UB Orangeburg, LLC

Periodic Review Report (Part 2)

UB Orangeburg

1-45 Orangetown Shopping Center

NYSDEC Site Number C344066

July 2021

Version 1

Appendix F – Photograph Log

PHOTGRAPH LOG

UB Orangeburg, LLC
Orangetown Shopping Center
NYSDEC Site # C344066

Photo Number:
1

Date:
May 11, 2021

Description:
View of the bio-augmentation system (BAS) stub-ups.

Photo Number:
2

Date:
May 11, 2021

Description:
View of the asphalt parking lot and well manways located behind the on-site building.

Photo Number:
3

Date:
May 11, 2021

Description:
View of the asphalt parking lot and well manways located behind the on-site building. The sub-slab depressurization system (SSDS) piping connect to the back of the on-site building is also shown.

Photo Number:
4

Date:
May 11, 2021

Description:
View of the asphalt parking lot and well manways located behind the on-site building.

Photo Number:
5

Date:
June 2, 2020

Description:
View of the electric service for the SSDSs on the side of the on-site building.

Photo Number:
6

Date:
June 2, 2020

Description:
View of the asphalt parking lot and well manways located behind the on-site building.

Photo Number:
7

Date:
June 2, 2020

Description:
View of the asphalt parking lot located in front of the on-site building.

Appendix G – Laboratory Reports

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Groundwater & Environmental Services

Orangetown Shopping Center, Orangeburg, NY

855691 1102741/06/206/111

SGS Job Number: JD24265

Sampling Date: 04/30/21

Report to:

Groundwater & Environmental Services

ACohen@gesonline.com

ATTN: Alyssa Cohen

Total number of pages in report: 46

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Beth Wasserman 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

Sections: 1 2 3 4 5

Table of Contents

Sample Summary

Groundwater & Environmental Services

Job No: JD24265

Orangetown Shopping Center, Orangeburg, NY
Project No: 855691 1102741/06/206/111

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD24265-1	04/30/21	11:00	LM	05/01/21	AQ	Ground Water	MW-3
JD24265-2	04/30/21	09:15	LM	05/01/21	AQ	Ground Water	MW-4
JD24265-2D	04/30/21	09:15	LM	05/01/21	AQ	Water Dup/MSD	MW-MSD
JD24265-2S	04/30/21	09:15	LM	05/01/21	AQ	Water Matrix Spike	MW-MS
JD24265-3	04/30/21	13:10	LM	05/01/21	AQ	Ground Water	MW-5
JD24265-4	04/30/21	12:30	LM	05/01/21	AQ	Ground Water	MW-8A
JD24265-5	04/30/21	10:15	LM	05/01/21	AQ	Ground Water	MW-E
JD24265-6	04/30/21	08:00	LM	05/01/21	AQ	Ground Water	DUPLICATE
JD24265-7	04/30/21	13:15	LM	05/01/21	AQ	Field Blank Water	FIELD BLANK
JD24265-8	04/30/21	13:20	LM	05/01/21	AQ	Equipment Blank	EQUIPMENT BLANK
JD24265-9	04/30/21	13:20	LM	05/01/21	AQ	Trip Blank Water	TRIP BLANK

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the RL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Groundwater & Environmental Services	**Job No**	JD24265
Site:	Orangetown Shopping Center, Orangeburg, NY	**Report Date**	5/17/2021 9:13:08 AM

On 05/01/2021, 7 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.5 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD24265 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260D

Matrix: AQ **Batch ID:** V1A9089

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD24454-1MS, JD24454-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JD24265-3 for Bromomethane: Associated CCV outside of control limits low.
- JD24265-3 for Acetone: Associated CCV outside of control limits high, sample was ND.
- V1A9089-MB for Dibromochloromethane: MDL from current instrument.
- V1A9089-MB for 1,1,2,2-Tetrachloroethane: MDL from current instrument.

Matrix: AQ **Batch ID:** V2C8133

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24265-2MS, JD24265-2MSD were used as the QC samples indicated.
- JD24265-5 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-6 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-1 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-4 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-6 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-9 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-4 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-5 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-1 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-2 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-2 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-9 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-8 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-7 for Dichlorodifluoromethane: Associated CCV outside of control limits low.
- JD24265-7 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JD24265-8 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

GC Volatiles By Method RSK-175

Matrix: AQ **Batch ID:** GAA2292

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24265-2DUP were used as the QC samples indicated.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP26282

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24265-2MS, JD24265-2MSD, JD24265-2SDL were used as the QC samples for metals.
- JD24265-5 for Iron: Elevated sample detection limit due to difficult sample matrix.
- JD24265-2 for Iron: Elevated sample detection limit due to difficult sample matrix.
- JD24265-3 for Iron: Elevated sample detection limit due to difficult sample matrix.
- JD24265-1 for Iron: Elevated sample detection limit due to difficult sample matrix.
- JD24265-4 for Iron: Elevated sample detection limit due to difficult sample matrix.

