



284 Sheffield Street, Mountainside, New Jersey - 07092

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

LAB CHRONICLE

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

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1232-01	B-P-17A	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23
O1232-02	B-P-17B	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23
O1232-04	B-P-18A	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/23/23	01/19/23
O1232-05	B-P-18B	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23
O1232-06	B-P-19A	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/23/23	01/19/23
O1232-07	B-P-19B	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23
O1232-08	B-P-35A	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23
O1232-09	B-P-35B	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23
O1232-09RE	B-P-35BRE	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/23/23	01/19/23
O1232-10	DUP01	SOIL	VOC-TCLVOA-10	8260D	01/18/23		01/20/23	01/19/23



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

Hit Summary Sheet SW-846

SDG No.: O1232

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID: O1232-01	B-P-17A B-P-17A	SOIL	unknown10.947	* 5.60	J	0	0	ug/Kg
			Total Tics :	5.60				
			Total Concentration:	5.60				
Client ID: O1232-04	B-P-18A B-P-18A	SOIL	unknown10.947	* 12.6	J	0	0	ug/Kg
			Total Tics :	12.6				
			Total Concentration:	12.6				
Client ID: O1232-05	B-P-18B B-P-18B	SOIL	Benzene	1.80	J	0.72	5.40	ug/Kg
O1232-05	B-P-18B	SOIL	Toluene	1.10	J	0.69	5.40	ug/Kg
			Total Voc :	2.90				
			Total Concentration:	2.90				
Client ID: O1232-06	B-P-19A B-P-19A	SOIL	Acetone	18.2	J	13.6	28.0	ug/Kg
			Total Voc :	18.2				
O1232-06	B-P-19A	SOIL	unknown10.947	* 8.50	J	0	0	ug/Kg
			Total Tics :	8.50				
			Total Concentration:	26.7				
Client ID: O1232-07	B-P-19B B-P-19B	SOIL	Acetone	24.1	J	13.8	28.3	ug/Kg
			Total Voc :	24.1				
			Total Concentration:	24.1				
Client ID: O1232-10	DUP01 DUP01	SOIL	Benzene	3.30	J	0.73	5.50	ug/Kg
O1232-10	DUP01	SOIL	Toluene	1.80	J	0.70	5.50	ug/Kg
			Total Voc :	5.10				
			Total Concentration:	5.10				

SAMPLE DATA

A

B

C

D

E

F

G

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17A	SDG No.:	O1232
Lab Sample ID:	O1232-01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	89.4
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012292.D	1		01/20/23 15:49	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.96	U	0.96	5.60	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.60	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.60	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.60	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.60	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.60	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.60	ug/Kg
75-35-4	1,1-Dichloroethene	0.96	U	0.96	5.60	ug/Kg
67-64-1	Acetone	13.6	U	13.6	28.0	ug/Kg
75-15-0	Carbon Disulfide	0.84	U	0.84	5.60	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.60	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.60	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
75-34-3	1,1-Dichloroethane	0.78	U	0.78	5.60	ug/Kg
110-82-7	Cyclohexane	0.94	U	0.94	5.60	ug/Kg
78-93-3	2-Butanone	8.10	U	8.10	28.0	ug/Kg
56-23-5	Carbon Tetrachloride	0.88	U	0.88	5.60	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
74-97-5	Bromochloromethane	0.91	U	0.91	5.60	ug/Kg
67-66-3	Chloroform	0.75	U	0.75	5.60	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.84	U	0.84	5.60	ug/Kg
108-87-2	Methylcyclohexane	0.89	U	0.89	5.60	ug/Kg
71-43-2	Benzene	0.74	U	0.74	5.60	ug/Kg
107-06-2	1,2-Dichloroethane	0.94	U	0.94	5.60	ug/Kg
79-01-6	Trichloroethene	0.82	U	0.82	5.60	ug/Kg
78-87-5	1,2-Dichloropropane	0.73	U	0.73	5.60	ug/Kg
75-27-4	Bromodichloromethane	0.78	U	0.78	5.60	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	28.0	ug/Kg
108-88-3	Toluene	0.70	U	0.70	5.60	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.83	U	0.83	5.60	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.79	U	0.79	5.60	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17A	SDG No.:	O1232
Lab Sample ID:	O1232-01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	89.4
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012292.D	1		01/20/23 15:49	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.96	U	0.96	5.60	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	28.0	ug/Kg
124-48-1	Dibromochloromethane	0.84	U	0.84	5.60	ug/Kg
106-93-4	1,2-Dibromoethane	0.84	U	0.84	5.60	ug/Kg
127-18-4	Tetrachloroethene	0.85	U	0.85	5.60	ug/Kg
108-90-7	Chlorobenzene	0.73	U	0.73	5.60	ug/Kg
100-41-4	Ethyl Benzene	0.78	U	0.78	5.60	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.2	ug/Kg
95-47-6	o-Xylene	0.88	U	0.88	5.60	ug/Kg
100-42-5	Styrene	0.88	U	0.88	5.60	ug/Kg
75-25-2	Bromoform	0.91	U	0.91	5.60	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.60	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.60	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.75	U	0.75	5.60	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.60	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.60	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.60	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	71.1		50 - 163	142%	SPK: 50
1868-53-7	Dibromofluoromethane	57.9		54 - 147	116%	SPK: 50
2037-26-5	Toluene-d8	65.9		58 - 134	132%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.9		30 - 143	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	188000	7.789			
540-36-3	1,4-Difluorobenzene	315000	8.691			
3114-55-4	Chlorobenzene-d5	310000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	145000	13.428			
TENTATIVE IDENTIFIED COMPOUNDS						
	unknown10.947	5.60	J		10.9	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17A	SDG No.:	O1232
Lab Sample ID:	O1232-01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	89.4
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012292.D	1		01/20/23 15:49	VY012023

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

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17B	SDG No.:	O1232
Lab Sample ID:	O1232-02	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	86.9
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012293.D	1		01/20/23 16:13	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.99	U	0.99	5.80	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.80	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.80	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.80	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.80	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.80	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.83	U	0.83	5.80	ug/Kg
75-35-4	1,1-Dichloroethene	0.99	U	0.99	5.80	ug/Kg
67-64-1	Acetone	14.0	U	14.0	28.8	ug/Kg
75-15-0	Carbon Disulfide	0.86	U	0.86	5.80	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.80	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.80	ug/Kg
75-09-2	Methylene Chloride	6.90	U	6.90	11.5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.78	U	0.78	5.80	ug/Kg
75-34-3	1,1-Dichloroethane	0.81	U	0.81	5.80	ug/Kg
110-82-7	Cyclohexane	0.97	U	0.97	5.80	ug/Kg
78-93-3	2-Butanone	8.40	U	8.40	28.8	ug/Kg
56-23-5	Carbon Tetrachloride	0.91	U	0.91	5.80	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.78	U	0.78	5.80	ug/Kg
74-97-5	Bromochloromethane	0.93	U	0.93	5.80	ug/Kg
67-66-3	Chloroform	0.77	U	0.77	5.80	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.86	U	0.86	5.80	ug/Kg
108-87-2	Methylcyclohexane	0.92	U	0.92	5.80	ug/Kg
71-43-2	Benzene	0.76	U	0.76	5.80	ug/Kg
107-06-2	1,2-Dichloroethane	0.97	U	0.97	5.80	ug/Kg
79-01-6	Trichloroethene	0.84	U	0.84	5.80	ug/Kg
78-87-5	1,2-Dichloropropane	0.75	U	0.75	5.80	ug/Kg
75-27-4	Bromodichloromethane	0.81	U	0.81	5.80	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.30	U	5.30	28.8	ug/Kg
108-88-3	Toluene	0.72	U	0.72	5.80	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.85	U	0.85	5.80	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.82	U	0.82	5.80	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17B	SDG No.:	O1232
Lab Sample ID:	O1232-02	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	86.9
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012293.D	1		01/20/23 16:13	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.99	U	0.99	5.80	ug/Kg
591-78-6	2-Hexanone	5.40	U	5.40	28.8	ug/Kg
124-48-1	Dibromochloromethane	0.86	U	0.86	5.80	ug/Kg
106-93-4	1,2-Dibromoethane	0.86	U	0.86	5.80	ug/Kg
127-18-4	Tetrachloroethene	0.87	U	0.87	5.80	ug/Kg
108-90-7	Chlorobenzene	0.75	U	0.75	5.80	ug/Kg
100-41-4	Ethyl Benzene	0.81	U	0.81	5.80	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.5	ug/Kg
95-47-6	o-Xylene	0.91	U	0.91	5.80	ug/Kg
100-42-5	Styrene	0.91	U	0.91	5.80	ug/Kg
75-25-2	Bromoform	0.93	U	0.93	5.80	ug/Kg
98-82-8	Isopropylbenzene	0.83	U	0.83	5.80	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.80	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.77	U	0.77	5.80	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.72	U	0.72	5.80	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.74	U	0.74	5.80	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.80	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.80	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	5.80	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	64.9		50 - 163	130%	SPK: 50
1868-53-7	Dibromofluoromethane	55.9		54 - 147	112%	SPK: 50
2037-26-5	Toluene-d8	65.0		58 - 134	130%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.7		30 - 143	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	129000	7.789			
540-36-3	1,4-Difluorobenzene	209000	8.691			
3114-55-4	Chlorobenzene-d5	195000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	86200	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-17B	SDG No.:	O1232
Lab Sample ID:	O1232-02	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	86.9
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012293.D	1		01/20/23 16:13	VY012023

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:	Louis Berger U.S., Inc., A WSP Company			Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR			Date Received:	01/19/23
Client Sample ID:	B-P-18A			SDG No.:	O1232
Lab Sample ID:	O1232-04			Matrix:	SOIL
Analytical Method:	SW8260			% Solid:	87.5
Sample Wt/Vol:	5.05	Units:	g	Final Vol:	5000 uL
Soil Aliquot Vol:			uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID :	0.25	Level :	LOW
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012311.D	1		01/23/23 14:14	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.97	U	0.97	5.70	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.70	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.70	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.70	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.70	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.70	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.70	ug/Kg
75-35-4	1,1-Dichloroethene	0.97	U	0.97	5.70	ug/Kg
67-64-1	Acetone	13.8	U	13.8	28.3	ug/Kg
75-15-0	Carbon Disulfide	0.85	U	0.85	5.70	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.70	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.70	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.3	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.77	U	0.77	5.70	ug/Kg
75-34-3	1,1-Dichloroethane	0.79	U	0.79	5.70	ug/Kg
110-82-7	Cyclohexane	0.95	U	0.95	5.70	ug/Kg
78-93-3	2-Butanone	8.20	U	8.20	28.3	ug/Kg
56-23-5	Carbon Tetrachloride	0.89	U	0.89	5.70	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.77	U	0.77	5.70	ug/Kg
74-97-5	Bromochloromethane	0.92	U	0.92	5.70	ug/Kg
67-66-3	Chloroform	0.76	U	0.76	5.70	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.85	U	0.85	5.70	ug/Kg
108-87-2	Methylcyclohexane	0.91	U	0.91	5.70	ug/Kg
71-43-2	Benzene	0.75	U	0.75	5.70	ug/Kg
107-06-2	1,2-Dichloroethane	0.95	U	0.95	5.70	ug/Kg
79-01-6	Trichloroethene	0.83	U	0.83	5.70	ug/Kg
78-87-5	1,2-Dichloropropane	0.74	U	0.74	5.70	ug/Kg
75-27-4	Bromodichloromethane	0.79	U	0.79	5.70	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.20	U	5.20	28.3	ug/Kg
108-88-3	Toluene	0.71	U	0.71	5.70	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.84	U	0.84	5.70	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.80	U	0.80	5.70	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-18A	SDG No.:	O1232
Lab Sample ID:	O1232-04	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	87.5
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012311.D	1		01/23/23 14:14	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.97	U	0.97	5.70	ug/Kg
591-78-6	2-Hexanone	5.30	U	5.30	28.3	ug/Kg
124-48-1	Dibromochloromethane	0.85	U	0.85	5.70	ug/Kg
106-93-4	1,2-Dibromoethane	0.85	U	0.85	5.70	ug/Kg
127-18-4	Tetrachloroethene	0.86	U	0.86	5.70	ug/Kg
108-90-7	Chlorobenzene	0.74	U	0.74	5.70	ug/Kg
100-41-4	Ethyl Benzene	0.79	U	0.79	5.70	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.3	ug/Kg
95-47-6	o-Xylene	0.89	U	0.89	5.70	ug/Kg
100-42-5	Styrene	0.89	U	0.89	5.70	ug/Kg
75-25-2	Bromoform	0.92	U	0.92	5.70	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.70	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.70	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.76	U	0.76	5.70	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.71	U	0.71	5.70	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.70	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.70	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.70	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.70	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	75.6		50 - 163	151%	SPK: 50
1868-53-7	Dibromofluoromethane	55.2		54 - 147	110%	SPK: 50
2037-26-5	Toluene-d8	65.5		58 - 134	131%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.7		30 - 143	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	170000	7.789			
540-36-3	1,4-Difluorobenzene	284000	8.691			
3114-55-4	Chlorobenzene-d5	275000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	126000	13.428			
TENTATIVE IDENTIFIED COMPOUNDS						
	unknown10.947	12.6	J		10.9	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-18A	SDG No.:	O1232
Lab Sample ID:	O1232-04	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	87.5
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012311.D	1		01/23/23 14:14	VY012323

