

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
Q1232-02	JPP-46.2-012925	TCLP	TCLP VOA	8260D	01/29/25		02/03/25	01/30/25
Q1232-06	JPP-46.1-012925	TCLP	TCLP VOA	8260D	01/29/25		02/03/25	01/30/25
Q1232-10	JPP-42.1-012925	TCLP	TCLP VOA	8260D	01/29/25		02/03/25	01/30/25
Q1232-14	JPP-42.2-012925	TCLP	TCLP VOA	8260D	01/29/25		02/03/25	01/30/25
Q1232-18	JPP-51.1-012925	TCLP	TCLP VOA	8260D	01/29/25		02/03/25	01/30/25

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:	JPP-46.1-012925							
Q1232-06	JPP-46.1-012925	TCLP	2-Butanone	5.00	J	1.30	25.0	ug/L
			Total Voc :	5.00				
			Total Concentration:	5.00				



SAMPLE DATA

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:	Q1232-02	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
VN085633.D	1		02/03/25 19:37	VN020325

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	53.1		74 - 125	106%	SPK: 50
1868-53-7	Dibromofluoromethane	48.2		75 - 124	96%	SPK: 50
2037-26-5	Toluene-d8	50.9		86 - 113	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.7		77 - 121	85%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	163000	8.224			
540-36-3	1,4-Difluorobenzene	348000	9.1			
3114-55-4	Chlorobenzene-d5	326000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	110000	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:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-46.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-06	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:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044816.D	1		02/03/25 15:45	VX020325

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	5.00	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	46.9		74 - 125	94%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		75 - 124	95%	SPK: 50
2037-26-5	Toluene-d8	52.3		86 - 113	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.4		77 - 121	97%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	118000	5.544			
540-36-3	1,4-Difluorobenzene	241000	6.757			
3114-55-4	Chlorobenzene-d5	214000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	91800	12.018			

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-42.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-10	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
VN085642.D	1		02/03/25 23:14	VN020325

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	48.3		74 - 125	97%	SPK: 50
1868-53-7	Dibromofluoromethane	47.1		75 - 124	94%	SPK: 50
2037-26-5	Toluene-d8	51.0		86 - 113	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.8		77 - 121	102%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	193000	8.224			
540-36-3	1,4-Difluorobenzene	385000	9.1			
3114-55-4	Chlorobenzene-d5	363000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	159000	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:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-42.2-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-14	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:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044818.D	1		02/03/25 16:32	VX020325

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	46.4		74 - 125	93%	SPK: 50
1868-53-7	Dibromofluoromethane	48.7		75 - 124	97%	SPK: 50
2037-26-5	Toluene-d8	53.4		86 - 113	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.4		77 - 121	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	118000	5.549			
540-36-3	1,4-Difluorobenzene	237000	6.757			
3114-55-4	Chlorobenzene-d5	210000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	90100	12.018			

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-51.1-012925	SDG No.:	Q1232
Lab Sample ID:	Q1232-18	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:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044819.D	1		02/03/25 16:55	VX020325

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	47.3		74 - 125	95%	SPK: 50
1868-53-7	Dibromofluoromethane	49.1		75 - 124	98%	SPK: 50
2037-26-5	Toluene-d8	53.6		86 - 113	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.9		77 - 121	98%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	115000	5.55			
540-36-3	1,4-Difluorobenzene	233000	6.757			
3114-55-4	Chlorobenzene-d5	205000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	85600	12.018			