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP33541

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24265-1MS, JD24265-2DUP, JD24265-2MS were used as the QC samples for Sulfate.

General Chemistry By Method EPA 353.2/LACHAT

Matrix: AQ **Batch ID:** GP33592

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24368-1DUP, JD24368-1MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.

General Chemistry By Method EPA353.2/SM4500NO2B

Matrix: AQ **Batch ID:** R190748

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JD24265-1 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

Matrix: AQ **Batch ID:** R190749

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JD24265-2 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

Matrix: AQ **Batch ID:** R190750

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JD24265-3 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

Matrix: AQ **Batch ID:** R190751

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JD24265-4 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

Matrix: AQ **Batch ID:** R190752

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JD24265-5 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

General Chemistry By Method SM3500FE B-11

Matrix: AQ **Batch ID:** GN17899

- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24368-1DUP, JD24368-1MS, JD24368-1MSD were used as the QC samples for Iron, Ferrous.
- JD24265-1 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.
- JD24265-2 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.
- JD24265-5 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.
- JD24265-3 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.
- JD24265-4 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.

Matrix: AQ **Batch ID:** R190787

- The data for SM3500FE B-11 meets quality control requirements.
- JD24265-1 for Iron, Ferric: Calculated as: (Iron) - (Iron, Ferrous)

Matrix: AQ **Batch ID:** R190790

- The data for SM3500FE B-11 meets quality control requirements.
- JD24265-2 for Iron, Ferric: Calculated as: (Iron) - (Iron, Ferrous)

Matrix: AQ **Batch ID:** R190791

- The data for SM3500FE B-11 meets quality control requirements.
- JD24265-4 for Iron, Ferric: Calculated as: (Iron) - (Iron, Ferrous)

Matrix: AQ **Batch ID:** R190794

- The data for SM3500FE B-11 meets quality control requirements.
- JD24265-3 for Iron, Ferric: Calculated as: (Iron) - (Iron, Ferrous)

Matrix: AQ **Batch ID:** R190795

- The data for SM3500FE B-11 meets quality control requirements.
- JD24265-5 for Iron, Ferric: Calculated as: (Iron) - (Iron, Ferrous)

General Chemistry By Method SM4500NO2 B-11

Matrix:	AQ	Batch ID:	GN17709

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24265-1MS, JD24265-1MSD were used as the QC samples for Nitrogen, Nitrite.

General Chemistry By Method SM5310 B-11

Matrix:	AQ	Batch ID:	GP33546

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD24265-1MSD, JD24265-1MS were used as the QC samples for Total Organic Carbon.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Total Organic Carbon are outside control limits. Spike recovery indicates possible matrix interference.
- RPD(s) for MSD for Total Organic Carbon are outside control limits for sample GP33546-MSD1. High RPD due to nature of sample matrix.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD24265
Account: Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Collected: 04/30/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD24265-1	**MW-3**					
cis-1,2-Dichloroethene		2.0	1.0		ug/l	SW846 8260D
Iron [a]		6090	500		ug/l	SW846 6010D
Iron, Ferric [b]		3.5	0.70		mg/l	SM3500FE B-11
Iron, Ferrous [c]		2.6	0.20		mg/l	SM3500FE B-11
Sulfate		4.7	2.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		3.8	1.0		mg/l	SM5310 B-11
JD24265-2	**MW-4**					
cis-1,2-Dichloroethene		3.6	1.0		ug/l	SW846 8260D
Iron [a]		7020	500		ug/l	SW846 6010D
Iron, Ferric [b]		6.9	0.70		mg/l	SM3500FE B-11
Nitrogen, Nitrate [d]		1.1	0.11		mg/l	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite		1.1	0.10		mg/l	EPA 353.2/LACHAT
Sulfate		30.8	2.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		3.1	1.0		mg/l	SM5310 B-11
JD24265-3	**MW-5**					
Chloroform		3.1	1.0		ug/l	SW846 8260D
cis-1,2-Dichloroethene		80.1	1.0		ug/l	SW846 8260D
trans-1,2-Dichloroethene		2.4	1.0		ug/l	SW846 8260D
Trichloroethene		5.3	1.0		ug/l	SW846 8260D
Vinyl chloride		4.0	1.0		ug/l	SW846 8260D
Ethene		0.92	0.31		ug/l	RSK-175
Iron [a]		25700	500		ug/l	SW846 6010D
Iron, Ferric [b]		7.0	1.5		mg/l	SM3500FE B-11
Iron, Ferrous [c]		18.7	1.0		mg/l	SM3500FE B-11
Nitrogen, Nitrate [d]		0.22	0.11		mg/l	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite		0.23	0.10		mg/l	EPA 353.2/LACHAT
Nitrogen, Nitrite		0.010	0.010		mg/l	SM4500NO2 B-11
Sulfate		18.1	2.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		16.4	1.0		mg/l	SM5310 B-11
JD24265-4	**MW-8A**					
cis-1,2-Dichloroethene		5.6	1.0		ug/l	SW846 8260D
Trichloroethene		5.7	1.0		ug/l	SW846 8260D
Iron [a]		16400	1000		ug/l	SW846 6010D
Iron, Ferric [b]		14.1	1.2		mg/l	SM3500FE B-11
Iron, Ferrous [c]		2.3	0.20		mg/l	SM3500FE B-11
Nitrogen, Nitrate [d]		1.3	0.11		mg/l	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite		1.3	0.10		mg/l	EPA 353.2/LACHAT

