Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

19 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/08/19 18:03.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Will Brewington
President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
ST-120		9040810-01	Nonpotable Water	04/08/19 09:10	04/08/19 18:03
ST-065		9040810-02	Nonpotable Water	04/08/19 09:40	04/08/19 18:03
OB-07A		9040810-03	Nonpotable Water	04/08/19 11:10	04/08/19 18:03
OB-07		9040810-04	Nonpotable Water	04/08/19 11:55	04/08/19 18:03
OB-06		9040810-05	Nonpotable Water	04/08/19 13:25	04/08/19 18:03
ST-80		9040810-06	Nonpotable Water	04/08/19 14:05	04/08/19 18:03
ST-70		9040810-07	Nonpotable Water	04/08/19 14:25	04/08/19 18:03
MW-4		9040810-08	Nonpotable Water	04/08/19 15:15	04/08/19 18:03
OB-10		9040810-09	Nonpotable Water	04/08/19 16:00	04/08/19 18:03
TRIP BLANK		9040810-10	Nonpotable Water	04/08/19 00:00	04/08/19 18:03
ST-105		9040810-11	Nonpotable Water	04/08/19 16:35	04/08/19 18:03

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-120

9040810-01 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**7.33**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**2.17**		NTU	0.500	0.500	1	04/09/19	04/09/19 12:49	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.1**		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-120

9040810-01 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 17:42	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 17:42	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 17:42	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*112 %*	*04/15/19*	*04/15/19 17:42*
Surrogate: Toluene-d8	*88-110*	*97 %*	*04/15/19*	*04/15/19 17:42*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/15/19*	*04/15/19 17:42*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-120

9040810-01 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**173000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Barium	**55.1**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Calcium	**31400**		ug/L	80.0	80.0	1	04/09/19	04/10/19 15:43	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Copper	**1.67**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Iron	**345**		ug/L	100	100	1	04/09/19	04/10/19 15:43	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Magnesium	**22900**		ug/L	100	100	1	04/09/19	04/10/19 15:43	VVD
Manganese	**116**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 15:43	VVD
Nickel	**9.16**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Potassium	**2280**		ug/L	100	100	1	04/09/19	04/10/19 15:43	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Sodium	**71400**		ug/L	100	100	1	04/09/19	04/10/19 15:43	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:43	VVD
Zinc	**8.90**		ug/L	4.00	4.00	1	04/09/19	04/10/19 15:43	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**10.9**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:32	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-120

9040810-01 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**3.1**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:13	FRD
Chloride	**182**		mg/L	5.0	5.0	10	04/10/19	04/13/19 16:58	SES
Conductivity	**729**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**435**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	**1.8**		mg/L	0.2	0.1	1	04/09/19	04/09/19 19:19	BMG
Sulfate	**15.5**		mg/L	1.0	0.5	1	04/09/19	04/09/19 19:19	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**69.4**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-065

9040810-02 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**7.77**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**1.65**		NTU	0.500	0.500	1	04/09/19	04/09/19 12:54	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-065

9040810-02 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 18:08	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:08	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:08	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/15/19*	*04/15/19 18:08*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/15/19*	*04/15/19 18:08*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/15/19*	*04/15/19 18:08*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-065

9040810-02 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**173000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Barium	**50.9**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Calcium	**30500**		ug/L	80.0	80.0	1	04/09/19	04/10/19 15:50	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Copper	**1.43**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Iron	**185**		ug/L	100	100	1	04/09/19	04/10/19 15:50	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Magnesium	**23400**		ug/L	100	100	1	04/09/19	04/10/19 15:50	VVD
Manganese	**84.7**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 15:50	VVD
Nickel	**6.80**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Potassium	**3930**		ug/L	100	100	1	04/09/19	04/10/19 15:50	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Sodium	**71300**		ug/L	100	100	1	04/09/19	04/10/19 15:50	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:50	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/09/19	04/10/19 15:50	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**18.9**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:33	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-065

9040810-02 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.15**		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:19	FRD
Chloride	**171**		mg/L	5.0	5.0	10	04/13/19	04/13/19 17:52	SES
Conductivity	**752**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**430**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	**2.0**		mg/L	0.2	0.1	1	04/09/19	04/09/19 20:12	BMG
Sulfate	**18.0**		mg/L	1.0	0.5	1	04/09/19	04/09/19 20:12	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**89.1**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07A

9040810-03 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.98**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**1.09**		NTU	0.500	0.500	1	04/09/19	04/09/19 12:58	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.4**		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
cis-1,2-Dichloroethene	**1.5**		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07A

9040810-03 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 18:33	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:33	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:33	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/15/19*	*04/15/19 18:33*
Surrogate: Toluene-d8	*88-110*	*96 %*	*04/15/19*	*04/15/19 18:33*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/15/19*	*04/15/19 18:33*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07A

9040810-03 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**411000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Barium	**43.8**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Calcium	**73200**		ug/L	80.0	80.0	1	04/09/19	04/10/19 15:57	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Copper	**2.60**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Iron	ND		ug/L	100	100	1	04/09/19	04/10/19 15:57	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Magnesium	**55500**		ug/L	100	100	1	04/09/19	04/10/19 15:57	VVD
Manganese	**71.7**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Mercury	**0.886**		ug/L	0.100	0.100	1	04/09/19	04/10/19 15:57	VVD
Nickel	**3.11**		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Potassium	**2320**		ug/L	100	100	1	04/09/19	04/10/19 15:57	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Sodium	**28500**		ug/L	100	100	1	04/09/19	04/10/19 15:57	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 15:57	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/09/19	04/10/19 15:57	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**25.2**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:34	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07A

9040810-03 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:21	FRD
Chloride	**239**		mg/L	5.0	5.0	10	04/13/19	04/13/19 18:09	SES
Conductivity	**1050**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**771**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/09/19	04/09/19 20:30	BMG
Sulfate	**40.7**		mg/L	1.0	0.5	1	04/09/19	04/09/19 20:30	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**122**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07

9040810-04 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.73**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**1.42**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:02	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.6**		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
cis-1,2-Dichloroethene	**1.7**		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07

9040810-04 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 18:59	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 18:59	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 18:59	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/15/19*	*04/15/19 18:59*
Surrogate: Toluene-d8	*88-110*	*96 %*	*04/15/19*	*04/15/19 18:59*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/15/19*	*04/15/19 18:59*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07

9040810-04 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**527000**		ug/L	5.00	5.00	5	04/09/19	04/10/19 17:09	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Barium	**36.6**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Calcium	**127000**		ug/L	400	400	5	04/09/19	04/10/19 17:09	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Copper	**2.30**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Iron	ND		ug/L	100	100	1	04/09/19	04/10/19 16:03	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Magnesium	**50800**		ug/L	500	500	5	04/09/19	04/10/19 17:09	VVD
Manganese	**154**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:03	VVD
Nickel	**1.23**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Potassium	**4770**		ug/L	100	100	1	04/09/19	04/10/19 16:03	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Sodium	**26500**		ug/L	100	100	1	04/09/19	04/10/19 16:03	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:03	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:03	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**21.1**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:35	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-07

9040810-04 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:23	FRD
Chloride	**230**		mg/L	5.0	5.0	10	04/13/19	04/13/19 18:27	SES
Conductivity	**1190**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**923**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/09/19	04/09/19 20:48	BMG
Sulfate	**41.4**		mg/L	1.0	0.5	1	04/09/19	04/09/19 20:48	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**221**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-06

9040810-05 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.14**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**9.11**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:24	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Chlorobenzene	**1.3**		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,4-Dichlorobenzene	**1.0**		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-06

9040810-05 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 19:24	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:24	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:24	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/15/19*	*04/15/19 19:24*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/15/19*	*04/15/19 19:24*
Surrogate: 4-Bromofluorobenzene	*86-115*	*96 %*	*04/15/19*	*04/15/19 19:24*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-06

9040810-05 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**600000**		ug/L	5.00	5.00	5	04/09/19	04/10/19 17:16	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Barium	**171**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Calcium	**127000**		ug/L	400	400	5	04/09/19	04/10/19 17:16	VVD
Chromium	**5.29**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Cobalt	**4.76**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Copper	**6.65**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Iron	**836**		ug/L	100	100	1	04/09/19	04/10/19 16:10	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Magnesium	**68600**		ug/L	500	500	5	04/09/19	04/10/19 17:16	VVD
Manganese	**608**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Mercury	**0.252**		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:10	VVD
Nickel	**12.5**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Potassium	**4500**		ug/L	100	100	1	04/09/19	04/10/19 16:10	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Sodium	**155000**		ug/L	500	500	5	04/09/19	04/10/19 17:16	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Vanadium	**1.05**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:10	VVD
Zinc	**20.5**		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:10	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**51.9**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:36	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-06

9040810-05 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**22.3**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:26	FRD
Chloride	**358**		mg/L	10.0	10.0	20	04/10/19	04/14/19 11:48	SES
Conductivity	**1760**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**1140**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/09/19	04/09/19 21:06	BMG
Sulfate	**99.6**		mg/L	10.0	5.0	10	04/13/19	04/13/19 18:45	SES
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**289**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-80

9040810-06 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**9.02**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**4.62**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:25	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**10.4**		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-80

9040810-06 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 19:50	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 19:50	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 19:50	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/15/19*	*04/15/19 19:50*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/15/19*	*04/15/19 19:50*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/15/19*	*04/15/19 19:50*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-80

9040810-06 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**188000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Barium	**64.4**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Calcium	**38600**		ug/L	80.0	80.0	1	04/09/19	04/10/19 16:17	VVD
Chromium	**9.86**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Cobalt	**1.03**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Copper	**3.00**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Iron	**564**		ug/L	100	100	1	04/09/19	04/10/19 16:17	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Magnesium	**22200**		ug/L	100	100	1	04/09/19	04/10/19 16:17	VVD
Manganese	**194**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:17	VVD
Nickel	**4.62**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Potassium	**6730**		ug/L	100	100	1	04/09/19	04/10/19 16:17	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Sodium	**63700**		ug/L	100	100	1	04/09/19	04/10/19 16:17	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:17	VVD
Zinc	**4.76**		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:17	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**21.0**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:38	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-80

9040810-06 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**4.4**		mg/L	2.8	2.8	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:28	FRD
Chloride	**152**		mg/L	5.0	5.0	10	04/13/19	04/13/19 19:39	SES
Conductivity	**723**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**445**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	**1.6**		mg/L	0.2	0.1	1	04/09/19	04/09/19 21:24	BMG
Sulfate	**27.5**		mg/L	1.0	0.5	1	04/09/19	04/09/19 21:24	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**104**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-70

9040810-07 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**7.95**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**4.65**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:32	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**9.7**		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-70

9040810-07 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 20:15	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:15	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:15	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/15/19*	*04/15/19 20:15*
Surrogate: Toluene-d8	*88-110*	*97 %*	*04/15/19*	*04/15/19 20:15*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/15/19*	*04/15/19 20:15*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-70

9040810-07 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**188000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Barium	**78.6**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Calcium	**37700**		ug/L	80.0	80.0	1	04/09/19	04/10/19 16:30	VVD
Chromium	**9.25**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Cobalt	**1.37**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Copper	**2.76**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Iron	**572**		ug/L	100	100	1	04/09/19	04/10/19 16:30	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Magnesium	**22900**		ug/L	100	100	1	04/09/19	04/10/19 16:30	VVD
Manganese	**261**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:30	VVD
Nickel	**6.90**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Potassium	**6010**		ug/L	100	100	1	04/09/19	04/10/19 16:30	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Sodium	**64800**		ug/L	100	100	1	04/09/19	04/10/19 16:30	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:30	VVD
Zinc	**9.45**		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:30	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**20.2**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:39	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-70

9040810-07 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**3.7**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.43**		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:34	FRD
Chloride	**157**		mg/L	5.0	5.0	10	04/13/19	04/13/19 19:57	SES
Conductivity	**754**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**458**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	**1.6**		mg/L	0.2	0.1	1	04/09/19	04/09/19 21:42	BMG
Sulfate	**25.8**		mg/L	1.0	0.5	1	04/09/19	04/09/19 21:42	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**106**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

MW-4

9040810-08 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.95**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**3.42**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:40	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

MW-4

9040810-08 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 20:41	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 20:41	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 20:41	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/15/19*	*04/15/19 20:41*
Surrogate: Toluene-d8	*88-110*	*96 %*	*04/15/19*	*04/15/19 20:41*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/15/19*	*04/15/19 20:41*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

MW-4

9040810-08 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**187000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Barium	**33.4**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Calcium	**33000**		ug/L	80.0	80.0	1	04/09/19	04/10/19 16:37	VVD
Chromium	**2.73**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Copper	**1.16**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Iron	**566**		ug/L	100	100	1	04/09/19	04/10/19 16:37	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Magnesium	**25400**		ug/L	100	100	1	04/09/19	04/10/19 16:37	VVD
Manganese	**22.7**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:37	VVD
Nickel	**1.72**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Potassium	**2860**		ug/L	100	100	1	04/09/19	04/10/19 16:37	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Sodium	**34400**		ug/L	100	100	1	04/09/19	04/10/19 16:37	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:37	VVD
Zinc	**4.63**		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:37	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**12.4**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:40	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

MW-4

9040810-08 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	4.7	4.7	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:36	FRD
Chloride	**156**		mg/L	5.0	5.0	10	04/13/19	04/13/19 20:14	SES
Conductivity	**604**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**482**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	**0.8**		mg/L	0.2	0.1	1	04/09/19	04/09/19 21:59	BMG
Sulfate	**5.9**		mg/L	1.0	0.5	1	04/09/19	04/09/19 21:59	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**45.6**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-10

9040810-09 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.08**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**0.788**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:44	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.0**		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Benzene	**2.4**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Chlorobenzene	**4.4**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,4-Dichlorobenzene	**9.5**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1-Dichloroethane	**2.2**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
cis-1,2-Dichloroethene	**36.9**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
trans-1,2-Dichloroethene	**2.2**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,2-Dichloropropane	**3.3**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-10

9040810-09 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 21:07	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:07	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Trichloroethene	**5.8**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
Vinyl chloride	**20.9**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:07	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/15/19*	*04/15/19 21:07*
Surrogate: Toluene-d8	*88-110*	*96 %*	*04/15/19*	*04/15/19 21:07*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/15/19*	*04/15/19 21:07*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-10

9040810-09 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**361000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Barium	**120**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Calcium	**64500**		ug/L	80.0	80.0	1	04/09/19	04/10/19 16:43	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Cobalt	**21.8**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Copper	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Iron	**1610**		ug/L	100	100	1	04/09/19	04/10/19 16:43	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Magnesium	**48500**		ug/L	100	100	1	04/09/19	04/10/19 16:43	VVD
Manganese	**14400**		ug/L	20.0	20.0	20	04/09/19	04/10/19 17:22	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:43	VVD
Nickel	**22.5**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Potassium	**3680**		ug/L	100	100	1	04/09/19	04/10/19 16:43	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Sodium	**27500**		ug/L	100	100	1	04/09/19	04/10/19 16:43	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:43	VVD
Zinc	**5.43**		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:43	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**18.3**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:41	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

OB-10

9040810-09 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:39	FRD
Chloride	**228**		mg/L	5.0	5.0	10	04/13/19	04/13/19 20:32	SES
Conductivity	**990**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**710**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/09/19	04/09/19 22:17	BMG
Sulfate	**1.7**		mg/L	1.0	0.5	1	04/09/19	04/09/19 22:17	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**150**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TRIP BLANK

9040810-10 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TRIP BLANK

9040810-10 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 21:32	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:32	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:32	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*113 %*	*04/15/19*	*04/15/19 21:32*
Surrogate: Toluene-d8	*88-110*	*96 %*	*04/15/19*	*04/15/19 21:32*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/15/19*	*04/15/19 21:32*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-105

9040810-11 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**7.30**		pH Units			1	04/09/19	04/09/19 12:20	RH
TURBIDITY BY EPA 180.1									
Turbidity	**4.74**		NTU	0.500	0.500	1	04/09/19	04/09/19 13:47	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.2**		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Benzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-105

9040810-11 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Isobutanol	ND		ug/L	100	100	1	04/15/19	04/15/19 21:58	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/15/19	04/15/19 21:58	GM
Styrene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Toluene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Trichloroethene	**1.0**		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/15/19	04/15/19 21:58	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/15/19*	*04/15/19 21:58*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/15/19*	*04/15/19 21:58*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/15/19*	*04/15/19 21:58*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-105

9040810-11 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**159000**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Barium	**69.2**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Calcium	**30000**		ug/L	80.0	80.0	1	04/09/19	04/10/19 16:50	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Cobalt	**1.30**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Copper	**2.24**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Iron	**356**		ug/L	100	100	1	04/09/19	04/10/19 16:50	VVD
Lead	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Magnesium	**20400**		ug/L	100	100	1	04/09/19	04/10/19 16:50	VVD
Manganese	**254**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/09/19	04/10/19 16:50	VVD
Nickel	**7.46**		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Potassium	**2340**		ug/L	100	100	1	04/09/19	04/10/19 16:50	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Silver	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Sodium	**55700**		ug/L	100	100	1	04/09/19	04/10/19 16:50	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/09/19	04/10/19 16:50	VVD
Zinc	**10.7**		ug/L	4.00	4.00	1	04/09/19	04/10/19 16:50	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**17.3**		mg/L	10.0	10.0	1	04/17/19	04/17/19 15:42	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

