	0.547	0.575	0.522	0.574	0.517	0.551	4.8	
Trichloroethene	0.362	0.324	0.352	0.310	0.343	0.352	0.341	5.8	
Tetrachloroethene	0.351	0.322	0.365	0.338	0.346	0.323	0.341	4.9	
Chlorobenzene	1.133	1.076	1.154	1.047	1.110	1.051	1.095	4	
1,2-Dichloroethane-d4	0.774	0.831	0.754	0.762	0.914		0.807	8.3	
Dibromofluoromethane	0.359	0.358	0.335	0.310	0.373		0.347	7.1	
Toluene-d8	1.339	1.267	1.207	1.076	1.274		1.232	8.1	
4-Bromofluorobenzene	0.475	0.449	0.410	0.357	0.417		0.422	10.6	

* Compounds with required minimum RRF and maximum %RSD values.
 All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1207 SAS No.: Q1207 SDG No.: Q1207

Instrument ID: MSVOA_N Calibration Date/Time: 01/29/2025 11:08

Lab File ID: VN085548.D Init. Calib. Date(s): 01/14/2025 01/14/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 14:56 17:19

GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.737	0.641		-13.03	20
1,1-Dichloroethene	0.537	0.511		-4.84	20
2-Butanone	0.384	0.403		4.95	20
Carbon Tetrachloride	0.557	0.568		1.98	20
Chloroform	1.218	1.236		1.48	20
Benzene	1.463	1.501		2.6	20
1,2-Dichloroethane	0.551	0.584		5.99	20
Trichloroethene	0.341	0.338		-0.88	20
Tetrachloroethene	0.341	0.339		-0.59	20
Chlorobenzene	1.095	1.109	0.3	1.28	20
1,2-Dichloroethane-d4	0.807	0.877		8.67	20
Dibromofluoromethane	0.347	0.387		11.53	20
Toluene-d8	1.232	1.409		14.37	20
4-Bromofluorobenzene	0.422	0.503		19.19	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.