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

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-18B	SDG No.:	O1232
Lab Sample ID:	O1232-05	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	91.4
Sample Wt/Vol:	5.03 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012295.D	1		01/20/23 17:00	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.94	U	0.94	5.40	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.40	ug/Kg
75-01-4	Vinyl Chloride	0.99	U	0.99	5.40	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.40	ug/Kg
75-00-3	Chloroethane	0.97	U	0.97	5.40	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.40	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.78	U	0.78	5.40	ug/Kg
75-35-4	1,1-Dichloroethene	0.94	U	0.94	5.40	ug/Kg
67-64-1	Acetone	13.3	U	13.3	27.2	ug/Kg
75-15-0	Carbon Disulfide	0.82	U	0.82	5.40	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.40	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.40	ug/Kg
75-09-2	Methylene Chloride	6.50	U	6.50	10.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.74	U	0.74	5.40	ug/Kg
75-34-3	1,1-Dichloroethane	0.76	U	0.76	5.40	ug/Kg
110-82-7	Cyclohexane	0.91	U	0.91	5.40	ug/Kg
78-93-3	2-Butanone	7.90	U	7.90	27.2	ug/Kg
56-23-5	Carbon Tetrachloride	0.86	U	0.86	5.40	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.74	U	0.74	5.40	ug/Kg
74-97-5	Bromochloromethane	0.88	U	0.88	5.40	ug/Kg
67-66-3	Chloroform	0.73	U	0.73	5.40	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.82	U	0.82	5.40	ug/Kg
108-87-2	Methylcyclohexane	0.87	U	0.87	5.40	ug/Kg
71-43-2	Benzene	1.80	J	0.72	5.40	ug/Kg
107-06-2	1,2-Dichloroethane	0.91	U	0.91	5.40	ug/Kg
79-01-6	Trichloroethene	0.79	U	0.79	5.40	ug/Kg
78-87-5	1,2-Dichloropropane	0.71	U	0.71	5.40	ug/Kg
75-27-4	Bromodichloromethane	0.76	U	0.76	5.40	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.00	U	5.00	27.2	ug/Kg
108-88-3	Toluene	1.10	J	0.69	5.40	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.80	U	0.80	5.40	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.77	U	0.77	5.40	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-18B	SDG No.:	O1232
Lab Sample ID:	O1232-05	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	91.4
Sample Wt/Vol:	5.03 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012295.D	1		01/20/23 17:00	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.94	U	0.94	5.40	ug/Kg
591-78-6	2-Hexanone	5.10	U	5.10	27.2	ug/Kg
124-48-1	Dibromochloromethane	0.82	U	0.82	5.40	ug/Kg
106-93-4	1,2-Dibromoethane	0.82	U	0.82	5.40	ug/Kg
127-18-4	Tetrachloroethene	0.83	U	0.83	5.40	ug/Kg
108-90-7	Chlorobenzene	0.71	U	0.71	5.40	ug/Kg
100-41-4	Ethyl Benzene	0.76	U	0.76	5.40	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.9	ug/Kg
95-47-6	o-Xylene	0.86	U	0.86	5.40	ug/Kg
100-42-5	Styrene	0.86	U	0.86	5.40	ug/Kg
75-25-2	Bromoform	0.88	U	0.88	5.40	ug/Kg
98-82-8	Isopropylbenzene	0.78	U	0.78	5.40	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.40	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.73	U	0.73	5.40	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.69	U	0.69	5.40	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.70	U	0.70	5.40	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.40	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.40	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.40	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	69.3		50 - 163	139%	SPK: 50
1868-53-7	Dibromofluoromethane	55.4		54 - 147	111%	SPK: 50
2037-26-5	Toluene-d8	64.9		58 - 134	130%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.6		30 - 143	105%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	206000	7.789			
540-36-3	1,4-Difluorobenzene	346000	8.691			
3114-55-4	Chlorobenzene-d5	328000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	154000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23
Client Sample ID:	B-P-18B		SDG No.:	O1232
Lab Sample ID:	O1232-05		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	91.4
Sample Wt/Vol:	5.03	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012295.D	1		01/20/23 17:00	VY012023

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	88.2
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012312.D	1		01/23/23 14:37	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.96	U	0.96	5.60	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.60	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.60	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.60	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.60	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.60	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.60	ug/Kg
75-35-4	1,1-Dichloroethene	0.96	U	0.96	5.60	ug/Kg
67-64-1	Acetone	18.2	J	13.6	28.0	ug/Kg
75-15-0	Carbon Disulfide	0.84	U	0.84	5.60	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.60	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.60	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
75-34-3	1,1-Dichloroethane	0.78	U	0.78	5.60	ug/Kg
110-82-7	Cyclohexane	0.94	U	0.94	5.60	ug/Kg
78-93-3	2-Butanone	8.10	U	8.10	28.0	ug/Kg
56-23-5	Carbon Tetrachloride	0.88	U	0.88	5.60	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
74-97-5	Bromochloromethane	0.91	U	0.91	5.60	ug/Kg
67-66-3	Chloroform	0.75	U	0.75	5.60	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.84	U	0.84	5.60	ug/Kg
108-87-2	Methylcyclohexane	0.89	U	0.89	5.60	ug/Kg
71-43-2	Benzene	0.74	U	0.74	5.60	ug/Kg
107-06-2	1,2-Dichloroethane	0.94	U	0.94	5.60	ug/Kg
79-01-6	Trichloroethene	0.82	U	0.82	5.60	ug/Kg
78-87-5	1,2-Dichloropropane	0.73	U	0.73	5.60	ug/Kg
75-27-4	Bromodichloromethane	0.78	U	0.78	5.60	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	28.0	ug/Kg
108-88-3	Toluene	0.70	U	0.70	5.60	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.83	U	0.83	5.60	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.79	U	0.79	5.60	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	88.2
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012312.D	1		01/23/23 14:37	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.96	U	0.96	5.60	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	28.0	ug/Kg
124-48-1	Dibromochloromethane	0.84	U	0.84	5.60	ug/Kg
106-93-4	1,2-Dibromoethane	0.84	U	0.84	5.60	ug/Kg
127-18-4	Tetrachloroethene	0.85	U	0.85	5.60	ug/Kg
108-90-7	Chlorobenzene	0.73	U	0.73	5.60	ug/Kg
100-41-4	Ethyl Benzene	0.78	U	0.78	5.60	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.2	ug/Kg
95-47-6	o-Xylene	0.88	U	0.88	5.60	ug/Kg
100-42-5	Styrene	0.88	U	0.88	5.60	ug/Kg
75-25-2	Bromoform	0.91	U	0.91	5.60	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.60	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.60	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.75	U	0.75	5.60	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.60	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.60	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.60	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	77.5		50 - 163	155%	SPK: 50
1868-53-7	Dibromofluoromethane	57.0		54 - 147	114%	SPK: 50
2037-26-5	Toluene-d8	65.8		58 - 134	132%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.9		30 - 143	108%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	142000	7.789			
540-36-3	1,4-Difluorobenzene	236000	8.691			
3114-55-4	Chlorobenzene-d5	229000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	108000	13.428			
TENTATIVE IDENTIFIED COMPOUNDS						
	unknown10.947	8.50	J		10.9	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19A	SDG No.:	O1232
Lab Sample ID:	O1232-06	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	88.2
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012312.D	1		01/23/23 14:37	VY012323

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

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	88
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012297.D	1		01/20/23 17:46	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.97	U	0.97	5.70	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.70	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.70	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.70	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.70	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.70	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.70	ug/Kg
75-35-4	1,1-Dichloroethene	0.97	U	0.97	5.70	ug/Kg
67-64-1	Acetone	24.1	J	13.8	28.3	ug/Kg
75-15-0	Carbon Disulfide	0.85	U	0.85	5.70	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.70	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.70	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.3	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.77	U	0.77	5.70	ug/Kg
75-34-3	1,1-Dichloroethane	0.79	U	0.79	5.70	ug/Kg
110-82-7	Cyclohexane	0.95	U	0.95	5.70	ug/Kg
78-93-3	2-Butanone	8.20	U	8.20	28.3	ug/Kg
56-23-5	Carbon Tetrachloride	0.89	U	0.89	5.70	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.77	U	0.77	5.70	ug/Kg
74-97-5	Bromochloromethane	0.92	U	0.92	5.70	ug/Kg
67-66-3	Chloroform	0.76	U	0.76	5.70	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.85	U	0.85	5.70	ug/Kg
108-87-2	Methylcyclohexane	0.91	U	0.91	5.70	ug/Kg
71-43-2	Benzene	0.75	U	0.75	5.70	ug/Kg
107-06-2	1,2-Dichloroethane	0.95	U	0.95	5.70	ug/Kg
79-01-6	Trichloroethene	0.83	U	0.83	5.70	ug/Kg
78-87-5	1,2-Dichloropropane	0.74	U	0.74	5.70	ug/Kg
75-27-4	Bromodichloromethane	0.79	U	0.79	5.70	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.20	U	5.20	28.3	ug/Kg
108-88-3	Toluene	0.71	U	0.71	5.70	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.84	U	0.84	5.70	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.80	U	0.80	5.70	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	88
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012297.D	1		01/20/23 17:46	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.97	U	0.97	5.70	ug/Kg
591-78-6	2-Hexanone	5.30	U	5.30	28.3	ug/Kg
124-48-1	Dibromochloromethane	0.85	U	0.85	5.70	ug/Kg
106-93-4	1,2-Dibromoethane	0.85	U	0.85	5.70	ug/Kg
127-18-4	Tetrachloroethene	0.86	U	0.86	5.70	ug/Kg
108-90-7	Chlorobenzene	0.74	U	0.74	5.70	ug/Kg
100-41-4	Ethyl Benzene	0.79	U	0.79	5.70	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.3	ug/Kg
95-47-6	o-Xylene	0.89	U	0.89	5.70	ug/Kg
100-42-5	Styrene	0.89	U	0.89	5.70	ug/Kg
75-25-2	Bromoform	0.92	U	0.92	5.70	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.70	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.70	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.76	U	0.76	5.70	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.71	U	0.71	5.70	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.70	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.70	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.70	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.70	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.1		50 - 163	110%	SPK: 50
1868-53-7	Dibromofluoromethane	54.4		54 - 147	109%	SPK: 50
2037-26-5	Toluene-d8	64.4		58 - 134	129%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.6		30 - 143	83%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	63400	7.789			
540-36-3	1,4-Difluorobenzene	94000	8.691			
3114-55-4	Chlorobenzene-d5	80500	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	33200	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-19B	SDG No.:	O1232
Lab Sample ID:	O1232-07	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	88
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012297.D	1		01/20/23 17:46	VY012023

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:	Louis Berger U.S., Inc., A WSP Company			Date Collected:	01/18/23	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR			Date Received:	01/19/23	
Client Sample ID:	B-P-35A			SDG No.:	O1232	
Lab Sample ID:	O1232-08			Matrix:	SOIL	
Analytical Method:	SW8260			% Solid:	91.3	
Sample Wt/Vol:	5	Units:	g	Final Vol:	5000	uL
Soil Aliquot Vol:			uL	Test:	VOC-TCLVOA-10	
GC Column:	RXI-624	ID :	0.25	Level :	LOW	
Prep Method :						