ST-105

9040810-11 (Nonpotable Water)
Sample Date: 04/08/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**4.8**		mg/L	2.7	2.7	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:41	FRD
Chloride	**142**		mg/L	5.0	5.0	10	04/13/19	04/13/19 21:26	SES
Conductivity	**627**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**380**		mg/L	5.0	5.0	1	04/14/19	04/14/19 12:35	SES
Nitrate (as N)	**1.4**		mg/L	0.2	0.1	1	04/09/19	04/09/19 22:35	BMG
Sulfate	**15.7**		mg/L	1.0	0.5	1	04/09/19	04/09/19 22:35	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**78.7**		mg/L	1.0	1.0	1	04/09/19	04/11/19 14:46	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904132 - Turbidity										
Blank (B904132-BLK1)					Prepared & Analyzed: 04/09/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
Blank (B904226-BLK1)					Prepared & Analyzed: 04/15/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
Blank (B904226-BLK1)					Prepared & Analyzed: 04/15/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*53.57*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*48.27*			ug/L	*50.0*		*97*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.48*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
LCS (B904226-BS1)					Prepared & Analyzed: 04/15/19					
Acetone	12.0		5.0	ug/L	10.0		120	50-150		
Benzene	5.4		1.0	ug/L	5.00		109	50-150		
Bromochloromethane	5.6		1.0	ug/L	5.00		111	50-150		
Bromodichloromethane	5.5		1.0	ug/L	5.00		109	50-150		
Bromoform	5.7		1.0	ug/L	5.00		114	50-150		
Bromomethane	3.3		1.0	ug/L	5.00		65	50-150		
2-Butanone (MEK)	10.4		5.0	ug/L	10.0		104	50-150		
Carbon disulfide	5.9		1.0	ug/L	5.00		119	50-150		
Carbon tetrachloride	5.5		1.0	ug/L	5.00		109	50-150		
Chlorobenzene	5.3		1.0	ug/L	5.00		105	50-150		
Chloroethane	4.5		1.0	ug/L	5.00		90	50-150		
Chloroform	5.3		1.0	ug/L	5.00		106	50-150		
Chloromethane	5.6		1.0	ug/L	5.00		112	50-150		
Dibromochloromethane	5.1		1.0	ug/L	5.00		101	50-150		
1,2-Dibromo-3-chloropropane	5.8		1.0	ug/L	5.00		116	50-150		
1,2-Dibromoethane (EDB)	5.4		1.0	ug/L	5.00		109	50-150		
Dibromomethane	5.7		1.0	ug/L	5.00		113	50-150		
1,2-Dichlorobenzene	5.5		1.0	ug/L	5.00		110	50-150		
1,4-Dichlorobenzene	5.5		1.0	ug/L	5.00		109	50-150		
1,1-Dichloroethane	5.5		1.0	ug/L	5.00		111	50-150		
1,2-Dichloroethane	5.4		1.0	ug/L	5.00		108	50-150		
1,1-Dichloroethene	6.2		1.0	ug/L	5.00		125	50-150		
cis-1,2-Dichloroethene	5.3		1.0	ug/L	5.00		107	50-150		
trans-1,2-Dichloroethene	5.4		1.0	ug/L	5.00		108	50-150		
1,2-Dichloropropane	5.6		1.0	ug/L	5.00		111	50-150		
1,3-Dichloropropane	5.7		1.0	ug/L	5.00		114	50-150		
2,2-Dichloropropane	5.4		1.0	ug/L	5.00		107	50-150		
1,1-Dichloropropene	5.2		1.0	ug/L	5.00		103	50-150		
cis-1,3-Dichloropropene	4.9		1.0	ug/L	5.00		98	50-150		
trans-1,3-Dichloropropene	5.0		1.0	ug/L	5.00		101	50-150		
Ethylbenzene	5.1		1.0	ug/L	5.00		101	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
LCS (B904226-BS1)					Prepared & Analyzed: 04/15/19					
2-Hexanone	10.5		5.0	ug/L	10.0		105	50-150		
Methyl tert-butyl ether (MTBE)	5.4		1.0	ug/L	5.00		109	50-150		
4-Methyl-2-pentanone	10.2		5.0	ug/L	10.0		102	50-150		
Methylene chloride	6.3		1.0	ug/L	5.00		125	0-200		
Methyl methacrylate	5.3		5.0	ug/L	5.00		105	50-150		
Styrene	5.0		1.0	ug/L	5.00		100	50-150		
1,1,1,2-Tetrachloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,1,2,2-Tetrachloroethane	6.1		1.0	ug/L	5.00		122	50-150		
Tetrachloroethene	5.2		1.0	ug/L	5.00		105	50-150		
Toluene	5.2		1.0	ug/L	5.00		103	50-150		
1,1,1-Trichloroethane	5.5		1.0	ug/L	5.00		109	50-150		
1,1,2-Trichloroethane	5.3		1.0	ug/L	5.00		105	50-150		
Trichloroethene	5.9		1.0	ug/L	5.00		117	50-150		
Trichlorofluoromethane (Freon 11)	5.7		1.0	ug/L	5.00		114	50-150		
1,2,3-Trichloropropane	6.1		1.0	ug/L	5.00		121	50-150		
Vinyl acetate	5.6		1.0	ug/L	5.00		111	50-150		
Vinyl chloride	5.8		1.0	ug/L	5.00		115	50-150		
o-Xylene	5.0		1.0	ug/L	5.00		100	50-150		
m- & p-Xylenes	10.0		1.0	ug/L	10.0		100	50-150		
Surrogate: 1,2-Dichloroethane-d4	*50.95*			ug/L	*50.0*		*102*	*80-120*		
Surrogate: Toluene-d8	*48.39*			ug/L	*50.0*		*97*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.85*			ug/L	*50.0*		*102*	*86-115*		
Duplicate (B904226-DUP1)		**Source: 9040808-02**			Prepared & Analyzed: 04/15/19					
Acetone	ND		5.0	ug/L		ND				20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
Duplicate (B904226-DUP1)			**Source: 9040808-02**		Prepared & Analyzed: 04/15/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
Duplicate (B904226-DUP1)		**Source: 9040808-02**		Prepared & Analyzed: 04/15/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*56.66*			ug/L	*50.0*		*113*	*80-120*		
Surrogate: Toluene-d8	*47.95*			ug/L	*50.0*		*96*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*48.58*			ug/L	*50.0*		*97*	*86-115*		
Matrix Spike (B904226-MS1)		**Source: 9040808-01**		Prepared & Analyzed: 04/15/19						
Acetone	17.6		5.0	ug/L	10.0	5.3	123	60-120		
Benzene	11.7		1.0	ug/L	10.0	ND	117	60-120		
Bromochloromethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
Bromodichloromethane	11.7		1.0	ug/L	10.0	ND	117	60-120		
Bromoform	11.3		1.0	ug/L	10.0	ND	113	60-120		
Bromomethane	7.8		1.0	ug/L	10.0	ND	78	60-120		
2-Butanone (MEK)	12.5		5.0	ug/L	10.0	ND	125	60-120		
Carbon disulfide	11.8		1.0	ug/L	10.0	ND	118	60-120		
Carbon tetrachloride	11.5		1.0	ug/L	10.0	ND	115	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
Matrix Spike (B904226-MS1)			**Source: 9040808-01**		Prepared & Analyzed: 04/15/19					
Chlorobenzene	10.8		1.0	ug/L	10.0	ND	108	60-120		
Chloroethane	8.2		1.0	ug/L	10.0	ND	82	60-120		
Chloroform	11.5		1.0	ug/L	10.0	ND	115	60-120		
Chloromethane	11.3		1.0	ug/L	10.0	ND	113	60-120		
Dibromochloromethane	10.6		1.0	ug/L	10.0	ND	106	60-120		
1,2-Dibromo-3-chloropropane	10.5		1.0	ug/L	10.0	ND	105	60-120		
1,2-Dibromoethane (EDB)	11.4		1.0	ug/L	10.0	ND	114	60-120		
Dibromomethane	11.4		1.0	ug/L	10.0	ND	114	60-120		
1,2-Dichlorobenzene	10.8		1.0	ug/L	10.0	ND	108	60-120		
1,4-Dichlorobenzene	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1-Dichloroethane	11.9		1.0	ug/L	10.0	ND	119	60-120		
1,2-Dichloroethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,1-Dichloroethene	11.7		1.0	ug/L	10.0	ND	117	60-120		
cis-1,2-Dichloroethene	10.5		1.0	ug/L	10.0	ND	105	60-120		
trans-1,2-Dichloroethene	11.7		1.0	ug/L	10.0	ND	117	60-120		
1,2-Dichloropropane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,3-Dichloropropane	11.8		1.0	ug/L	10.0	ND	118	60-120		
2,2-Dichloropropane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,1-Dichloropropene	11.0		1.0	ug/L	10.0	ND	110	60-120		
cis-1,3-Dichloropropene	9.8		1.0	ug/L	10.0	ND	98	60-120		
trans-1,3-Dichloropropene	10.4		1.0	ug/L	10.0	ND	104	60-120		
Ethylbenzene	10.1		1.0	ug/L	10.0	ND	101	60-120		
2-Hexanone	10.5		5.0	ug/L	10.0	ND	105	60-120		
Methyl tert-butyl ether (MTBE)	10.2		1.0	ug/L	10.0	ND	102	60-120		
4-Methyl-2-pentanone	10.9		5.0	ug/L	10.0	ND	109	60-120		
Methylene chloride	12.0		1.0	ug/L	10.0	ND	120	60-120		
Methyl methacrylate	11.0		5.0	ug/L	10.0	ND	110	60-120		
Styrene	9.3		1.0	ug/L	10.0	ND	93	60-120		
1,1,1,2-Tetrachloroethane	10.6		1.0	ug/L	10.0	ND	106	60-120		
1,1,2,2-Tetrachloroethane	12.6		1.0	ug/L	10.0	ND	126	60-120		
Tetrachloroethene	10.6		1.0	ug/L	10.0	ND	106	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904226 - GCMS-WATER-VOLATILES										
Matrix Spike (B904226-MS1)		**Source: 9040808-01**		Prepared & Analyzed: 04/15/19						
Toluene	10.5		1.0	ug/L	10.0	ND	105	60-120		
1,1,1-Trichloroethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,1,2-Trichloroethane	11.7		1.0	ug/L	10.0	ND	117	60-120		
Trichloroethene	11.3		1.0	ug/L	10.0	ND	113	60-120		
Trichlorofluoromethane (Freon 11)	11.4		1.0	ug/L	10.0	ND	114	60-120		
1,2,3-Trichloropropane	11.5		1.0	ug/L	10.0	ND	115	60-120		
Vinyl acetate	9.4		1.0	ug/L	10.0	ND	94	60-120		
Vinyl chloride	11.4		1.0	ug/L	10.0	ND	114	60-120		
o-Xylene	9.4		1.0	ug/L	10.0	ND	94	60-120		
m- & p-Xylenes	19.6		1.0	ug/L	20.0	ND	98	60-120		
Surrogate: 1,2-Dichloroethane-d4	*53.54*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*48.28*			ug/L	*50.0*		*97*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*51.06*			ug/L	*50.0*		*102*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904140 - 3010A-Metals Digestion										
Blank (B904140-BLK1)					Prepared: 04/09/19 Analyzed: 04/10/19					
Hardness as CaCO3	39.8		1.00	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904140-BS1)					Prepared: 04/09/19 Analyzed: 04/10/19					
Antimony	94.7		1.00	ug/L	100		95	80-120		
Arsenic	98.3		1.00	ug/L	100		98	80-120		
Barium	95.3		1.00	ug/L	100		95	80-120		
Beryllium	92.9		1.00	ug/L	100		93	80-120		
Cadmium	96.9		1.00	ug/L	100		97	80-120		
Calcium	9670		80.0	ug/L	10000		97	80-120		
Chromium	98.8		1.00	ug/L	100		99	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904140 - 3010A-Metals Digestion										
LCS (B904140-BS1)					Prepared: 04/09/19 Analyzed: 04/10/19					
Cobalt	97.2		1.00	ug/L	100		97	80-120		
Copper	99.7		1.00	ug/L	100		100	80-120		
Iron	9870		100	ug/L	10000		99	80-120		
Lead	94.2		1.00	ug/L	100		94	80-120		
Magnesium	10300		100	ug/L	10000		103	80-120		
Manganese	97.0		1.00	ug/L	100		97	80-120		
Mercury	5.14		0.100	ug/L	5.00		103	80-120		
Nickel	99.5		1.00	ug/L	100		100	80-120		
Potassium	9770		100	ug/L	10000		98	80-120		
Selenium	93.6		1.00	ug/L	100		94	80-120		
Silver	85.4		1.00	ug/L	100		85	80-120		
Sodium	10400		100	ug/L	10000		104	80-120		
Thallium	95.3		1.00	ug/L	100		95	80-120		
Vanadium	97.7		1.00	ug/L	100		98	80-120		
Zinc	138		4.00	ug/L	140		98	80-120		
Duplicate (B904140-DUP1)			**Source: 9040810-01**		Prepared: 04/09/19 Analyzed: 04/10/19					
Hardness as CaCO3	169000		1.00	ug/L		173000			2	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	ND		1.00	ug/L		ND				200
Barium	55.0		1.00	ug/L		55.1			0.2	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	30500		80.0	ug/L		31400			3	200
Chromium	ND		1.00	ug/L		ND				200
Cobalt	ND		1.00	ug/L		ND				200
Copper	1.73		1.00	ug/L		1.67			4	200
Iron	326		100	ug/L		345			6	200
Lead	ND		1.00	ug/L		ND				200
Magnesium	22500		100	ug/L		22900			2	200
Manganese	115		1.00	ug/L		116			1	200
Mercury	ND		0.100	ug/L		ND				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904140 - 3010A-Metals Digestion										
Duplicate (B904140-DUP1)		**Source: 9040810-01**		Prepared: 04/09/19 Analyzed: 04/10/19						
Nickel	8.65		1.00	ug/L		9.16			6	200
Potassium	2230		100	ug/L		2280			2	200
Selenium	ND		1.00	ug/L		ND				200
Silver	ND		1.00	ug/L		ND				200
Sodium	70100		100	ug/L		71400			2	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	4.11		4.00	ug/L		8.90			74	200
Matrix Spike (B904140-MS1)		**Source: 9040810-01**		Prepared: 04/09/19 Analyzed: 04/10/19						
Antimony	49.4		1.00	ug/L	50.0	ND	99	60-140		
Arsenic	50.5		1.00	ug/L	50.0	ND	101	60-140		
Barium	104		1.00	ug/L	50.0	55.1	97	60-140		
Beryllium	50.9		1.00	ug/L	50.0	ND	102	60-140		
Cadmium	48.8		1.00	ug/L	50.0	ND	98	60-140		
Calcium	36000		80.0	ug/L	5000	31400	93	60-140		
Chromium	49.9		1.00	ug/L	50.0	ND	100	60-140		
Cobalt	49.2		1.00	ug/L	50.0	ND	98	60-140		
Copper	50.1		1.00	ug/L	50.0	1.67	97	60-140		
Iron	5370		100	ug/L	5000	345	100	60-140		
Lead	47.8		1.00	ug/L	50.0	ND	96	60-140		
Magnesium	27700		100	ug/L	5000	22900	97	60-140		
Manganese	165		1.00	ug/L	50.0	116	99	60-140		
Mercury	2.48		0.100	ug/L	2.50	ND	99	60-140		
Nickel	58.9		1.00	ug/L	50.0	9.16	99	60-140		
Potassium	7080		100	ug/L	5000	2280	96	60-140		
Selenium	45.6		1.00	ug/L	50.0	ND	91	60-140		
Silver	42.4		1.00	ug/L	50.0	ND	85	60-140		
Sodium	75500		100	ug/L	5000	71400	82	60-140		
Thallium	48.4		1.00	ug/L	50.0	ND	97	60-140		
Vanadium	49.5		1.00	ug/L	50.0	ND	99	60-140		
Zinc	72.4		4.00	ug/L	70.0	8.90	91	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904263 - COD (03) Prep										
Blank (B904263-BLK1)					Prepared & Analyzed: 04/17/19					
COD	ND		20.0	mg/L						
LCS (B904263-BS1)					Prepared & Analyzed: 04/17/19					
COD	200		20.0	mg/L	200		100	85-115		
Duplicate (B904263-DUP1)		**Source: 9040810-01**			Prepared & Analyzed: 04/17/19					
COD	ND		20.0	mg/L		ND				20
Matrix Spike (B904263-MS1)		**Source: 9040810-01**			Prepared & Analyzed: 04/17/19					
COD	208		20.0	mg/L	200	ND	104	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904147 - TSS PREP										
Blank (B904147-BLK1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904147-BS1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Solids, Suspended	46.6		2.5	mg/L	52.1		89	70-130		
Duplicate (B904147-DUP1)		**Source: 9040810-08**			Prepared: 04/10/19 Analyzed: 04/11/19					
Solids, Suspended	14.4		5.6	mg/L		ND				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0080 - Method 300.0										
LCS (B9D0080-BS1)					Prepared & Analyzed: 04/09/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		99.1	90-110		
Sulfate	10.1		1.0	mg/L	10.0		101	90-110		
Duplicate (B9D0080-DUP1)		**Source: E058168-01**			Prepared & Analyzed: 04/09/19					
Sulfate	3.9		1.0	mg/L		3.9			0.661	20
Nitrate (as N)	0.1		0.2	mg/L		0.1			0.0841	20
Duplicate (B9D0080-DUP2)		**Source: E058173-01**			Prepared & Analyzed: 04/09/19					
Nitrate (as N)	5.8		0.2	mg/L		5.9			0.525	20
Sulfate	23.9		1.0	mg/L		24.0			0.0317	20
Matrix Spike (B9D0080-MS1)		**Source: E058168-01**			Prepared & Analyzed: 04/09/19					
Nitrate (as N)	1.1		0.2	mg/L	1.00	0.1	102	80-120		
Sulfate	13.7		1.0	mg/L	10.0	3.9	98.5	80-120		
Matrix Spike (B9D0080-MS2)		**Source: E058173-01**			Prepared & Analyzed: 04/09/19					
Nitrate (as N)	6.9		0.2	mg/L	1.00	5.9	100	80-120		
Sulfate	34.3		1.0	mg/L	10.0	24.0	103	80-120		
Batch B9D0108 - Method 300.0										
LCS (B9D0108-BS1)					Prepared & Analyzed: 04/13/19					
Chloride	1.1		0.5	mg/L	1.00		107	90-110		
Sulfate	10.2		1.0	mg/L	10.0		102	90-110		
Duplicate (B9D0108-DUP1)		**Source: 9040810-05**			Prepared: 04/13/19 Analyzed: 04/14/19					
Chloride	356		10.0	mg/L		358			0.336	20
Sulfate	100		10.0	mg/L		99.6			0.936	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0108 - Method 300.0										
Duplicate (B9D0108-DUP2)		**Source: E058219-01**			Prepared & Analyzed: 04/13/19					
Sulfate	ND		5.0	mg/L		ND				20
Chloride	28.6		2.5	mg/L		29.5			3.02	20
Matrix Spike (B9D0108-MS1)		**Source: 9040810-05**			Prepared: 04/13/19 Analyzed: 04/14/19					
Chloride	367		10.0	mg/L	10.0	358	98.8	80-120		
Sulfate	205		10.0	mg/L	100	99.6	105	80-120		
Matrix Spike (B9D0108-MS2)		**Source: E058219-01**			Prepared & Analyzed: 04/13/19					
Sulfate	51.6		5.0	mg/L	50.0	ND	103	80-120		
Chloride	34.3		2.5	mg/L	5.00	29.5	95.9	80-120		
Batch B9D0124 - No Prep WC										
Blank (B9D0124-BLK1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0124-BS1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	1.98		0.10	mg/L	2.00		98.9	90-110		
Duplicate (B9D0124-DUP1)		**Source: 9040810-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Matrix Spike (B9D0124-MS1)		**Source: 9040810-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	1.96		0.10	mg/L	2.00	ND	97.8	90-110		
Batch B9D0137 - No Prep WC										
Blank (B9D0137-BLK1)					Prepared & Analyzed: 04/14/19					
Dissolved Solids	ND		5.0	mg/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0137 - No Prep WC										
Duplicate (B9D0137-DUP1)		**Source: 9040810-01**			Prepared & Analyzed: 04/14/19					
Dissolved Solids	435		5.0	mg/L		435			0.00	20
Batch B9D0139 - No Prep WC										
Duplicate (B9D0139-DUP1)		**Source: E058130-01**			Prepared & Analyzed: 04/14/19					
Conductivity	598		1.00	us/Cm		599			0.167	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0087 - No Prep WC										
LCS (B9D0087-BS1)					Prepared: 04/09/19 Analyzed: 04/11/19					
Alkalinity as CaCO3	107		1.0	mg/L	100		107	90-110		
Duplicate (B9D0087-DUP1)		**Source: E058119-04**			Prepared: 04/09/19 Analyzed: 04/11/19					
Alkalinity as CaCO3	573		4.0	mg/L		566			1.12	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/19/19 16:48

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

CHAIN-OF-CUSTODY RECORD

Company Name: EA Engineering

Project Manager: Laura Oakes

Project Name: Gude

Project ID:

Sampler(s): Pete Yencsik

P.O. Number:

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
ST 120	4/8/19	9:10	X			9	X	X	X	X	X	X	X			9040810-01
ST-065	4/8/19	9:40	X			9	X	X	X	X	X	X	X			-02
OB-07A	4/8/19	11:10	X			9	X	X	X	X	X	X	X			-03
OB-07	4/8/19	11:55	X			9	X	X	X	X	X	X	X			-04
OB-06	4/8/19	13:25	X			9	X	X	X	X	X	X	X			-05
ST-80	4/8/19	1405	X			9	X	X	X	X	X	X	X			-06
ST-70	4/8/19	14:25	X			9	X	X	X	X	X	X	X			-07
MW-4	4/8/19	1515	X			9	X	X	X	X	X	X	X			-08
OB-10	4/8/19	16:00	X			9	X	X	X	X	X	X	X			-09
Trip Blank	4/8/19	—	X			1	X									-10

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yencsik	6:05 4/8/19	(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)
(Printed)	18:03 4/8/19	(Printed) Victoria Davenport

Turn Around Time:
- [x] Normal (7 day)
- [ ] 5 day
- [ ] 4 day
- [ ] 3 day
- [ ] Rush (2 day)
- [ ] Next Day
- [ ] Other: _____
- [ ] Specific Due Date: _____

Lab Use:
Temp: 6.5 °C
- [x] Received on Ice
- [x] Received same day
- [ ] Preservation Appropriate

Delivery Method:
- [ ] Courier
- [x] Client
- [ ] UPS
- [ ] FedEx
- [ ] USPS
- [ ] Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- [ ] Return to Client
- [ ] Disposal by lab
- [ ] Archive for _____ days

MSS-F001-003

CHAIN-OF-CUSTODY RECORD

Company Name: EA Engineers

Project Manager: Laura Oakes

Project Name: Gude

Project ID:

Sampler(s): Pete Yenesile

P.O. Number:

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
ST-105	4/8/19	1635	X			9	X	X	X	X	X	X	X			9040810-11

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yenesile	4/8/19 6:05	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)	18:03 4/8/19	(Printed) Victoria Davenport			

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 6.5 °C
- ☑ Received on Ice
- ☑ Received same day
- ☐ Preservation Appropriate

Delivery Method:
- Courier
- Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

58177

SUBCONTRACT ORDER
Maryland Spectral Services
9040810

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Intial
4/8/19 KD

Due 4:00 PM 04/18/19

Laboratory ID **Comments**

Sample ID: 9040810-01 **ST 120** **Water** **Sampled:04/08/19 09:10**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-02 **ST-065** **Water** **Sampled:04/08/19 09:40**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-03 **OB-07A** **Water** **Sampled:04/08/19 11:10**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[illegible] 950	4/9/19	FRD	4/9/19 959

T=8.6

58177

SUBCONTRACT ORDER
Maryland Spectral Services
9040810

Due 4:00 PM 04/18/19 | **Laboratory ID** | **Comments**

Sample ID: 9040810-04 **OB-07** **Water** **Sampled:04/08/19 11:55**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-05 **OB-06** **Water** **Sampled:04/08/19 13:25**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-06 **ST-80** **Water** **Sampled:04/08/19 14:05**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-07 **ST-70** **Water** **Sampled:04/08/19 14:25**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By		Date	Received By		Date
[illegible]	950	4/9/19	FRD	4/9/19	950

58177

SUBCONTRACT ORDER
Maryland Spectral Services

9040810

Due 4:00 PM 04/18/19 | **Laboratory ID** | **Comments**

Sample ID: 9040810-08 **MW-4** **Water** **Sampled:04/08/19 15:15**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-09 **OB-10** **Water** **Sampled:04/08/19 16:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040810-11 **ST-105** **Water** **Sampled:04/08/19 16:35**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[illegible] 950	4/9/19	FRD	4/9/19 950

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

23 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/09/19 18:52.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Will Brewington
President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TRIP BLANK		9040914-01	Nonpotable Water	04/09/19 00:00	04/09/19 18:52
OB-04		9040914-02	Nonpotable Water	04/09/19 09:15	04/09/19 18:52
OB-04A		9040914-03	Nonpotable Water	04/09/19 10:30	04/09/19 18:52
OB-105		9040914-04	Nonpotable Water	04/09/19 11:40	04/09/19 18:52
MW-16A		9040914-05	Nonpotable Water	04/09/19 13:50	04/09/19 18:52
MW-16B		9040914-06	Nonpotable Water	04/09/19 14:55	04/09/19 18:52
MW-13B		9040914-07	Nonpotable Water	04/09/19 16:25	04/09/19 18:52
OB-30		9040914-08	Nonpotable Water	04/09/19 00:00	04/09/19 18:52
MW-13A		9040914-09	Nonpotable Water	04/09/19 17:35	04/09/19 18:52

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TRIP BLANK

9040914-01 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TRIP BLANK

9040914-01 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 14:10	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:10	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:10	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/16/19*	*04/16/19 14:10*
Surrogate: Toluene-d8	*88-110*	*97 %*	*04/16/19*	*04/16/19 14:10*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/16/19*	*04/16/19 14:10*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04

9040914-02 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.21**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	ND		NTU	0.500	0.500	1	04/10/19	04/10/19 17:30	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Benzene	**1.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Chlorobenzene	**1.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,4-Dichlorobenzene	**5.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
cis-1,2-Dichloroethene	**11.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04

9040914-02 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 14:35	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Methylene chloride	**2.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 14:35	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Tetrachloroethene	**1.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Trichloroethene	**1.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
Vinyl chloride	**1.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 14:35	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*107 %*	*04/16/19*	*04/16/19 14:35*
Surrogate: Toluene-d8	*88-110*	*96 %*	*04/16/19*	*04/16/19 14:35*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/16/19*	*04/16/19 14:35*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04

9040914-02 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**745000**		ug/L	100	100	1	04/10/19	04/11/19 14:36	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Arsenic	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Barium	**289**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Calcium	**171000**		ug/L	400	400	5	04/10/19	04/11/19 18:00	CMK
Chromium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Cobalt	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Copper	**40.0**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Iron	ND		ug/L	100	100	1	04/10/19	04/11/19 14:36	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Magnesium	**91300**		ug/L	100	100	1	04/10/19	04/11/19 14:36	CMK
Manganese	**3800**		ug/L	5.00	5.00	5	04/10/19	04/11/19 18:00	CMK
Mercury	ND		ug/L	0.100	0.100	1	04/10/19	04/11/19 14:36	CMK
Nickel	**14.8**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Potassium	**6860**		ug/L	100	100	1	04/10/19	04/11/19 14:36	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Sodium	**77100**		ug/L	100	100	1	04/10/19	04/11/19 14:36	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Vanadium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:36	CMK
Zinc	**7.96**	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 14:36	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**47.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 17:59	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04

9040914-02 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.80**		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:47	FRD
Chloride	**530**		mg/L	12.5	12.5	25	04/13/19	04/13/19 22:37	SES
Conductivity	**2070**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**1470**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	**1.3**	H	mg/L	0.2	0.1	1	04/11/19	04/11/19 14:07	BMG
Sulfate	**25.0**		mg/L	1.0	0.5	1	04/11/19	04/11/19 14:07	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**264**		mg/L	1.0	1.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04A

9040914-03 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.12**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**0.812**		NTU	0.500	0.500	1	04/10/19	04/10/19 17:35	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**8.1**		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Benzene	**1.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Chlorobenzene	**1.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,4-Dichlorobenzene	**6.2**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
cis-1,2-Dichloroethene	**14.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04A

9040914-03 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 15:01	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Methylene chloride	**3.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:01	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Tetrachloroethene	**1.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Trichloroethene	**1.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
Vinyl chloride	**1.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:01	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/16/19*	*04/16/19 15:01*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 15:01*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/16/19*	*04/16/19 15:01*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04A