Summary of Hits

Job Number: JD24265
Account: Groundwater & Environmental Services
Project: Orangetown Shopping Center, Orangeburg, NY
Collected: 04/30/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Sulfate		17.0	2.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.5	1.0		mg/l	SM5310 B-11
JD24265-5	**MW-E**					
Iron [a]		210000	5000		ug/l	SW846 6010D
Iron, Ferric [b]		181	7.0		mg/l	SM3500FE B-11
Iron, Ferrous [c]		28.6	2.0		mg/l	SM3500FE B-11
Sulfate		23.6	2.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		15.9	1.0		mg/l	SM5310 B-11
JD24265-6	**DUPLICATE**					
cis-1,2-Dichloroethene		3.7	1.0		ug/l	SW846 8260D
JD24265-7	**FIELD BLANK**					
No hits reported in this sample.						
JD24265-8	**EQUIPMENT BLANK**					
No hits reported in this sample.						
JD24265-9	**TRIP BLANK**					
No hits reported in this sample.						

(a) Elevated sample detection limit due to difficult sample matrix.
(b) Calculated as: (Iron) - (Iron, Ferrous)
(c) Field analysis required. Received out of hold time and analyzed by request.
(d) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JD24265-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182604.D	1	05/07/21 12:19	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JD24265-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		85-118%
17060-07-0	1,2-Dichloroethane-D4	110%		80-121%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JD24265-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	RSK-175	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA88010.D	1	05/06/21 13:57	JN	n/a	n/a	GAA2292
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-85-1	Ethene	ND	0.31	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JD24265-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	6090	500	ug/l	1	05/04/21	05/06/21	ND	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA50488
(2) Prep QC Batch: MP26282

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	JD24265-1	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferric [a]	3.5	0.70	mg/l	1	05/06/21 23:10	EB	SM3500FE B-11
Iron, Ferrous [b]	2.6	0.20	mg/l	1	05/06/21 23:10	EB	SM3500FE B-11
Nitrogen, Nitrate [c]	< 0.11	0.11	mg/l	1	05/06/21 15:42	BM	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	< 0.10	0.10	mg/l	1	05/06/21 15:42	BM	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	05/01/21 15:00	JOO	SM4500NO2 B-11
Sulfate	4.7	2.0	mg/l	1	05/05/21 23:48	MH	EPA 300/SW846 9056A
Total Organic Carbon	3.8	1.0	mg/l	1	05/10/21 20:29	LV	SM5310 B-11

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JD24265-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182603.D	1	05/07/21 11:50	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JD24265-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		85-118%
17060-07-0	1,2-Dichloroethane-D4	111%		80-121%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JD24265-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	RSK-175	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA88013.D	1	05/06/21 14:43	JN	n/a	n/a	GAA2292
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-85-1	Ethene	ND	0.31	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JD24265-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	7020	500	ug/l	1	05/04/21	05/06/21	ND	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA50488
(2) Prep QC Batch: MP26282

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	JD24265-2	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferric [a]	6.9	0.70	mg/l	1	05/06/21 23:10	EB	SM3500FE B-11
Iron, Ferrous [b]	< 0.20	0.20	mg/l	1	05/06/21 23:10	EB	SM3500FE B-11
Nitrogen, Nitrate [c]	1.1	0.11	mg/l	1	05/06/21 15:44	BM	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	1.1	0.10	mg/l	1	05/06/21 15:44	BM	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	05/01/21 15:00	JOO	SM4500NO2 B-11
Sulfate	30.8	2.0	mg/l	1	05/05/21 22:55	MH	EPA 300/SW846 9056A
Total Organic Carbon	3.1	1.0	mg/l	1	05/14/21 15:41	LV	SM5310 B-11