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

SDG No.: **Q1232**

Client: **RU2 Engineering, LLC**

Analytical Method: **SW8260D**

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
Q1232-02	JPP-46.2-012925	1,2-Dichloroethane-d4	50	53.1	106	74	125
		Dibromofluoromethane	50	48.2	96	75	124
		Toluene-d8	50	50.9	102	86	113
		4-Bromofluorobenzene	50	42.7	85	77	121
Q1232-06	JPP-46.1-012925	1,2-Dichloroethane-d4	50	47.0	94	74	125
		Dibromofluoromethane	50	47.6	95	75	124
		Toluene-d8	50	52.3	105	86	113
		4-Bromofluorobenzene	50	48.4	97	77	121
Q1232-10	JPP-42.1-012925	1,2-Dichloroethane-d4	50	48.4	97	74	125
		Dibromofluoromethane	50	47.1	94	75	124
		Toluene-d8	50	51.0	102	86	113
		4-Bromofluorobenzene	50	50.8	102	77	121
Q1232-14	JPP-42.2-012925	1,2-Dichloroethane-d4	50	46.4	93	74	125
		Dibromofluoromethane	50	48.7	97	75	124
		Toluene-d8	50	53.4	107	86	113
		4-Bromofluorobenzene	50	50.4	101	77	121
Q1232-18	JPP-51.1-012925	1,2-Dichloroethane-d4	50	47.3	95	74	125
		Dibromofluoromethane	50	49.1	98	75	124
		Toluene-d8	50	53.6	107	86	113
		4-Bromofluorobenzene	50	48.9	98	77	121
VN0203WBL01	VN0203WBL01	1,2-Dichloroethane-d4	50	50.4	101	74	125
		Dibromofluoromethane	50	50.6	101	75	124
		Toluene-d8	50	50.1	100	86	113
		4-Bromofluorobenzene	50	42.6	85	77	121
VN0203WBS01	VN0203WBS01	1,2-Dichloroethane-d4	50	47.8	96	74	125
		Dibromofluoromethane	50	52.2	104	75	124
		Toluene-d8	50	54.6	109	86	113
		4-Bromofluorobenzene	50	51.1	102	77	121
VN0203WBSD0	VN0203WBSD01	1,2-Dichloroethane-d4	50	48.0	96	74	125
		Dibromofluoromethane	50	51.0	102	75	124
		Toluene-d8	50	51.7	103	86	113
		4-Bromofluorobenzene	50	48.8	98	77	121
VX0203WBL01	VX0203WBL01	1,2-Dichloroethane-d4	50	48.6	97	74	125
		Dibromofluoromethane	50	50.1	100	75	124
		Toluene-d8	50	55.2	110	86	113
		4-Bromofluorobenzene	50	52.9	106	77	121
VX0203WBS01	VX0203WBS01	1,2-Dichloroethane-d4	50	43.1	86	74	125
		Dibromofluoromethane	50	46.5	93	75	124
		Toluene-d8	50	50.2	100	86	113
		4-Bromofluorobenzene	50	47.5	95	77	121

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: SW8260D

Datafile : VN085619.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN0203WBS01	Vinyl chloride	20	18.0	ug/L	90			65	117	
	1,1-Dichloroethene	20	17.3	ug/L	86			74	110	
	2-Butanone	100	88.6	ug/L	89			65	122	
	Carbon Tetrachloride	20	17.5	ug/L	88			77	113	
	Chloroform	20	19.0	ug/L	95			79	113	
	Benzene	20	18.6	ug/L	93			82	109	
	1,2-Dichloroethane	20	17.2	ug/L	86			80	115	
	Trichloroethene	20	18.4	ug/L	92			77	113	
	Tetrachloroethene	20	19.2	ug/L	96			67	123	
	Chlorobenzene	20	19.0	ug/L	95			82	109	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: SW8260D

Datafile : VN085620.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VN0203WBSD01	Vinyl chloride	20	18.9	ug/L	95	5		65	117	20
	1,1-Dichloroethene	20	18.1	ug/L	91	6		74	110	20
	2-Butanone	100	94.6	ug/L	95	7		65	122	20
	Carbon Tetrachloride	20	17.8	ug/L	89	1		77	113	20
	Chloroform	20	19.8	ug/L	99	4		79	113	20
	Benzene	20	18.8	ug/L	94	1		82	109	20
	1,2-Dichloroethane	20	17.5	ug/L	88	2		80	115	20
	Trichloroethene	20	18.2	ug/L	91	1		77	113	20
	Tetrachloroethene	20	19.1	ug/L	96	0		67	123	20
	Chlorobenzene	20	19.6	ug/L	98	3		82	109	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1232