9040914-03 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**720000**		ug/L	100	100	1	04/10/19	04/11/19 14:56	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Arsenic	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Barium	**66.6**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Calcium	**128000**		ug/L	400	400	5	04/10/19	04/11/19 18:07	CMK
Chromium	**2.27**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Cobalt	**1.09**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Copper	**30.5**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Iron	**143**		ug/L	100	100	1	04/10/19	04/11/19 14:56	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Magnesium	**98500**		ug/L	100	100	1	04/10/19	04/11/19 14:56	CMK
Manganese	**2420**		ug/L	5.00	5.00	5	04/10/19	04/11/19 18:07	CMK
Mercury	ND		ug/L	0.100	0.100	1	04/10/19	04/11/19 14:56	CMK
Nickel	**23.7**		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Potassium	**6320**		ug/L	100	100	1	04/10/19	04/11/19 14:56	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Sodium	**108000**		ug/L	500	500	5	04/10/19	04/11/19 18:07	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Vanadium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 14:56	CMK
Zinc	**20.5**	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 14:56	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**50.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:00	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-04A

9040914-03 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**6.3**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.94**		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:49	FRD
Chloride	**546**		mg/L	12.5	12.5	25	04/13/19	04/13/19 22:55	SES
Conductivity	**2120**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**1450**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	**1.4**	H	mg/L	0.2	0.1	1	04/11/19	04/11/19 14:25	BMG
Sulfate	**18.8**		mg/L	1.0	0.5	1	04/11/19	04/11/19 14:25	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**254**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-105

9040914-04 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.97**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**204**		NTU	2.50	2.50	5	04/10/19	04/10/19 18:24	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**9.4**		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,4-Dichlorobenzene	**1.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
cis-1,2-Dichloroethene	**1.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-105

9040914-04 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 15:27	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:27	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:27	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*106 %*	*04/16/19*	*04/16/19 15:27*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/16/19*	*04/16/19 15:27*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 15:27*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-105

9040914-04 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**821000**		ug/L	100	100	1	04/10/19	04/11/19 15:02	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Arsenic	**2.71**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Barium	**566**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Calcium	**115000**		ug/L	400	400	5	04/10/19	04/11/19 18:13	CMK
Chromium	**2.07**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Cobalt	**6.60**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Copper	**2.02**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Iron	**21400**		ug/L	100	100	1	04/10/19	04/11/19 15:02	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Magnesium	**138000**		ug/L	500	500	5	04/10/19	04/11/19 18:13	CMK
Manganese	**1900**		ug/L	5.00	5.00	5	04/10/19	04/11/19 18:13	CMK
Mercury	ND		ug/L	0.100	0.100	1	04/10/19	04/11/19 15:02	CMK
Nickel	**10.8**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Potassium	**85700**		ug/L	100	100	1	04/10/19	04/11/19 15:02	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Sodium	**253000**		ug/L	500	500	5	04/10/19	04/11/19 18:13	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Vanadium	**1.30**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:02	CMK
Zinc	**26.1**	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 15:02	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**131**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:00	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-105

9040914-04 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**50.3**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**43.8**		mg/L	1.00	0.50	10	04/12/19	04/12/19 14:05	FRD
Chloride	**224**		mg/L	5.0	5.0	10	04/13/19	04/13/19 23:13	SES
Conductivity	**2950**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**1730**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	**0.7**	H	mg/L	0.2	0.1	1	04/11/19	04/11/19 14:42	BMG
Sulfate	**150**		mg/L	10.0	5.0	10	04/13/19	04/13/19 23:13	SES
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**1270**		mg/L	10.0	10.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16A

9040914-05 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.43**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**25.7**		NTU	0.500	0.500	1	04/10/19	04/10/19 17:44	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.3**		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Chlorobenzene	**2.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,4-Dichlorobenzene	**1.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16A

9040914-05 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 15:52	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 15:52	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 15:52	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/16/19*	*04/16/19 15:52*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 15:52*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 15:52*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16A

9040914-05 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**138000**		ug/L	100	100	1	04/10/19	04/11/19 15:09	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Arsenic	**2.10**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Barium	**217**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Calcium	**16400**		ug/L	80.0	80.0	1	04/10/19	04/11/19 15:09	CMK
Chromium	**21.5**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Cobalt	**6.95**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Copper	**7.78**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Iron	**6870**		ug/L	100	100	1	04/10/19	04/11/19 15:09	CMK
Lead	**1.31**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Magnesium	**23700**		ug/L	100	100	1	04/10/19	04/11/19 15:09	CMK
Manganese	**12700**		ug/L	20.0	20.0	20	04/10/19	04/11/19 18:20	CMK
Mercury	ND		ug/L	0.100	0.100	1	04/10/19	04/11/19 15:09	CMK
Nickel	**19.3**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Potassium	**3530**		ug/L	100	100	1	04/10/19	04/11/19 15:09	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Sodium	**59600**		ug/L	100	100	1	04/10/19	04/11/19 15:09	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Vanadium	**1.73**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:09	CMK
Zinc	**24.6**	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 15:09	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**21.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:01	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16A

9040914-05 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**72.7**		mg/L	2.7	2.7	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.19**		mg/L	0.10	0.05	1	04/12/19	04/12/19 12:54	FRD
Chloride	**37.2**		mg/L	2.5	2.5	5	04/13/19	04/13/19 23:31	SES
Conductivity	**604**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**365**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	**0.5**	H	mg/L	0.2	0.1	1	04/11/19	04/11/19 15:00	BMG
Sulfate	**16.4**		mg/L	1.0	0.5	1	04/11/19	04/11/19 15:00	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**200**		mg/L	4.0	4.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16B

9040914-06 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.23**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**4.29**		NTU	0.500	0.500	1	04/10/19	04/10/19 17:48	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**9.5**		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Chlorobenzene	**10.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,4-Dichlorobenzene	**3.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16B

9040914-06 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 16:18	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:18	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:18	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*107 %*	*04/16/19*	*04/16/19 16:18*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 16:18*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/16/19*	*04/16/19 16:18*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16B

9040914-06 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**329000**		ug/L	100	100	1	04/10/19	04/11/19 15:16	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Arsenic	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Barium	**27.1**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Calcium	**51700**		ug/L	80.0	80.0	1	04/10/19	04/11/19 15:16	CMK
Chromium	**4.41**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Cobalt	**7.84**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Copper	**1.54**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Iron	**655**		ug/L	100	100	1	04/10/19	04/11/19 15:16	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Magnesium	**48600**		ug/L	100	100	1	04/10/19	04/11/19 15:16	CMK
Manganese	**16300**		ug/L	20.0	20.0	20	04/10/19	04/11/19 18:26	CMK
Mercury	ND		ug/L	0.100	0.100	1	04/10/19	04/11/19 15:16	CMK
Nickel	**17.2**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Potassium	**3610**		ug/L	100	100	1	04/10/19	04/11/19 15:16	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Sodium	**36000**		ug/L	100	100	1	04/10/19	04/11/19 15:16	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Vanadium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:16	CMK
Zinc	**6.73**	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 15:16	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**30.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:02	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-16B

9040914-06 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**7.5**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 13:00	FRD
Chloride	**210**		mg/L	5.0	5.0	10	04/13/19	04/13/19 23:49	SES
Conductivity	**961**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**588**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	ND	H	mg/L	0.2	0.1	1	04/11/19	04/11/19 15:18	BMG
Sulfate	**14.7**		mg/L	1.0	0.5	1	04/11/19	04/11/19 15:18	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**146**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13B

9040914-07 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.23**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**0.692**		NTU	0.500	0.500	1	04/10/19	04/10/19 17:51	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.5**		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Benzene	**1.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Chlorobenzene	**1.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,4-Dichlorobenzene	**6.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1-Dichloroethane	**9.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,2-Dichloroethane	**1.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
cis-1,2-Dichloroethene	**58.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
trans-1,2-Dichloroethene	**2.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,2-Dichloropropane	**5.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13B

9040914-07 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 16:43	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Methylene chloride	**3.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 16:43	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Tetrachloroethene	**9.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Trichloroethene	**12.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
Vinyl chloride	**6.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 16:43	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/16/19*	*04/16/19 16:43*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 16:43*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/16/19*	*04/16/19 16:43*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13B

9040914-07 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**318000**		ug/L	100	100	1	04/10/19	04/11/19 15:22	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Arsenic	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Barium	**73.8**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Calcium	**76900**		ug/L	80.0	80.0	1	04/10/19	04/11/19 15:22	CMK
Chromium	**1.26**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Cobalt	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Copper	**3.69**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Iron	**157**		ug/L	100	100	1	04/10/19	04/11/19 15:22	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Magnesium	**30600**		ug/L	100	100	1	04/10/19	04/11/19 15:22	CMK
Manganese	**43.0**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Mercury	**0.372**		ug/L	0.100	0.100	1	04/10/19	04/11/19 15:22	CMK
Nickel	**2.78**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Potassium	**3590**		ug/L	100	100	1	04/10/19	04/11/19 15:22	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Sodium	**19500**		ug/L	100	100	1	04/10/19	04/11/19 15:22	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Vanadium	**1.04**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:22	CMK
Zinc	ND	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 15:22	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**7.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:02	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13B

9040914-07 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**4.9**		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 13:02	FRD
Chloride	**115**		mg/L	2.5	2.5	5	04/14/19	04/14/19 00:07	SES
Conductivity	**799**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**545**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/11/19	04/11/19 16:12	BMG
Sulfate	**15.7**		mg/L	1.0	0.5	1	04/11/19	04/11/19 16:12	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**209**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-30

9040914-08 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.23**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**1.40**		NTU	0.500	0.500	1	04/10/19	04/10/19 17:56	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Benzene	**1.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Chlorobenzene	**1.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,4-Dichlorobenzene	**6.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1-Dichloroethane	**9.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,2-Dichloroethane	**1.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
cis-1,2-Dichloroethene	**57.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
trans-1,2-Dichloroethene	**2.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,2-Dichloropropane	**4.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-30

9040914-08 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 17:09	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Methylene chloride	**3.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:09	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Tetrachloroethene	**10.2**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Trichloroethene	**12.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
Vinyl chloride	**6.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:09	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*106 %*	*04/16/19*	*04/16/19 17:09*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 17:09*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 17:09*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-30

9040914-08 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**311000**		ug/L	100	100	1	04/10/19	04/11/19 15:29	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Arsenic	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Barium	**71.2**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Calcium	**75100**		ug/L	80.0	80.0	1	04/10/19	04/11/19 15:29	CMK
Chromium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Cobalt	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Copper	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Iron	ND		ug/L	100	100	1	04/10/19	04/11/19 15:29	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Magnesium	**29900**		ug/L	100	100	1	04/10/19	04/11/19 15:29	CMK
Manganese	**41.1**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Mercury	**0.286**		ug/L	0.100	0.100	1	04/10/19	04/11/19 15:29	CMK
Nickel	**2.42**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Potassium	**3500**		ug/L	100	100	1	04/10/19	04/11/19 15:29	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Sodium	**19000**		ug/L	100	100	1	04/10/19	04/11/19 15:29	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Vanadium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:29	CMK
Zinc	ND	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 15:29	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**8.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:03	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

OB-30

9040914-08 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 13:05	FRD
Chloride	**115**		mg/L	2.5	2.5	5	04/14/19	04/14/19 01:00	SES
Conductivity	**797**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**537**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	**0.3**	H	mg/L	0.2	0.1	1	04/11/19	04/11/19 16:30	BMG
Sulfate	**15.7**		mg/L	1.0	0.5	1	04/11/19	04/11/19 16:30	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**207**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13A

9040914-09 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.49**		pH Units			1	04/10/19	04/10/19 12:30	AM
TURBIDITY BY EPA 180.1									
Turbidity	**8.91**		NTU	0.500	0.500	1	04/10/19	04/10/19 18:00	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,4-Dichlorobenzene	**2.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1-Dichloroethane	**7.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,2-Dichloroethane	**1.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
cis-1,2-Dichloroethene	**46.5**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
trans-1,2-Dichloroethene	**1.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,2-Dichloropropane	**3.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13A

9040914-09 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 17:34	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Methylene chloride	**1.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 17:34	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Tetrachloroethene	**7.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Trichloroethene	**11.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
Vinyl chloride	**3.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 17:34	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*105 %*	*04/16/19*	*04/16/19 17:34*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 17:34*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/16/19*	*04/16/19 17:34*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13A

9040914-09 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**104000**		ug/L	100	100	1	04/10/19	04/11/19 15:35	CMK
Antimony	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Arsenic	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Barium	**102**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Beryllium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Cadmium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Calcium	**17100**		ug/L	80.0	80.0	1	04/10/19	04/11/19 15:35	CMK
Chromium	**1.47**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Cobalt	**18.2**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Copper	**1.93**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Iron	**2360**		ug/L	100	100	1	04/10/19	04/11/19 15:35	CMK
Lead	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Magnesium	**14800**		ug/L	100	100	1	04/10/19	04/11/19 15:35	CMK
Manganese	**796**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Mercury	ND		ug/L	0.100	0.100	1	04/10/19	04/11/19 15:35	CMK
Nickel	**10.4**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Potassium	**3060**		ug/L	100	100	1	04/10/19	04/11/19 15:35	CMK
Selenium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Silver	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Sodium	**10700**		ug/L	100	100	1	04/10/19	04/11/19 15:35	CMK
Thallium	ND		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Vanadium	**1.72**		ug/L	1.00	1.00	1	04/10/19	04/11/19 15:35	CMK
Zinc	**15.2**	B	ug/L	4.00	4.00	1	04/10/19	04/11/19 15:35	CMK
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**5.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:04	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