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	JD24265-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A210226.D	1	05/10/21 12:30	KC	n/a	n/a	V1A9089
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.1	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	80.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.4	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	JD24265-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	5.3	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	4.0	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		85-118%
17060-07-0	1,2-Dichloroethane-D4	97%		80-121%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	JD24265-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	RSK-175	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA88012.D	1	05/06/21 14:28	JN	n/a	n/a	GAA2292
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-85-1	Ethene	0.92	0.31	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	JD24265-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	25700	500	ug/l	1	05/04/21	05/06/21	ND	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA50488
(2) Prep QC Batch: MP26282

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	JD24265-3	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferric [a]	7.0	1.5	mg/l	1	05/06/21 23:50	EB	SM3500FE B-11
Iron, Ferrous [b]	18.7	1.0	mg/l	5	05/06/21 23:50	EB	SM3500FE B-11
Nitrogen, Nitrate [c]	0.22	0.11	mg/l	1	05/06/21 15:45	BM	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	0.23	0.10	mg/l	1	05/06/21 15:45	BM	EPA 353.2/LACHAT
Nitrogen, Nitrite	0.010	0.010	mg/l	1	05/01/21 15:00	JOO	SM4500NO2 B-11
Sulfate	18.1	2.0	mg/l	1	05/06/21 10:55	MH	EPA 300/SW846 9056A
Total Organic Carbon	16.4	1.0	mg/l	1	05/14/21 15:51	LV	SM5310 B-11

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-8A		
Lab Sample ID:	JD24265-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182605.D	1	05/07/21 12:48	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	5.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8A		
Lab Sample ID:	JD24265-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	5.7	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		85-118%
17060-07-0	1,2-Dichloroethane-D4	108%		80-121%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8A		
Lab Sample ID:	JD24265-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	RSK-175	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA88015.D	1	05/06/21 15:11	JN	n/a	n/a	GAA2292
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-85-1	Ethene	ND	0.31	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8A		
Lab Sample ID:	JD24265-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	16400	1000	ug/l	1	05/04/21	05/06/21	ND	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA50488
(2) Prep QC Batch: MP26282

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-8A		
Lab Sample ID:	JD24265-4	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferric [a]	14.1	1.2	mg/l	1	05/06/21 23:10	EB	SM3500FE B-11
Iron, Ferrous [b]	2.3	0.20	mg/l	1	05/06/21 23:10	EB	SM3500FE B-11
Nitrogen, Nitrate [c]	1.3	0.11	mg/l	1	05/06/21 15:46	BM	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	1.3	0.10	mg/l	1	05/06/21 15:46	BM	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	05/01/21 15:00	JOO	SM4500NO2 B-11
Sulfate	17.0	2.0	mg/l	1	05/06/21 00:23	MH	EPA 300/SW846 9056A
Total Organic Carbon	2.5	1.0	mg/l	1	05/10/21 21:31	LV	SM5310 B-11

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-E		
Lab Sample ID:	JD24265-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182606.D	1	05/07/21 13:17	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-E		
Lab Sample ID:	JD24265-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		85-118%
17060-07-0	1,2-Dichloroethane-D4	114%		80-121%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-E		
Lab Sample ID:	JD24265-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	RSK-175	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA88016.D	1	05/06/21 15:38	JN	n/a	n/a	GAA2292
Run #2							

CAS No.	Compound	Result	RL	Units	Q
74-85-1	Ethene	ND	0.31	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-E		
Lab Sample ID:	JD24265-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron [a]	210000	5000	ug/l	1	05/04/21	05/06/21	ND	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA50488
(2) Prep QC Batch: MP26282

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-E		
Lab Sample ID:	JD24265-5	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
		Percent Solids:	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferric [a]	181	7.0	mg/l	1	05/06/21 23:50	EB	SM3500FE B-11
Iron, Ferrous [b]	28.6	2.0	mg/l	10	05/06/21 23:50	EB	SM3500FE B-11
Nitrogen, Nitrate [c]	< 0.11	0.11	mg/l	1	05/06/21 15:47	BM	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	< 0.10	0.10	mg/l	1	05/06/21 15:47	BM	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	05/01/21 15:00	JOO	SM4500NO2 B-11
Sulfate	23.6	2.0	mg/l	1	05/06/21 01:43	MH	EPA 300/SW846 9056A
Total Organic Carbon	15.9	1.0	mg/l	1	05/10/21 21:44	LV	SM5310 B-11