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012298.D	1		01/20/23 18:10	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.94	U	0.94	5.50	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.50	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.50	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.50	ug/Kg
75-00-3	Chloroethane	0.97	U	0.97	5.50	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.50	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.79	U	0.79	5.50	ug/Kg
75-35-4	1,1-Dichloroethene	0.94	U	0.94	5.50	ug/Kg
67-64-1	Acetone	13.4	U	13.4	27.4	ug/Kg
75-15-0	Carbon Disulfide	0.82	U	0.82	5.50	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.50	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.50	ug/Kg
75-09-2	Methylene Chloride	6.50	U	6.50	11.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.74	U	0.74	5.50	ug/Kg
75-34-3	1,1-Dichloroethane	0.77	U	0.77	5.50	ug/Kg
110-82-7	Cyclohexane	0.92	U	0.92	5.50	ug/Kg
78-93-3	2-Butanone	8.00	U	8.00	27.4	ug/Kg
56-23-5	Carbon Tetrachloride	0.87	U	0.87	5.50	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.74	U	0.74	5.50	ug/Kg
74-97-5	Bromochloromethane	0.89	U	0.89	5.50	ug/Kg
67-66-3	Chloroform	0.73	U	0.73	5.50	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.82	U	0.82	5.50	ug/Kg
108-87-2	Methylcyclohexane	0.88	U	0.88	5.50	ug/Kg
71-43-2	Benzene	0.72	U	0.72	5.50	ug/Kg
107-06-2	1,2-Dichloroethane	0.92	U	0.92	5.50	ug/Kg
79-01-6	Trichloroethene	0.80	U	0.80	5.50	ug/Kg
78-87-5	1,2-Dichloropropane	0.71	U	0.71	5.50	ug/Kg
75-27-4	Bromodichloromethane	0.77	U	0.77	5.50	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.00	U	5.00	27.4	ug/Kg
108-88-3	Toluene	0.69	U	0.69	5.50	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.81	U	0.81	5.50	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.78	U	0.78	5.50	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35A	SDG No.:	O1232
Lab Sample ID:	O1232-08	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	91.3
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012298.D	1		01/20/23 18:10	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.94	U	0.94	5.50	ug/Kg
591-78-6	2-Hexanone	5.10	U	5.10	27.4	ug/Kg
124-48-1	Dibromochloromethane	0.82	U	0.82	5.50	ug/Kg
106-93-4	1,2-Dibromoethane	0.82	U	0.82	5.50	ug/Kg
127-18-4	Tetrachloroethene	0.83	U	0.83	5.50	ug/Kg
108-90-7	Chlorobenzene	0.71	U	0.71	5.50	ug/Kg
100-41-4	Ethyl Benzene	0.77	U	0.77	5.50	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	11.0	ug/Kg
95-47-6	o-Xylene	0.87	U	0.87	5.50	ug/Kg
100-42-5	Styrene	0.87	U	0.87	5.50	ug/Kg
75-25-2	Bromoform	0.89	U	0.89	5.50	ug/Kg
98-82-8	Isopropylbenzene	0.79	U	0.79	5.50	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.50	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.73	U	0.73	5.50	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.69	U	0.69	5.50	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.70	U	0.70	5.50	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.50	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.50	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.50	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	67.8		50 - 163	136%	SPK: 50
1868-53-7	Dibromofluoromethane	55.9		54 - 147	112%	SPK: 50
2037-26-5	Toluene-d8	65.5		58 - 134	131%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.0		30 - 143	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	188000	7.789			
540-36-3	1,4-Difluorobenzene	314000	8.691			
3114-55-4	Chlorobenzene-d5	302000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	141000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35A	SDG No.:	O1232
Lab Sample ID:	O1232-08	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	91.3
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012298.D	1		01/20/23 18:10	VY012023

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35B	SDG No.:	O1232
Lab Sample ID:	O1232-09	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	93.3
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012299.D	1		01/20/23 18:33	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.91	U	0.91	5.30	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.30	ug/Kg
75-01-4	Vinyl Chloride	0.96	U	0.96	5.30	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.30	ug/Kg
75-00-3	Chloroethane	0.94	U	0.94	5.30	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.30	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.76	U	0.76	5.30	ug/Kg
75-35-4	1,1-Dichloroethene	0.91	U	0.91	5.30	ug/Kg
67-64-1	Acetone	12.9	U	12.9	26.4	ug/Kg
75-15-0	Carbon Disulfide	0.79	U	0.79	5.30	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.98	U	0.98	5.30	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.30	ug/Kg
75-09-2	Methylene Chloride	6.30	U	6.30	10.6	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.72	U	0.72	5.30	ug/Kg
75-34-3	1,1-Dichloroethane	0.74	U	0.74	5.30	ug/Kg
110-82-7	Cyclohexane	0.89	U	0.89	5.30	ug/Kg
78-93-3	2-Butanone	7.70	U	7.70	26.4	ug/Kg
56-23-5	Carbon Tetrachloride	0.84	U	0.84	5.30	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.72	U	0.72	5.30	ug/Kg
74-97-5	Bromochloromethane	0.86	U	0.86	5.30	ug/Kg
67-66-3	Chloroform	0.71	U	0.71	5.30	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.79	U	0.79	5.30	ug/Kg
108-87-2	Methylcyclohexane	0.85	U	0.85	5.30	ug/Kg
71-43-2	Benzene	0.70	U	0.70	5.30	ug/Kg
107-06-2	1,2-Dichloroethane	0.89	U	0.89	5.30	ug/Kg
79-01-6	Trichloroethene	0.77	U	0.77	5.30	ug/Kg
78-87-5	1,2-Dichloropropane	0.69	U	0.69	5.30	ug/Kg
75-27-4	Bromodichloromethane	0.74	U	0.74	5.30	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.80	U	4.80	26.4	ug/Kg
108-88-3	Toluene	0.67	U	0.67	5.30	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.78	U	0.78	5.30	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.75	U	0.75	5.30	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35B	SDG No.:	O1232
Lab Sample ID:	O1232-09	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	93.3
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012299.D	1		01/20/23 18:33	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.91	U	0.91	5.30	ug/Kg
591-78-6	2-Hexanone	4.90	U	4.90	26.4	ug/Kg
124-48-1	Dibromochloromethane	0.79	U	0.79	5.30	ug/Kg
106-93-4	1,2-Dibromoethane	0.79	U	0.79	5.30	ug/Kg
127-18-4	Tetrachloroethene	0.80	U	0.80	5.30	ug/Kg
108-90-7	Chlorobenzene	0.69	U	0.69	5.30	ug/Kg
100-41-4	Ethyl Benzene	0.74	U	0.74	5.30	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.6	ug/Kg
95-47-6	o-Xylene	0.84	U	0.84	5.30	ug/Kg
100-42-5	Styrene	0.84	U	0.84	5.30	ug/Kg
75-25-2	Bromoform	0.86	U	0.86	5.30	ug/Kg
98-82-8	Isopropylbenzene	0.76	U	0.76	5.30	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.30	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.71	U	0.71	5.30	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.67	U	0.67	5.30	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.68	U	0.68	5.30	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.30	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.99	U	0.99	5.30	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.30	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	96.7	*	50 - 163	193%	SPK: 50
1868-53-7	Dibromofluoromethane	64.9		54 - 147	130%	SPK: 50
2037-26-5	Toluene-d8	67.0		58 - 134	134%	SPK: 50
460-00-4	4-Bromofluorobenzene	56.6		30 - 143	113%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	37500	7.789			
540-36-3	1,4-Difluorobenzene	64400	8.691			
3114-55-4	Chlorobenzene-d5	69300	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	33300	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35B	SDG No.:	O1232
Lab Sample ID:	O1232-09	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	93.3
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012299.D	1		01/20/23 18:33	VY012023

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35BRE	SDG No.:	O1232
Lab Sample ID:	O1232-09RE	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	93.3
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012314.D	1		01/23/23 15:24	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.91	U	0.91	5.30	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.30	ug/Kg
75-01-4	Vinyl Chloride	0.97	U	0.97	5.30	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.30	ug/Kg
75-00-3	Chloroethane	0.94	U	0.94	5.30	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.30	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.76	U	0.76	5.30	ug/Kg
75-35-4	1,1-Dichloroethene	0.91	U	0.91	5.30	ug/Kg
67-64-1	Acetone	12.9	U	12.9	26.5	ug/Kg
75-15-0	Carbon Disulfide	0.80	U	0.80	5.30	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.99	U	0.99	5.30	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.30	ug/Kg
75-09-2	Methylene Chloride	6.30	U	6.30	10.6	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.72	U	0.72	5.30	ug/Kg
75-34-3	1,1-Dichloroethane	0.74	U	0.74	5.30	ug/Kg
110-82-7	Cyclohexane	0.89	U	0.89	5.30	ug/Kg
78-93-3	2-Butanone	7.70	U	7.70	26.5	ug/Kg
56-23-5	Carbon Tetrachloride	0.84	U	0.84	5.30	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.72	U	0.72	5.30	ug/Kg
74-97-5	Bromochloromethane	0.86	U	0.86	5.30	ug/Kg
67-66-3	Chloroform	0.71	U	0.71	5.30	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.80	U	0.80	5.30	ug/Kg
108-87-2	Methylcyclohexane	0.85	U	0.85	5.30	ug/Kg
71-43-2	Benzene	0.70	U	0.70	5.30	ug/Kg
107-06-2	1,2-Dichloroethane	0.89	U	0.89	5.30	ug/Kg
79-01-6	Trichloroethene	0.77	U	0.77	5.30	ug/Kg
78-87-5	1,2-Dichloropropane	0.69	U	0.69	5.30	ug/Kg
75-27-4	Bromodichloromethane	0.74	U	0.74	5.30	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.90	U	4.90	26.5	ug/Kg
108-88-3	Toluene	0.67	U	0.67	5.30	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.79	U	0.79	5.30	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.75	U	0.75	5.30	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35BRE	SDG No.:	O1232
Lab Sample ID:	O1232-09RE	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	93.3
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012314.D	1		01/23/23 15:24	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.91	U	0.91	5.30	ug/Kg
591-78-6	2-Hexanone	5.00	U	5.00	26.5	ug/Kg
124-48-1	Dibromochloromethane	0.80	U	0.80	5.30	ug/Kg
106-93-4	1,2-Dibromoethane	0.80	U	0.80	5.30	ug/Kg
127-18-4	Tetrachloroethene	0.81	U	0.81	5.30	ug/Kg
108-90-7	Chlorobenzene	0.69	U	0.69	5.30	ug/Kg
100-41-4	Ethyl Benzene	0.74	U	0.74	5.30	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.6	ug/Kg
95-47-6	o-Xylene	0.84	U	0.84	5.30	ug/Kg
100-42-5	Styrene	0.84	U	0.84	5.30	ug/Kg
75-25-2	Bromoform	0.86	U	0.86	5.30	ug/Kg
98-82-8	Isopropylbenzene	0.76	U	0.76	5.30	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.30	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.71	U	0.71	5.30	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.67	U	0.67	5.30	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.68	U	0.68	5.30	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.30	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.30	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.30	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	91.6	*	50 - 163	183%	SPK: 50
1868-53-7	Dibromofluoromethane	59.8		54 - 147	120%	SPK: 50
2037-26-5	Toluene-d8	66.2		58 - 134	132%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.3		30 - 143	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	39100	7.789			
540-36-3	1,4-Difluorobenzene	65200	8.691			
3114-55-4	Chlorobenzene-d5	65300	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	29200	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P-35BRE	SDG No.:	O1232
Lab Sample ID:	O1232-09RE	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	93.3
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012314.D	1		01/23/23 15:24	VY012323

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	DUP01	SDG No.:	O1232
Lab Sample ID:	O1232-10	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	90.1
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012300.D	1		01/20/23 18:57	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.95	U	0.95	5.50	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.50	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.50	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.50	ug/Kg
75-00-3	Chloroethane	0.99	U	0.99	5.50	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.50	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.80	U	0.80	5.50	ug/Kg
75-35-4	1,1-Dichloroethene	0.95	U	0.95	5.50	ug/Kg
67-64-1	Acetone	13.5	U	13.5	27.7	ug/Kg
75-15-0	Carbon Disulfide	0.83	U	0.83	5.50	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.50	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.50	ug/Kg
75-09-2	Methylene Chloride	6.60	U	6.60	11.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.75	U	0.75	5.50	ug/Kg
75-34-3	1,1-Dichloroethane	0.78	U	0.78	5.50	ug/Kg
110-82-7	Cyclohexane	0.93	U	0.93	5.50	ug/Kg
78-93-3	2-Butanone	8.10	U	8.10	27.7	ug/Kg
56-23-5	Carbon Tetrachloride	0.88	U	0.88	5.50	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.75	5.50	ug/Kg
74-97-5	Bromochloromethane	0.90	U	0.90	5.50	ug/Kg
67-66-3	Chloroform	0.74	U	0.74	5.50	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.83	U	0.83	5.50	ug/Kg
108-87-2	Methylcyclohexane	0.89	U	0.89	5.50	ug/Kg
71-43-2	Benzene	3.30	J	0.73	5.50	ug/Kg
107-06-2	1,2-Dichloroethane	0.93	U	0.93	5.50	ug/Kg
79-01-6	Trichloroethene	0.81	U	0.81	5.50	ug/Kg
78-87-5	1,2-Dichloropropane	0.72	U	0.72	5.50	ug/Kg
75-27-4	Bromodichloromethane	0.78	U	0.78	5.50	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	27.7	ug/Kg
108-88-3	Toluene	1.80	J	0.70	5.50	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.82	U	0.82	5.50	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.79	U	0.79	5.50	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	DUP01	SDG No.:	O1232
Lab Sample ID:	O1232-10	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	90.1
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012300.D	1		01/20/23 18:57	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.95	U	0.95	5.50	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	27.7	ug/Kg
124-48-1	Dibromochloromethane	0.83	U	0.83	5.50	ug/Kg
106-93-4	1,2-Dibromoethane	0.83	U	0.83	5.50	ug/Kg
127-18-4	Tetrachloroethene	0.84	U	0.84	5.50	ug/Kg
108-90-7	Chlorobenzene	0.72	U	0.72	5.50	ug/Kg
100-41-4	Ethyl Benzene	0.78	U	0.78	5.50	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	11.1	ug/Kg
95-47-6	o-Xylene	0.88	U	0.88	5.50	ug/Kg
100-42-5	Styrene	0.88	U	0.88	5.50	ug/Kg
75-25-2	Bromoform	0.90	U	0.90	5.50	ug/Kg
98-82-8	Isopropylbenzene	0.80	U	0.80	5.50	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.50	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.74	U	0.74	5.50	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.50	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.71	U	0.71	5.50	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.50	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.50	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.50	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	74.6		50 - 163	149%	SPK: 50
1868-53-7	Dibromofluoromethane	57.2		54 - 147	114%	SPK: 50
2037-26-5	Toluene-d8	66.1		58 - 134	132%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.7		30 - 143	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	152000	7.789			
540-36-3	1,4-Difluorobenzene	253000	8.691			
3114-55-4	Chlorobenzene-d5	250000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	114000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	01/19/23
Client Sample ID:	DUP01		SDG No.:	O1232
Lab Sample ID:	O1232-10		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	90.1
Sample Wt/Vol:	5.01	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012300.D	1		01/20/23 18:57	VY012023