MW-13A

9040914-09 (Nonpotable Water)
Sample Date: 04/09/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**26.8**		mg/L	7.7	7.7	1	04/10/19	04/11/19 11:32	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.13**		mg/L	0.10	0.05	1	04/12/19	04/12/19 13:07	FRD
Chloride	**70.3**		mg/L	2.5	2.5	5	04/14/19	04/14/19 01:18	SES
Conductivity	**314**		us/Cm	1.00	1.00	1	04/14/19	04/14/19 11:20	SES
Dissolved Solids	**195**		mg/L	5.0	5.0	1	04/15/19	04/15/19 11:15	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/11/19	04/11/19 16:47	BMG
Sulfate	**6.2**		mg/L	1.0	0.5	1	04/11/19	04/11/19 16:47	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**31.9**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904158 - Turbidity										
Blank (B904158-BLK1)					Prepared & Analyzed: 04/10/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Blank (B904241-BLK1)					Prepared & Analyzed: 04/16/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Blank (B904241-BLK1)					Prepared & Analyzed: 04/16/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*54.38*			ug/L	*50.0*		*109*	*80-120*		
Surrogate: Toluene-d8	*48.24*			ug/L	*50.0*		*96*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.42*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
LCS (B904241-BS1)					Prepared & Analyzed: 04/16/19					
Acetone	9.5		5.0	ug/L	10.0		95	50-150		
Benzene	5.0		1.0	ug/L	5.00		101	50-150		
Bromochloromethane	4.9		1.0	ug/L	5.00		97	50-150		
Bromodichloromethane	4.6		1.0	ug/L	5.00		92	50-150		
Bromoform	4.7		1.0	ug/L	5.00		94	50-150		
Bromomethane	3.6		1.0	ug/L	5.00		71	50-150		
2-Butanone (MEK)	10.2		5.0	ug/L	10.0		102	50-150		
Carbon disulfide	5.2		1.0	ug/L	5.00		105	50-150		
Carbon tetrachloride	4.9		1.0	ug/L	5.00		99	50-150		
Chlorobenzene	4.7		1.0	ug/L	5.00		94	50-150		
Chloroethane	3.8		1.0	ug/L	5.00		76	50-150		
Chloroform	5.0		1.0	ug/L	5.00		99	50-150		
Chloromethane	5.1		1.0	ug/L	5.00		102	50-150		
Dibromochloromethane	4.6		1.0	ug/L	5.00		93	50-150		
1,2-Dibromo-3-chloropropane	5.0		1.0	ug/L	5.00		100	50-150		
1,2-Dibromoethane (EDB)	5.1		1.0	ug/L	5.00		101	50-150		
Dibromomethane	5.2		1.0	ug/L	5.00		104	50-150		
1,2-Dichlorobenzene	4.7		1.0	ug/L	5.00		95	50-150		
1,4-Dichlorobenzene	4.7		1.0	ug/L	5.00		94	50-150		
1,1-Dichloroethane	5.1		1.0	ug/L	5.00		102	50-150		
1,2-Dichloroethane	5.2		1.0	ug/L	5.00		103	50-150		
1,1-Dichloroethene	5.4		1.0	ug/L	5.00		108	50-150		
cis-1,2-Dichloroethene	4.9		1.0	ug/L	5.00		98	50-150		
trans-1,2-Dichloroethene	5.0		1.0	ug/L	5.00		99	50-150		
1,2-Dichloropropane	4.9		1.0	ug/L	5.00		98	50-150		
1,3-Dichloropropane	5.1		1.0	ug/L	5.00		102	50-150		
2,2-Dichloropropane	4.8		1.0	ug/L	5.00		95	50-150		
1,1-Dichloropropene	4.8		1.0	ug/L	5.00		95	50-150		
cis-1,3-Dichloropropene	4.2		1.0	ug/L	5.00		83	50-150		
trans-1,3-Dichloropropene	4.3		1.0	ug/L	5.00		86	50-150		
Ethylbenzene	4.3		1.0	ug/L	5.00		86	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
LCS (B904241-BS1)					Prepared & Analyzed: 04/16/19					
2-Hexanone	8.4		5.0	ug/L	10.0		84	50-150		
Methyl tert-butyl ether (MTBE)	4.7		1.0	ug/L	5.00		94	50-150		
4-Methyl-2-pentanone	9.0		5.0	ug/L	10.0		90	50-150		
Methylene chloride	5.5		1.0	ug/L	5.00		110	0-200		
Methyl methacrylate	4.9	J	5.0	ug/L	5.00		98	50-150		
Styrene	3.9		1.0	ug/L	5.00		79	50-150		
1,1,1,2-Tetrachloroethane	4.7		1.0	ug/L	5.00		93	50-150		
1,1,2,2-Tetrachloroethane	5.5		1.0	ug/L	5.00		111	50-150		
Tetrachloroethene	4.4		1.0	ug/L	5.00		89	50-150		
Toluene	4.6		1.0	ug/L	5.00		92	50-150		
1,1,1-Trichloroethane	4.7		1.0	ug/L	5.00		95	50-150		
1,1,2-Trichloroethane	4.9		1.0	ug/L	5.00		97	50-150		
Trichloroethene	5.2		1.0	ug/L	5.00		104	50-150		
Trichlorofluoromethane (Freon 11)	5.1		1.0	ug/L	5.00		103	50-150		
1,2,3-Trichloropropane	4.9		1.0	ug/L	5.00		98	50-150		
Vinyl acetate	4.7		1.0	ug/L	5.00		94	50-150		
Vinyl chloride	5.2		1.0	ug/L	5.00		105	50-150		
o-Xylene	4.1		1.0	ug/L	5.00		82	50-150		
m- & p-Xylenes	8.7		1.0	ug/L	10.0		87	50-150		
Surrogate: 1,2-Dichloroethane-d4	*52.55*			ug/L	*50.0*		*105*	*80-120*		
Surrogate: Toluene-d8	*47.91*			ug/L	*50.0*		*96*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.07*			ug/L	*50.0*		*100*	*86-115*		
Duplicate (B904241-DUP1)		**Source: 9040914-03**			Prepared & Analyzed: 04/16/19					
Acetone	9.0		5.0	ug/L		8.1			10	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	1.7		1.0	ug/L		1.6			5	20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Duplicate (B904241-DUP1)			**Source: 9040914-03**		Prepared & Analyzed: 04/16/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	1.6		1.0	ug/L		1.6			0.6	20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	6.7		1.0	ug/L		6.2			7	20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	14.7		1.0	ug/L		14.1			4	20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Duplicate (B904241-DUP1)		**Source: 9040914-03**		Prepared & Analyzed: 04/16/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	3.4		1.0	ug/L		3.0			10	20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	1.1		1.0	ug/L		1.1			4	20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	1.2		1.0	ug/L		1.4			13	20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	2.0		1.0	ug/L		1.8			11	20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*55.03*			ug/L	*50.0*		*110*	*80-120*		
Surrogate: Toluene-d8	*47.12*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*48.89*			ug/L	*50.0*		*98*	*86-115*		
Matrix Spike (B904241-MS1)		**Source: 9040914-02**		Prepared & Analyzed: 04/16/19						
Acetone	16.6		5.0	ug/L	10.0	4.5	121	60-120		
Benzene	11.4		1.0	ug/L	10.0	1.6	98	60-120		
Bromochloromethane	9.5		1.0	ug/L	10.0	ND	95	60-120		
Bromodichloromethane	9.5		1.0	ug/L	10.0	ND	95	60-120		
Bromoform	9.1		1.0	ug/L	10.0	ND	91	60-120		
Bromomethane	5.9		1.0	ug/L	10.0	ND	59	60-120		
2-Butanone (MEK)	11.4		5.0	ug/L	10.0	ND	114	60-120		
Carbon disulfide	9.8		1.0	ug/L	10.0	ND	98	60-120		
Carbon tetrachloride	9.8		1.0	ug/L	10.0	ND	98	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Matrix Spike (B904241-MS1)		**Source: 9040914-02**		Prepared & Analyzed: 04/16/19						
Chlorobenzene	10.8		1.0	ug/L	10.0	1.6	92	60-120		
Chloroethane	6.7		1.0	ug/L	10.0	ND	67	60-120		
Chloroform	10.0		1.0	ug/L	10.0	ND	100	60-120		
Chloromethane	9.4		1.0	ug/L	10.0	ND	94	60-120		
Dibromochloromethane	8.8		1.0	ug/L	10.0	ND	88	60-120		
1,2-Dibromo-3-chloropropane	9.0		1.0	ug/L	10.0	ND	90	60-120		
1,2-Dibromoethane (EDB)	9.2		1.0	ug/L	10.0	ND	92	60-120		
Dibromomethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,2-Dichlorobenzene	9.6		1.0	ug/L	10.0	ND	96	60-120		
1,4-Dichlorobenzene	14.1		1.0	ug/L	10.0	5.4	87	60-120		
1,1-Dichloroethane	10.5		1.0	ug/L	10.0	ND	105	60-120		
1,2-Dichloroethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,1-Dichloroethene	9.8		1.0	ug/L	10.0	ND	98	60-120		
cis-1,2-Dichloroethene	22.2		1.0	ug/L	10.0	11.8	104	60-120		
trans-1,2-Dichloroethene	10.1		1.0	ug/L	10.0	ND	101	60-120		
1,2-Dichloropropane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,3-Dichloropropane	9.9		1.0	ug/L	10.0	ND	99	60-120		
2,2-Dichloropropane	7.5		1.0	ug/L	10.0	ND	75	60-120		
1,1-Dichloropropene	9.4		1.0	ug/L	10.0	ND	94	60-120		
cis-1,3-Dichloropropene	8.5		1.0	ug/L	10.0	ND	85	60-120		
trans-1,3-Dichloropropene	8.5		1.0	ug/L	10.0	ND	85	60-120		
Ethylbenzene	8.7		1.0	ug/L	10.0	ND	87	60-120		
2-Hexanone	9.4		5.0	ug/L	10.0	ND	94	60-120		
Methyl tert-butyl ether (MTBE)	8.9		1.0	ug/L	10.0	ND	89	60-120		
4-Methyl-2-pentanone	9.8		5.0	ug/L	10.0	ND	98	60-120		
Methylene chloride	12.3		1.0	ug/L	10.0	2.1	101	60-120		
Methyl methacrylate	9.8		5.0	ug/L	10.0	ND	98	60-120		
Styrene	8.2		1.0	ug/L	10.0	ND	82	60-120		
1,1,1,2-Tetrachloroethane	9.1		1.0	ug/L	10.0	ND	91	60-120		
1,1,2,2-Tetrachloroethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
Tetrachloroethene	10.1		1.0	ug/L	10.0	1.3	88	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Matrix Spike (B904241-MS1)		**Source: 9040914-02**		Prepared & Analyzed: 04/16/19						
Toluene	9.4		1.0	ug/L	10.0	ND	94	60-120		
1,1,1-Trichloroethane	9.7		1.0	ug/L	10.0	ND	97	60-120		
1,1,2-Trichloroethane	9.6		1.0	ug/L	10.0	ND	96	60-120		
Trichloroethene	10.9		1.0	ug/L	10.0	1.0	99	60-120		
Trichlorofluoromethane (Freon 11)	9.5		1.0	ug/L	10.0	ND	95	60-120		
1,2,3-Trichloropropane	9.7		1.0	ug/L	10.0	ND	97	60-120		
Vinyl acetate	7.0		1.0	ug/L	10.0	ND	70	60-120		
Vinyl chloride	10.7		1.0	ug/L	10.0	1.3	94	60-120		
o-Xylene	8.2		1.0	ug/L	10.0	ND	82	60-120		
m- & p-Xylenes	16.7		1.0	ug/L	20.0	ND	83	60-120		
Surrogate: 1,2-Dichloroethane-d4	*52.81*			ug/L	*50.0*		*106*	*80-120*		
Surrogate: Toluene-d8	*47.01*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.93*			ug/L	*50.0*		*102*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904152 - 3010A-Metals Digestion										
Blank (B904152-BLK1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Hardness as CaCO3	104		100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	11.1	B	4.00	ug/L						
LCS (B904152-BS1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Antimony	47.3		1.00	ug/L	50.0		95	80-120		
Arsenic	49.4		1.00	ug/L	50.0		99	80-120		
Barium	46.4		1.00	ug/L	50.0		93	80-120		
Beryllium	44.7		1.00	ug/L	50.0		89	80-120		
Cadmium	47.6		1.00	ug/L	50.0		95	80-120		
Calcium	4840		80.0	ug/L	5000		97	80-120		
Chromium	49.0		1.00	ug/L	50.0		98	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904152 - 3010A-Metals Digestion										
LCS (B904152-BS1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Cobalt	48.0		1.00	ug/L	50.0		96	80-120		
Copper	49.5		1.00	ug/L	50.0		99	80-120		
Iron	5020		100	ug/L	5000		100	80-120		
Lead	45.8		1.00	ug/L	50.0		92	80-120		
Magnesium	4840		100	ug/L	5000		97	80-120		
Manganese	49.7		1.00	ug/L	50.0		99	80-120		
Mercury	2.34		0.100	ug/L	2.50		94	80-120		
Nickel	49.1		1.00	ug/L	50.0		98	80-120		
Potassium	4880		100	ug/L	5000		98	80-120		
Selenium	44.6		1.00	ug/L	50.0		89	80-120		
Silver	41.1		1.00	ug/L	50.0		82	80-120		
Sodium	4880		100	ug/L	5000		98	80-120		
Thallium	45.9		1.00	ug/L	50.0		92	80-120		
Vanadium	49.3		1.00	ug/L	50.0		99	80-120		
Zinc	69.5	B	4.00	ug/L	70.0		99	80-120		
Duplicate (B904152-DUP1)			**Source: 9040914-02**		Prepared: 04/10/19 Analyzed: 04/11/19					
Hardness as CaCO3	730000		100	ug/L		745000			2	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	ND		1.00	ug/L		ND				200
Barium	278		1.00	ug/L		289			4	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	144000		80.0	ug/L		171000			17	200
Chromium	ND		1.00	ug/L		ND				200
Cobalt	ND		1.00	ug/L		ND				200
Copper	39.2		1.00	ug/L		40.0			2	200
Iron	ND		100	ug/L		ND				200
Lead	ND		1.00	ug/L		ND				200
Magnesium	89900		100	ug/L		91300			2	200
Manganese	3150		1.00	ug/L		3800			19	200
Mercury	ND		0.100	ug/L		ND				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904152 - 3010A-Metals Digestion										
Duplicate (B904152-DUP1)		**Source: 9040914-02**		Prepared: 04/10/19 Analyzed: 04/11/19						
Nickel	15.0		1.00	ug/L		14.8			2	200
Potassium	6740		100	ug/L		6860			2	200
Selenium	ND		1.00	ug/L		ND				200
Silver	ND		1.00	ug/L		ND				200
Sodium	75700		100	ug/L		77100			2	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	8.65	B	4.00	ug/L		7.96			8	200
Matrix Spike (B904152-MS1)		**Source: 9040914-02**		Prepared: 04/10/19 Analyzed: 04/11/19						
Antimony	50.2		1.00	ug/L	50.0	ND	100	60-140		
Arsenic	50.8		1.00	ug/L	50.0	ND	102	60-140		
Barium	339		1.00	ug/L	50.0	289	99	60-140		
Beryllium	45.2		1.00	ug/L	50.0	ND	90	60-140		
Cadmium	49.0		1.00	ug/L	50.0	ND	98	60-140		
Calcium	154000		80.0	ug/L	5000	171000	NR	60-140		
Chromium	50.4		1.00	ug/L	50.0	ND	101	60-140		
Cobalt	47.4		1.00	ug/L	50.0	ND	95	60-140		
Copper	89.0		1.00	ug/L	50.0	40.0	98	60-140		
Iron	5000		100	ug/L	5000	ND	100	60-140		
Lead	47.6		1.00	ug/L	50.0	ND	95	60-140		
Magnesium	97300		100	ug/L	5000	91300	121	60-140		
Manganese	3330		1.00	ug/L	50.0	3800	NR	60-140		
Mercury	2.49		0.100	ug/L	2.50	ND	100	60-140		
Nickel	63.1		1.00	ug/L	50.0	14.8	97	60-140		
Potassium	11800		100	ug/L	5000	6860	99	60-140		
Selenium	45.2		1.00	ug/L	50.0	ND	90	60-140		
Silver	42.3		1.00	ug/L	50.0	ND	85	60-140		
Sodium	82800		100	ug/L	5000	77100	114	60-140		
Thallium	49.0		1.00	ug/L	50.0	ND	98	60-140		
Vanadium	50.9		1.00	ug/L	50.0	ND	102	60-140		
Zinc	75.2	B	4.00	ug/L	70.0	7.96	96	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904307 - COD (03) Prep										
Blank (B904307-BLK1)					Prepared & Analyzed: 04/22/19					
COD	ND		20.0	mg/L						
LCS (B904307-BS1)					Prepared & Analyzed: 04/22/19					
COD	ND		20.0	mg/L	2.00			85-115		
Duplicate (B904307-DUP1)		**Source: 9040914-02**			Prepared & Analyzed: 04/22/19					
COD	44.0		20.0	mg/L		47.0			7	20
Matrix Spike (B904307-MS1)		**Source: 9040914-02**			Prepared & Analyzed: 04/22/19					
COD	50.0		20.0	mg/L	2.00	47.0	150	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904147 - TSS PREP										
Blank (B904147-BLK1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904147-BS1)					Prepared: 04/10/19 Analyzed: 04/11/19					
Solids, Suspended	46.6		2.5	mg/L	52.1		89	70-130		
Duplicate (B904147-DUP1)		**Source: 9040810-08**			Prepared: 04/10/19 Analyzed: 04/11/19					
Solids, Suspended	14.4		5.6	mg/L		ND				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0108 - Method 300.0										
LCS (B9D0108-BS1)					Prepared & Analyzed: 04/13/19					
Sulfate	10.2		1.0	mg/L	10.0		102	90-110		
Chloride	1.1		0.5	mg/L	1.00		107	90-110		
Duplicate (B9D0108-DUP1)		**Source: E058177-05**			Prepared: 04/13/19 Analyzed: 04/14/19					
Chloride	356		10.0	mg/L		358			0.336	20
Sulfate	100		10.0	mg/L		99.6			0.936	20
Duplicate (B9D0108-DUP2)		**Source: E058219-01**			Prepared & Analyzed: 04/13/19					
Chloride	28.6		2.5	mg/L		29.5			3.02	20
Sulfate	ND		5.0	mg/L		ND				20
Matrix Spike (B9D0108-MS1)		**Source: E058177-05**			Prepared: 04/13/19 Analyzed: 04/14/19					
Chloride	367		10.0	mg/L	10.0	358	98.8	80-120		
Sulfate	205		10.0	mg/L	100	99.6	105	80-120		
Matrix Spike (B9D0108-MS2)		**Source: E058219-01**			Prepared & Analyzed: 04/13/19					
Sulfate	51.6		5.0	mg/L	50.0	ND	103	80-120		
Chloride	34.3		2.5	mg/L	5.00	29.5	95.9	80-120		
Batch B9D0113 - Method 300.0										
LCS (B9D0113-BS1)					Prepared & Analyzed: 04/11/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		98.8	90-110		
Sulfate	10.0		1.0	mg/L	10.0		100	90-110		
Duplicate (B9D0113-DUP1)		**Source: E058223-01**			Prepared & Analyzed: 04/11/19					
Nitrate (as N)	3.1		0.2	mg/L		3.1			0.542	20
Sulfate	6.2		1.0	mg/L		6.2			0.222	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0113 - Method 300.0										
Duplicate (B9D0113-DUP2)		**Source: E058232-01**			Prepared & Analyzed: 04/11/19					
Nitrate (as N)	6.7		0.2	mg/L		6.7			0.0270	20
Sulfate	32.7		1.0	mg/L		32.8			0.211	20
Matrix Spike (B9D0113-MS1)		**Source: E058223-01**			Prepared & Analyzed: 04/11/19					
Nitrate (as N)	4.1		0.2	mg/L	1.00	3.1	99.6	80-120		
Sulfate	16.3		1.0	mg/L	10.0	6.2	102	80-120		
Matrix Spike (B9D0113-MS2)		**Source: E058232-01**			Prepared & Analyzed: 04/11/19					
Sulfate	43.7		1.0	mg/L	10.0	32.8	108	80-120		
Nitrate (as N)	7.7		0.2	mg/L	1.00	6.7	99.0	80-120		
Batch B9D0124 - No Prep WC										
Blank (B9D0124-BLK1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0124-BS1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	1.98		0.10	mg/L	2.00		98.9	90-110		
Duplicate (B9D0124-DUP1)		**Source: E058177-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Matrix Spike (B9D0124-MS1)		**Source: E058177-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	1.96		0.10	mg/L	2.00	ND	97.8	90-110		
Batch B9D0139 - No Prep WC										
Duplicate (B9D0139-DUP1)		**Source: E058130-01**			Prepared & Analyzed: 04/14/19					
Conductivity	598		1.00	us/Cm		599			0.167	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0146 - No Prep WC										
Blank (B9D0146-BLK1)					Prepared & Analyzed: 04/15/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0146-DUP1)		**Source: E058200-03**			Prepared & Analyzed: 04/15/19					
Dissolved Solids	28.0		5.0	mg/L		30.0			6.90	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0145 - No Prep WC										
LCS (B9D0145-BS1)					Prepared & Analyzed: 04/15/19					
Alkalinity as CaCO3	101		1.0	mg/L	100		101	90-110		
Duplicate (B9D0145-DUP1)		**Source: E058216-02**			Prepared & Analyzed: 04/15/19					
Alkalinity as CaCO3	512		4.0	mg/L		504			1.50	20
Duplicate (B9D0145-DUP2)		**Source: E058237-02**			Prepared & Analyzed: 04/15/19					
Alkalinity as CaCO3	510		4.0	mg/L		509			0.157	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:03

Notes and Definitions

J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
H	This sample was analyzed outside the EPA recommended holding time.
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

CHAIN-OF-CUSTODY RECORD

Company Name: EA Engineering

Project Manager: Laura Oakes

Project Name: Gude

Project ID: 15564.04.001

Sampler(s): Pete Yencesik

P.O. Number: 18961

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
Trip Blank	4/9/19	—	X			1	X									9040914-01
OB-04		9:15	X			9	X	X	X	X	X	X	X			-02
OB-04A		1030	X			9	X	X	X	X	X	X	X			-03
OB-105		11:40	X			9	X	X	X	X	X	X	X			-04
MW-16A		1350	X			9	X	X	X	X	X	X	X			-05
MW-16B		1455	X			9	X	X	X	X	X	X	X			-06
MW-13B		1625	X			9	X	X	X	X	X	X	X			-07
OB-30		—	X			9	X	X	X	X	X	X	X			-08
MW-13A		1735	X			9	X	X	X	X	X	X	X			-09

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yencesik	4/9/19 18:45	(Printed) Victoria Davenport	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)		(Printed)			

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 5.3°C
- ☑ Received on Ice
- ☑ Received same day
- ☐ Preservation Appropriate

Delivery Method:
- Courier
- ☑ Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

58226

SUBCONTRACT ORDER
Maryland Spectral Services
9040914

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Intial
4/10/19 / KD

Due 4:00 PM 04/19/19

	Laboratory ID	Comments

Sample ID: 9040914-02 **OB-04** **Water** **Sampled:04/09/19 09:15**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040914-03 **OB-04A** **Water** **Sampled:04/09/19 10:30**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040914-04 **OB-105** **Water** **Sampled:04/09/19 11:40**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature] 1007	4/11/19	[signature]	

SUBCONTRACT ORDER
Maryland Spectral Services

9040914

Due 4:00 PM 04/19/19 | **Laboratory ID** | **Comments**

Sample ID: 9040914-05 **MW-16A** **Water** **Sampled:04/09/19 13:50**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040914-06 **MW-16B** **Water** **Sampled:04/09/19 14:55**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040914-07 **MW-13B** **Water** **Sampled:04/09/19 16:25**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9040914-08 **OB-30** **Water** **Sampled:04/09/19 00:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[illegible] 1007	4/11/19	[illegible]	

SUBCONTRACT ORDER
Maryland Spectral Services

9040914

Due 4:00 PM 04/19/19 | **Laboratory ID** | **Comments**

Sample ID: 9040914-09 **MW-13A** **Water** **Sampled:04/09/19 17:35**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:

Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
K Dol 1007	4/11/19	[illegible]	

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

23 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/10/19 18:20.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Will Brewington
President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OB-11A		9041028-01	Nonpotable Water	04/10/19 09:05	04/10/19 18:20
OB-11		9041028-02	Nonpotable Water	04/10/19 10:20	04/10/19 18:20
OB-25		9041028-03	Nonpotable Water	04/10/19 11:00	04/10/19 18:20
OB-50		9041028-04	Nonpotable Water	04/10/19 00:00	04/10/19 18:20
MW-22A		9041028-05	Nonpotable Water	04/10/19 12:55	04/10/19 18:20
MW-22B		9041028-06	Nonpotable Water	04/10/19 13:50	04/10/19 18:20
OB-12		9041028-07	Nonpotable Water	04/10/19 15:45	04/10/19 18:20
OB-15		9041028-08	Nonpotable Water	04/10/19 16:30	04/10/19 18:20
TRIP BLANK		9041028-09	Nonpotable Water	04/10/19 00:00	04/10/19 18:20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11A

9041028-01 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.53**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**1.83**		NTU	0.500	0.500	1	04/11/19	04/11/19 18:38	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Chlorobenzene	**9.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,2-Dichlorobenzene	**1.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,4-Dichlorobenzene	**8.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1-Dichloroethane	**5.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
cis-1,2-Dichloroethene	**27.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
trans-1,2-Dichloroethene	**1.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,2-Dichloropropane	**2.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11A

9041028-01 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 18:00	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:00	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Tetrachloroethene	**1.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Trichloroethene	**4.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
Vinyl chloride	**6.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:00	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*103 %*	*04/16/19*	*04/16/19 18:00*
Surrogate: Toluene-d8	*88-110*	*97 %*	*04/16/19*	*04/16/19 18:00*
Surrogate: 4-Bromofluorobenzene	*86-115*	*102 %*	*04/16/19*	*04/16/19 18:00*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11A

9041028-01 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**602000**		ug/L	100	100	1	04/12/19	04/15/19 17:00	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Arsenic	**1.13**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Barium	**165**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Cadmium	**1.02**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Calcium	**99700**	QB-01	ug/L	80.0	80.0	1	04/12/19	04/15/19 17:00	VVD
Chromium	**1.25**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Cobalt	**38.3**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Copper	**1.93**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Iron	**1890**		ug/L	100	100	1	04/12/19	04/15/19 17:00	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Magnesium	**85800**		ug/L	100	100	1	04/12/19	04/15/19 17:00	VVD
Manganese	**13200**		ug/L	20.0	20.0	20	04/12/19	04/16/19 15:25	VVD
Mercury	**0.244**		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:00	VVD
Nickel	**34.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Potassium	**5670**		ug/L	100	100	1	04/12/19	04/15/19 17:00	VVD
Selenium	**1.01**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Sodium	**123000**		ug/L	2000	2000	20	04/12/19	04/16/19 15:25	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:00	VVD
Zinc	**18.9**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:00	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**34.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:04	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11A

9041028-01 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.58**		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:11	FRD
Chloride	**404**		mg/L	12.5	12.5	25	04/14/19	04/14/19 01:36	SES
Conductivity	**1840**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**1170**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.4**		mg/L	0.2	0.1	1	04/11/19	04/11/19 17:05	BMG
Sulfate	**9.8**		mg/L	1.0	0.5	1	04/11/19	04/11/19 17:05	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**353**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11

9041028-02 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.50**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	ND		NTU	0.500	0.500	1	04/11/19	04/11/19 18:42	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**8.6**		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Benzene	**2.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Chlorobenzene	**22.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,2-Dichlorobenzene	**2.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,4-Dichlorobenzene	**17.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1-Dichloroethane	**12.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,2-Dichloroethane	**2.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
cis-1,2-Dichloroethene	**89.5**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
trans-1,2-Dichloroethene	**3.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,2-Dichloropropane	**4.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11

9041028-02 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 18:25	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Methyl tert-butyl ether (MTBE)	**2.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Methylene chloride	**5.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:25	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Tetrachloroethene	**10.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Trichloroethene	**11.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
Vinyl chloride	**13.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:25	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*105 %*	*04/16/19*	*04/16/19 18:25*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/16/19*	*04/16/19 18:25*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 18:25*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11

9041028-02 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**751000**		ug/L	500	500	5	04/12/19	04/16/19 15:32	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Barium	**26.7**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Cadmium	**14.1**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Calcium	**145000**	QB-01	ug/L	400	400	5	04/12/19	04/16/19 15:32	VVD
Chromium	**1.46**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Cobalt	**1.76**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Copper	**5.16**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Iron	ND		ug/L	100	100	1	04/12/19	04/15/19 17:06	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Magnesium	**94200**		ug/L	500	500	5	04/12/19	04/16/19 15:32	VVD
Manganese	**1530**		ug/L	5.00	5.00	5	04/12/19	04/16/19 15:32	VVD
Mercury	**4.00**		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:06	VVD
Nickel	**35.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Potassium	**5170**		ug/L	100	100	1	04/12/19	04/15/19 17:06	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Sodium	**115000**		ug/L	500	500	5	04/12/19	04/16/19 15:32	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:06	VVD
Zinc	**46.9**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:06	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**34.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:05	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-11

9041028-02 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:18	FRD
Chloride	**458**		mg/L	12.5	12.5	25	04/14/19	04/14/19 13:17	SES
Conductivity	**1830**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**1440**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.5**		mg/L	0.2	0.1	1	04/11/19	04/11/19 17:23	BMG
Sulfate	**12.6**		mg/L	1.0	0.5	1	04/11/19	04/11/19 17:23	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**255**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-25

9041028-03 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.26**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**12.8**		NTU	0.500	0.500	1	04/11/19	04/11/19 18:45	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**14.5**		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
cis-1,2-Dichloroethene	**3.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-25

9041028-03 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 18:51	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 18:51	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 18:51	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/16/19*	*04/16/19 18:51*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/16/19*	*04/16/19 18:51*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 18:51*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-25

9041028-03 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**388000**		ug/L	100	100	1	04/12/19	04/15/19 17:13	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Barium	**91.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Calcium	**62100**	QB-01	ug/L	80.0	80.0	1	04/12/19	04/15/19 17:13	VVD
Chromium	**2.93**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Cobalt	**31.0**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Iron	**1300**		ug/L	100	100	1	04/12/19	04/15/19 17:13	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Magnesium	**56500**		ug/L	100	100	1	04/12/19	04/15/19 17:13	VVD
Manganese	**24700**		ug/L	50.0	50.0	50	04/12/19	04/16/19 15:39	VVD
Mercury	**0.117**		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:13	VVD
Nickel	**18.4**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Potassium	**14400**		ug/L	100	100	1	04/12/19	04/15/19 17:13	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Sodium	**82400**		ug/L	100	100	1	04/12/19	04/15/19 17:13	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:13	VVD
Zinc	**12.7**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:13	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**25.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:06	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-25

9041028-03 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**19.3**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.33**		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:20	FRD
Chloride	**191**		mg/L	5.0	5.0	10	04/14/19	04/14/19 14:11	SES
Conductivity	**1210**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**751**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/11/19	04/11/19 17:41	BMG
Sulfate	**45.8**		mg/L	1.0	0.5	1	04/11/19	04/11/19 17:41	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**315**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-50

9041028-04 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.60**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**0.584**		NTU	0.500	0.500	1	04/11/19	04/11/19 18:48	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**10.0**		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Benzene	**2.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Chlorobenzene	**23.2**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,2-Dichlorobenzene	**3.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,4-Dichlorobenzene	**18.6**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1-Dichloroethane	**12.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,2-Dichloroethane	**2.5**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
cis-1,2-Dichloroethene	**90.9**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
trans-1,2-Dichloroethene	**3.2**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,2-Dichloropropane	**4.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-50

9041028-04 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 19:17	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Methyl tert-butyl ether (MTBE)	**2.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Methylene chloride	**5.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:17	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Tetrachloroethene	**10.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Trichloroethene	**11.5**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
Vinyl chloride	**14.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:17	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*107 %*	*04/16/19*	*04/16/19 19:17*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/16/19*	*04/16/19 19:17*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 19:17*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-50

9041028-04 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**714000**		ug/L	500	500	5	04/12/19	04/16/19 15:45	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Barium	**26.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Cadmium	**13.9**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Calcium	**138000**	QB-01	ug/L	400	400	5	04/12/19	04/16/19 15:45	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Cobalt	**1.74**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Copper	**5.55**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Iron	ND		ug/L	100	100	1	04/12/19	04/15/19 17:19	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Magnesium	**90000**		ug/L	500	500	5	04/12/19	04/16/19 15:45	VVD
Manganese	**1460**		ug/L	5.00	5.00	5	04/12/19	04/16/19 15:45	VVD
Mercury	**4.01**		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:19	VVD
Nickel	**34.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Potassium	**5100**		ug/L	100	100	1	04/12/19	04/15/19 17:19	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Sodium	**109000**		ug/L	500	500	5	04/12/19	04/16/19 15:45	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:19	VVD
Zinc	**49.0**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:19	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**35.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:07	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-50

9041028-04 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.7	2.7	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:22	FRD
Chloride	**447**		mg/L	12.5	12.5	25	04/14/19	04/14/19 14:29	SES
Conductivity	**1840**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**1420**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.4**		mg/L	0.2	0.1	1	04/11/19	04/11/19 17:59	BMG
Sulfate	**12.7**		mg/L	1.0	0.5	1	04/11/19	04/11/19 17:59	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**257**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22A