Client: RU2 Engineering, LLC

Analytical Method: SW8260D

Datafile : VX044805.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VX0203WBS01	Vinyl chloride	20	20.2	ug/L	101			65	117	
	1,1-Dichloroethene	20	16.8	ug/L	84			74	110	
	2-Butanone	100	110	ug/L	110			65	122	
	Carbon Tetrachloride	20	17.6	ug/L	88			77	113	
	Chloroform	20	19.3	ug/L	97			79	113	
	Benzene	20	20.7	ug/L	104			82	109	
	1,2-Dichloroethane	20	18.0	ug/L	90			80	115	
	Trichloroethene	20	19.4	ug/L	97			77	113	
	Tetrachloroethene	20	18.9	ug/L	95			67	123	
	Chlorobenzene	20	19.9	ug/L	100			82	109	

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VN0203WBL01

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM Case No.: Q1232

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: VN085618.D

Lab Sample ID: VN0203WBL01

Date Analyzed: 02/03/2025

Time Analyzed: 13:34

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
VN0203WBS01	VN0203WBS01	VN085619.D	02/03/2025
VN0203WBSD01	VN0203WBSD01	VN085620.D	02/03/2025
JPP-46.2-012925	Q1232-02	VN085633.D	02/03/2025
JPP-42.1-012925	Q1232-10	VN085642.D	02/03/2025

COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0203WBL01

Lab Name: CHEMTECH

Contract: RUTW01

Lab Code: CHEM Case No.: Q1232

SAS No.: Q1232 SDG NO.: Q1232

Lab File ID: VX044804.D

Lab Sample ID: VX0203WBL01

Date Analyzed: 02/03/2025

Time Analyzed: 10:44

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VX0203WBS01	VX0203WBS01	VX044805.D	02/03/2025
JPP-46.1-012925	Q1232-06	VX044816.D	02/03/2025
JPP-42.2-012925	Q1232-14	VX044818.D	02/03/2025
JPP-51.1-012925	Q1232-18	VX044819.D	02/03/2025

COMMENTS: _____

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: RUTW01
Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
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.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
Lab File ID: VN085616.D BFB Injection Date: 02/03/2025
Instrument ID: MSVOA_N BFB Injection Time: 12:23
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	20.2
75	30.0 - 60.0% of mass 95	54.4
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	1.4 (1.9) 1
174	50.0 - 100.0% of mass 95	76.2
175	5.0 - 9.0% of mass 174	5.5 (7.2) 1
176	95.0 - 101.0% of mass 174	75 (98.4) 1
177	5.0 - 9.0% of mass 176	5.1 (6.8) 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	VN085617.D	02/03/2025	12:56
VN0203WBL01	VN0203WBL01	VN085618.D	02/03/2025	13:34
VN0203WBS01	VN0203WBS01	VN085619.D	02/03/2025	13:58
VN0203WBSD01	VN0203WBSD01	VN085620.D	02/03/2025	14:22
JPP-46.2-012925	Q1232-02	VN085633.D	02/03/2025	19:37
JPP-42.1-012925	Q1232-10	VN085642.D	02/03/2025	23:14

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: RUTW01
Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
Lab File ID: VX044647.D BFB Injection Date: 01/15/2025
Instrument ID: MSVOA_X BFB Injection Time: 09:30
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.6
75	30.0 - 60.0% of mass 95	50.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.6 (0.9) 1
174	50.0 - 100.0% of mass 95	67.1
175	5.0 - 9.0% of mass 174	4.9 (7.3) 1
176	95.0 - 101.0% of mass 174	64.4 (96) 1
177	5.0 - 9.0% of mass 176	4.3 (6.8) 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
VSTDIC001	VSTDIC001	VX044648.D	01/15/2025	10:31
VSTDIC005	VSTDIC005	VX044649.D	01/15/2025	11:17
VSTDIC020	VSTDIC020	VX044650.D	01/15/2025	11:40
VSTDIC050	VSTDIC050	VX044651.D	01/15/2025	12:02
VSTDIC100	VSTDIC100	VX044652.D	01/15/2025	13:14
VSTDIC150	VSTDIC150	VX044653.D	01/15/2025	13:37