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JD24265-6	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182607.D	1	05/07/21 13:45	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE		
Lab Sample ID:	JD24265-6	**Date Sampled:**	04/30/21
Matrix:	AQ - Ground Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		85-118%
17060-07-0	1,2-Dichloroethane-D4	109%		80-121%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	JD24265-7	**Date Sampled:**	04/30/21
Matrix:	AQ - Field Blank Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182611.D	1	05/07/21 15:41	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	JD24265-7	**Date Sampled:**	04/30/21
Matrix:	AQ - Field Blank Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		85-118%
17060-07-0	1,2-Dichloroethane-D4	110%		80-121%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JD24265-8	**Date Sampled:**	04/30/21
Matrix:	AQ - Equipment Blank	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182612.D	1	05/07/21 16:10	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	JD24265-8	**Date Sampled:**	04/30/21
Matrix:	AQ - Equipment Blank	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		85-118%
17060-07-0	1,2-Dichloroethane-D4	106%		80-121%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	JD24265-9	**Date Sampled:**	04/30/21
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C182613.D	1	05/07/21 16:38	KC	n/a	n/a	V2C8133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	10	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
110-82-7	Cyclohexane	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	JD24265-9	**Date Sampled:**	04/30/21
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/01/21
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Orangetown Shopping Center, Orangeburg, NY		

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
79-20-9	Methyl Acetate	ND	5.0	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		85-118%
17060-07-0	1,2-Dichloroethane-D4	109%		80-121%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GW
FB
TB

CHAIN OF CUSTODY

Client: Urstadt Biddle Properties Inc.

BW-041521-131

E

PAGE 1 OF 1

FED-EX Tracking # 4636 0063 3960

Bottle Order Control #

Lab Quote #

Lab Job # JD24265

CLIENT/REPORTING INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
Groundwater & Environmental Services, Inc. 63 East Main Street, Pawling, NY 12564	**Project Name:** Urstadt - Orangetown Shopping Center/Sparkle Cleaners	Groundwater & Environmental Services, Inc. ges-invoices@gesonline.com ATTN: Accounts Payable
Project Manager: Michael DeGloria MDeGloria@gesonline.com NERegion@gesonline.com **Phone #:** 866-839-5195 **Extension:** 3839	**Project Address:** 1-45 Orangetown Shopping Ctr, Orangeburg, NY **Project PSID #:** 855691	**Invoice Instructions (Project #/ Phase / Task / Altorg)** 1102741/06/206/111

Sampler(s) Name: LMW WARNER

Sampler(s) Name:

Lab Sample #	Field ID / Point of Collection (Sys_loc_code)	Depth Interval (ft)	Date Sampled	Time Sampled	Sampler	Matrix	Total # Bottles	number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Amber	V8260TCL20	V RSK175 ETHENE	TOC - Total Organic Carbon	XNO3O - Nitrate	SO4 - Sulfate	XFE3 - Ferric Iron, Ferrous, Total, FE			LAB USE ONLY
1	MW-3		4.30.21	1100	LMW	WG	12	X		X	X	X					X	X	X	X	X	X			19J6
2	MW-4			0915		WG	21	X		X	X	X					X	X	X	X	X	X			A16
3	MW-5			1310		WG	12	X		X	X	X					X	X	X	X	X	X			G60
4	MW-8A			1230		WG	12	X		X	X	X					X	X	X	X	X	X			1579
5	MW-E			1015		WG	12	X		X	X	X					X	X	X	X	X	X			
2	MW-MS			0915		WG	3	X									X								
	MW-MSD			0915		WG	3	X									X								
6	Duplicate			0800		WG	3	X									X								
7	Field Blank			1315		WG	2	X									X								
8	Equipment Blank			1320		WG	2	X									X								
9	Trip Blank		LAB	LAB	LAB	WG	2	X									X								

Turnaround Time (Business Days) **Approved By (Lab PM) / Date**

- [x] Standard 14 Days _____/
- [ ] 1 day RUSH _____/
- [ ] Other _____ _____/

Laboratory Information

Lab: SGS North America, Inc.
Address: 2235 US Hwy 130, Dayton, NJ 08810
Phone: 732-355-4563
Lab PM: Beth Wasserman
Lab PM Email: Beth.Wasserman@sgs.com

Data Deliverable Information

- [ ] Commercial 'A' (Level 1) = Results Only
- [ ] Commercial 'B" (Level 2) = Results + QC Summary
- [ ] FULLT1 (Level 3 & 4)
- [ ] NJ Reduced = Results + QC Summary + Partial Raw Data
- [ ] Commercial 'C'
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [x] NYASP Category B
- [ ] State Forms
- [ ] EDD Format _____
- [ ] Other _____

Please Email the EQ EDD Package to ges@equisonline.com and jthomas@gesonline.com;
Please Email Report to mdegloria@gesonline.com, NERegion@gesonline.com, and jthomas@gesonline.com

EQEDD Name: Urstadt - Orangetown Shopping Center/Sparkle Cleaners_LabReport#.20454.EQEDD.zip

Sample Custody must be documented below each time samples change possession, including courier.