9041028-05 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.39**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**20.7**		NTU	0.500	0.500	1	04/11/19	04/11/19 18:52	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.5**		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
cis-1,2-Dichloroethene	**4.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22A

9041028-05 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 19:42	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 19:42	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Trichloroethene	**3.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 19:42	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/16/19*	*04/16/19 19:42*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/16/19*	*04/16/19 19:42*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/16/19*	*04/16/19 19:42*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22A

9041028-05 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**364000**		ug/L	100	100	1	04/12/19	04/15/19 17:39	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Barium	**21.9**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Calcium	**85400**	QB-01	ug/L	80.0	80.0	1	04/12/19	04/15/19 17:39	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Cobalt	**1.11**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Iron	**4250**		ug/L	100	100	1	04/12/19	04/15/19 17:39	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Magnesium	**36600**		ug/L	100	100	1	04/12/19	04/15/19 17:39	VVD
Manganese	**1730**		ug/L	5.00	5.00	5	04/12/19	04/16/19 16:05	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:39	VVD
Nickel	**4.91**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Potassium	**4930**		ug/L	100	100	1	04/12/19	04/15/19 17:39	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Sodium	**83200**		ug/L	100	100	1	04/12/19	04/15/19 17:39	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:39	VVD
Zinc	**4.79**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:39	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**14.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:07	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22A

9041028-05 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**6.4**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:29	FRD
Chloride	**131**		mg/L	5.0	5.0	10	04/14/19	04/19/19 22:15	SES
Conductivity	**1070**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**645**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/11/19	04/11/19 18:17	BMG
Sulfate	**39.6**		mg/L	1.0	0.5	1	04/11/19	04/11/19 18:17	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**360**		mg/L	4.0	4.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22B

9041028-06 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.75**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**33.1**		NTU	0.500	0.500	1	04/11/19	04/11/19 18:55	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.5**		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
cis-1,2-Dichloroethene	**4.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22B

9041028-06 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 20:08	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:08	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Trichloroethene	**1.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:08	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/16/19*	*04/16/19 20:08*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/16/19*	*04/16/19 20:08*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/16/19*	*04/16/19 20:08*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22B

9041028-06 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**343000**		ug/L	100	100	1	04/12/19	04/15/19 17:46	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Arsenic	**8.49**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Barium	**35.5**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Calcium	**89800**	QB-01	ug/L	80.0	80.0	1	04/12/19	04/15/19 17:46	VVD
Chromium	**2.57**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Cobalt	**1.06**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Iron	**3550**		ug/L	100	100	1	04/12/19	04/15/19 17:46	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Magnesium	**28900**		ug/L	100	100	1	04/12/19	04/15/19 17:46	VVD
Manganese	**608**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:46	VVD
Nickel	**4.69**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Potassium	**7340**		ug/L	100	100	1	04/12/19	04/15/19 17:46	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Sodium	**57100**		ug/L	100	100	1	04/12/19	04/15/19 17:46	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:46	VVD
Zinc	**11.1**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:46	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**8.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:08	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

MW-22B

9041028-06 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**10.2**		mg/L	5.4	5.4	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:31	FRD
Chloride	**120**		mg/L	2.5	2.5	5	04/14/19	04/14/19 15:40	SES
Conductivity	**953**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**599**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/11/19	04/11/19 18:35	BMG
Sulfate	**75.1**		mg/L	1.0	0.5	1	04/11/19	04/11/19 18:35	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**283**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-12

9041028-07 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.78**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**0.912**		NTU	0.500	0.500	1	04/11/19	04/11/19 18:58	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**9.0**		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Benzene	**3.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Chlorobenzene	**2.7**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,4-Dichlorobenzene	**7.4**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1-Dichloroethane	**18.5**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,2-Dichloroethane	**1.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
cis-1,2-Dichloroethene	**27.8**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
trans-1,2-Dichloroethene	**3.2**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,2-Dichloropropane	**8.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-12

9041028-07 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 20:34	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Methylene chloride	**4.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:34	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Tetrachloroethene	**13.0**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Trichloroethene	**12.3**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Trichlorofluoromethane (Freon 11)	**1.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
Vinyl chloride	**7.1**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:34	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/16/19*	*04/16/19 20:34*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 20:34*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/16/19*	*04/16/19 20:34*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-12

9041028-07 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**191000**		ug/L	100	100	1	04/12/19	04/15/19 17:52	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Barium	**17.7**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Calcium	**33000**	QB-01	ug/L	80.0	80.0	1	04/12/19	04/15/19 17:52	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Cobalt	**1.01**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Iron	ND		ug/L	100	100	1	04/12/19	04/15/19 17:52	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Magnesium	**26400**		ug/L	100	100	1	04/12/19	04/15/19 17:52	VVD
Manganese	**110**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:52	VVD
Nickel	**7.38**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Potassium	**5000**		ug/L	100	100	1	04/12/19	04/15/19 17:52	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Sodium	**30000**		ug/L	100	100	1	04/12/19	04/15/19 17:52	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:52	VVD
Zinc	**7.55**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:52	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**10.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:08	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-12

9041028-07 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:33	FRD
Chloride	**75.6**		mg/L	2.5	2.5	5	04/14/19	04/14/19 15:58	SES
Conductivity	**521**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**306**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/11/19	04/11/19 18:53	BMG
Sulfate	**24.7**		mg/L	1.0	0.5	1	04/11/19	04/11/19 18:53	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**124**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-15

9041028-08 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.61**		pH Units			1	04/11/19	04/11/19 11:43	AM
TURBIDITY BY EPA 180.1									
Turbidity	**4.53**		NTU	0.500	0.500	1	04/11/19	04/11/19 19:00	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**15.1**		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-15

9041028-08 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 20:59	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 20:59	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
Vinyl chloride	**1.2**		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 20:59	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/16/19*	*04/16/19 20:59*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/16/19*	*04/16/19 20:59*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/16/19*	*04/16/19 20:59*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-15

9041028-08 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**134000**		ug/L	100	100	1	04/12/19	04/15/19 17:59	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Barium	**87.5**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Calcium	**11700**	QB-01	ug/L	80.0	80.0	1	04/12/19	04/15/19 17:59	VVD
Chromium	**1.33**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Cobalt	**5.17**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Iron	**713**		ug/L	100	100	1	04/12/19	04/15/19 17:59	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Magnesium	**25400**		ug/L	100	100	1	04/12/19	04/15/19 17:59	VVD
Manganese	**1920**		ug/L	5.00	5.00	5	04/12/19	04/16/19 16:11	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 17:59	VVD
Nickel	**34.3**		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Potassium	**1980**		ug/L	100	100	1	04/12/19	04/15/19 17:59	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Sodium	**8440**		ug/L	100	100	1	04/12/19	04/15/19 17:59	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 17:59	VVD
Zinc	**61.3**		ug/L	4.00	4.00	1	04/12/19	04/15/19 17:59	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**3.0**		mg/L	3.0	3.0	1	04/22/19	04/22/19 18:09	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

OB-15

9041028-08 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.7	2.7	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.18**		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:35	FRD
Chloride	**7.1**		mg/L	0.5	0.5	1	04/11/19	04/11/19 19:46	BMG
Conductivity	**303**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**186**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.5**		mg/L	0.2	0.1	1	04/11/19	04/11/19 19:46	BMG
Sulfate	**91.0**		mg/L	1.0	0.5	1	04/11/19	04/11/19 19:46	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**50.9**		mg/L	2.0	2.0	1	04/15/19	04/15/19 10:54	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TRIP BLANK

9041028-09 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Benzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TRIP BLANK

9041028-09 (Nonpotable Water)
Sample Date: 04/10/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Isobutanol	ND		ug/L	100	100	1	04/16/19	04/16/19 21:25	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/16/19	04/16/19 21:25	GM
Styrene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Toluene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/16/19	04/16/19 21:25	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/16/19*	*04/16/19 21:25*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/16/19*	*04/16/19 21:25*
Surrogate: 4-Bromofluorobenzene	*86-115*	*96 %*	*04/16/19*	*04/16/19 21:25*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904180 - Turbidity										
Blank (B904180-BLK1)					Prepared & Analyzed: 04/11/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Blank (B904241-BLK1)					Prepared & Analyzed: 04/16/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Blank (B904241-BLK1)					Prepared & Analyzed: 04/16/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*54.38*			ug/L	*50.0*		*109*	*80-120*		
Surrogate: Toluene-d8	*48.24*			ug/L	*50.0*		*96*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.42*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
LCS (B904241-BS1)					Prepared & Analyzed: 04/16/19					
Acetone	9.5		5.0	ug/L	10.0		95	50-150		
Benzene	5.0		1.0	ug/L	5.00		101	50-150		
Bromochloromethane	4.9		1.0	ug/L	5.00		97	50-150		
Bromodichloromethane	4.6		1.0	ug/L	5.00		92	50-150		
Bromoform	4.7		1.0	ug/L	5.00		94	50-150		
Bromomethane	3.6		1.0	ug/L	5.00		71	50-150		
2-Butanone (MEK)	10.2		5.0	ug/L	10.0		102	50-150		
Carbon disulfide	5.2		1.0	ug/L	5.00		105	50-150		
Carbon tetrachloride	4.9		1.0	ug/L	5.00		99	50-150		
Chlorobenzene	4.7		1.0	ug/L	5.00		94	50-150		
Chloroethane	3.8		1.0	ug/L	5.00		76	50-150		
Chloroform	5.0		1.0	ug/L	5.00		99	50-150		
Chloromethane	5.1		1.0	ug/L	5.00		102	50-150		
Dibromochloromethane	4.6		1.0	ug/L	5.00		93	50-150		
1,2-Dibromo-3-chloropropane	5.0		1.0	ug/L	5.00		100	50-150		
1,2-Dibromoethane (EDB)	5.1		1.0	ug/L	5.00		101	50-150		
Dibromomethane	5.2		1.0	ug/L	5.00		104	50-150		
1,2-Dichlorobenzene	4.7		1.0	ug/L	5.00		95	50-150		
1,4-Dichlorobenzene	4.7		1.0	ug/L	5.00		94	50-150		
1,1-Dichloroethane	5.1		1.0	ug/L	5.00		102	50-150		
1,2-Dichloroethane	5.2		1.0	ug/L	5.00		103	50-150		
1,1-Dichloroethene	5.4		1.0	ug/L	5.00		108	50-150		
cis-1,2-Dichloroethene	4.9		1.0	ug/L	5.00		98	50-150		
trans-1,2-Dichloroethene	5.0		1.0	ug/L	5.00		99	50-150		
1,2-Dichloropropane	4.9		1.0	ug/L	5.00		98	50-150		
1,3-Dichloropropane	5.1		1.0	ug/L	5.00		102	50-150		
2,2-Dichloropropane	4.8		1.0	ug/L	5.00		95	50-150		
1,1-Dichloropropene	4.8		1.0	ug/L	5.00		95	50-150		
cis-1,3-Dichloropropene	4.2		1.0	ug/L	5.00		83	50-150		
trans-1,3-Dichloropropene	4.3		1.0	ug/L	5.00		86	50-150		
Ethylbenzene	4.3		1.0	ug/L	5.00		86	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
LCS (B904241-BS1)					Prepared & Analyzed: 04/16/19					
2-Hexanone	8.4		5.0	ug/L	10.0		84	50-150		
Methyl tert-butyl ether (MTBE)	4.7		1.0	ug/L	5.00		94	50-150		
4-Methyl-2-pentanone	9.0		5.0	ug/L	10.0		90	50-150		
Methylene chloride	5.5		1.0	ug/L	5.00		110	0-200		
Methyl methacrylate	4.9	J	5.0	ug/L	5.00		98	50-150		
Styrene	3.9		1.0	ug/L	5.00		79	50-150		
1,1,1,2-Tetrachloroethane	4.7		1.0	ug/L	5.00		93	50-150		
1,1,2,2-Tetrachloroethane	5.5		1.0	ug/L	5.00		111	50-150		
Tetrachloroethene	4.4		1.0	ug/L	5.00		89	50-150		
Toluene	4.6		1.0	ug/L	5.00		92	50-150		
1,1,1-Trichloroethane	4.7		1.0	ug/L	5.00		95	50-150		
1,1,2-Trichloroethane	4.9		1.0	ug/L	5.00		97	50-150		
Trichloroethene	5.2		1.0	ug/L	5.00		104	50-150		
Trichlorofluoromethane (Freon 11)	5.1		1.0	ug/L	5.00		103	50-150		
1,2,3-Trichloropropane	4.9		1.0	ug/L	5.00		98	50-150		
Vinyl acetate	4.7		1.0	ug/L	5.00		94	50-150		
Vinyl chloride	5.2		1.0	ug/L	5.00		105	50-150		
o-Xylene	4.1		1.0	ug/L	5.00		82	50-150		
m- & p-Xylenes	8.7		1.0	ug/L	10.0		87	50-150		
Surrogate: 1,2-Dichloroethane-d4	*52.55*			ug/L	*50.0*		*105*	*80-120*		
Surrogate: Toluene-d8	*47.91*			ug/L	*50.0*		*96*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.07*			ug/L	*50.0*		*100*	*86-115*		
Duplicate (B904241-DUP1)			**Source: 9040914-03**		Prepared & Analyzed: 04/16/19					
Acetone	9.0		5.0	ug/L		8.1			10	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	1.7		1.0	ug/L		1.6			5	20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Duplicate (B904241-DUP1)			**Source: 9040914-03**		Prepared & Analyzed: 04/16/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	1.6		1.0	ug/L		1.6			0.6	20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	6.7		1.0	ug/L		6.2			7	20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	14.7		1.0	ug/L		14.1			4	20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Duplicate (B904241-DUP1)		**Source: 9040914-03**		Prepared & Analyzed: 04/16/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	3.4		1.0	ug/L		3.0			10	20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	1.1		1.0	ug/L		1.1			4	20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	1.2		1.0	ug/L		1.4			13	20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	2.0		1.0	ug/L		1.8			11	20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*55.03*			ug/L	*50.0*		*110*	*80-120*		
Surrogate: Toluene-d8	*47.12*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*48.89*			ug/L	*50.0*		*98*	*86-115*		
Matrix Spike (B904241-MS1)		**Source: 9040914-02**		Prepared & Analyzed: 04/16/19						
Acetone	16.6		5.0	ug/L	10.0	4.5	121	60-120		
Benzene	11.4		1.0	ug/L	10.0	1.6	98	60-120		
Bromochloromethane	9.5		1.0	ug/L	10.0	ND	95	60-120		
Bromodichloromethane	9.5		1.0	ug/L	10.0	ND	95	60-120		
Bromoform	9.1		1.0	ug/L	10.0	ND	91	60-120		
Bromomethane	5.9		1.0	ug/L	10.0	ND	59	60-120		
2-Butanone (MEK)	11.4		5.0	ug/L	10.0	ND	114	60-120		
Carbon disulfide	9.8		1.0	ug/L	10.0	ND	98	60-120		
Carbon tetrachloride	9.8		1.0	ug/L	10.0	ND	98	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Matrix Spike (B904241-MS1)		**Source: 9040914-02**		Prepared & Analyzed: 04/16/19						
Chlorobenzene	10.8		1.0	ug/L	10.0	1.6	92	60-120		
Chloroethane	6.7		1.0	ug/L	10.0	ND	67	60-120		
Chloroform	10.0		1.0	ug/L	10.0	ND	100	60-120		
Chloromethane	9.4		1.0	ug/L	10.0	ND	94	60-120		
Dibromochloromethane	8.8		1.0	ug/L	10.0	ND	88	60-120		
1,2-Dibromo-3-chloropropane	9.0		1.0	ug/L	10.0	ND	90	60-120		
1,2-Dibromoethane (EDB)	9.2		1.0	ug/L	10.0	ND	92	60-120		
Dibromomethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,2-Dichlorobenzene	9.6		1.0	ug/L	10.0	ND	96	60-120		
1,4-Dichlorobenzene	14.1		1.0	ug/L	10.0	5.4	87	60-120		
1,1-Dichloroethane	10.5		1.0	ug/L	10.0	ND	105	60-120		
1,2-Dichloroethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,1-Dichloroethene	9.8		1.0	ug/L	10.0	ND	98	60-120		
cis-1,2-Dichloroethene	22.2		1.0	ug/L	10.0	11.8	104	60-120		
trans-1,2-Dichloroethene	10.1		1.0	ug/L	10.0	ND	101	60-120		
1,2-Dichloropropane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,3-Dichloropropane	9.9		1.0	ug/L	10.0	ND	99	60-120		
2,2-Dichloropropane	7.5		1.0	ug/L	10.0	ND	75	60-120		
1,1-Dichloropropene	9.4		1.0	ug/L	10.0	ND	94	60-120		
cis-1,3-Dichloropropene	8.5		1.0	ug/L	10.0	ND	85	60-120		
trans-1,3-Dichloropropene	8.5		1.0	ug/L	10.0	ND	85	60-120		
Ethylbenzene	8.7		1.0	ug/L	10.0	ND	87	60-120		
2-Hexanone	9.4		5.0	ug/L	10.0	ND	94	60-120		
Methyl tert-butyl ether (MTBE)	8.9		1.0	ug/L	10.0	ND	89	60-120		
4-Methyl-2-pentanone	9.8		5.0	ug/L	10.0	ND	98	60-120		
Methylene chloride	12.3		1.0	ug/L	10.0	2.1	101	60-120		
Methyl methacrylate	9.8		5.0	ug/L	10.0	ND	98	60-120		
Styrene	8.2		1.0	ug/L	10.0	ND	82	60-120		
1,1,1,2-Tetrachloroethane	9.1		1.0	ug/L	10.0	ND	91	60-120		
1,1,2,2-Tetrachloroethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
Tetrachloroethene	10.1		1.0	ug/L	10.0	1.3	88	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904241 - GCMS-WATER-VOLATILES										
Matrix Spike (B904241-MS1)		**Source: 9040914-02**		Prepared & Analyzed: 04/16/19						
Toluene	9.4		1.0	ug/L	10.0	ND	94	60-120		
1,1,1-Trichloroethane	9.7		1.0	ug/L	10.0	ND	97	60-120		
1,1,2-Trichloroethane	9.6		1.0	ug/L	10.0	ND	96	60-120		
Trichloroethene	10.9		1.0	ug/L	10.0	1.0	99	60-120		
Trichlorofluoromethane (Freon 11)	9.5		1.0	ug/L	10.0	ND	95	60-120		
1,2,3-Trichloropropane	9.7		1.0	ug/L	10.0	ND	97	60-120		
Vinyl acetate	7.0		1.0	ug/L	10.0	ND	70	60-120		
Vinyl chloride	10.7		1.0	ug/L	10.0	1.3	94	60-120		
o-Xylene	8.2		1.0	ug/L	10.0	ND	82	60-120		
m- & p-Xylenes	16.7		1.0	ug/L	20.0	ND	83	60-120		
Surrogate: 1,2-Dichloroethane-d4	*52.81*			ug/L	*50.0*		*106*	*80-120*		
Surrogate: Toluene-d8	*47.01*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.93*			ug/L	*50.0*		*102*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904197 - 3010A-Metals Digestion										
Blank (B904197-BLK1)					Prepared: 04/12/19 Analyzed: 04/15/19					
Hardness as CaCO3	211		100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	84.5	B	80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904197-BS1)					Prepared: 04/12/19 Analyzed: 04/15/19					
Antimony	47.9		1.00	ug/L	50.0		96	80-120		
Arsenic	49.2		1.00	ug/L	50.0		98	80-120		
Barium	49.1		1.00	ug/L	50.0		98	80-120		
Beryllium	48.0		1.00	ug/L	50.0		96	80-120		
Cadmium	49.1		1.00	ug/L	50.0		98	80-120		
Calcium	4990		80.0	ug/L	5000		100	80-120		
Chromium	50.1		1.00	ug/L	50.0		100	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904197 - 3010A-Metals Digestion										
LCS (B904197-BS1)					Prepared: 04/12/19 Analyzed: 04/15/19					
Cobalt	49.5		1.00	ug/L	50.0		99	80-120		
Copper	49.3		1.00	ug/L	50.0		99	80-120		
Iron	5100		100	ug/L	5000		102	80-120		
Lead	47.0		1.00	ug/L	50.0		94	80-120		
Magnesium	5120		100	ug/L	5000		102	80-120		
Manganese	50.4		1.00	ug/L	50.0		101	80-120		
Mercury	2.26		0.100	ug/L	2.50		90	80-120		
Nickel	49.6		1.00	ug/L	50.0		99	80-120		
Potassium	5040		100	ug/L	5000		101	80-120		
Selenium	47.4		1.00	ug/L	50.0		95	80-120		
Silver	37.7		1.00	ug/L	50.0		75	80-120		
Sodium	5300		100	ug/L	5000		106	80-120		
Thallium	47.9		1.00	ug/L	50.0		96	80-120		
Vanadium	49.8		1.00	ug/L	50.0		100	80-120		
Zinc	74.9		4.00	ug/L	70.0		107	80-120		
Duplicate (B904197-DUP1)			**Source: 9041028-01**		Prepared: 04/12/19 Analyzed: 04/15/19					
Hardness as CaCO3	602000		100	ug/L		602000			0.07	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	1.25		1.00	ug/L		1.13			10	200
Barium	164		1.00	ug/L		165			0.4	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		1.02				200
Calcium	99900		80.0	ug/L		99700			0.2	200
Chromium	1.37		1.00	ug/L		1.25			9	200
Cobalt	38.2		1.00	ug/L		38.3			0.09	200
Copper	2.00		1.00	ug/L		1.93			4	200
Iron	1900		100	ug/L		1890			0.4	200
Lead	ND		1.00	ug/L		ND				200
Magnesium	85700		100	ug/L		85800			0.04	200
Manganese	12600		1.00	ug/L		13200			5	200
Mercury	0.250		0.100	ug/L		0.244			2	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904197 - 3010A-Metals Digestion										
Duplicate (B904197-DUP1)		**Source: 9041028-01**		Prepared: 04/12/19 Analyzed: 04/15/19						
Nickel	34.8		1.00	ug/L		34.2			2	200
Potassium	5700		100	ug/L		5670			0.6	200
Selenium	1.08		1.00	ug/L		1.01			7	200
Silver	ND		1.00	ug/L		ND				200
Sodium	120000		100	ug/L		123000			3	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	24.3		4.00	ug/L		18.9			25	200
Matrix Spike (B904197-MS1)		**Source: 9041116-01**		Prepared: 04/12/19 Analyzed: 04/15/19						
Antimony	49.2		1.00	ug/L	50.0	ND	98	60-140		
Arsenic	50.2		1.00	ug/L	50.0	ND	100	60-140		
Barium	201		1.00	ug/L	50.0	151	101	60-140		
Beryllium	48.3		1.00	ug/L	50.0	ND	97	60-140		
Cadmium	49.9		1.00	ug/L	50.0	ND	100	60-140		
Calcium	61900		80.0	ug/L	5000	56500	108	60-140		
Chromium	50.5		1.00	ug/L	50.0	ND	101	60-140		
Cobalt	53.7		1.00	ug/L	50.0	5.26	97	60-140		
Copper	48.1		1.00	ug/L	50.0	ND	96	60-140		
Iron	5220		100	ug/L	5000	ND	104	60-140		
Lead	48.2		1.00	ug/L	50.0	ND	96	60-140		
Magnesium	22400		100	ug/L	5000	17000	109	60-140		
Manganese	5820		1.00	ug/L	50.0	7650	NR	60-140		
Mercury	2.46		0.100	ug/L	2.50	ND	98	60-140		
Nickel	55.6		1.00	ug/L	50.0	6.73	98	60-140		
Potassium	7790		100	ug/L	5000	2720	101	60-140		
Selenium	50.4		1.00	ug/L	50.0	ND	101	60-140		
Silver	38.1		1.00	ug/L	50.0	ND	76	60-140		
Sodium	30400		100	ug/L	5000	25400	100	60-140		
Thallium	49.8		1.00	ug/L	50.0	ND	100	60-140		
Vanadium	50.6		1.00	ug/L	50.0	ND	101	60-140		
Zinc	85.1		4.00	ug/L	70.0	ND	122	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904307 - COD (03) Prep										
Blank (B904307-BLK1)					Prepared & Analyzed: 04/22/19					
COD	ND		20.0	mg/L						
LCS (B904307-BS1)					Prepared & Analyzed: 04/22/19					
COD	ND		20.0	mg/L	2.00			85-115		
Duplicate (B904307-DUP1)		**Source: 9040914-02**			Prepared & Analyzed: 04/22/19					
COD	44.0		20.0	mg/L		47.0			7	20
Matrix Spike (B904307-MS1)		**Source: 9040914-02**			Prepared & Analyzed: 04/22/19					
COD	50.0		20.0	mg/L	2.00	47.0	150	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904189 - TSS PREP										
Blank (B904189-BLK1)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904189-BLK2)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904189-BS1)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	63.0		2.5	mg/L	59.3		106	70-130		
Duplicate (B904189-DUP1)		**Source: 9041028-06**			Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	7.4		3.6	mg/L		10.2			32	200
Duplicate (B904189-DUP2)		**Source: 9041210-04**			Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	37.6		5.9	mg/L		45.7			19	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0108 - Method 300.0										
LCS (B9D0108-BS1)					Prepared & Analyzed: 04/13/19					
Chloride	1.1		0.5	mg/L	1.00		107	90-110		
Duplicate (B9D0108-DUP1)		**Source: E058177-05**			Prepared: 04/13/19 Analyzed: 04/14/19					
Chloride	356		10.0	mg/L		358			0.336	20
Duplicate (B9D0108-DUP2)		**Source: E058219-01**			Prepared & Analyzed: 04/13/19					
Chloride	28.6		2.5	mg/L		29.5			3.02	20
Matrix Spike (B9D0108-MS1)		**Source: E058177-05**			Prepared: 04/13/19 Analyzed: 04/14/19					
Chloride	367		10.0	mg/L	10.0	358	98.8	80-120		
Matrix Spike (B9D0108-MS2)		**Source: E058219-01**			Prepared & Analyzed: 04/13/19					
Chloride	34.3		2.5	mg/L	5.00	29.5	95.9	80-120		
Batch B9D0113 - Method 300.0										
LCS (B9D0113-BS1)					Prepared & Analyzed: 04/11/19					
Sulfate	10.0		1.0	mg/L	10.0		100	90-110		
Chloride	1.0		0.5	mg/L	1.00		99.0	90-110		
Nitrate (as N)	1.0		0.2	mg/L	1.00		98.8	90-110		
Duplicate (B9D0113-DUP1)		**Source: E058223-01**			Prepared & Analyzed: 04/11/19					
Chloride	16.2		0.5	mg/L		16.3			0.971	20
Nitrate (as N)	3.1		0.2	mg/L		3.1			0.542	20
Sulfate	6.2		1.0	mg/L		6.2			0.222	20
Duplicate (B9D0113-DUP2)		**Source: E058232-01**			Prepared & Analyzed: 04/11/19					
Sulfate	32.7		1.0	mg/L		32.8			0.211	20
Nitrate (as N)	6.7		0.2	mg/L		6.7			0.0270	20
Chloride	12.7		0.5	mg/L		12.7			0.325	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0113 - Method 300.0										
Matrix Spike (B9D0113-MS1)		**Source: E058223-01**			Prepared & Analyzed: 04/11/19					
Sulfate	16.3		1.0	mg/L	10.0	6.2	102	80-120		
Chloride	17.2		0.5	mg/L	1.00	16.3	86.4	80-120		
Nitrate (as N)	4.1		0.2	mg/L	1.00	3.1	99.6	80-120		
Matrix Spike (B9D0113-MS2)		**Source: E058232-01**			Prepared & Analyzed: 04/11/19					
Sulfate	43.7		1.0	mg/L	10.0	32.8	108	80-120		
Chloride	13.7		0.5	mg/L	1.00	12.7	95.2	80-120		
Nitrate (as N)	7.7		0.2	mg/L	1.00	6.7	99.0	80-120		
Batch B9D0126 - No Prep WC										
Blank (B9D0126-BLK1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0126-BS1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	2.00		0.10	mg/L	2.00		100	90-110		
Duplicate (B9D0126-DUP1)		**Source: 9041028-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	0.61		0.10	mg/L		0.58			4.57	20
Matrix Spike (B9D0126-MS1)		**Source: 9041028-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	2.54		0.10	mg/L	2.00	0.58	97.8	90-110		
Batch B9D0140 - Method 300.0										
LCS (B9D0140-BS1)					Prepared & Analyzed: 04/14/19					
Chloride	1.1		0.5	mg/L	1.00		107	90-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0140 - Method 300.0										
Duplicate (B9D0140-DUP1)		**Source: 9041028-02**			Prepared & Analyzed: 04/14/19					
Chloride	443		12.5	mg/L		458			3.23	20
Duplicate (B9D0140-DUP2)		**Source: E058244-07**			Prepared: 04/14/19 Analyzed: 04/20/19					
Chloride	296		12.5	mg/L		294			0.821	20
Matrix Spike (B9D0140-MS1)		**Source: 9041028-02**			Prepared & Analyzed: 04/14/19					
Chloride	458		12.5	mg/L	1.00	458	45.3	80-120		
Matrix Spike (B9D0140-MS2)		**Source: E058244-07**			Prepared: 04/14/19 Analyzed: 04/20/19					
Chloride	295		12.5	mg/L	1.00	294	98.8	80-120		
Batch B9D0193 - No Prep WC										
Blank (B9D0193-BLK1)					Prepared & Analyzed: 04/16/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0193-DUP1)		**Source: 9041028-01**			Prepared & Analyzed: 04/16/19					
Dissolved Solids	1170		5.0	mg/L		1170			0.428	20
Batch B9D0194 - No Prep WC										
Duplicate (B9D0194-DUP1)		**Source: 9041028-01**			Prepared & Analyzed: 04/18/19					
Conductivity	1830		1.00	us/Cm		1840			0.437	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0145 - No Prep WC										
LCS (B9D0145-BS1)					Prepared & Analyzed: 04/15/19					
Alkalinity as CaCO3	101		1.0	mg/L	100		101	90-110		
Duplicate (B9D0145-DUP1)		**Source: E058216-02**			Prepared & Analyzed: 04/15/19					
Alkalinity as CaCO3	512		4.0	mg/L		504			1.50	20
Duplicate (B9D0145-DUP2)		**Source: E058237-02**			Prepared & Analyzed: 04/15/19					
Alkalinity as CaCO3	510		4.0	mg/L		509			0.157	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/23/19 08:17