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: RUTW01
Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
Lab File ID: VX044801.D BFB Injection Date: 02/03/2025
Instrument ID: MSVOA_X BFB Injection Time: 08:12
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.4
75	30.0 - 60.0% of mass 95	51.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.8 (1) 1
174	50.0 - 100.0% of mass 95	77.6
175	5.0 - 9.0% of mass 174	5.9 (7.6) 1
176	95.0 - 101.0% of mass 174	74.5 (96.1) 1
177	5.0 - 9.0% of mass 176	4.9 (6.6) 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	VX044802.D	02/03/2025	09:52
VX0203WBL01	VX0203WBL01	VX044804.D	02/03/2025	10:44
VX0203WBS01	VX0203WBS01	VX044805.D	02/03/2025	11:07
JPP-46.1-012925	Q1232-06	VX044816.D	02/03/2025	15:45
JPP-42.2-012925	Q1232-14	VX044818.D	02/03/2025	16:32
JPP-51.1-012925	Q1232-18	VX044819.D	02/03/2025	16:55

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: RUTW01
 Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
 Lab File ID: VN085617.D Date Analyzed: 02/03/2025
 Instrument ID: MSVOA_N Time Analyzed: 12:56
 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	193909	8.22	331362	9.10	301323	11.87
UPPER LIMIT	387818	8.718	662724	9.6	602646	12.365
LOWER LIMIT	96954.5	7.718	165681	8.6	150662	11.365
EPA SAMPLE NO.						
JPP-46.2-012925	163195	8.22	347669	9.10	325913	11.87
JPP-42.1-012925	193386	8.22	384666	9.10	362979	11.87
VN0203WBL01	183958	8.22	354826	9.10	307130	11.87
VN0203WBS01	188870	8.22	327054	9.10	287245	11.87
VN0203WBSD01	177381	8.22	316818	9.10	277592	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.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
 Lab File ID: VN085617.D Date Analyzed: 02/03/2025
 Instrument ID: MSVOA_N Time Analyzed: 12:56
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	152662	13.788				
UPPER LIMIT	305324	14.288				
LOWER LIMIT	76331	13.288				
EPA SAMPLE NO.						
JPP-46.2-012925	109751	13.79				
JPP-42.1-012925	158909	13.79				
VN0203WBL01	111992	13.79				
VN0203WBS01	141185	13.79				
VN0203WBSD01	132351	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.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: RUTW01
 Lab Code: CHEM Case No.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
 Lab File ID: VX044802.D Date Analyzed: 02/03/2025
 Instrument ID: MSVOA_X Time Analyzed: 09:52
 GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	162430	5.54	297715	6.75	252415	10.05
UPPER LIMIT	324860	6.038	595430	7.251	504830	10.549
LOWER LIMIT	81215	5.038	148858	6.251	126208	9.549
EPA SAMPLE NO.						
JPP-46.1-012925	117794	5.54	241488	6.76	213988	10.05
JPP-42.2-012925	118473	5.55	237156	6.76	210118	10.05
JPP-51.1-012925	115498	5.55	232958	6.76	204621	10.05
VX0203WBL01	124993	5.54	257688	6.76	232979	10.05
VX0203WBS01	151779	5.54	276067	6.76	242310	10.05

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.: Q1232 SAS No.: Q1232 SDG NO.: Q1232
 Lab File ID: VX044802.D Date Analyzed: 02/03/2025
 Instrument ID: MSVOA_X Time Analyzed: 09:52
 GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	101849	12.018				
UPPER LIMIT	203698	12.518				
LOWER LIMIT	50924.5	11.518				
EPA SAMPLE NO.						
JPP-46.1-012925	91814	12.02				
JPP-42.2-012925	90092	12.02				
JPP-51.1-012925	85623	12.02				
VX0203WBL01	100905	12.02				
VX0203WBS01	107943	12.02				

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:	VN0203WBL01		SDG No.:	Q1232
Lab Sample ID:	VN0203WBL01		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
VN085618.D	1		02/03/25 13:34	VN020325

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	50.4		74 - 125	101%	SPK: 50
1868-53-7	Dibromofluoromethane	50.6		75 - 124	101%	SPK: 50
2037-26-5	Toluene-d8	50.1		86 - 113	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.6		77 - 121	85%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	184000	8.224			
540-36-3	1,4-Difluorobenzene	355000	9.1			
3114-55-4	Chlorobenzene-d5	307000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	112000	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:	VX0203WBL01		SDG No.:	Q1232
Lab Sample ID:	VX0203WBL01		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:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044804.D	1		02/03/25 10:44	VX020325