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

LOQ = Limit of Quantitation

MDL = Method Detection Limit

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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.: O1232

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

Analytical Method: SW8260D

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
O1232-01	B-P-17A	1,2-Dichloroethane-d4	50	71.1	142	50	163
		Dibromofluoromethane	50	57.9	116	54	147
		Toluene-d8	50	65.9	132	58	134
		4-Bromofluorobenzene	50	54.9	110	30	143
O1232-02	B-P-17B	1,2-Dichloroethane-d4	50	64.9	130	50	163
		Dibromofluoromethane	50	55.9	112	54	147
		Toluene-d8	50	65.0	130	58	134
		4-Bromofluorobenzene	50	49.7	99	30	143
O1232-04	B-P-18A	1,2-Dichloroethane-d4	50	75.6	151	50	163
		Dibromofluoromethane	50	55.2	110	54	147
		Toluene-d8	50	65.5	131	58	134
		4-Bromofluorobenzene	50	53.7	107	30	143
O1232-05	B-P-18B	1,2-Dichloroethane-d4	50	69.3	139	50	163
		Dibromofluoromethane	50	55.4	111	54	147
		Toluene-d8	50	64.9	130	58	134
		4-Bromofluorobenzene	50	52.6	105	30	143
O1232-06	B-P-19A	1,2-Dichloroethane-d4	50	77.5	155	50	163
		Dibromofluoromethane	50	57.0	114	54	147
		Toluene-d8	50	65.8	132	58	134
		4-Bromofluorobenzene	50	53.9	108	30	143
O1232-07	B-P-19B	1,2-Dichloroethane-d4	50	55.1	110	50	163
		Dibromofluoromethane	50	54.4	109	54	147
		Toluene-d8	50	64.4	129	58	134
		4-Bromofluorobenzene	50	41.6	83	30	143
O1232-08	B-P-35A	1,2-Dichloroethane-d4	50	67.8	136	50	163
		Dibromofluoromethane	50	55.9	112	54	147
		Toluene-d8	50	65.5	131	58	134
		4-Bromofluorobenzene	50	53.0	106	30	143
O1232-09	B-P-35B	1,2-Dichloroethane-d4	50	96.7	193 *	50	163
		Dibromofluoromethane	50	64.9	130	54	147
		Toluene-d8	50	67.0	134	58	134
		4-Bromofluorobenzene	50	56.6	113	30	143
O1232-09RE	B-P-35BRE	1,2-Dichloroethane-d4	50	91.6	183 *	50	163
		Dibromofluoromethane	50	59.8	120	54	147
		Toluene-d8	50	66.2	132	58	134
		4-Bromofluorobenzene	50	53.3	107	30	143
O1232-10	DUP01	1,2-Dichloroethane-d4	50	74.6	149	50	163
		Dibromofluoromethane	50	57.2	114	54	147
		Toluene-d8	50	66.1	132	58	134
		4-Bromofluorobenzene	50	53.7	107	30	143
VY0120SBL01	VY0120SBL01	1,2-Dichloroethane-d4	50	69.0	138	50	163
		Dibromofluoromethane	50	56.2	112	54	147
		Toluene-d8	50	65.7	131	58	134
		4-Bromofluorobenzene	50	53.6	107	30	143
VY0120SBS01	VY0120SBS01	1,2-Dichloroethane-d4	50	46.6	93	50	163
		Dibromofluoromethane	50	45.1	90	54	147
		Toluene-d8	50	47.4	95	58	134
		4-Bromofluorobenzene	50	44.4	89	30	143
VY0120SBSD01	VY0120SBSD01	1,2-Dichloroethane-d4	50	45.5	91	50	163
		Dibromofluoromethane	50	46.2	92	54	147
		Toluene-d8	50	48.7	97	58	134
		4-Bromofluorobenzene	50	44.8	90	30	143



Surrogate Summary

SDG No.: O1232
Client: Louis Berger U.S., Inc., A WSP Company
Analytical Method: SW8260D

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
VY0123SBL01	VY0123SBL01	1,2-Dichloroethane-d4	50	52.7	105	50	163
		Dibromofluoromethane	50	45.4	91	54	147
		Toluene-d8	50	47.0	94	58	134
		4-Bromofluorobenzene	50	41.2	82	30	143
VY0123SBS01	VY0123SBS01	1,2-Dichloroethane-d4	50	49.4	99	50	163
		Dibromofluoromethane	50	46.3	93	54	147
		Toluene-d8	50	48.5	97	58	134
		4-Bromofluorobenzene	50	44.5	89	30	143

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

SDG No.: O1232

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

Analytical Method: SW8260D

Datafile : VY012282.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VY0120SBS01	Dichlorodifluoromethane	20	20.1	ug/Kg	101			64	136	
	Chloromethane	20	19.9	ug/Kg	100			70	130	
	Vinyl chloride	20	19.6	ug/Kg	98			72	129	
	Bromomethane	20	20.2	ug/Kg	101			58	141	
	Chloroethane	20	20.1	ug/Kg	101			69	130	
	Trichlorofluoromethane	20	19.2	ug/Kg	96			69	134	
	1,1,2-Trichlorotrifluoroethane	20	20.5	ug/Kg	103			81	123	
	1,1-Dichloroethene	20	20.2	ug/Kg	101			79	121	
	Acetone	100	91.9	ug/Kg	92			60	131	
	Carbon disulfide	20	19.9	ug/Kg	100			45	154	
	Methyl tert-butyl Ether	20	19.7	ug/Kg	99			77	129	
	Methyl Acetate	20	19.6	ug/Kg	98			69	149	
	Methylene Chloride	20	16.6	ug/Kg	83			39	175	
	trans-1,2-Dichloroethene	20	20.3	ug/Kg	102			80	123	
	1,1-Dichloroethane	20	20.6	ug/Kg	103			82	123	
	Cyclohexane	20	20.2	ug/Kg	101			76	122	
	2-Butanone	100	100	ug/Kg	100			69	131	
	Carbon Tetrachloride	20	18.9	ug/Kg	95			76	129	
	cis-1,2-Dichloroethene	20	20.6	ug/Kg	103			82	123	
	Bromochloromethane	20	20.5	ug/Kg	103			62	134	
	Chloroform	20	20.1	ug/Kg	101			82	125	
	1,1,1-Trichloroethane	20	19.3	ug/Kg	97			80	126	
	Methylcyclohexane	20	20.0	ug/Kg	100			77	123	
	Benzene	20	20.3	ug/Kg	102			84	121	
	1,2-Dichloroethane	20	19.2	ug/Kg	96			81	126	
	Trichloroethene	20	20.0	ug/Kg	100			83	122	
	1,2-Dichloropropane	20	21.3	ug/Kg	106			83	122	
	Bromodichloromethane	20	19.7	ug/Kg	99			82	123	
	4-Methyl-2-Pentanone	100	100	ug/Kg	100			70	135	
	Toluene	20	20.0	ug/Kg	100			83	122	
	t-1,3-Dichloropropene	20	19.8	ug/Kg	99			78	124	
	cis-1,3-Dichloropropene	20	19.9	ug/Kg	100			81	122	
	1,1,2-Trichloroethane	20	20.2	ug/Kg	101			82	125	
	2-Hexanone	100	100	ug/Kg	100			66	138	
	Dibromochloromethane	20	19.9	ug/Kg	100			79	125	
	1,2-Dibromoethane	20	20.1	ug/Kg	101			80	125	
	Tetrachloroethene	20	21.5	ug/Kg	108			83	125	
	Chlorobenzene	20	19.9	ug/Kg	100			84	122	
	Ethyl Benzene	20	19.9	ug/Kg	100			82	124	
	m/p-Xylenes	40	40.1	ug/Kg	100			83	124	
	o-Xylene	20	20.0	ug/Kg	100			83	123	
	Styrene	20	20.1	ug/Kg	101			82	124	
	Bromoform	20	20.0	ug/Kg	100			75	127	
	Isopropylbenzene	20	20.2	ug/Kg	101			82	124	
	1,1,2,2-Tetrachloroethane	20	20.8	ug/Kg	104			77	127	
	1,3-Dichlorobenzene	20	20.0	ug/Kg	100			83	122	
	1,4-Dichlorobenzene	20	19.6	ug/Kg	98			84	121	
	1,2-Dichlorobenzene	20	19.9	ug/Kg	100			83	124	
	1,2-Dibromo-3-Chloropropane	20	19.7	ug/Kg	99			66	134	



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

SDG No.: O1232
Client: Louis Berger U.S., Inc., A WSP Company
Analytical Method: SW8260D

Datafile : VY012282.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VY0120SBS01	1,2,4-Trichlorobenzene	20	18.8	ug/Kg	94			78	127	
	1,2,3-Trichlorobenzene	20	18.7	ug/Kg	94			70	137	

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

SDG No.: O1232

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

Analytical Method: SW8260D

Datafile : VY012283.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VY0120SBSD01	Dichlorodifluoromethane	20	20.8	ug/Kg	104	3		64	136	20
	Chloromethane	20	20.9	ug/Kg	104	4		70	130	20
	Vinyl chloride	20	20.8	ug/Kg	104	6		72	129	20
	Bromomethane	20	19.9	ug/Kg	100	1		58	141	20
	Chloroethane	20	20.4	ug/Kg	102	1		69	130	20
	Trichlorofluoromethane	20	19.6	ug/Kg	98	2		69	134	20
	1,1,2-Trichlorotrifluoroethane	20	20.9	ug/Kg	104	1		81	123	20
	1,1-Dichloroethene	20	20.6	ug/Kg	103	2		79	121	20
	Acetone	100	85.8	ug/Kg	86	7		60	131	20
	Carbon disulfide	20	20.4	ug/Kg	102	2		45	154	20
	Methyl tert-butyl Ether	20	19.3	ug/Kg	97	2		77	129	20
	Methyl Acetate	20	19.9	ug/Kg	100	2		69	149	20
	Methylene Chloride	20	17.1	ug/Kg	86	4		39	175	20
	trans-1,2-Dichloroethene	20	20.9	ug/Kg	104	2		80	123	20
	1,1-Dichloroethane	20	21.0	ug/Kg	105	2		82	123	20
	Cyclohexane	20	21.0	ug/Kg	105	4		76	122	20
	2-Butanone	100	99.5	ug/Kg	100	0		69	131	20
	Carbon Tetrachloride	20	19.5	ug/Kg	98	3		76	129	20
	cis-1,2-Dichloroethene	20	20.8	ug/Kg	104	1		82	123	20
	Bromochloromethane	20	20.1	ug/Kg	101	2		62	134	20
	Chloroform	20	19.9	ug/Kg	100	1		82	125	20
	1,1,1-Trichloroethane	20	19.7	ug/Kg	99	2		80	126	20
	Methylcyclohexane	20	21.5	ug/Kg	108	8		77	123	20
	Benzene	20	20.9	ug/Kg	104	2		84	121	20
	1,2-Dichloroethane	20	19.1	ug/Kg	96	0		81	126	20
	Trichloroethene	20	20.9	ug/Kg	104	4		83	122	20
	1,2-Dichloropropane	20	22.0	ug/Kg	110	4		83	122	20
	Bromodichloromethane	20	19.9	ug/Kg	100	1		82	123	20
	4-Methyl-2-Pentanone	100	100	ug/Kg	100	0		70	135	20
	Toluene	20	20.4	ug/Kg	102	2		83	122	20
	t-1,3-Dichloropropene	20	19.9	ug/Kg	100	1		78	124	20
	cis-1,3-Dichloropropene	20	20.7	ug/Kg	104	4		81	122	20
	1,1,2-Trichloroethane	20	20.0	ug/Kg	100	1		82	125	20
	2-Hexanone	100	98.5	ug/Kg	99	1		66	138	20
	Dibromochloromethane	20	19.9	ug/Kg	100	0		79	125	20
	1,2-Dibromoethane	20	20.2	ug/Kg	101	0		80	125	20
	Tetrachloroethene	20	21.6	ug/Kg	108	0		83	125	20
	Chlorobenzene	20	20.6	ug/Kg	103	3		84	122	20
	Ethyl Benzene	20	20.5	ug/Kg	103	3		82	124	20
	m/p-Xylenes	40	40.9	ug/Kg	102	2		83	124	20
	o-Xylene	20	20.4	ug/Kg	102	2		83	123	20
	Styrene	20	20.6	ug/Kg	103	2		82	124	20
	Bromoform	20	19.9	ug/Kg	100	0		75	127	20
	Isopropylbenzene	20	20.9	ug/Kg	104	3		82	124	20
	1,1,2,2-Tetrachloroethane	20	20.4	ug/Kg	102	2		77	127	20
	1,3-Dichlorobenzene	20	20.4	ug/Kg	102	2		83	122	20
	1,4-Dichlorobenzene	20	20.4	ug/Kg	102	4		84	121	20
	1,2-Dichlorobenzene	20	20.3	ug/Kg	102	2		83	124	20
	1,2-Dibromo-3-Chloropropane	20	18.7	ug/Kg	94	5		66	134	20