Notes and Definitions

QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

CHAIN-OF-CUSTODY RECORD

Company Name: EA Engineering

Project Manager: Laura Akes

Project Name: Gude

Project ID: 1556404

Sampler(s): Pete Yencsik

P.O. Number: 18961

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Analysis Requested

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
OB-11A	4/10/19	9:05	X			9	X	X	X	X	X	X	X			9041028-01
OB-11		10:20	X			9	X	X	X	X	X	X	X			-02
OB-25		11:10	X			9	X	X	X	X	X	X	X			-03
OB-50		—	X			9	X	X	X	X	X	X	X			-04
MW-22A		1255	X			9	X	X	X	X	X	X	X			-05
MW-22B		1350	X			9	X	X	X	X	X	X	X			-06
OB-12		1545	X			9	X	X	X	X	X	X	X			-07
OB-15		1630	X			9	X	X	X	X	X	X	X			-08
Trip Blank		—	X			1	X									-09

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yencsik	4/10/19 18:20	(Printed) Samantha Adron	(Printed)		(Printed)

Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)
(Printed)		(Printed)

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 5.0°C
- ☒ Received on Ice
- ☒ Received same day
- ☐ Preservation Appropriate

Delivery Method:
- Courier
- ☒ Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

58227

SUBCONTRACT ORDER
Maryland Spectral Services
9041028

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Intial
4/10/19 / KD

Due 4:00 PM 04/22/19

				Laboratory ID	Comments
Sample ID: 9041028-01	**OB-11A**	**Water**	**Sampled:04/10/19 09:05**		

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041028-02	**OB-11**	**Water**	**Sampled:04/10/19 10:20**		

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041028-03	**OB-25**	**Water**	**Sampled:04/10/19 11:00**		

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature]	1007 4/11/19	[signature]	

SUBCONTRACT ORDER
Maryland Spectral Services

9041028

Due 4:00 PM 04/22/19

Laboratory ID **Comments**

Sample ID: 9041028-04 **OB-50** **Water** **Sampled:04/10/19 11:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041028-05 **MW-22A** **Water** **Sampled:04/10/19 12:55**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041028-06 **MW-22B** **Water** **Sampled:04/10/19 13:50**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041028-07 **OB-12** **Water** **Sampled:04/10/19 15:45**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature]	1007 4/11/19	[signature]	

SUBCONTRACT ORDER
Maryland Spectral Services

9041028

Due 4:00 PM 04/22/19 **Laboratory ID** **Comments**

Sample ID: 9041028-08 **OB-15** **Water** **Sampled:04/10/19 16:30**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:

Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
1007	4/11/19		

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

24 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/11/19 17:46.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Will Brewington
President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OB-08		9041116-01	Nonpotable Water	04/11/19 08:45	04/11/19 17:46
TRIP BLANK		9041116-02	Nonpotable Water	04/11/19 00:00	04/11/19 17:46
OB-08A		9041116-03	Nonpotable Water	04/11/19 09:46	04/11/19 17:46
MW-3B		9041116-04	Nonpotable Water	04/11/19 11:20	04/11/19 17:46
MW-3A		9041116-05	Nonpotable Water	04/11/19 12:25	04/11/19 17:46
MW-24B		9041116-06	Nonpotable Water	04/11/19 14:50	04/11/19 17:46
MW-24A		9041116-07	Nonpotable Water	04/11/19 16:00	04/11/19 17:46
OB-40		9041116-08	Nonpotable Water	04/11/19 00:00	04/11/19 17:46

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08

9041116-01 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.53**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	ND		NTU	0.500	0.500	1	04/12/19	04/12/19 13:45	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Chlorobenzene	**4.5**		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,4-Dichlorobenzene	**2.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
cis-1,2-Dichloroethene	**13.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08

9041116-01 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	**1.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 13:52	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 13:52	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
Vinyl chloride	**1.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 13:52	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/17/19*	*04/17/19 13:52*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 13:52*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 13:52*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08

9041116-01 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**211000**	B	ug/L	100	100	1	04/12/19	04/15/19 18:05	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Barium	**151**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Calcium	**56500**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:05	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Cobalt	**5.26**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Iron	ND		ug/L	100	100	1	04/12/19	04/15/19 18:05	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Magnesium	**17000**		ug/L	100	100	1	04/12/19	04/15/19 18:05	VVD
Manganese	**7650**		ug/L	10.0	10.0	10	04/12/19	04/16/19 16:18	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:05	VVD
Nickel	**6.73**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Potassium	**2720**		ug/L	100	100	1	04/12/19	04/15/19 18:05	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Sodium	**25400**		ug/L	100	100	1	04/12/19	04/15/19 18:05	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:05	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:05	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**4.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:43	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08

9041116-01 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:42	FRD
Chloride	**41.5**		mg/L	2.5	2.5	5	04/14/19	04/14/19 16:16	SES
Conductivity	**549**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**328**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/12/19	04/12/19 17:36	BMG
Sulfate	**6.1**		mg/L	1.0	0.5	1	04/12/19	04/12/19 17:36	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**225**		mg/L	1.0	1.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TRIP BLANK

9041116-02 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.3**		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TRIP BLANK

9041116-02 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 14:18	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:18	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:18	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*107 %*	*04/17/19*	*04/17/19 14:18*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/17/19*	*04/17/19 14:18*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/17/19*	*04/17/19 14:18*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08A

9041116-03 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.44**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**5.08**		NTU	0.500	0.500	1	04/12/19	04/12/19 13:46	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Chlorobenzene	**7.8**		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,4-Dichlorobenzene	**3.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
cis-1,2-Dichloroethene	**8.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,2-Dichloropropane	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08A

9041116-03 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 14:44	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 14:44	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
Vinyl chloride	**1.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 14:44	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/17/19*	*04/17/19 14:44*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 14:44*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/17/19*	*04/17/19 14:44*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08A

9041116-03 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**184000**	B	ug/L	100	100	1	04/12/19	04/15/19 18:12	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Arsenic	**3.00**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Barium	**110**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Cadmium	**1.46**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Calcium	**44200**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:12	VVD
Chromium	**5.71**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Cobalt	**12.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Copper	**4.25**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Iron	**4000**		ug/L	100	100	1	04/12/19	04/15/19 18:12	VVD
Lead	**2.25**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Magnesium	**18000**		ug/L	100	100	1	04/12/19	04/15/19 18:12	VVD
Manganese	**7750**		ug/L	10.0	10.0	10	04/12/19	04/16/19 16:24	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:12	VVD
Nickel	**10.6**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Potassium	**2920**		ug/L	100	100	1	04/12/19	04/15/19 18:12	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Sodium	**27200**		ug/L	100	100	1	04/12/19	04/15/19 18:12	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Vanadium	**1.95**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:12	VVD
Zinc	**25.0**		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:12	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**9.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:44	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-08A

9041116-03 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**57.4**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.31**		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:44	FRD
Chloride	**32.6**		mg/L	2.5	2.5	5	04/14/19	04/14/19 16:34	SES
Conductivity	**503**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**303**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/12/19	04/12/19 17:54	BMG
Sulfate	**2.3**		mg/L	1.0	0.5	1	04/12/19	04/12/19 17:54	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**220**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3B

9041116-04 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.93**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**8.63**		NTU	0.500	0.500	1	04/12/19	04/12/19 13:46	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.2**		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3B

9041116-04 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 15:09	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:09	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:09	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/17/19*	*04/17/19 15:09*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 15:09*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 15:09*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3B

9041116-04 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**41600**	B	ug/L	100	100	1	04/12/19	04/15/19 18:18	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Barium	**10.5**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Calcium	**12100**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:18	VVD
Chromium	**5.27**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Copper	**1.40**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Iron	**614**		ug/L	100	100	1	04/12/19	04/15/19 18:18	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Magnesium	**2770**		ug/L	100	100	1	04/12/19	04/15/19 18:18	VVD
Manganese	**32.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:18	VVD
Nickel	**3.61**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Potassium	**1260**		ug/L	100	100	1	04/12/19	04/15/19 18:18	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Sodium	**13500**		ug/L	100	100	1	04/12/19	04/15/19 18:18	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Vanadium	**1.19**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:18	VVD
Zinc	**10.4**		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:18	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**6.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:44	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3B

9041116-04 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**37.9**		mg/L	2.7	2.7	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:46	FRD
Chloride	**3.1**		mg/L	0.5	0.5	1	04/12/19	04/12/19 18:12	BMG
Conductivity	**145**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**100**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.2**		mg/L	0.2	0.1	1	04/12/19	04/12/19 18:12	BMG
Sulfate	**47.5**		mg/L	1.0	0.5	1	04/12/19	04/12/19 18:12	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**60.5**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3A

9041116-05 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.27**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**10.3**		NTU	0.500	0.500	1	04/12/19	04/12/19 13:47	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.3**		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Chloroform	**2.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3A

9041116-05 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 15:35	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 15:35	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 15:35	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/17/19*	*04/17/19 15:35*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 15:35*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 15:35*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3A

9041116-05 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**20400**	B	ug/L	100	100	1	04/12/19	04/15/19 18:25	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Barium	**4.23**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Calcium	**5510**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:25	VVD
Chromium	**2.93**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Iron	**281**		ug/L	100	100	1	04/12/19	04/15/19 18:25	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Magnesium	**1610**		ug/L	100	100	1	04/12/19	04/15/19 18:25	VVD
Manganese	**9.47**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:25	VVD
Nickel	**1.86**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Potassium	**1040**		ug/L	100	100	1	04/12/19	04/15/19 18:25	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Sodium	**3690**		ug/L	100	100	1	04/12/19	04/15/19 18:25	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:25	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:25	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	ND		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:45	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-3A

9041116-05 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**18.7**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:48	FRD
Chloride	**3.2**		mg/L	0.5	0.5	1	04/12/19	04/12/19 18:30	BMG
Conductivity	**77.7**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**44.0**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/12/19	04/12/19 18:30	BMG
Sulfate	**2.0**		mg/L	1.0	0.5	1	04/12/19	04/12/19 18:30	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**34.3**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24B

9041116-06 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.52**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**127**		NTU	1.00	1.00	2	04/12/19	04/12/19 13:57	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**44.3**		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Benzene	**5.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
2-Butanone (MEK)	**25.2**		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Chlorobenzene	**3.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,4-Dichlorobenzene	**13.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1-Dichloroethane	**4.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
cis-1,2-Dichloroethene	**2.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
trans-1,2-Dichloroethene	**3.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24B

9041116-06 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 16:01	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:01	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Toluene	**76.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
Vinyl chloride	**1.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
o-Xylene	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:01	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*105 %*	*04/17/19*	*04/17/19 16:01*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 16:01*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 16:01*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24B

9041116-06 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**567000**	B	ug/L	100	100	1	04/12/19	04/15/19 18:31	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Arsenic	**32.3**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Barium	**190**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Calcium	**89700**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:31	VVD
Chromium	**3.39**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Cobalt	**51.6**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Iron	**47800**		ug/L	100	100	1	04/12/19	04/15/19 18:31	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Magnesium	**83300**		ug/L	100	100	1	04/12/19	04/15/19 18:31	VVD
Manganese	**4410**		ug/L	5.00	5.00	5	04/12/19	04/16/19 16:31	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:31	VVD
Nickel	**16.9**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Potassium	**3920**		ug/L	100	100	1	04/12/19	04/15/19 18:31	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Sodium	**34800**		ug/L	100	100	1	04/12/19	04/15/19 18:31	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:31	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:31	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**43.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:46	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24B

9041116-06 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**54.2**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:55	FRD
Chloride	**293**		mg/L	12.5	12.5	25	04/14/19	04/19/19 23:09	SES
Conductivity	**1370**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**986**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.6**		mg/L	0.2	0.1	1	04/12/19	04/12/19 19:23	BMG
Sulfate	ND		mg/L	1.0	0.5	1	04/12/19	04/12/19 19:23	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**296**		mg/L	4.0	4.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24A

9041116-07 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.08**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**7.01**		NTU	0.500	0.500	1	04/12/19	04/12/19 13:50	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**8.9**		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Benzene	**4.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Chlorobenzene	**10.5**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,2-Dichlorobenzene	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,4-Dichlorobenzene	**13.5**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1-Dichloroethane	**1.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
cis-1,2-Dichloroethene	**1.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
trans-1,2-Dichloroethene	**2.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24A

9041116-07 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 16:26	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:26	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Toluene	**5.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
Vinyl chloride	**2.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:26	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*106 %*	*04/17/19*	*04/17/19 16:26*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 16:26*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/17/19*	*04/17/19 16:26*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24A

9041116-07 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**449000**	B	ug/L	100	100	1	04/12/19	04/15/19 18:38	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Arsenic	**4.86**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Barium	**298**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Calcium	**63400**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:38	VVD
Chromium	**3.12**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Cobalt	**62.5**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Iron	**25800**		ug/L	100	100	1	04/12/19	04/15/19 18:38	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Magnesium	**70600**		ug/L	100	100	1	04/12/19	04/15/19 18:38	VVD
Manganese	**8950**		ug/L	10.0	10.0	10	04/12/19	04/16/19 16:38	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:38	VVD
Nickel	**32.7**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Potassium	**5140**		ug/L	100	100	1	04/12/19	04/15/19 18:38	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Sodium	**53600**		ug/L	100	100	1	04/12/19	04/15/19 18:38	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:38	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:38	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**39.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:47	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

MW-24A

9041116-07 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**41.2**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.59**		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:57	FRD
Chloride	**324**		mg/L	12.5	12.5	25	04/14/19	04/19/19 23:26	SES
Conductivity	**1290**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**1090**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.3**		mg/L	0.2	0.1	1	04/12/19	04/12/19 19:41	BMG
Sulfate	ND		mg/L	1.0	0.5	1	04/12/19	04/12/19 19:41	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**177**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-40

9041116-08 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.56**		pH Units			1	04/12/19	04/12/19 14:45	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**138**		NTU	1.00	1.00	2	04/12/19	04/12/19 13:56	CMK
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**43.8**		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Benzene	**5.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
2-Butanone (MEK)	**25.1**		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Chlorobenzene	**3.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,4-Dichlorobenzene	**12.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1-Dichloroethane	**4.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
cis-1,2-Dichloroethene	**2.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
trans-1,2-Dichloroethene	**3.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-40

9041116-08 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 16:52	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 16:52	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Toluene	**76.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
Vinyl chloride	**1.8**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
o-Xylene	**1.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 16:52	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*106 %*	*04/17/19*	*04/17/19 16:52*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 16:52*
Surrogate: 4-Bromofluorobenzene	*86-115*	*99 %*	*04/17/19*	*04/17/19 16:52*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-40

9041116-08 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**570000**	B	ug/L	100	100	1	04/12/19	04/15/19 18:57	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Arsenic	**33.1**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Barium	**191**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Calcium	**90100**	QB-01, B	ug/L	80.0	80.0	1	04/12/19	04/15/19 18:57	VVD
Chromium	**4.09**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Cobalt	**52.2**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Copper	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Iron	**48100**		ug/L	100	100	1	04/12/19	04/15/19 18:57	VVD
Lead	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Magnesium	**83600**		ug/L	100	100	1	04/12/19	04/15/19 18:57	VVD
Manganese	**4350**		ug/L	10.0	10.0	10	04/12/19	04/16/19 17:10	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/12/19	04/15/19 18:57	VVD
Nickel	**17.3**		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Potassium	**3980**		ug/L	100	100	1	04/12/19	04/15/19 18:57	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Silver	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Sodium	**34900**		ug/L	100	100	1	04/12/19	04/15/19 18:57	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/12/19	04/15/19 18:57	VVD
Zinc	**4.85**		ug/L	4.00	4.00	1	04/12/19	04/15/19 18:57	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**42.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:48	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