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	48.6		74 - 125	97%	SPK: 50
1868-53-7	Dibromofluoromethane	50.1		75 - 124	100%	SPK: 50
2037-26-5	Toluene-d8	55.2		86 - 113	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.9		77 - 121	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	125000	5.544			
540-36-3	1,4-Difluorobenzene	258000	6.757			
3114-55-4	Chlorobenzene-d5	233000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	101000	12.018			

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:	VN0203WBS01		SDG No.:	Q1232
Lab Sample ID:	VN0203WBS01		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
VN085619.D	1		02/03/25 13:58	VN020325

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	18.0		0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	17.3		0.26	5.00	ug/L
78-93-3	2-Butanone	88.6		1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	17.5		0.25	5.00	ug/L
67-66-3	Chloroform	19.0		0.26	5.00	ug/L
71-43-2	Benzene	18.6		0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	17.2		0.24	5.00	ug/L
79-01-6	Trichloroethene	18.4		0.32	5.00	ug/L
127-18-4	Tetrachloroethene	19.2		0.25	5.00	ug/L
108-90-7	Chlorobenzene	19.0		0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	47.8		74 - 125	96%	SPK: 50
1868-53-7	Dibromofluoromethane	52.2		75 - 124	104%	SPK: 50
2037-26-5	Toluene-d8	54.6		86 - 113	109%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.1		77 - 121	102%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	189000	8.224			
540-36-3	1,4-Difluorobenzene	327000	9.1			
3114-55-4	Chlorobenzene-d5	287000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	141000	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:	VX0203WBS01		SDG No.:	Q1232
Lab Sample ID:	VX0203WBS01		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:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX044805.D	1		02/03/25 11:07	VX020325

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	20.2		0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	16.8		0.26	5.00	ug/L
78-93-3	2-Butanone	110		1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	17.6		0.25	5.00	ug/L
67-66-3	Chloroform	19.3		0.26	5.00	ug/L
71-43-2	Benzene	20.7		0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	18.0		0.24	5.00	ug/L
79-01-6	Trichloroethene	19.4		0.32	5.00	ug/L
127-18-4	Tetrachloroethene	18.9		0.25	5.00	ug/L
108-90-7	Chlorobenzene	19.9		0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	43.1		74 - 125	86%	SPK: 50
1868-53-7	Dibromofluoromethane	46.5		75 - 124	93%	SPK: 50
2037-26-5	Toluene-d8	50.2		86 - 113	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.5		77 - 121	95%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	152000	5.544			
540-36-3	1,4-Difluorobenzene	276000	6.757			
3114-55-4	Chlorobenzene-d5	242000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	108000	12.018			

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:	VN0203WBSD01	SDG No.:	Q1232	
Lab Sample ID:	VN0203WBSD01	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
VN085620.D	1		02/03/25 14:22	VN020325

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	18.9		0.34	5.00	ug/L
75-35-4	1,1-Dichloroethene	18.1		0.26	5.00	ug/L
78-93-3	2-Butanone	94.6		1.30	25.0	ug/L
56-23-5	Carbon Tetrachloride	17.8		0.25	5.00	ug/L
67-66-3	Chloroform	19.8		0.26	5.00	ug/L
71-43-2	Benzene	18.8		0.16	5.00	ug/L
107-06-2	1,2-Dichloroethane	17.5		0.24	5.00	ug/L
79-01-6	Trichloroethene	18.2		0.32	5.00	ug/L
127-18-4	Tetrachloroethene	19.1		0.25	5.00	ug/L
108-90-7	Chlorobenzene	19.6		0.13	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.0		74 - 125	96%	SPK: 50
1868-53-7	Dibromofluoromethane	51.0		75 - 124	102%	SPK: 50
2037-26-5	Toluene-d8	51.7		86 - 113	103%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.8		77 - 121	98%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	177000	8.224			
540-36-3	1,4-Difluorobenzene	317000	9.1			
3114-55-4	Chlorobenzene-d5	278000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	132000	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.: Q1232 SAS No.: Q1232 SDG No.: Q1232