	Relinquished By Sampler:	Date / Time:	Received By:
1	LMW Warner	4.30.21	Fed-Ex
2	Relinquished By: Fedex	Date / Time: 5/1/21 945	Received By:
3	Relinquished By:	Date / Time:	Received By:

Custody Seal Number: [ ] Intact [ ] Not Intact [ ] Preserved where applicable [ ] On Ice Cooler Temp 4.2 CP

INITIAL ASSESSMENT KG2A

LABEL VERIFICATION _____

5.1

5

JD24265: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD24265 **Client:** GROUNDWATER & ENVIRONMENTAL SE **Project:** ORANGETOWN SHOPPING CENTER, ORANGE

Date / Time Received: 5/1/2021 9:45:00 AM **Delivery Method:** Fed Ex **Airbill #'s:** 4636 0063 3960

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.5);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☑	☐	☐
2. Trip Blank listed on COC:	☑	☐	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Test Strip Lot #s: pH 1-12: 212820 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

JD24265: Chain of Custody
Page 2 of 2

Appendix H – DUSR

RemVēr

Quality Assessment
Data Usability Summary Report

			RemVēr Project #2021GE01Q2 Client Project # 1102707-06-206
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JD24265		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

Groundwater & Environmental Services (GES) contracted RemVēr to perform a data quality assessment (DQA) on analytical laboratory data of environmental samples (in this case: groundwater samples). This DQA addressed analytical data reported in Sample Delivery Groups (SDGs) #JD24265.

The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVēr followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by SGS Accutest or during the DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A/B/C/D or 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☐ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☐ Method 8081B Pesticides
☐ Method 8082 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
☐ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Extractable Petroleum Hydrocarbons (EPH)
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ EPH-total
☒ Other Methods:
Method 9060A/SM5310 Total Organic Carbon
Method 300.0/9056A Anions (IC)
Method RSK-175 Dissolved Gases
Method SM4500 Nitrite
Method 353.2 Nitrite & Nitrate
Method SM3500 Fe^{+2} / Fe^{+3}

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☒ Trip Blank(s)
☒ Equipment, Method, &/or Rinsate Blank

☒ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data under Review

The client collected groundwater samples during a one-day collection event: April 30, 2021 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) requiring several kinds of monitoring. This event provided gauging/biostimulant and quarterly groundwater monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified for SDG: # JD24265

Of the five (5) samples (plus one duplicate and three blanks) discussed herein, the results are acceptable for use even though the results of some analytes are flagged due to sample handling, laboratory accuracy or precision issues.

All the Ferrous results were qualified (UJ or J) due to a holding violation, causing similar flagging of calculated Ferric results.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (SGS Accutest SDG Report: #JD24265)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #JD24265– Sample #	Matrix	Sampled	Received
MW-3	#-1	Water	04/30/21	05/01/21
MW-4	#-2	Water	04/30/21	05/01/21
MW-5	#-3	Water	04/30/21	05/01/21
MW-6				
MW-7				
MW-8A	#-4	Water	04/30/21	05/01/21
MW-8B				
MW-10				
MW-15A				
MW-C				
MW-D				
MW-E	#-5	Water	04/30/21	05/01/21
MW-F				
MW-4 (MS/MSD)	#-2 MS/MSD	Water	04/30/21	05/01/21
Field Duplicate (FD) (MW-4)	#-6 (rep of #-2)	Water	04/30/21	05/01/21
Field Blank (FB)	#-7	Water	04/30/21	05/01/21
Equipment Blank (EB)	#-8	Water	04/30/21	05/01/21
Trip Blank (TB #1)	#-9	Water	04/30/21	05/01/21

The SDG included the following samples with their analyses:

JD24265:	Well	VOCs	Ethene	TOC	Iron	Fe^{+2}	Fe^{+3}	NO_2	NO_3	SO_4
#-1	MW-3	X	X	X	X	X	X	X	X	X
#-2	MW-4	X	X	X	X	X	X	X	X	X
#-2MS	MW-4	X	—	X	X	X	X	X	X	X
#-2MSD	MW-4	X	—	X	X	X	X	X	X	X
#-3	MW-5	X	X	X	X	X	X	X	X	X
#-4	MW-8A	X	X	X	X	X	X	X	X	X
#-5	MW-E	X	X	X	X	X	X	X	X	X
#-6	FD (MW-4)	X	—	—	—	—	—	—	—	—
#-7	FB	X	—	—	—	—	—	—	—	—
#-8	EB	X	—	—	—	—	—	—	—	—
#-9	TB	X	—	—	—	—	—	—	—	—

TOC: Total Organic Carbon | Iron: Total Iron | Fe^{+2}: Ferrous Iron | Fe^{+3}: Ferric Iron | NO_3: Nitrate | SO_4: Sulfate

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
JD24265	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
JD24265	Y N--Ferrous	Y	Hold time for all Ferrous analysis missed, effects derivatives as well, flag UJ/J

Do all QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
JD24265	☒	☒	☐	☒	☐	☒	☐	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Were the data generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
JD24265	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
JD24265	Y	None

Are correct data qualifiers used and are they consistent with current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
JD24265	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
JD24265	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a one-day collection event: April 30, 2021. A review of the field notes provided the following information pertaining to data usability.