OB-40

9041116-08 (Nonpotable Water)
Sample Date: 04/11/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**46.2**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.11**		mg/L	0.10	0.05	1	04/12/19	04/12/19 14:59	FRD
Chloride	**294**		mg/L	12.5	12.5	25	04/14/19	04/19/19 23:44	SES
Conductivity	**1360**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**987**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**0.3**		mg/L	0.2	0.1	1	04/12/19	04/12/19 19:59	BMG
Sulfate	ND		mg/L	1.0	0.5	1	04/12/19	04/12/19 19:59	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**294**		mg/L	4.0	4.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904191 - Turbidity										
Blank (B904191-BLK1)					Prepared & Analyzed: 04/12/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*53.32*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*47.08*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.67*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
Acetone	10.6		5.0	ug/L	10.0		106	50-150		
Benzene	5.4		1.0	ug/L	5.00		108	50-150		
Bromochloromethane	4.9		1.0	ug/L	5.00		99	50-150		
Bromodichloromethane	5.1		1.0	ug/L	5.00		101	50-150		
Bromoform	5.1		1.0	ug/L	5.00		102	50-150		
Bromomethane	4.3		1.0	ug/L	5.00		85	50-150		
2-Butanone (MEK)	11.0		5.0	ug/L	10.0		110	50-150		
Carbon disulfide	5.5		1.0	ug/L	5.00		109	50-150		
Carbon tetrachloride	5.2		1.0	ug/L	5.00		104	50-150		
Chlorobenzene	4.8		1.0	ug/L	5.00		96	50-150		
Chloroethane	4.3		1.0	ug/L	5.00		86	50-150		
Chloroform	5.3		1.0	ug/L	5.00		107	50-150		
Chloromethane	5.9		1.0	ug/L	5.00		118	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		96	50-150		
1,2-Dibromo-3-chloropropane	4.7		1.0	ug/L	5.00		94	50-150		
1,2-Dibromoethane (EDB)	5.0		1.0	ug/L	5.00		100	50-150		
Dibromomethane	5.1		1.0	ug/L	5.00		101	50-150		
1,2-Dichlorobenzene	5.0		1.0	ug/L	5.00		99	50-150		
1,4-Dichlorobenzene	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dichloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
cis-1,2-Dichloroethene	5.0		1.0	ug/L	5.00		100	50-150		
trans-1,2-Dichloroethene	5.2		1.0	ug/L	5.00		105	50-150		
1,2-Dichloropropane	5.0		1.0	ug/L	5.00		101	50-150		
1,3-Dichloropropane	5.3		1.0	ug/L	5.00		107	50-150		
2,2-Dichloropropane	5.1		1.0	ug/L	5.00		101	50-150		
1,1-Dichloropropene	4.9		1.0	ug/L	5.00		98	50-150		
cis-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		90	50-150		
trans-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		89	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		93	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
2-Hexanone	10.1		5.0	ug/L	10.0		101	50-150		
Methyl tert-butyl ether (MTBE)	5.3		1.0	ug/L	5.00		105	50-150		
4-Methyl-2-pentanone	10.2		5.0	ug/L	10.0		102	50-150		
Methylene chloride	5.5		1.0	ug/L	5.00		110	0-200		
Methyl methacrylate	5.4		5.0	ug/L	5.00		108	50-150		
Styrene	4.4		1.0	ug/L	5.00		88	50-150		
1,1,1,2-Tetrachloroethane	4.7		1.0	ug/L	5.00		93	50-150		
1,1,2,2-Tetrachloroethane	5.8		1.0	ug/L	5.00		117	50-150		
Tetrachloroethene	4.8		1.0	ug/L	5.00		96	50-150		
Toluene	4.7		1.0	ug/L	5.00		94	50-150		
1,1,1-Trichloroethane	5.0		1.0	ug/L	5.00		101	50-150		
1,1,2-Trichloroethane	5.1		1.0	ug/L	5.00		101	50-150		
Trichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
Trichlorofluoromethane (Freon 11)	5.7		1.0	ug/L	5.00		115	50-150		
1,2,3-Trichloropropane	5.1		1.0	ug/L	5.00		103	50-150		
Vinyl acetate	4.9		1.0	ug/L	5.00		97	50-150		
Vinyl chloride	5.5		1.0	ug/L	5.00		110	50-150		
o-Xylene	4.5		1.0	ug/L	5.00		90	50-150		
m- & p-Xylenes	8.8		1.0	ug/L	10.0		88	50-150		
Surrogate: 1,2-Dichloroethane-d4	*53.43*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*46.97*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.42*			ug/L	*50.0*		*101*	*86-115*		
Duplicate (B904261-DUP1)		**Source: 9041116-04**			Prepared & Analyzed: 04/18/19					
Acetone	10.3		5.0	ug/L		7.2			35	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)			**Source: 9041116-04**		Prepared & Analyzed: 04/18/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)		**Source: 9041116-04**		Prepared & Analyzed: 04/18/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*56.65*			ug/L	*50.0*		*113*	*80-120*		
Surrogate: Toluene-d8	*46.67*			ug/L	*50.0*		*93*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.82*			ug/L	*50.0*		*96*	*86-115*		
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Acetone	17.5		5.0	ug/L	10.0	4.5	130	60-120		
Benzene	11.8		1.0	ug/L	10.0	ND	118	60-120		
Bromochloromethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
Bromodichloromethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Bromoform	11.6		1.0	ug/L	10.0	ND	116	60-120		
Bromomethane	2.9		1.0	ug/L	10.0	ND	29	60-120		
2-Butanone (MEK)	13.1		5.0	ug/L	10.0	ND	131	60-120		
Carbon disulfide	11.0		1.0	ug/L	10.0	ND	110	60-120		
Carbon tetrachloride	10.6		1.0	ug/L	10.0	ND	106	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)			**Source: 9041116-03**		Prepared & Analyzed: 04/18/19					
Chlorobenzene	18.7		1.0	ug/L	10.0	7.8	109	60-120		
Chloroethane	8.9		1.0	ug/L	10.0	ND	89	60-120		
Chloroform	10.6		1.0	ug/L	10.0	ND	106	60-120		
Chloromethane	10.2		1.0	ug/L	10.0	ND	102	60-120		
Dibromochloromethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dibromo-3-chloropropane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	11.4		1.0	ug/L	10.0	ND	114	60-120		
1,2-Dichlorobenzene	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,4-Dichlorobenzene	12.7		1.0	ug/L	10.0	3.2	95	60-120		
1,1-Dichloroethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,2-Dichloroethane	11.9		1.0	ug/L	10.0	ND	119	60-120		
1,1-Dichloroethene	11.3		1.0	ug/L	10.0	ND	113	60-120		
cis-1,2-Dichloroethene	18.3		1.0	ug/L	10.0	8.0	104	60-120		
trans-1,2-Dichloroethene	10.9		1.0	ug/L	10.0	ND	109	60-120		
1,2-Dichloropropane	12.2		1.0	ug/L	10.0	1.1	111	60-120		
1,3-Dichloropropane	11.0		1.0	ug/L	10.0	ND	110	60-120		
2,2-Dichloropropane	7.2		1.0	ug/L	10.0	ND	72	60-120		
1,1-Dichloropropene	10.1		1.0	ug/L	10.0	ND	101	60-120		
cis-1,3-Dichloropropene	8.8		1.0	ug/L	10.0	ND	88	60-120		
trans-1,3-Dichloropropene	9.0		1.0	ug/L	10.0	ND	90	60-120		
Ethylbenzene	9.5		1.0	ug/L	10.0	ND	95	60-120		
2-Hexanone	10.7		5.0	ug/L	10.0	ND	107	60-120		
Methyl tert-butyl ether (MTBE)	10.5		1.0	ug/L	10.0	ND	105	60-120		
4-Methyl-2-pentanone	11.1		5.0	ug/L	10.0	ND	111	60-120		
Methylene chloride	11.8		1.0	ug/L	10.0	ND	118	60-120		
Methyl methacrylate	10.3		5.0	ug/L	10.0	ND	103	60-120		
Styrene	8.8		1.0	ug/L	10.0	ND	88	60-120		
1,1,1,2-Tetrachloroethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1,2,2-Tetrachloroethane	12.3		1.0	ug/L	10.0	ND	123	60-120		
Tetrachloroethene	9.5		1.0	ug/L	10.0	ND	95	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Toluene	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,1,1-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
1,1,2-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Trichloroethene	10.5		1.0	ug/L	10.0	ND	105	60-120		
Trichlorofluoromethane (Freon 11)	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,2,3-Trichloropropane	11.3		1.0	ug/L	10.0	ND	113	60-120		
Vinyl acetate	7.1		1.0	ug/L	10.0	ND	71	60-120		
Vinyl chloride	11.3		1.0	ug/L	10.0	1.6	97	60-120		
o-Xylene	8.6		1.0	ug/L	10.0	ND	86	60-120		
m- & p-Xylenes	18.2		1.0	ug/L	20.0	ND	91	60-120		
Surrogate: 1,2-Dichloroethane-d4	*53.24*			ug/L	*50.0*		*106*	*80-120*		
Surrogate: Toluene-d8	*46.93*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.72*			ug/L	*50.0*		*101*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904197 - 3010A-Metals Digestion										
Blank (B904197-BLK1)					Prepared: 04/12/19 Analyzed: 04/15/19					
Hardness as CaCO3	211		100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	84.5	B	80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904197-BS1)					Prepared: 04/12/19 Analyzed: 04/15/19					
Antimony	47.9		1.00	ug/L	50.0		96	80-120		
Arsenic	49.2		1.00	ug/L	50.0		98	80-120		
Barium	49.1		1.00	ug/L	50.0		98	80-120		
Beryllium	48.0		1.00	ug/L	50.0		96	80-120		
Cadmium	49.1		1.00	ug/L	50.0		98	80-120		
Calcium	4990	B	80.0	ug/L	5000		100	80-120		
Chromium	50.1		1.00	ug/L	50.0		100	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904197 - 3010A-Metals Digestion										
LCS (B904197-BS1)					Prepared: 04/12/19 Analyzed: 04/15/19					
Cobalt	49.5		1.00	ug/L	50.0		99	80-120		
Copper	49.3		1.00	ug/L	50.0		99	80-120		
Iron	5100		100	ug/L	5000		102	80-120		
Lead	47.0		1.00	ug/L	50.0		94	80-120		
Magnesium	5120		100	ug/L	5000		102	80-120		
Manganese	50.4		1.00	ug/L	50.0		101	80-120		
Mercury	2.26		0.100	ug/L	2.50		90	80-120		
Nickel	49.6		1.00	ug/L	50.0		99	80-120		
Potassium	5040		100	ug/L	5000		101	80-120		
Selenium	47.4		1.00	ug/L	50.0		95	80-120		
Silver	37.7		1.00	ug/L	50.0		75	80-120		
Sodium	5300		100	ug/L	5000		106	80-120		
Thallium	47.9		1.00	ug/L	50.0		96	80-120		
Vanadium	49.8		1.00	ug/L	50.0		100	80-120		
Zinc	74.9		4.00	ug/L	70.0		107	80-120		
Duplicate (B904197-DUP1)		**Source: 9041028-01**			Prepared: 04/12/19 Analyzed: 04/15/19					
Hardness as CaCO3	602000	B	100	ug/L		602000			0.07	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	1.25		1.00	ug/L		1.13			10	200
Barium	164		1.00	ug/L		165			0.4	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		1.02				200
Calcium	99900	B	80.0	ug/L		99700			0.2	200
Chromium	1.37		1.00	ug/L		1.25			9	200
Cobalt	38.2		1.00	ug/L		38.3			0.09	200
Copper	2.00		1.00	ug/L		1.93			4	200
Iron	1900		100	ug/L		1890			0.4	200
Lead	ND		1.00	ug/L		ND				200
Magnesium	85700		100	ug/L		85800			0.04	200
Manganese	12600	Ea	1.00	ug/L		13200			5	200
Mercury	0.250		0.100	ug/L		0.244			2	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904197 - 3010A-Metals Digestion										
Duplicate (B904197-DUP1)		**Source: 9041028-01**		Prepared: 04/12/19 Analyzed: 04/15/19						
Nickel	34.8		1.00	ug/L		34.2			2	200
Potassium	5700		100	ug/L		5670			0.6	200
Selenium	1.08		1.00	ug/L		1.01			7	200
Silver	ND		1.00	ug/L		ND				200
Sodium	120000	Ea	100	ug/L		123000			3	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	24.3		4.00	ug/L		18.9			25	200
Matrix Spike (B904197-MS1)		**Source: 9041116-01**		Prepared: 04/12/19 Analyzed: 04/15/19						
Antimony	49.2		1.00	ug/L	50.0	ND	98	60-140		
Arsenic	50.2		1.00	ug/L	50.0	ND	100	60-140		
Barium	201		1.00	ug/L	50.0	151	101	60-140		
Beryllium	48.3		1.00	ug/L	50.0	ND	97	60-140		
Cadmium	49.9		1.00	ug/L	50.0	ND	100	60-140		
Calcium	61900	B	80.0	ug/L	5000	56500	108	60-140		
Chromium	50.5		1.00	ug/L	50.0	ND	101	60-140		
Cobalt	53.7		1.00	ug/L	50.0	5.26	97	60-140		
Copper	48.1		1.00	ug/L	50.0	ND	96	60-140		
Iron	5220		100	ug/L	5000	ND	104	60-140		
Lead	48.2		1.00	ug/L	50.0	ND	96	60-140		
Magnesium	22400		100	ug/L	5000	17000	109	60-140		
Manganese	5820	Ea	1.00	ug/L	50.0	7650	NR	60-140		
Mercury	2.46		0.100	ug/L	2.50	ND	98	60-140		
Nickel	55.6		1.00	ug/L	50.0	6.73	98	60-140		
Potassium	7790		100	ug/L	5000	2720	101	60-140		
Selenium	50.4		1.00	ug/L	50.0	ND	101	60-140		
Silver	38.1		1.00	ug/L	50.0	ND	76	60-140		
Sodium	30400		100	ug/L	5000	25400	100	60-140		
Thallium	49.8		1.00	ug/L	50.0	ND	100	60-140		
Vanadium	50.6		1.00	ug/L	50.0	ND	101	60-140		
Zinc	85.1		4.00	ug/L	70.0	ND	122	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904347 - COD (03) Prep										
Blank (B904347-BLK1)					Prepared & Analyzed: 04/23/19					
COD	ND		3.0	mg/L						
LCS (B904347-BS1)					Prepared & Analyzed: 04/23/19					
COD	54.0		3.0	mg/L	50.0		108	85-115		
Duplicate (B904347-DUP1)		**Source: 9041116-01**			Prepared & Analyzed: 04/23/19					
COD	7.0	QR-02	3.0	mg/L		4.0			55	20
Matrix Spike (B904347-MS1)		**Source: 9041116-01**			Prepared & Analyzed: 04/23/19					
COD	64.0		3.0	mg/L	50.0	4.0	120	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904189 - TSS PREP										
Blank (B904189-BLK1)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904189-BLK2)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904189-BS1)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	63.0		2.5	mg/L	59.3		106	70-130		
Duplicate (B904189-DUP1)		**Source: 9041028-06**			Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	7.4		3.6	mg/L		10.2			32	200
Duplicate (B904189-DUP2)		**Source: 9041210-04**			Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	37.6		5.9	mg/L		45.7			19	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0126 - No Prep WC										
Blank (B9D0126-BLK1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0126-BS1)					Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	2.00		0.10	mg/L	2.00		100	90-110		
Duplicate (B9D0126-DUP1)		**Source: E058227-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	0.61		0.10	mg/L		0.58			4.57	20
Matrix Spike (B9D0126-MS1)		**Source: E058227-01**			Prepared & Analyzed: 04/12/19					
Ammonia Nitrogen	2.54		0.10	mg/L	2.00	0.58	97.8	90-110		
Batch B9D0128 - Method 300.0										
LCS (B9D0128-BS1)					Prepared & Analyzed: 04/12/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		102	90-110		
Sulfate	10.2		1.0	mg/L	10.0		102	90-110		
Chloride	1.0		0.5	mg/L	1.00		99.1	90-110		
Duplicate (B9D0128-DUP1)		**Source: E058242-01**			Prepared & Analyzed: 04/12/19					
Sulfate	12.1		1.0	mg/L		12.1			0.0132	20
Nitrate (as N)	2.0		0.2	mg/L		2.0			0.0256	20
Chloride	1000000000	E	0.5	mg/L		1000000000			0.00	20
Duplicate (B9D0128-DUP2)		**Source: E058247-01**			Prepared & Analyzed: 04/12/19					
Sulfate	1.1		1.0	mg/L		1.1			1.10	20
Nitrate (as N)	4.4		0.2	mg/L		4.4			0.315	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0128 - Method 300.0										
Matrix Spike (B9D0128-MS1)		**Source: E058242-01**			Prepared & Analyzed: 04/12/19					
Chloride	1000000000	E	0.5	mg/L	1.00	1000000000	0.00	80-120		
Nitrate (as N)	3.0		0.2	mg/L	1.00	2.0	102	80-120		
Sulfate	22.4		1.0	mg/L	10.0	12.1	103	80-120		
Matrix Spike (B9D0128-MS2)		**Source: E058247-01**			Prepared & Analyzed: 04/12/19					
Nitrate (as N)	5.4		0.2	mg/L	1.00	4.4	103	80-120		
Sulfate	10.8		1.0	mg/L	10.0	1.1	96.5	80-120		
Chloride	1000000000	E	0.5	mg/L	1.00	1000000000	0.00	80-120		
Batch B9D0140 - Method 300.0										
LCS (B9D0140-BS1)					Prepared & Analyzed: 04/14/19					
Chloride	1.1		0.5	mg/L	1.00		107	90-110		
Duplicate (B9D0140-DUP1)		**Source: E058227-02**			Prepared & Analyzed: 04/14/19					
Chloride	443		12.5	mg/L		458			3.23	20
Duplicate (B9D0140-DUP2)		**Source: 9041116-08**			Prepared: 04/14/19 Analyzed: 04/20/19					
Chloride	296		12.5	mg/L		294			0.821	20
Matrix Spike (B9D0140-MS1)		**Source: E058227-02**			Prepared & Analyzed: 04/14/19					
Chloride	458		12.5	mg/L	1.00	458	45.3	80-120		
Matrix Spike (B9D0140-MS2)		**Source: 9041116-08**			Prepared: 04/14/19 Analyzed: 04/20/19					
Chloride	295		12.5	mg/L	1.00	294	98.8	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0193 - No Prep WC										
Blank (B9D0193-BLK1)					Prepared & Analyzed: 04/16/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0193-DUP1)		**Source: E058227-01**			Prepared & Analyzed: 04/16/19					
Dissolved Solids	1170		5.0	mg/L		1170			0.428	20
Batch B9D0194 - No Prep WC										
Duplicate (B9D0194-DUP1)		**Source: E058227-01**			Prepared & Analyzed: 04/18/19					
Conductivity	1830		1.00	us/Cm		1840			0.437	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0180 - No Prep WC										
LCS (B9D0180-BS1)					Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	106		1.0	mg/L	100		106	90-110		
Duplicate (B9D0180-DUP1)		**Source: 9041116-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	224		1.0	mg/L		225			0.223	20
Duplicate (B9D0180-DUP2)		**Source: E058284-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	394		4.0	mg/L		392			0.539	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:24

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
Ea	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
E	Over Calibration Estimated Result
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

CHAIN-OF-CUSTODY RECORD

Company Name: EA Engineering

Project Manager: Laura Oakes

Project Name: Gude

Project ID: 15562404

Sampler(s): Pete Yenesik

P.O. Number: 18961

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
OB-08	4/11/19	845	X			9	X	X	X	X	X	X	X			9041116-01
Trip Blank			X			1	X									-02
[redacted] OB-03A		946	X			9	X	X	X	X	X	X	X			-03
MW-3B		1120	X			9	X	X	X	X	X	X	X			-04
MW-3A		1225	X			9	X	X	X	X	X	X	X			-05
MW-24B		1450	X			9	X	X	X	X	X	X	X			-06
MW-24A		1600	X			9	X	X	X	X	X	X	X			-07
OB-40		—	X			9	X	X	X	X	X	X	X			-08

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yenesik	17:44 (17:44)	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)	4/10/19 17:47	(Printed) Victoria Davenport			

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 5.6 °C
- ☑ Received on Ice
- ☑ Received same day
- ☐ Preservation Appropriate

Delivery Method:
- Courier
- ☒ Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

58244

SUBCONTRACT ORDER
Maryland Spectral Services
9041116

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Intial
4/11/19 / KD

Due 4:00 PM 04/23/19

Laboratory ID **Comments**

Sample ID: 9041116-01 **OB-08** **Water** **Sampled:04/11/19 08:45**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041116-03 **OB-08A** **Water** **Sampled:04/11/19 09:46**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041116-04 **MW-3B** **Water** **Sampled:04/11/19 11:20**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
1025	4/12/19		

T=2.3

58244

SUBCONTRACT ORDER
Maryland Spectral Services

9041116

Due 4:00 PM 04/23/19 | **Laboratory ID** | **Comments**

Sample ID: 9041116-05 **MW-3A** **Water** **Sampled:04/11/19 12:25**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041116-06 **MW-24B** **Water** **Sampled:04/11/19 14:50**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041116-07 **MW-24A** **Water** **Sampled:04/11/19 16:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041116-08 **OB-40** **Water** **Sampled:04/11/19 00:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
K M	1025 4/12/19		

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

24 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/12/19 15:43.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Will Brewington
President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-19A		9041210-01	Nonpotable Water	04/12/19 12:10	04/12/19 15:43
MW-19B		9041210-02	Nonpotable Water	04/12/19 00:00	04/12/19 15:43
TRIP BLANK		9041210-03	Nonpotable Water	04/12/19 00:00	04/12/19 15:43
MW-6		9041210-04	Nonpotable Water	04/12/19 14:20	04/12/19 15:43

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19A

9041210-01 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.86**		pH Units			1	04/13/19	04/13/19 18:29	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**13.4**		NTU	0.500	0.500	1	04/13/19	04/13/19 18:20	KD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.0**		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1-Dichloroethane	**2.8**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
cis-1,2-Dichloroethene	**7.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19A

9041210-01 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 17:17	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:17	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Tetrachloroethene	**1.8**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Trichloroethene	**2.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:17	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/17/19*	*04/17/19 17:17*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 17:17*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 17:17*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19A

9041210-01 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**269000**	B	ug/L	100	100	1	04/13/19	04/16/19 03:07	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Barium	**118**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Calcium	**45200**		ug/L	80.0	80.0	1	04/13/19	04/16/19 03:07	VVD
Chromium	**2.35**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Cobalt	**11.9**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Copper	**5.92**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Iron	**1750**	B	ug/L	100	100	1	04/13/19	04/16/19 03:07	VVD
Lead	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Magnesium	**37900**		ug/L	100	100	1	04/13/19	04/16/19 03:07	VVD
Manganese	**1710**		ug/L	5.00	5.00	5	04/13/19	04/16/19 16:51	VVD
Mercury	**0.839**		ug/L	0.100	0.100	1	04/13/19	04/16/19 03:07	VVD
Nickel	**9.40**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Potassium	**3780**		ug/L	100	100	1	04/13/19	04/16/19 03:07	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Silver	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Sodium	**79200**		ug/L	100	100	1	04/13/19	04/16/19 03:07	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Vanadium	**2.09**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:07	VVD
Zinc	**34.4**	B	ug/L	4.00	4.00	1	04/13/19	04/16/19 03:07	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**5.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:48	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19A