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

SDG No.: O1232
Client: Louis Berger U.S., Inc., A WSP Company
Analytical Method: SW8260D

Datafile : VY012283.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VY0120SBSD01	1,2,4-Trichlorobenzene	20	18.8	ug/Kg	94	0		78	127	20
	1,2,3-Trichlorobenzene	20	18.6	ug/Kg	93	1		70	137	20

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

SDG No.: O1232

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

Analytical Method: SW8260D

Datafile : VY012309.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VY0123SBS01	Dichlorodifluoromethane	20	21.2	ug/Kg	106			64	136	
	Chloromethane	20	19.7	ug/Kg	99			70	130	
	Vinyl chloride	20	20.0	ug/Kg	100			72	129	
	Bromomethane	20	21.0	ug/Kg	105			58	141	
	Chloroethane	20	20.8	ug/Kg	104			69	130	
	Trichlorofluoromethane	20	21.2	ug/Kg	106			69	134	
	1,1,2-Trichlorotrifluoroethane	20	20.8	ug/Kg	104			81	123	
	1,1-Dichloroethene	20	20.6	ug/Kg	103			79	121	
	Acetone	100	87.9	ug/Kg	88			60	131	
	Carbon disulfide	20	20.2	ug/Kg	101			45	154	
	Methyl tert-butyl Ether	20	19.4	ug/Kg	97			77	129	
	Methyl Acetate	20	18.3	ug/Kg	92			69	149	
	Methylene Chloride	20	15.2	ug/Kg	76			39	175	
	trans-1,2-Dichloroethene	20	20.1	ug/Kg	101			80	123	
	1,1-Dichloroethane	20	20.5	ug/Kg	103			82	123	
	Cyclohexane	20	20.2	ug/Kg	101			76	122	
	2-Butanone	100	92.3	ug/Kg	92			69	131	
	Carbon Tetrachloride	20	20.7	ug/Kg	104			76	129	
	cis-1,2-Dichloroethene	20	20.5	ug/Kg	103			82	123	
	Bromochloromethane	20	19.2	ug/Kg	96			62	134	
	Chloroform	20	20.4	ug/Kg	102			82	125	
	1,1,1-Trichloroethane	20	20.7	ug/Kg	104			80	126	
	Methylcyclohexane	20	20.8	ug/Kg	104			77	123	
	Benzene	20	20.5	ug/Kg	103			84	121	
	1,2-Dichloroethane	20	20.2	ug/Kg	101			81	126	
	Trichloroethene	20	20.1	ug/Kg	101			83	122	
	1,2-Dichloropropane	20	20.3	ug/Kg	102			83	122	
	Bromodichloromethane	20	20.3	ug/Kg	102			82	123	
	4-Methyl-2-Pentanone	100	93.5	ug/Kg	94			70	135	
	Toluene	20	20.4	ug/Kg	102			83	122	
	t-1,3-Dichloropropene	20	19.6	ug/Kg	98			78	124	
	cis-1,3-Dichloropropene	20	20.1	ug/Kg	101			81	122	
	1,1,2-Trichloroethane	20	19.6	ug/Kg	98			82	125	
	2-Hexanone	100	92.0	ug/Kg	92			66	138	
	Dibromochloromethane	20	19.7	ug/Kg	99			79	125	
	1,2-Dibromoethane	20	19.3	ug/Kg	97			80	125	
	Tetrachloroethene	20	21.0	ug/Kg	105			83	125	
	Chlorobenzene	20	20.2	ug/Kg	101			84	122	
	Ethyl Benzene	20	20.3	ug/Kg	102			82	124	
	m/p-Xylenes	40	41.2	ug/Kg	103			83	124	
	o-Xylene	20	20.0	ug/Kg	100			83	123	
	Styrene	20	20.4	ug/Kg	102			82	124	
	Bromoform	20	19.1	ug/Kg	96			75	127	
	Isopropylbenzene	20	20.6	ug/Kg	103			82	124	
	1,1,2,2-Tetrachloroethane	20	19.3	ug/Kg	97			77	127	
	1,3-Dichlorobenzene	20	19.8	ug/Kg	99			83	122	
	1,4-Dichlorobenzene	20	19.5	ug/Kg	98			84	121	
	1,2-Dichlorobenzene	20	19.4	ug/Kg	97			83	124	
	1,2-Dibromo-3-Chloropropane	20	18.7	ug/Kg	94			66	134	



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

SDG No.: O1232
Client: Louis Berger U.S., Inc., A WSP Company
Analytical Method: SW8260D

Datafile : VY012309.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	
									High	RPD
VY0123SBS01	1,2,4-Trichlorobenzene	20	17.9	ug/Kg	90			78	127	
	1,2,3-Trichlorobenzene	20	17.2	ug/Kg	86			70	137	



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VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VY0120SBL01

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM Case No.: 01232

SAS No.: 01232 SDG NO.: 01232

Lab File ID: VY012281.D

Lab Sample ID: VY0120SBL01

Date Analyzed: 01/20/2023

Time Analyzed: 11:32

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

Heated Purge: (Y/N) Y

Instrument ID: MSVOA_Y

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VY0120SBS01	VY0120SBS01	VY012282.D	01/20/2023
VY0120SBSD01	VY0120SBSD01	VY012283.D	01/20/2023
B-P-17A	01232-01	VY012292.D	01/20/2023
B-P-17B	01232-02	VY012293.D	01/20/2023
B-P-18B	01232-05	VY012295.D	01/20/2023
B-P-19B	01232-07	VY012297.D	01/20/2023
B-P-35A	01232-08	VY012298.D	01/20/2023
B-P-35B	01232-09	VY012299.D	01/20/2023
DUP01	01232-10	VY012300.D	01/20/2023

COMMENTS:



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VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VY0123SBL01

Lab Name: CHEMTECH

Contract: loui01

Lab Code: CHEM Case No.: O1232

SAS No.: O1232 SDG NO.: O1232

Lab File ID: VY012308.D

Lab Sample ID: VY0123SBL01

Date Analyzed: 01/23/2023

Time Analyzed: 13:04

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

Heated Purge: (Y/N) Y

Instrument ID: MSVOA_Y

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VY0123SBS01	VY0123SBS01	VY012309.D	01/23/2023
B-P-18A	O1232-04	VY012311.D	01/23/2023
B-P-19A	O1232-06	VY012312.D	01/23/2023
B-P-35BRE	O1232-09RE	VY012314.D	01/23/2023

COMMENTS: _____



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: loui01
Lab Code: CHEM Case No.: 01232 SAS No.: 01232 SDG NO.: 01232
Lab File ID: VY012193.D BFB Injection Date: 01/16/2023
Instrument ID: MSVOA_Y BFB Injection Time: 09:00
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.8
75	30.0 - 60.0% of mass 95	54.6
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	1 (1.1) 1
174	50.0 - 100.0% of mass 95	88.4
175	5.0 - 9.0% of mass 174	6.7 (7.6) 1
176	95.0 - 101.0% of mass 174	85.2 (96.4) 1
177	5.0 - 9.0% of mass 176	5.9 (6.9) 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
VSTDIC005	VSTDIC005	VY012194.D	01/16/2023	12:17
VSTDIC010	VSTDIC010	VY012195.D	01/16/2023	13:03
VSTDIC020	VSTDIC020	VY012196.D	01/16/2023	13:26
VSTDIC050	VSTDIC050	VY012197.D	01/16/2023	13:48
VSTDIC100	VSTDIC100	VY012198.D	01/16/2023	14:11
VSTDIC150	VSTDIC150	VY012199.D	01/16/2023	14:34



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: loui01
Lab Code: CHEM Case No.: 01232 SAS No.: 01232 SDG NO.: 01232
Lab File ID: VY012279.D BFB Injection Date: 01/20/2023
Instrument ID: MSVOA_Y BFB Injection Time: 09:50
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.4
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	6.7
173	Less than 2.0% of mass 174	1 (1.1) 1
174	50.0 - 100.0% of mass 95	90.2
175	5.0 - 9.0% of mass 174	6.6 (7.3) 1
176	95.0 - 101.0% of mass 174	86.4 (95.8) 1
177	5.0 - 9.0% of mass 176	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
VSTDCCC050	VSTDCCC050	VY012280.D	01/20/2023	10:34
VY0120SBL01	VY0120SBL01	VY012281.D	01/20/2023	11:32
VY0120SBS01	VY0120SBS01	VY012282.D	01/20/2023	11:55
VY0120SBSD01	VY0120SBSD01	VY012283.D	01/20/2023	12:18
B-P-17A	01232-01	VY012292.D	01/20/2023	15:49
B-P-17B	01232-02	VY012293.D	01/20/2023	16:13
B-P-18B	01232-05	VY012295.D	01/20/2023	17:00
B-P-19B	01232-07	VY012297.D	01/20/2023	17:46
B-P-35A	01232-08	VY012298.D	01/20/2023	18:10
B-P-35B	01232-09	VY012299.D	01/20/2023	18:33
DUP01	01232-10	VY012300.D	01/20/2023	18:57



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: loui01
Lab Code: CHEM Case No.: 01232 SAS No.: 01232 SDG NO.: 01232
Lab File ID: VY012306.D BFB Injection Date: 01/23/2023
Instrument ID: MSVOA_Y BFB Injection Time: 10:03
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	54.6
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	1 (1.1) 1
174	50.0 - 100.0% of mass 95	90.6
175	5.0 - 9.0% of mass 174	6.3 (7) 1
176	95.0 - 101.0% of mass 174	87.1 (96.1) 1
177	5.0 - 9.0% of mass 176	5.8 (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	VY012307.D	01/23/2023	12:09
VY0123SBL01	VY0123SBL01	VY012308.D	01/23/2023	13:04
VY0123SBS01	VY0123SBS01	VY012309.D	01/23/2023	13:27
B-P-18A	O1232-04	VY012311.D	01/23/2023	14:14
B-P-19A	O1232-06	VY012312.D	01/23/2023	14:37
B-P-35BRE	O1232-09RE	VY012314.D	01/23/2023	15:24

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: loui01
 Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232
 Lab File ID: VY012280.D Date Analyzed: 01/20/2023
 Instrument ID: MSVOA_Y Time Analyzed: 10:34
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	233023	7.79	353084	8.69	315640	11.49
UPPER LIMIT	466046	8.289	706168	9.191	631280	11.989
LOWER LIMIT	116512	7.289	176542	8.191	157820	10.989
EPA SAMPLE NO.						
B-P-17A	188143	7.79	315261	8.69	309525	11.49
B-P-17B	128819	7.79	208628	8.69	194650	11.49
B-P-18B	205706	7.79	345925	8.69	328400	11.49
B-P-19B	63421 *	7.79	93969 *	8.69	80473 *	11.49
B-P-35A	188384	7.79	314014	8.69	302134	11.49
B-P-35B	37522 *	7.79	64399 *	8.69	69318 *	11.49
DUP01	151828	7.79	252877	8.69	249786	11.49
VY0120SBL01	217392	7.79	360969	8.69	344609	11.49
VY0120SBS01	218108	7.79	336761	8.69	305655	11.49
VY0120SBSD01	226848	7.79	340849	8.69	308539	11.49

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: loui01
 Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232
 Lab File ID: VY012280.D Date Analyzed: 01/20/2023
 Instrument ID: MSVOA_Y Time Analyzed: 10:34
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS4 AREA #	RT #				
12 HOUR STD	156820	13.428				
UPPER LIMIT	313640	13.928				
LOWER LIMIT	78410	12.928				
EPA SAMPLE NO.						
B-P-17A	144924	13.43				
B-P-17B	86164	13.43				
B-P-18B	154191	13.43				
B-P-19B	33154 *	13.43				
B-P-35A	140878	13.43				
B-P-35B	33340 *	13.43				
DUP01	114034	13.43				
VY0120SBL01	161157	13.43				
VY0120SBS01	155958	13.43				
VY0120SBSD01	155933	13.43				

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: loui01
 Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232
 Lab File ID: VY012307.D Date Analyzed: 01/23/2023
 Instrument ID: MSVOA_Y Time Analyzed: 12:09
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	179464	7.79	268117	8.69	243165	11.49
UPPER LIMIT	358928	8.289	536234	9.191	486330	11.99
LOWER LIMIT	89732	7.289	134059	8.191	121583	10.99
EPA SAMPLE NO.						
B-P-18A	170252	7.79	283949	8.69	275020	11.49
B-P-19A	142002	7.79	235758	8.69	228539	11.49
B-P-35BRE	39101 *	7.79	65182 *	8.69	65342 *	11.49
VY0123SBL01	162197	7.79	255207	8.69	227538	11.49
VY0123SBS01	173816	7.79	263834	8.69	239765	11.49

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.