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 ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: RUTW01

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

Instrument ID: MSVOA_X Calibration Date(s): 01/15/2025 01/15/2025

Heated Purge: (Y/N) N Calibration Time(s): 10:31 13:37

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:		RRF001 = VX044648.D		RRF005 = VX044649.D		RRF020 = VX044650.D		
		RRF050 = VX044651.D		RRF100 = VX044652.D		RRF150 = VX044653.D		
COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	% RSD
Vinyl Chloride	0.801	0.681	0.681	0.702	0.699	0.749	0.719	6.6
1,1-Dichloroethene	0.638	0.546	0.572	0.566	0.571	0.618	0.585	6
2-Butanone	0.451	0.444	0.444	0.426	0.449	0.450	0.444	2.1
Carbon Tetrachloride	0.585	0.503	0.468	0.460	0.465	0.502	0.497	9.4
Chloroform	1.261	1.226	1.185	1.142	1.095	1.206	1.186	5
Benzene	1.517	1.376	1.364	1.306	1.274	1.384	1.370	6.1
1,2-Dichloroethane	0.552	0.494	0.491	0.477	0.473	0.513	0.500	5.8
Trichloroethene	0.338	0.319	0.324	0.316	0.324	0.355	0.329	4.5
Tetrachloroethene	0.346	0.309	0.299	0.296	0.308	0.326	0.314	5.9
Chlorobenzene	1.178	1.085	1.036	1.008	0.998	1.067	1.062	6.2
1,2-Dichloroethane-d4		0.863	0.691	0.745	0.689	0.785	0.755	9.6
Dibromofluoromethane		0.355	0.289	0.318	0.293	0.333	0.318	8.8
Toluene-d8		1.270	1.051	1.111	1.001	1.104	1.108	9.1
4-Bromofluorobenzene		0.445	0.394	0.421	0.383	0.421	0.413	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.: Q1232 SAS No.: Q1232 SDG No.: Q1232

Instrument ID: MSVOA_N Calibration Date/Time: 02/03/2025 12:56

Lab File ID: VN085617.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	0.636		-13.7	20
1,1-Dichloroethene	0.537	0.488		-9.13	20
2-Butanone	0.384	0.336		-12.5	20
Carbon Tetrachloride	0.557	0.512		-8.08	20
Chloroform	1.218	1.179		-3.2	20
Benzene	1.463	1.422		-2.8	20
1,2-Dichloroethane	0.551	0.500		-9.26	20
Trichloroethene	0.341	0.329		-3.52	20
Tetrachloroethene	0.341	0.330		-3.23	20
Chlorobenzene	1.095	1.101	0.3	0.55	20
1,2-Dichloroethane-d4	0.807	0.719		-10.9	20
Dibromofluoromethane	0.347	0.346		-0.29	20
Toluene-d8	1.232	1.296		5.2	20
4-Bromofluorobenzene	0.422	0.438		3.79	20

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.: Q1232 SAS No.: Q1232 SDG No.: Q1232

Instrument ID: MSVOA_X Calibration Date/Time: 02/03/2025 09:52

Lab File ID: VX044802.D Init. Calib. Date(s): 01/15/2025 01/15/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 10:31 13:37

GC Column: DB-624UI ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.719	0.766		6.54	20
1,1-Dichloroethene	0.585	0.636		8.72	20
2-Butanone	0.444	0.459		3.38	20
Carbon Tetrachloride	0.497	0.454		-8.65	20
Chloroform	1.186	1.162		-2.02	20
Benzene	1.370	1.440		5.11	20
1,2-Dichloroethane	0.500	0.454		-9.2	20
Trichloroethene	0.329	0.337		2.43	20
Tetrachloroethene	0.314	0.312		-0.64	20
Chlorobenzene	1.062	1.101	0.3	3.67	20
1,2-Dichloroethane-d4	0.755	0.726		-3.84	20
Dibromofluoromethane	0.318	0.333		4.72	20
Toluene-d8	1.108	1.249		12.73	20
4-Bromofluorobenzene	0.413	0.437		5.81	20

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