Groundwater MWs	April-2021 Comments SDG #JD24265
MW-3	#-1, Bailer purge (≈4-gal), sampled
MW-4	#-2, Bailer purge (≈6-gal), sampled; duplicate and MS/MSD samples came from this well
MW-5	#-3, Bailer purge (≈5-gal), sampled
MW-8A	#-4, Bailer purge (≈0.9-gal), sampled
MW-E	#-5, Bailer purge (≈1.5-gal), sampled

Laboratory Report Inspection

The laboratory produced SDG report #JD24265 (dated 18-May-21), which contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JD24265, single, one-page COC). The laboratory noted no issues at the time of receipt; however, they note in the case narrative that the Ferrous Iron samples received outside of Holding Time, see discussion below.

Sample Preservation & Holding Time Evaluation

Laboratory received one cooler with samples on 5/1/2021 @ 09:45 (designated as SDG-JD24265) in proper condition and, where required, on ice. The temperature of the cooler at receipt was measured as 4.2ºC and corrected to 3.5ºC. Holding times and preservation requirements were met with the following exceptions (note: the SGS Accutest Sample Receipt Summary said nothing about this holding time deviation):

- Ferrous—samples #-1 (MW-3), -2 (MW-4), -3 (MW-5) -4 (MW-8A), and -5 (MW-E) were analyzed outside of holding for this analysis, all results flagged as UJ/J-HT.
- Ferric—because this analyte is derived by calculation all results were similarly qualified as Ferrous (see Attachments 2 and 3).

Sample Preparation & Analyses

Sample preparations for organic and inorganic analyses were within acceptable parameters with no exceptions. The laboratory reported no analytical issues other than those specified in the following sections.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was below the method detection limit (MDL), then a “U” flag was set to indicate non-detection (undetected).
- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then then a “UJ” flag was set to indicate a qualified non-detection.

- If an analyte was above the RL and beyond the upper limit for an analyte the laboratory set an “E” flag. RemVēr set a “JE” flag to indicate an estimated detection.
- *Method 6010* (metals)—Samples #-1-5 required elevated RLs due to analytical difficulties posed by the sample matrix. RemVēr flagged these results as UJ (when undetected) or J (when detected) as appropriate.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) and CCVs were acceptable for all analytes with the following exceptions:

- *Method 8260* (VOCs)—
  - Batch V1A9089: The CCV for Acetone in Sample #-3 was beyond the upper control limit (>UCL), but the results were non-detect. RemVēr flagged the results as UJ.
  - Batch V1A9089: The CCV for Bromomethane in Sample #-3 was below the lower control limit (<LCL), but the results were non-detect. RemVēr flagged the results as UJ.
  - Batch V2C8133: The CCV for Acetone in Samples #-1-2 and #-4-9 was >UCL, but the results were non-detect. RemVēr flagged the results as UJ.
  - Batch V2C8133: The CCV for Dichlorodifluoromethane in Samples #-1-2 and #-4-9 was <LCL, but the results were non-detect. RemVēr flagged the results as UJ.

Blank Evaluation

The Method Blanks run for each analysis had no detections or qualifications other than those specified below:

- *Method 8260*—In Batch V1A9089, Dibromochloromethane and 1,1,2,2-Tetrachloroethane were detected above the MDL but below the RL. If the element was not detected in a sample (Sample #-3 in this case), then it received a UJ flag; however, if it was detected, then the result received a J B flag.

The Trip Blank (TB) had no detectable VOC analytes (above their respective the reporting limits). Both the Equipment Blank (EB) and Field Blank (FB) had no detectable VOC analytes (above their respective the RLs). Therefore, no results were flagged for in-field handling contamination.

Laboratory Control Samples (LCS)

The various LCS’ were within the acceptable range for their particular analyses in SDG JD24265.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses for JD24265 met the QA criteria, with the following exceptions:

- *Method SM5310* (TOC)—Batch GP33546 had MS/MSD recovery of TOC >UCL indicative of high bias, most likely due to matrix interference. Therefore, RemVēr flagged the Sample #-1 – #-5 results as either UJ+ or J+, as appropriate.

Duplicates

The analytical Method Duplicates met their respective RPD performance criteria.

GES collected a field replicate of MW-4 (compare samples #-2 and #-6). The VOC analytes met the RPD performance criteria of <20%.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag. Using the analytically estimated Total and Ferrous Iron concentrations or Nitrate + Nitrite and Nitrite, SGS calculated the concentration of Ferric Iron or Nitrate (respectively) by difference. Therefore, qualifier flags associated with analytic results automatically attach to the calculated results.