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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: louie01
Lab Code: CHEM Case No.: 01232 SAS No.: 01232 SDG NO.: 01232
Lab File ID: VY012307.D Date Analyzed: 01/23/2023
Instrument ID: MSVOA_Y Time Analyzed: 12:09
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS4 AREA #	RT #				
12 HOUR STD	123436	13.428				
UPPER LIMIT	246872	13.928				
LOWER LIMIT	61718	12.928				
EPA SAMPLE NO.						
B-P-18A	125590	13.43				
B-P-19A	107729	13.43				
B-P-35BRE	29180 *	13.43				
VY0123SBL01	110055	13.43				
VY0123SBS01	122385	13.43				

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

A

B

C

D

E

F

G

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0120SBL01		SDG No.:	O1232
Lab Sample ID:	VY0120SBL01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012281.D	1		01/20/23 11:32	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.86	U	0.86	5.00	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.00	ug/Kg
75-01-4	Vinyl Chloride	0.91	U	0.91	5.00	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.00	ug/Kg
75-00-3	Chloroethane	0.89	U	0.89	5.00	ug/Kg
75-69-4	Trichlorofluoromethane	0.97	U	0.97	5.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.72	U	0.72	5.00	ug/Kg
75-35-4	1,1-Dichloroethene	0.86	U	0.86	5.00	ug/Kg
67-64-1	Acetone	12.2	U	12.2	25.0	ug/Kg
75-15-0	Carbon Disulfide	0.75	U	0.75	5.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.93	U	0.93	5.00	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.00	ug/Kg
75-09-2	Methylene Chloride	6.00	U	6.00	10.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.68	U	0.68	5.00	ug/Kg
75-34-3	1,1-Dichloroethane	0.70	U	0.70	5.00	ug/Kg
110-82-7	Cyclohexane	0.84	U	0.84	5.00	ug/Kg
78-93-3	2-Butanone	7.30	U	7.30	25.0	ug/Kg
56-23-5	Carbon Tetrachloride	0.79	U	0.79	5.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.68	U	0.68	5.00	ug/Kg
74-97-5	Bromochloromethane	0.81	U	0.81	5.00	ug/Kg
67-66-3	Chloroform	0.67	U	0.67	5.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.75	U	0.75	5.00	ug/Kg
108-87-2	Methylcyclohexane	0.80	U	0.80	5.00	ug/Kg
71-43-2	Benzene	0.66	U	0.66	5.00	ug/Kg
107-06-2	1,2-Dichloroethane	0.84	U	0.84	5.00	ug/Kg
79-01-6	Trichloroethene	0.73	U	0.73	5.00	ug/Kg
78-87-5	1,2-Dichloropropane	0.65	U	0.65	5.00	ug/Kg
75-27-4	Bromodichloromethane	0.70	U	0.70	5.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.60	U	4.60	25.0	ug/Kg
108-88-3	Toluene	0.63	U	0.63	5.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.74	U	0.74	5.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.71	U	0.71	5.00	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0120SBL01	SDG No.:	O1232
Lab Sample ID:	VY0120SBL01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012281.D	1		01/20/23 11:32	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.86	U	0.86	5.00	ug/Kg
591-78-6	2-Hexanone	4.70	U	4.70	25.0	ug/Kg
124-48-1	Dibromochloromethane	0.75	U	0.75	5.00	ug/Kg
106-93-4	1,2-Dibromoethane	0.75	U	0.75	5.00	ug/Kg
127-18-4	Tetrachloroethene	0.76	U	0.76	5.00	ug/Kg
108-90-7	Chlorobenzene	0.65	U	0.65	5.00	ug/Kg
100-41-4	Ethyl Benzene	0.70	U	0.70	5.00	ug/Kg
179601-23-1	m/p-Xylenes	1.50	U	1.50	10.0	ug/Kg
95-47-6	o-Xylene	0.79	U	0.79	5.00	ug/Kg
100-42-5	Styrene	0.79	U	0.79	5.00	ug/Kg
75-25-2	Bromoform	0.81	U	0.81	5.00	ug/Kg
98-82-8	Isopropylbenzene	0.72	U	0.72	5.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.10	U	1.10	5.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.67	U	0.67	5.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.63	U	0.63	5.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.64	U	0.64	5.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.20	U	1.20	5.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.94	U	0.94	5.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.00	U	1.00	5.00	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	69.0		50 - 163	138%	SPK: 50
1868-53-7	Dibromofluoromethane	56.2		54 - 147	112%	SPK: 50
2037-26-5	Toluene-d8	65.7		58 - 134	131%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.6		30 - 143	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	217000	7.789			
540-36-3	1,4-Difluorobenzene	361000	8.691			
3114-55-4	Chlorobenzene-d5	345000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	161000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0120SBL01		SDG No.:	O1232
Lab Sample ID:	VY0120SBL01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012281.D	1		01/20/23 11:32	VY012023

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0123SBL01	SDG No.:	O1232
Lab Sample ID:	VY0123SBL01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012308.D	1		01/23/23 13:04	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	0.86	U	0.86	5.00	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.00	ug/Kg
75-01-4	Vinyl Chloride	0.91	U	0.91	5.00	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.00	ug/Kg
75-00-3	Chloroethane	0.89	U	0.89	5.00	ug/Kg
75-69-4	Trichlorofluoromethane	0.97	U	0.97	5.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.72	U	0.72	5.00	ug/Kg
75-35-4	1,1-Dichloroethene	0.86	U	0.86	5.00	ug/Kg
67-64-1	Acetone	12.2	U	12.2	25.0	ug/Kg
75-15-0	Carbon Disulfide	0.75	U	0.75	5.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.93	U	0.93	5.00	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.00	ug/Kg
75-09-2	Methylene Chloride	6.00	U	6.00	10.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.68	U	0.68	5.00	ug/Kg
75-34-3	1,1-Dichloroethane	0.70	U	0.70	5.00	ug/Kg
110-82-7	Cyclohexane	0.84	U	0.84	5.00	ug/Kg
78-93-3	2-Butanone	7.30	U	7.30	25.0	ug/Kg
56-23-5	Carbon Tetrachloride	0.79	U	0.79	5.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.68	U	0.68	5.00	ug/Kg
74-97-5	Bromochloromethane	0.81	U	0.81	5.00	ug/Kg
67-66-3	Chloroform	0.67	U	0.67	5.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.75	U	0.75	5.00	ug/Kg
108-87-2	Methylcyclohexane	0.80	U	0.80	5.00	ug/Kg
71-43-2	Benzene	0.66	U	0.66	5.00	ug/Kg
107-06-2	1,2-Dichloroethane	0.84	U	0.84	5.00	ug/Kg
79-01-6	Trichloroethene	0.73	U	0.73	5.00	ug/Kg
78-87-5	1,2-Dichloropropane	0.65	U	0.65	5.00	ug/Kg
75-27-4	Bromodichloromethane	0.70	U	0.70	5.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.60	U	4.60	25.0	ug/Kg
108-88-3	Toluene	0.63	U	0.63	5.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.74	U	0.74	5.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.71	U	0.71	5.00	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0123SBL01	SDG No.:	O1232
Lab Sample ID:	VY0123SBL01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012308.D	1		01/23/23 13:04	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.86	U	0.86	5.00	ug/Kg
591-78-6	2-Hexanone	4.70	U	4.70	25.0	ug/Kg
124-48-1	Dibromochloromethane	0.75	U	0.75	5.00	ug/Kg
106-93-4	1,2-Dibromoethane	0.75	U	0.75	5.00	ug/Kg
127-18-4	Tetrachloroethene	0.76	U	0.76	5.00	ug/Kg
108-90-7	Chlorobenzene	0.65	U	0.65	5.00	ug/Kg
100-41-4	Ethyl Benzene	0.70	U	0.70	5.00	ug/Kg
179601-23-1	m/p-Xylenes	1.50	U	1.50	10.0	ug/Kg
95-47-6	o-Xylene	0.79	U	0.79	5.00	ug/Kg
100-42-5	Styrene	0.79	U	0.79	5.00	ug/Kg
75-25-2	Bromoform	0.81	U	0.81	5.00	ug/Kg
98-82-8	Isopropylbenzene	0.72	U	0.72	5.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.10	U	1.10	5.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.67	U	0.67	5.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.63	U	0.63	5.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.64	U	0.64	5.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.20	U	1.20	5.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.94	U	0.94	5.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.00	U	1.00	5.00	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.7		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	45.4		54 - 147	91%	SPK: 50
2037-26-5	Toluene-d8	47.0		58 - 134	94%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.2		30 - 143	82%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	162000	7.789			
540-36-3	1,4-Difluorobenzene	255000	8.691			
3114-55-4	Chlorobenzene-d5	228000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	110000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0123SBL01		SDG No.:	O1232
Lab Sample ID:	VY0123SBL01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012308.D	1		01/23/23 13:04	VY012323

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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0120SBS01		SDG No.:	O1232
Lab Sample ID:	VY0120SBS01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012282.D	1		01/20/23 11:55	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	20.1		0.86	5.00	ug/Kg
74-87-3	Chloromethane	19.9		1.10	5.00	ug/Kg
75-01-4	Vinyl Chloride	19.6		0.91	5.00	ug/Kg
74-83-9	Bromomethane	20.2		1.20	5.00	ug/Kg
75-00-3	Chloroethane	20.1		0.89	5.00	ug/Kg
75-69-4	Trichlorofluoromethane	19.2		0.97	5.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	20.5		0.72	5.00	ug/Kg
75-35-4	1,1-Dichloroethene	20.2		0.86	5.00	ug/Kg
67-64-1	Acetone	91.9		12.2	25.0	ug/Kg
75-15-0	Carbon Disulfide	19.9		0.75	5.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	19.7		0.93	5.00	ug/Kg
79-20-9	Methyl Acetate	19.6		1.30	5.00	ug/Kg
75-09-2	Methylene Chloride	16.6		6.00	10.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	20.3		0.68	5.00	ug/Kg
75-34-3	1,1-Dichloroethane	20.6		0.70	5.00	ug/Kg
110-82-7	Cyclohexane	20.2		0.84	5.00	ug/Kg
78-93-3	2-Butanone	100		7.30	25.0	ug/Kg
56-23-5	Carbon Tetrachloride	18.9		0.79	5.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	20.6		0.68	5.00	ug/Kg
74-97-5	Bromochloromethane	20.5		0.81	5.00	ug/Kg
67-66-3	Chloroform	20.1		0.67	5.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	19.3		0.75	5.00	ug/Kg
108-87-2	Methylcyclohexane	20.0		0.80	5.00	ug/Kg
71-43-2	Benzene	20.3		0.66	5.00	ug/Kg
107-06-2	1,2-Dichloroethane	19.2		0.84	5.00	ug/Kg
79-01-6	Trichloroethene	20.0		0.73	5.00	ug/Kg
78-87-5	1,2-Dichloropropane	21.3		0.65	5.00	ug/Kg
75-27-4	Bromodichloromethane	19.7		0.70	5.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	100		4.60	25.0	ug/Kg
108-88-3	Toluene	20.0		0.63	5.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	19.8		0.74	5.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	19.9		0.71	5.00	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0120SBS01	SDG No.:	O1232
Lab Sample ID:	VY0120SBS01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012282.D	1		01/20/23 11:55	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	20.2		0.86	5.00	ug/Kg
591-78-6	2-Hexanone	100		4.70	25.0	ug/Kg
124-48-1	Dibromochloromethane	19.9		0.75	5.00	ug/Kg
106-93-4	1,2-Dibromoethane	20.1		0.75	5.00	ug/Kg
127-18-4	Tetrachloroethene	21.5		0.76	5.00	ug/Kg
108-90-7	Chlorobenzene	19.9		0.65	5.00	ug/Kg
100-41-4	Ethyl Benzene	19.9		0.70	5.00	ug/Kg
179601-23-1	m/p-Xylenes	40.1		1.50	10.0	ug/Kg
95-47-6	o-Xylene	20.0		0.79	5.00	ug/Kg
100-42-5	Styrene	20.1		0.79	5.00	ug/Kg
75-25-2	Bromoform	20.0		0.81	5.00	ug/Kg
98-82-8	Isopropylbenzene	20.2		0.72	5.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	20.8		1.10	5.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	20.0		0.67	5.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	19.6		0.63	5.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	19.9		0.64	5.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	19.7		1.20	5.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	18.8		0.94	5.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	18.7		1.00	5.00	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	46.7		50 - 163	93%	SPK: 50
1868-53-7	Dibromofluoromethane	45.1		54 - 147	90%	SPK: 50
2037-26-5	Toluene-d8	47.3		58 - 134	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.4		30 - 143	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	218000	7.789			
540-36-3	1,4-Difluorobenzene	337000	8.691			
3114-55-4	Chlorobenzene-d5	306000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	156000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0120SBS01		SDG No.:	O1232
Lab Sample ID:	VY0120SBS01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012282.D	1		01/20/23 11:55	VY012023

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:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0123SBS01		SDG No.:	O1232
Lab Sample ID:	VY0123SBS01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012309.D	1		01/23/23 13:27	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	21.2		0.86	5.00	ug/Kg
74-87-3	Chloromethane	19.7		1.10	5.00	ug/Kg
75-01-4	Vinyl Chloride	20.0		0.91	5.00	ug/Kg
74-83-9	Bromomethane	21.0		1.20	5.00	ug/Kg
75-00-3	Chloroethane	20.8		0.89	5.00	ug/Kg
75-69-4	Trichlorofluoromethane	21.2		0.97	5.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	20.8		0.72	5.00	ug/Kg
75-35-4	1,1-Dichloroethene	20.6		0.86	5.00	ug/Kg
67-64-1	Acetone	87.9		12.2	25.0	ug/Kg
75-15-0	Carbon Disulfide	20.2		0.75	5.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	19.4		0.93	5.00	ug/Kg
79-20-9	Methyl Acetate	18.3		1.30	5.00	ug/Kg
75-09-2	Methylene Chloride	15.2		6.00	10.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	20.1		0.68	5.00	ug/Kg
75-34-3	1,1-Dichloroethane	20.5		0.70	5.00	ug/Kg
110-82-7	Cyclohexane	20.2		0.84	5.00	ug/Kg
78-93-3	2-Butanone	92.3		7.30	25.0	ug/Kg
56-23-5	Carbon Tetrachloride	20.7		0.79	5.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	20.5		0.68	5.00	ug/Kg
74-97-5	Bromochloromethane	19.2		0.81	5.00	ug/Kg
67-66-3	Chloroform	20.4		0.67	5.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	20.7		0.75	5.00	ug/Kg
108-87-2	Methylcyclohexane	20.8		0.80	5.00	ug/Kg
71-43-2	Benzene	20.5		0.66	5.00	ug/Kg
107-06-2	1,2-Dichloroethane	20.2		0.84	5.00	ug/Kg
79-01-6	Trichloroethene	20.1		0.73	5.00	ug/Kg
78-87-5	1,2-Dichloropropane	20.3		0.65	5.00	ug/Kg
75-27-4	Bromodichloromethane	20.3		0.70	5.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	93.5		4.60	25.0	ug/Kg
108-88-3	Toluene	20.4		0.63	5.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	19.6		0.74	5.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	20.1		0.71	5.00	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0123SBS01	SDG No.:	O1232
Lab Sample ID:	VY0123SBS01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012309.D	1		01/23/23 13:27	VY012323

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	19.6		0.86	5.00	ug/Kg
591-78-6	2-Hexanone	92.0		4.70	25.0	ug/Kg
124-48-1	Dibromochloromethane	19.7		0.75	5.00	ug/Kg
106-93-4	1,2-Dibromoethane	19.3		0.75	5.00	ug/Kg
127-18-4	Tetrachloroethene	21.0		0.76	5.00	ug/Kg
108-90-7	Chlorobenzene	20.2		0.65	5.00	ug/Kg
100-41-4	Ethyl Benzene	20.3		0.70	5.00	ug/Kg
179601-23-1	m/p-Xylenes	41.2		1.50	10.0	ug/Kg
95-47-6	o-Xylene	20.0		0.79	5.00	ug/Kg
100-42-5	Styrene	20.4		0.79	5.00	ug/Kg
75-25-2	Bromoform	19.1		0.81	5.00	ug/Kg
98-82-8	Isopropylbenzene	20.6		0.72	5.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	19.3		1.10	5.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	19.8		0.67	5.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	19.5		0.63	5.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	19.4		0.64	5.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	18.7		1.20	5.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	17.9		0.94	5.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	17.2		1.00	5.00	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.4		50 - 163	99%	SPK: 50
1868-53-7	Dibromofluoromethane	46.3		54 - 147	93%	SPK: 50
2037-26-5	Toluene-d8	48.5		58 - 134	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.5		30 - 143	89%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	174000	7.789			
540-36-3	1,4-Difluorobenzene	264000	8.691			
3114-55-4	Chlorobenzene-d5	240000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	122000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0123SBS01		SDG No.:	O1232
Lab Sample ID:	VY0123SBS01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012309.D	1		01/23/23 13:27	VY012323

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:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0120SBSD01	SDG No.:	O1232
Lab Sample ID:	VY0120SBSD01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012283.D	1		01/20/23 12:18	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
75-71-8	Dichlorodifluoromethane	20.8		0.86	5.00	ug/Kg
74-87-3	Chloromethane	20.9		1.10	5.00	ug/Kg
75-01-4	Vinyl Chloride	20.8		0.91	5.00	ug/Kg
74-83-9	Bromomethane	19.9		1.20	5.00	ug/Kg
75-00-3	Chloroethane	20.4		0.89	5.00	ug/Kg
75-69-4	Trichlorofluoromethane	19.6		0.97	5.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	20.9		0.72	5.00	ug/Kg
75-35-4	1,1-Dichloroethene	20.6		0.86	5.00	ug/Kg
67-64-1	Acetone	85.8		12.2	25.0	ug/Kg
75-15-0	Carbon Disulfide	20.4		0.75	5.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	19.3		0.93	5.00	ug/Kg
79-20-9	Methyl Acetate	19.9		1.30	5.00	ug/Kg
75-09-2	Methylene Chloride	17.1		6.00	10.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	20.9		0.68	5.00	ug/Kg
75-34-3	1,1-Dichloroethane	21.0		0.70	5.00	ug/Kg
110-82-7	Cyclohexane	21.0		0.84	5.00	ug/Kg
78-93-3	2-Butanone	99.5		7.30	25.0	ug/Kg
56-23-5	Carbon Tetrachloride	19.5		0.79	5.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	20.8		0.68	5.00	ug/Kg
74-97-5	Bromochloromethane	20.1		0.81	5.00	ug/Kg
67-66-3	Chloroform	19.9		0.67	5.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	19.7		0.75	5.00	ug/Kg
108-87-2	Methylcyclohexane	21.5		0.80	5.00	ug/Kg
71-43-2	Benzene	20.9		0.66	5.00	ug/Kg
107-06-2	1,2-Dichloroethane	19.1		0.84	5.00	ug/Kg
79-01-6	Trichloroethene	20.9		0.73	5.00	ug/Kg
78-87-5	1,2-Dichloropropane	22.0		0.65	5.00	ug/Kg
75-27-4	Bromodichloromethane	19.9		0.70	5.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	100		4.60	25.0	ug/Kg
108-88-3	Toluene	20.4		0.63	5.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	19.9		0.74	5.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	20.7		0.71	5.00	ug/Kg

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	
Client Sample ID:	VY0120SBSD01	SDG No.:	O1232
Lab Sample ID:	VY0120SBSD01	Matrix:	SOIL
Analytical Method:	SW8260	% Solid:	100
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012283.D	1		01/20/23 12:18	VY012023

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	20.0		0.86	5.00	ug/Kg
591-78-6	2-Hexanone	98.5		4.70	25.0	ug/Kg
124-48-1	Dibromochloromethane	19.9		0.75	5.00	ug/Kg
106-93-4	1,2-Dibromoethane	20.2		0.75	5.00	ug/Kg
127-18-4	Tetrachloroethene	21.6		0.76	5.00	ug/Kg
108-90-7	Chlorobenzene	20.6		0.65	5.00	ug/Kg
100-41-4	Ethyl Benzene	20.5		0.70	5.00	ug/Kg
179601-23-1	m/p-Xylenes	40.9		1.50	10.0	ug/Kg
95-47-6	o-Xylene	20.4		0.79	5.00	ug/Kg
100-42-5	Styrene	20.6		0.79	5.00	ug/Kg
75-25-2	Bromoform	19.9		0.81	5.00	ug/Kg
98-82-8	Isopropylbenzene	20.9		0.72	5.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	20.4		1.10	5.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	20.4		0.67	5.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	20.4		0.63	5.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	20.3		0.64	5.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	18.7		1.20	5.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	18.8		0.94	5.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	18.6		1.00	5.00	ug/Kg
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	45.5		50 - 163	91%	SPK: 50
1868-53-7	Dibromofluoromethane	46.2		54 - 147	92%	SPK: 50
2037-26-5	Toluene-d8	48.7		58 - 134	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.8		30 - 143	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	227000	7.789			
540-36-3	1,4-Difluorobenzene	341000	8.691			
3114-55-4	Chlorobenzene-d5	309000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	156000	13.428			

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company		Date Collected:	
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR		Date Received:	
Client Sample ID:	VY0120SBSD01		SDG No.:	O1232
Lab Sample ID:	VY0120SBSD01		Matrix:	SOIL
Analytical Method:	SW8260		% Solid:	100
Sample Wt/Vol:	5	Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY012283.D	1		01/20/23 12:18	VY012023

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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: loui01
 Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232
 Instrument ID: MSVOA_Y Calibration Date(s): 01/16/2023 01/16/2023
 Heated Purge: (Y/N) Y Calibration Time(s): 12:17 14:34
 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF005 = VY012194.D		RRF010 = VY012195.D		RRF020 = VY012196.D			
		RRF050 = VY012197.D		RRF100 = VY012198.D		RRF150 = VY012199.D			
COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
Dichlorodifluoromethane	0.456	0.520	0.486	0.372	0.410	0.378	0.437	13.8	
Chloromethane	0.452	0.440	0.400	0.368	0.389	0.372	0.403	8.7	
Vinyl Chloride	0.503	0.508	0.479	0.435	0.464	0.436	0.471	6.8	
Bromomethane	0.428	0.398	0.355	0.334	0.352	0.317	0.364	11.4	
Chloroethane	0.324	0.324	0.310	0.287	0.310	0.288	0.307	5.3	
Trichlorofluoromethane	0.951	0.994	0.945	0.842	0.929	0.853	0.919	6.5	
1,1,2-Trichlorotrifluoroethane	0.454	0.481	0.455	0.407	0.457	0.430	0.447	5.7	
1,1-Dichloroethene	0.470	0.477	0.459	0.438	0.469	0.443	0.459	3.4	
Acetone	0.111	0.149	0.123	0.154	0.149	0.150	0.139	12.9	
Carbon Disulfide	1.466	1.490	1.413	1.343	1.443	1.367	1.420	4	
Methyl tert-butyl Ether	1.159	1.395	1.250	1.280	1.325	1.273	1.280	6.1	
Methyl Acetate	0.308	0.340	0.287	0.301	0.308	0.326	0.312	6	
Methylene Chloride	1.174	1.020	0.736	0.570	0.559	0.513	0.762	36.1	
trans-1,2-Dichloroethene	0.519	0.543	0.512	0.495	0.519	0.487	0.512	3.9	
1,1-Dichloroethane	0.804	0.812	0.772	0.760	0.805	0.759	0.785	3.1	
Cyclohexane	0.845	0.795	0.707	0.633	0.713	0.681	0.729	10.6	
2-Butanone	0.125	0.175	0.143	0.157	0.156	0.166	0.154	11.5	
Carbon Tetrachloride	0.600	0.615	0.594	0.552	0.583	0.543	0.581	4.9	
cis-1,2-Dichloroethene	0.571	0.583	0.555	0.548	0.582	0.538	0.563	3.3	
Bromochloromethane	0.214	0.177	0.160	0.159	0.160	0.158	0.171	12.8	
Chloroform	0.940	0.997	0.912	0.900	0.952	0.860	0.927	5.1	
1,1,1-Trichloroethane	0.932	0.969	0.901	0.885	0.950	0.868	0.918	4.3	
Methylcyclohexane	0.549	0.566	0.556	0.514	0.564	0.550	0.550	3.4	
Benzene	1.354	1.375	1.297	1.237	1.289	1.239	1.299	4.4	
1,2-Dichloroethane	0.404	0.453	0.413	0.408	0.414	0.389	0.413	5.2	
Trichloroethene	0.404	0.405	0.395	0.372	0.387	0.366	0.388	4.2	
1,2-Dichloropropane	0.267	0.288	0.268	0.261	0.277	0.266	0.271	3.6	
Bromodichloromethane	0.437	0.488	0.460	0.446	0.468	0.440	0.457	4.2	
4-Methyl-2-Pentanone	0.165	0.218	0.193	0.199	0.195	0.211	0.197	9.3	
Toluene	0.875	0.896	0.872	0.840	0.877	0.828	0.865	3	
t-1,3-Dichloropropene	0.454	0.501	0.478	0.475	0.488	0.470	0.478	3.3	
cis-1,3-Dichloropropene	0.492	0.547	0.514	0.508	0.525	0.500	0.514	3.8	
1,1,2-Trichloroethane	0.252	0.286	0.255	0.254	0.253	0.246	0.258	5.5	