RemVēr modified SGS's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2020Q1_DUSR.xls [EXCEL file]).

References

Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

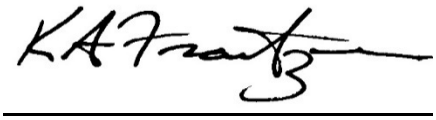
USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2021Q2_DUSR.xls [NOTE: RemVēr modified the SGS work products by adding quality flags, which are in yellow highlight.]



Prepared by: Kurt A. Frantzen, PhD, CHMM
June 11, 2021

GES PO #1116918

Table 1
Qualifier Flags

Qualifier	Quality Implication
0–9	Use with Coeluting Congeners
A	Tentatively Identified Compound (TIC) suspected to be an aldol condensation product
B | EB **TB | BB** **RB** **BH/BL**	An analyte identified in method blank (B), aqueous equipment (EB), rinsate (RB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results. Analyte detected in Blank at level >10X/5-10X that of the Sample
D	Sample analysis from dilution of original sample
E	Analyte concentration exceeds calibration range
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Attachment 1
Data Usability Reviewer: Kurt A. Frantzen, PhD

Experience

2013-Present	d/b/a RemVēr	Owner
2014-2019	AECC	Senior EHS Consultant
2011-2012	RemVēr, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVēr, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
    - Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
    - *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 61 Conference Papers & Invited Professional Presentations
    - 1999-2021, Visiting Lecturer, Brownfields Program & Open Studio, Harvard Graduate School of Design
    - 2010-2013, Invited Lecturer, Pace University Law School
    - 2014-2015, Adjunct Professor, Pace University Law School

Attachment 2
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
#-3	MDL>[X]<RL	Dibromochloromethane & 1,1,2,2-Tetrachloroethane	If <RL Flag UJ If >RL Flag JB
Method Blank: Ethene	No	—	No Comment
Method Blank: TOC	No	—	No Comment
Method Blanks: Nitrate & Sulfate	No	—	No Comment
Method Blank: Iron	No	—	No Comment
Method Blank: Ferrous	No	—	No Comment
Field Blank (FB)	No	—	No Comment
Equipment Blank (FB)	No	—	No Comment
Trip Blank (TB)	No	—	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	VOCs	No Comment
Ethene	—	—	—	Ethene	No Comment
Metals	—	—	—	Iron	No Comment
TOC	—	—	—	TOC	No Comment
NO_3 / NO_2 SO_4	—	—	—	Nitrite (NO_2), Nitrate (NO_3), Sulfate	No Comment
Ferrous/Ferric	— —	— —	— —	Iron +2 Iron +3	No Comment

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
Dis. Gases	—	—	—	—	No Comment
TOC	—	—	—	—	No Comment
NO_3 / SO_4	—	—	—	—	No Comment
Ferrous/Ferric	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs	—	—	—	SDG Batch	—	No Comment
Dis. Gases	—	—	—	SDG Batch	—	No Comment
TOC #-1 – #-5	—	—	X	SDG Batch	>CL	Flag UJ+/J+
Ferrous Iron	—	—	—	SDG Batch	—	No Comment
Sulfate	—	—	—	SDG Batch	—	No Comment
Nitrate + Nitrite	—	—	—	SDG Batch	—	No Comment
Nitrite	—	—	—	SDG Batch	—	No Comment

Attachment 2 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
VOCs	MW-4 (#-2 & #-6)	N/A	—	VOCs	None
Dissolved Gases		N/A	N/C	—	Not Collected
Total Iron		N/A	N/C	—	
Nitrate & Sulfate		N/A	N/C	—	
Total Metals (Iron)		N/A	N/C	—	
Iron, Ferrous & Ferric		N/A	N/C	—	
TOC		N/A	N/C	—	
LAB DUPLICATES					
JD24265	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—N/A	Significant QC Variances	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N	Preservation Require. Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N—Ferrous Iron samples, results qualified, as are ferric			

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
ALL	Any	Non-Detect				Flag U
	Any	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	Acetone	CCV	>UCL	—	—	Flag UJ or J
	Dichlorodifluoro-methane	CCV	<LCL	—	—	Flag UJ or J
#1–5	Iron	Elevated RL	—	—	—	Flag UJ or J
#-3	Dibromochloro-methane & 1,1,2,2-Tetrachloroethane	In Method Blanks	If result <RDL If result >RDL			Flag UJ Flag J B
#-1 – #-5	TOC	MS	>UCL	—	Hi	Flag UJ+ or J+
#-1, 2, 3, 4, & 5	Ferrous Ferric Iron	Holding Time Derivative of Fe^{2+}	—	—	—	Flag UJ/J-HT

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.