* 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:	<u>CHEMTECH</u>	Contract:	<u>loui01</u>
Lab Code:	<u>CHEM</u>	Case No.:	<u>O1232</u>
Instrument ID:	<u>MSVOA_Y</u>	SAS No.:	<u>O1232</u>
		SDG No.:	<u>O1232</u>
Heated Purge: (Y/N)	<u>Y</u>	Calibration Date(s):	<u>01/16/2023</u>
			<u>01/16/2023</u>
		Calibration Time(s):	<u>12:17</u>
			<u>14:34</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

LAB FILE ID:		RRF005 = VY012194.D		RRF010 = VY012195.D		RRF020 = VY012196.D		
		RRF050 = VY012197.D		RRF100 = VY012198.D		RRF150 = VY012199.D		
COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD
2-Hexanone	0.115	0.166	0.145	0.158	0.153	0.163	0.150	12.5
Dibromochloromethane	0.321	0.369	0.345	0.343	0.344	0.328	0.342	4.8
1,2-Dibromoethane	0.233	0.273	0.247	0.247	0.250	0.243	0.249	5.4
Tetrachloroethene	0.461	0.494	0.468	0.451	0.447	0.417	0.456	5.6
Chlorobenzene	1.097	1.064	1.013	0.990	1.013	0.961	1.023	4.8
Ethyl Benzene	1.877	1.892	1.821	1.791	1.838	1.752	1.828	2.9
m/p-Xylenes	0.732	0.752	0.730	0.711	0.726	0.687	0.723	3.1
o-Xylene	0.706	0.715	0.695	0.680	0.692	0.654	0.690	3.1
Styrene	1.140	1.203	1.157	1.149	1.167	1.106	1.154	2.8
Bromoform	0.227	0.272	0.250	0.249	0.242	0.240	0.247	6
Isopropylbenzene	3.672	3.672	3.604	3.501	3.715	3.469	3.605	2.8
1,1,2,2-Tetrachloroethane	0.544	0.622	0.546	0.563	0.561	0.572	0.568	5
1,3-Dichlorobenzene	1.837	1.799	1.736	1.665	1.725	1.591	1.726	5.2
1,4-Dichlorobenzene	1.888	1.818	1.695	1.642	1.705	1.577	1.721	6.6
1,2-Dichlorobenzene	1.660	1.639	1.521	1.485	1.511	1.422	1.540	6
1,2-Dibromo-3-Chloropropane	0.103	0.133	0.116	0.116	0.115	0.121	0.117	8.3
1,2,4-Trichlorobenzene	1.049	0.995	0.986	0.932	0.977	0.980	0.987	3.8
1,2,3-Trichlorobenzene	0.870	0.862	0.864	0.798	0.837	0.862	0.849	3.3
1,2-Dichloroethane-d4	0.533	0.551	0.498	0.409	0.409	0.388	0.465	15.3
Dibromofluoromethane	0.292	0.291	0.289	0.241	0.242	0.233	0.265	10.8
Toluene-d8	1.242	1.188	1.195	0.890	0.892	0.859	1.044	17.3
4-Bromofluorobenzene	0.425	0.419	0.403	0.333	0.336	0.323	0.373	12.7

* 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.



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: loui01

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

Instrument ID: MSVOA_Y Calibration Date/Time: 01/20/2023 10:34

Lab File ID: VY012280.D Init. Calib. Date(s): 01/16/2023 01/16/2023

Heated Purge: (Y/N) Y Init. Calib. Time(s): 12:17 14:34

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

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.437	0.401		-8.24	20
Chloromethane	0.403	0.385	0.1	-4.47	20
Vinyl Chloride	0.471	0.465		-1.27	20
Bromomethane	0.364	0.323		-11.26	20
Chloroethane	0.307	0.297		-3.26	20
Trichlorofluoromethane	0.919	0.886		-3.59	20
1,1,2-Trichlorotrifluoroethane	0.447	0.475		6.26	20
1,1-Dichloroethene	0.459	0.477		3.92	20
Acetone	0.139	0.153		10.07	20
Carbon Disulfide	1.420	1.446		1.83	20
Methyl tert-butyl Ether	1.280	1.266		-1.09	20
Methyl Acetate	0.312	0.310		-0.64	20
Methylene Chloride	0.762	0.537		-29.53	20
trans-1,2-Dichloroethene	0.512	0.536		4.69	20
1,1-Dichloroethane	0.785	0.839	0.1	6.88	20
Cyclohexane	0.729	0.760		4.25	20
2-Butanone	0.154	0.167		8.44	20
Carbon Tetrachloride	0.581	0.573		-1.38	20
cis-1,2-Dichloroethene	0.563	0.583		3.55	20
Bromochloromethane	0.171	0.168		-1.75	20
Chloroform	0.927	0.938		1.19	20
1,1,1-Trichloroethane	0.918	0.916		-0.22	20
Methylcyclohexane	0.550	0.596		8.36	20
Benzene	1.299	1.351		4	20
1,2-Dichloroethane	0.413	0.398		-3.63	20
Trichloroethene	0.388	0.411		5.93	20
1,2-Dichloropropane	0.271	0.298		9.96	20
Bromodichloromethane	0.457	0.465		1.75	20
4-Methyl-2-Pentanone	0.197	0.204		3.55	20
Toluene	0.865	0.890		2.89	20
t-1,3-Dichloropropene	0.478	0.490		2.51	20
cis-1,3-Dichloropropene	0.514	0.531		3.31	20
1,1,2-Trichloroethane	0.258	0.269		4.26	20
2-Hexanone	0.150	0.164		9.33	20
Dibromochloromethane	0.342	0.347		1.46	20
1,2-Dibromoethane	0.249	0.250		0.4	20
Tetrachloroethene	0.456	0.510		11.84	20
Chlorobenzene	1.023	1.059	0.3	3.52	20
Ethyl Benzene	1.828	1.910		4.49	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: loui01
 Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232
 Instrument ID: MSVOA_Y Calibration Date/Time: 01/20/2023 10:34
 Lab File ID: VY012280.D Init. Calib. Date(s): 01/16/2023 01/16/2023
 Heated Purge: (Y/N) Y Init. Calib. Time(s): 12:17 14:34
 GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
m/p-Xylenes	0.723	0.756		4.56	20
o-Xylene	0.690	0.723		4.78	20
Styrene	1.154	1.209		4.77	20
Bromoform	0.247	0.253	0.1	2.43	20
Isopropylbenzene	3.605	3.889		7.88	20
1,1,2,2-Tetrachloroethane	0.568	0.602	0.3	5.99	20
1,3-Dichlorobenzene	1.726	1.771		2.61	20
1,4-Dichlorobenzene	1.721	1.750		1.68	20
1,2-Dichlorobenzene	1.540	1.565		1.62	20
1,2-Dibromo-3-Chloropropane	0.117	0.119		1.71	20
1,2,4-Trichlorobenzene	0.987	1.016		2.94	20
1,2,3-Trichlorobenzene	0.849	0.879		3.53	20
1,2-Dichloroethane-d4	0.465	0.380		-18.28	20
Dibromofluoromethane	0.265	0.247		-6.79	20
Toluene-d8	1.044	0.901		-13.7	20
4-Bromofluorobenzene	0.373	0.334		-10.46	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: loui01
 Lab Code: CHEM Case No.: 01232 SAS No.: 01232 SDG No.: 01232
 Instrument ID: MSVOA_Y Calibration Date/Time: 01/23/2023 12:09
 Lab File ID: VY012307.D Init. Calib. Date(s): 01/16/2023 01/16/2023
 Heated Purge: (Y/N) Y Init. Calib. Time(s): 12:17 14:34
 GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.437	0.387		-11.44	20
Chloromethane	0.403	0.377	0.1	-6.45	20
Vinyl Chloride	0.471	0.462		-1.91	20
Bromomethane	0.364	0.354		-2.75	20
Chloroethane	0.307	0.305		-0.65	20
Trichlorofluoromethane	0.919	0.884		-3.81	20
1,1,2-Trichlorotrifluoroethane	0.447	0.440		-1.57	20
1,1-Dichloroethene	0.459	0.454		-1.09	20
Acetone	0.139	0.146		5.04	20
Carbon Disulfide	1.420	1.365		-3.87	20
Methyl tert-butyl Ether	1.280	1.242		-2.97	20
Methyl Acetate	0.312	0.292		-6.41	20
Methylene Chloride	0.762	0.518		-32.02	20
trans-1,2-Dichloroethene	0.512	0.505		-1.37	20
1,1-Dichloroethane	0.785	0.778	0.1	-0.89	20
Cyclohexane	0.729	0.682		-6.45	20
2-Butanone	0.154	0.146		-5.2	20
Carbon Tetrachloride	0.581	0.569		-2.07	20
cis-1,2-Dichloroethene	0.563	0.549		-2.66	20
Bromochloromethane	0.171	0.159		-7.02	20
Chloroform	0.927	0.919		-0.86	20
1,1,1-Trichloroethane	0.918	0.900		-1.96	20
Methylcyclohexane	0.550	0.560		1.82	20
Benzene	1.299	1.299		0	20
1,2-Dichloroethane	0.413	0.406		-1.7	20
Trichloroethene	0.388	0.383		-1.29	20
1,2-Dichloropropane	0.271	0.274		1.11	20
Bromodichloromethane	0.457	0.456		-0.22	20
4-Methyl-2-Pentanone	0.197	0.186		-5.58	20
Toluene	0.865	0.875		1.16	20
t-1,3-Dichloropropene	0.478	0.466		-2.51	20
cis-1,3-Dichloropropene	0.514	0.511		-0.58	20
1,1,2-Trichloroethane	0.258	0.247		-4.26	20
2-Hexanone	0.150	0.147		-2	20
Dibromochloromethane	0.342	0.329		-3.8	20
1,2-Dibromoethane	0.249	0.239		-4.02	20
Tetrachloroethene	0.456	0.461		1.1	20
Chlorobenzene	1.023	1.005	0.3	-1.76	20
Ethyl Benzene	1.828	1.852		1.31	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: loui01
 Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232
 Instrument ID: MSVOA_Y Calibration Date/Time: 01/23/2023 12:09
 Lab File ID: VY012307.D Init. Calib. Date(s): 01/16/2023 01/16/2023
 Heated Purge: (Y/N) Y Init. Calib. Time(s): 12:17 14:34
 GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
m/p-Xylenes	0.723	0.728		0.69	20
o-Xylene	0.690	0.693		0.44	20
Styrene	1.154	1.171		1.47	20
Bromoform	0.247	0.234	0.1	-5.26	20
Isopropylbenzene	3.605	3.679		2.05	20
1,1,2,2-Tetrachloroethane	0.568	0.540	0.3	-4.93	20
1,3-Dichlorobenzene	1.726	1.693		-1.91	20
1,4-Dichlorobenzene	1.721	1.678		-2.5	20
1,2-Dichlorobenzene	1.540	1.496		-2.86	20
1,2-Dibromo-3-Chloropropane	0.117	0.110		-5.98	20
1,2,4-Trichlorobenzene	0.987	0.948		-3.95	20
1,2,3-Trichlorobenzene	0.849	0.816		-3.89	20
1,2-Dichloroethane-d4	0.465	0.425		-8.6	20
Dibromofluoromethane	0.265	0.258		-2.64	20
Toluene-d8	1.044	0.958		-8.24	20
4-Bromofluorobenzene	0.373	0.357		-4.29	20

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