9041210-01 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**81.0**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:17	FRD
Chloride	**267**		mg/L	12.5	12.5	25	04/14/19	04/20/19 00:38	SES
Conductivity	**1010**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**795**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**2.1**		mg/L	0.2	0.1	1	04/12/19	04/12/19 23:51	BMG
Sulfate	**13.6**		mg/L	1.0	0.5	1	04/12/19	04/12/19 23:51	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**57.2**		mg/L	1.0	1.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19B

9041210-02 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.09**		pH Units			1	04/13/19	04/13/19 18:29	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**5.72**		NTU	0.500	0.500	1	04/13/19	04/13/19 18:21	KD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.0**		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,4-Dichlorobenzene	**1.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1-Dichloroethane	**5.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
cis-1,2-Dichloroethene	**15.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,2-Dichloropropane	**1.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19B

9041210-02 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 17:43	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Methylene chloride	**1.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 17:43	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Tetrachloroethene	**2.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Trichloroethene	**4.9**		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 17:43	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/17/19*	*04/17/19 17:43*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 17:43*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 17:43*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19B

9041210-02 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**295000**	B	ug/L	100	100	1	04/13/19	04/16/19 03:14	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Barium	**36.2**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Calcium	**64600**		ug/L	80.0	80.0	1	04/13/19	04/16/19 03:14	VVD
Chromium	**7.56**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Copper	**1.77**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Iron	**471**	B	ug/L	100	100	1	04/13/19	04/16/19 03:14	VVD
Lead	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Magnesium	**32400**		ug/L	100	100	1	04/13/19	04/16/19 03:14	VVD
Manganese	**47.5**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Mercury	**0.315**		ug/L	0.100	0.100	1	04/13/19	04/16/19 03:14	VVD
Nickel	**4.72**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Potassium	**2470**		ug/L	100	100	1	04/13/19	04/16/19 03:14	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Silver	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Sodium	**22900**		ug/L	100	100	1	04/13/19	04/16/19 03:14	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:14	VVD
Zinc	**14.2**	B	ug/L	4.00	4.00	1	04/13/19	04/16/19 03:14	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**5.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:50	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-19B

9041210-02 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**41.4**		mg/L	2.6	2.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:30	FRD
Chloride	**173**		mg/L	5.0	5.0	10	04/14/19	04/14/19 20:26	SES
Conductivity	**754**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**677**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	**1.6**		mg/L	0.2	0.1	1	04/13/19	04/13/19 00:09	BMG
Sulfate	**9.7**		mg/L	1.0	0.5	1	04/12/19	04/13/19 00:09	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**104**		mg/L	1.0	1.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TRIP BLANK

9041210-03 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TRIP BLANK

9041210-03 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 18:08	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:08	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:08	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*107 %*	*04/17/19*	*04/17/19 18:08*
Surrogate: Toluene-d8	*88-110*	*95 %*	*04/17/19*	*04/17/19 18:08*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 18:08*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-6

9041210-04 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.03**		pH Units			1	04/13/19	04/13/19 18:29	CMK
TURBIDITY BY EPA 180.1									
Turbidity	**8.21**		NTU	0.500	0.500	1	04/13/19	04/13/19 18:21	KD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**13.7**		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Chlorobenzene	**7.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,4-Dichlorobenzene	**4.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
cis-1,2-Dichloroethene	**4.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-6

9041210-04 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 18:34	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 18:34	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 18:34	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*108 %*	*04/17/19*	*04/17/19 18:34*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 18:34*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 18:34*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-6

9041210-04 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**653000**	B	ug/L	10000	10000	100	04/13/19	04/16/19 16:57	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Barium	**463**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Calcium	**110000**		ug/L	8000	8000	100	04/13/19	04/16/19 16:57	VVD
Chromium	**5.91**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Cobalt	**838**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Copper	**7.19**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Iron	**4750**	B	ug/L	100	100	1	04/13/19	04/16/19 03:20	VVD
Lead	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Magnesium	**91700**		ug/L	10000	10000	100	04/13/19	04/16/19 16:57	VVD
Manganese	**75000**		ug/L	100	100	100	04/13/19	04/16/19 16:57	VVD
Mercury	**0.132**		ug/L	0.100	0.100	1	04/13/19	04/16/19 03:20	VVD
Nickel	**100**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Potassium	**4890**		ug/L	100	100	1	04/13/19	04/16/19 03:20	VVD
Selenium	**11.8**		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Silver	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Sodium	**199000**		ug/L	10000	10000	100	04/13/19	04/16/19 16:57	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/13/19	04/16/19 03:20	VVD
Zinc	**57.4**	B	ug/L	4.00	4.00	1	04/13/19	04/16/19 03:20	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**12.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:50	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

MW-6

9041210-04 (Nonpotable Water)
Sample Date: 04/12/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**45.7**		mg/L	4.6	4.6	1	04/13/19	04/15/19 10:17	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:32	FRD
Chloride	**618**		mg/L	12.5	12.5	25	04/14/19	04/20/19 00:56	SES
Conductivity	**2390**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**1860**		mg/L	5.0	5.0	1	04/16/19	04/16/19 19:42	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/13/19	04/13/19 00:27	BMG
Sulfate	**41.4**		mg/L	1.0	0.5	1	04/12/19	04/13/19 00:27	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**245**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904210 - Turbidity										
Blank (B904210-BLK1)					Prepared & Analyzed: 04/13/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*53.32*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*47.08*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.67*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
Acetone	10.6		5.0	ug/L	10.0		106	50-150		
Benzene	5.4		1.0	ug/L	5.00		108	50-150		
Bromochloromethane	4.9		1.0	ug/L	5.00		99	50-150		
Bromodichloromethane	5.1		1.0	ug/L	5.00		101	50-150		
Bromoform	5.1		1.0	ug/L	5.00		102	50-150		
Bromomethane	4.3		1.0	ug/L	5.00		85	50-150		
2-Butanone (MEK)	11.0		5.0	ug/L	10.0		110	50-150		
Carbon disulfide	5.5		1.0	ug/L	5.00		109	50-150		
Carbon tetrachloride	5.2		1.0	ug/L	5.00		104	50-150		
Chlorobenzene	4.8		1.0	ug/L	5.00		96	50-150		
Chloroethane	4.3		1.0	ug/L	5.00		86	50-150		
Chloroform	5.3		1.0	ug/L	5.00		107	50-150		
Chloromethane	5.9		1.0	ug/L	5.00		118	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		96	50-150		
1,2-Dibromo-3-chloropropane	4.7		1.0	ug/L	5.00		94	50-150		
1,2-Dibromoethane (EDB)	5.0		1.0	ug/L	5.00		100	50-150		
Dibromomethane	5.1		1.0	ug/L	5.00		101	50-150		
1,2-Dichlorobenzene	5.0		1.0	ug/L	5.00		99	50-150		
1,4-Dichlorobenzene	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dichloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
cis-1,2-Dichloroethene	5.0		1.0	ug/L	5.00		100	50-150		
trans-1,2-Dichloroethene	5.2		1.0	ug/L	5.00		105	50-150		
1,2-Dichloropropane	5.0		1.0	ug/L	5.00		101	50-150		
1,3-Dichloropropane	5.3		1.0	ug/L	5.00		107	50-150		
2,2-Dichloropropane	5.1		1.0	ug/L	5.00		101	50-150		
1,1-Dichloropropene	4.9		1.0	ug/L	5.00		98	50-150		
cis-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		90	50-150		
trans-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		89	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		93	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
2-Hexanone	10.1		5.0	ug/L	10.0		101	50-150		
Methyl tert-butyl ether (MTBE)	5.3		1.0	ug/L	5.00		105	50-150		
4-Methyl-2-pentanone	10.2		5.0	ug/L	10.0		102	50-150		
Methylene chloride	5.5		1.0	ug/L	5.00		110	0-200		
Methyl methacrylate	5.4		5.0	ug/L	5.00		108	50-150		
Styrene	4.4		1.0	ug/L	5.00		88	50-150		
1,1,1,2-Tetrachloroethane	4.7		1.0	ug/L	5.00		93	50-150		
1,1,2,2-Tetrachloroethane	5.8		1.0	ug/L	5.00		117	50-150		
Tetrachloroethene	4.8		1.0	ug/L	5.00		96	50-150		
Toluene	4.7		1.0	ug/L	5.00		94	50-150		
1,1,1-Trichloroethane	5.0		1.0	ug/L	5.00		101	50-150		
1,1,2-Trichloroethane	5.1		1.0	ug/L	5.00		101	50-150		
Trichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
Trichlorofluoromethane (Freon 11)	5.7		1.0	ug/L	5.00		115	50-150		
1,2,3-Trichloropropane	5.1		1.0	ug/L	5.00		103	50-150		
Vinyl acetate	4.9		1.0	ug/L	5.00		97	50-150		
Vinyl chloride	5.5		1.0	ug/L	5.00		110	50-150		
o-Xylene	4.5		1.0	ug/L	5.00		90	50-150		
m- & p-Xylenes	8.8		1.0	ug/L	10.0		88	50-150		
Surrogate: 1,2-Dichloroethane-d4	*53.43*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*46.97*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.42*			ug/L	*50.0*		*101*	*86-115*		
Duplicate (B904261-DUP1)		**Source: 9041116-04**			Prepared & Analyzed: 04/18/19					
Acetone	10.3		5.0	ug/L		7.2			35	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)			**Source: 9041116-04**		Prepared & Analyzed: 04/18/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)		**Source: 9041116-04**		Prepared & Analyzed: 04/18/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*56.65*			ug/L	*50.0*		*113*	*80-120*		
Surrogate: Toluene-d8	*46.67*			ug/L	*50.0*		*93*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.82*			ug/L	*50.0*		*96*	*86-115*		
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Acetone	17.5		5.0	ug/L	10.0	4.5	130	60-120		
Benzene	11.8		1.0	ug/L	10.0	ND	118	60-120		
Bromochloromethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
Bromodichloromethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Bromoform	11.6		1.0	ug/L	10.0	ND	116	60-120		
Bromomethane	2.9		1.0	ug/L	10.0	ND	29	60-120		
2-Butanone (MEK)	13.1		5.0	ug/L	10.0	ND	131	60-120		
Carbon disulfide	11.0		1.0	ug/L	10.0	ND	110	60-120		
Carbon tetrachloride	10.6		1.0	ug/L	10.0	ND	106	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)			**Source: 9041116-03**		Prepared & Analyzed: 04/18/19					
Chlorobenzene	18.7		1.0	ug/L	10.0	7.8	109	60-120		
Chloroethane	8.9		1.0	ug/L	10.0	ND	89	60-120		
Chloroform	10.6		1.0	ug/L	10.0	ND	106	60-120		
Chloromethane	10.2		1.0	ug/L	10.0	ND	102	60-120		
Dibromochloromethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dibromo-3-chloropropane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	11.4		1.0	ug/L	10.0	ND	114	60-120		
1,2-Dichlorobenzene	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,4-Dichlorobenzene	12.7		1.0	ug/L	10.0	3.2	95	60-120		
1,1-Dichloroethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,2-Dichloroethane	11.9		1.0	ug/L	10.0	ND	119	60-120		
1,1-Dichloroethene	11.3		1.0	ug/L	10.0	ND	113	60-120		
cis-1,2-Dichloroethene	18.3		1.0	ug/L	10.0	8.0	104	60-120		
trans-1,2-Dichloroethene	10.9		1.0	ug/L	10.0	ND	109	60-120		
1,2-Dichloropropane	12.2		1.0	ug/L	10.0	1.1	111	60-120		
1,3-Dichloropropane	11.0		1.0	ug/L	10.0	ND	110	60-120		
2,2-Dichloropropane	7.2		1.0	ug/L	10.0	ND	72	60-120		
1,1-Dichloropropene	10.1		1.0	ug/L	10.0	ND	101	60-120		
cis-1,3-Dichloropropene	8.8		1.0	ug/L	10.0	ND	88	60-120		
trans-1,3-Dichloropropene	9.0		1.0	ug/L	10.0	ND	90	60-120		
Ethylbenzene	9.5		1.0	ug/L	10.0	ND	95	60-120		
2-Hexanone	10.7		5.0	ug/L	10.0	ND	107	60-120		
Methyl tert-butyl ether (MTBE)	10.5		1.0	ug/L	10.0	ND	105	60-120		
4-Methyl-2-pentanone	11.1		5.0	ug/L	10.0	ND	111	60-120		
Methylene chloride	11.8		1.0	ug/L	10.0	ND	118	60-120		
Methyl methacrylate	10.3		5.0	ug/L	10.0	ND	103	60-120		
Styrene	8.8		1.0	ug/L	10.0	ND	88	60-120		
1,1,1,2-Tetrachloroethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1,2,2-Tetrachloroethane	12.3		1.0	ug/L	10.0	ND	123	60-120		
Tetrachloroethene	9.5		1.0	ug/L	10.0	ND	95	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Toluene	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,1,1-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
1,1,2-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Trichloroethene	10.5		1.0	ug/L	10.0	ND	105	60-120		
Trichlorofluoromethane (Freon 11)	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,2,3-Trichloropropane	11.3		1.0	ug/L	10.0	ND	113	60-120		
Vinyl acetate	7.1		1.0	ug/L	10.0	ND	71	60-120		
Vinyl chloride	11.3		1.0	ug/L	10.0	1.6	97	60-120		
o-Xylene	8.6		1.0	ug/L	10.0	ND	86	60-120		
m- & p-Xylenes	18.2		1.0	ug/L	20.0	ND	91	60-120		
Surrogate: 1,2-Dichloroethane-d4	*53.24*			ug/L	*50.0*		*106*	*80-120*		
Surrogate: Toluene-d8	*46.93*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.72*			ug/L	*50.0*		*101*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904212 - 3010A-Metals Digestion										
Blank (B904212-BLK1)					Prepared: 04/13/19 Analyzed: 04/16/19					
Hardness as CaCO3	159	B	100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	106	B	100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	9.36	B	4.00	ug/L						
LCS (B904212-BS1)					Prepared: 04/13/19 Analyzed: 04/16/19					
Antimony	48.6		1.00	ug/L	50.0		97	80-120		
Arsenic	50.8		1.00	ug/L	50.0		102	80-120		
Barium	52.0		1.00	ug/L	50.0		104	80-120		
Beryllium	51.1		1.00	ug/L	50.0		102	80-120		
Cadmium	49.0		1.00	ug/L	50.0		98	80-120		
Calcium	5190		80.0	ug/L	5000		104	80-120		
Chromium	50.8		1.00	ug/L	50.0		102	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904212 - 3010A-Metals Digestion										
LCS (B904212-BS1)					Prepared: 04/13/19 Analyzed: 04/16/19					
Cobalt	48.3		1.00	ug/L	50.0		97	80-120		
Copper	49.9		1.00	ug/L	50.0		100	80-120		
Iron	5420	B	100	ug/L	5000		108	80-120		
Lead	48.8		1.00	ug/L	50.0		98	80-120		
Magnesium	5010		100	ug/L	5000		100	80-120		
Manganese	53.3		1.00	ug/L	50.0		107	80-120		
Mercury	2.48		0.100	ug/L	2.50		99	80-120		
Nickel	48.2		1.00	ug/L	50.0		96	80-120		
Potassium	5140		100	ug/L	5000		103	80-120		
Selenium	54.3		1.00	ug/L	50.0		109	80-120		
Silver	34.9		1.00	ug/L	50.0		70	80-120		
Sodium	4920		100	ug/L	5000		98	80-120		
Thallium	48.6		1.00	ug/L	50.0		97	80-120		
Vanadium	50.5		1.00	ug/L	50.0		101	80-120		
Zinc	77.3	B	4.00	ug/L	70.0		110	80-120		
Duplicate (B904212-DUP1)			**Source: 9041210-01**		Prepared: 04/13/19 Analyzed: 04/16/19					
Hardness as CaCO3	270000	B	100	ug/L		269000			0.3	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	ND		1.00	ug/L		ND				200
Barium	119		1.00	ug/L		118			0.6	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	45800		80.0	ug/L		45200			1	200
Chromium	2.32		1.00	ug/L		2.35			1	200
Cobalt	12.0		1.00	ug/L		11.9			0.3	200
Copper	5.57		1.00	ug/L		5.92			6	200
Iron	1730	B	100	ug/L		1750			1	200
Lead	ND		1.00	ug/L		ND				200
Magnesium	37800		100	ug/L		37900			0.4	200
Manganese	1690	E	1.00	ug/L		1710			1	200
Mercury	0.834		0.100	ug/L		0.839			0.7	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904212 - 3010A-Metals Digestion										
Duplicate (B904212-DUP1)		**Source: 9041210-01**		Prepared: 04/13/19 Analyzed: 04/16/19						
Nickel	9.64		1.00	ug/L		9.40			3	200
Potassium	3810		100	ug/L		3780			0.9	200
Selenium	ND		1.00	ug/L		ND				200
Silver	ND		1.00	ug/L		ND				200
Sodium	77900		100	ug/L		79200			2	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	2.03		1.00	ug/L		2.09			3	200
Zinc	40.5	B	4.00	ug/L		34.4			17	200
Matrix Spike (B904212-MS1)		**Source: 9041210-04**		Prepared: 04/13/19 Analyzed: 04/16/19						
Antimony	51.6		1.00	ug/L	50.0	ND	103	60-140		
Arsenic	53.0		1.00	ug/L	50.0	ND	106	60-140		
Barium	516		1.00	ug/L	50.0	463	106	60-140		
Beryllium	53.2		1.00	ug/L	50.0	ND	106	60-140		
Cadmium	50.6		1.00	ug/L	50.0	ND	101	60-140		
Calcium	110000	E	80.0	ug/L	5000	110000	NR	60-140		
Chromium	54.8		1.00	ug/L	50.0	5.91	98	60-140		
Cobalt	869		1.00	ug/L	50.0	838	62	60-140		
Copper	55.2		1.00	ug/L	50.0	7.19	96	60-140		
Iron	9970	B	100	ug/L	5000	4750	104	60-140		
Lead	50.7		1.00	ug/L	50.0	ND	101	60-140		
Magnesium	90800		100	ug/L	5000	91700	NR	60-140		
Manganese	72300	E	1.00	ug/L	50.0	75000	NR	60-140		
Mercury	2.73		0.100	ug/L	2.50	0.132	104	60-140		
Nickel	147		1.00	ug/L	50.0	100	94	60-140		
Potassium	9890		100	ug/L	5000	4890	100	60-140		
Selenium	62.0		1.00	ug/L	50.0	11.8	100	60-140		
Silver	35.5		1.00	ug/L	50.0	ND	71	60-140		
Sodium	184000	E	100	ug/L	5000	199000	NR	60-140		
Thallium	51.2		1.00	ug/L	50.0	ND	102	60-140		
Vanadium	52.2		1.00	ug/L	50.0	ND	104	60-140		
Zinc	123	B	4.00	ug/L	70.0	57.4	93	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904347 - COD (03) Prep										
Blank (B904347-BLK1)					Prepared & Analyzed: 04/23/19					
COD	ND		3.0	mg/L						
LCS (B904347-BS1)					Prepared & Analyzed: 04/23/19					
COD	54.0		3.0	mg/L	50.0		108	85-115		
Duplicate (B904347-DUP1)		**Source: 9041116-01**			Prepared & Analyzed: 04/23/19					
COD	7.0	QR-02	3.0	mg/L		4.0			55	20
Matrix Spike (B904347-MS1)		**Source: 9041116-01**			Prepared & Analyzed: 04/23/19					
COD	64.0		3.0	mg/L	50.0	4.0	120	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904189 - TSS PREP										
Blank (B904189-BLK1)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904189-BLK2)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904189-BS1)					Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	63.0		2.5	mg/L	59.3		106	70-130		
Duplicate (B904189-DUP1)		**Source: 9041028-06**			Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	7.4		3.6	mg/L		10.2			32	200
Duplicate (B904189-DUP2)		**Source: 9041210-04**			Prepared: 04/13/19 Analyzed: 04/15/19					
Solids, Suspended	37.6		5.9	mg/L		45.7			19	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0128 - Method 300.0										
LCS (B9D0128-BS1)					Prepared & Analyzed: 04/12/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		102	90-110		
Sulfate	10.2		1.0	mg/L	10.0		102	90-110		
Duplicate (B9D0128-DUP1)		**Source: E058242-01**			Prepared & Analyzed: 04/12/19					
Nitrate (as N)	2.0		0.2	mg/L		2.0			0.0256	20
Sulfate	12.1		1.0	mg/L		12.1			0.0132	20
Duplicate (B9D0128-DUP2)		**Source: E058247-01**			Prepared & Analyzed: 04/12/19					
Sulfate	1.1		1.0	mg/L		1.1			1.10	20
Nitrate (as N)	4.4		0.2	mg/L		4.4			0.315	20
Matrix Spike (B9D0128-MS1)		**Source: E058242-01**			Prepared & Analyzed: 04/12/19					
Nitrate (as N)	3.0		0.2	mg/L	1.00	2.0	102	80-120		
Sulfate	22.4		1.0	mg/L	10.0	12.1	103	80-120		
Matrix Spike (B9D0128-MS2)		**Source: E058247-01**			Prepared & Analyzed: 04/12/19					
Nitrate (as N)	5.4		0.2	mg/L	1.00	4.4	103	80-120		
Sulfate	10.8		1.0	mg/L	10.0	1.1	96.5	80-120		
Batch B9D0140 - Method 300.0										
LCS (B9D0140-BS1)					Prepared & Analyzed: 04/14/19					
Chloride	1.1		0.5	mg/L	1.00		107	90-110		
Duplicate (B9D0140-DUP1)		**Source: E058227-02**			Prepared & Analyzed: 04/14/19					
Chloride	443		12.5	mg/L		458			3.23	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0140 - Method 300.0										
Duplicate (B9D0140-DUP2)		**Source: E058244-07**			Prepared: 04/14/19 Analyzed: 04/20/19					
Chloride	296		12.5	mg/L		294			0.821	20
Matrix Spike (B9D0140-MS1)		**Source: E058227-02**			Prepared & Analyzed: 04/14/19					
Chloride	458		12.5	mg/L	1.00	458	45.3	80-120		
Matrix Spike (B9D0140-MS2)		**Source: E058244-07**			Prepared: 04/14/19 Analyzed: 04/20/19					
Chloride	295		12.5	mg/L	1.00	294	98.8	80-120		
Batch B9D0193 - No Prep WC										
Blank (B9D0193-BLK1)					Prepared & Analyzed: 04/16/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0193-DUP1)		**Source: E058227-01**			Prepared & Analyzed: 04/16/19					
Dissolved Solids	1170		5.0	mg/L		1170			0.428	20
Batch B9D0194 - No Prep WC										
Duplicate (B9D0194-DUP1)		**Source: E058227-01**			Prepared & Analyzed: 04/18/19					
Conductivity	1830		1.00	us/Cm		1840			0.437	20
Batch B9D0197 - No Prep WC										
Blank (B9D0197-BLK1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0197 - No Prep WC										
LCS (B9D0197-BS1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.01		0.10	mg/L	2.00		100	90-110		
Duplicate (B9D0197-DUP1)		**Source: 9041210-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Duplicate (B9D0197-DUP2)		**Source: E058303-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	3.51		0.10	mg/L		3.47			1.01	20
Matrix Spike (B9D0197-MS1)		**Source: 9041210-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00	ND	101	90-110		
Matrix Spike (B9D0197-MS2)		**Source: E058303-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	5.51		0.20	mg/L	2.00	3.47	102	90-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0180 - No Prep WC										
LCS (B9D0180-BS1)					Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	106		1.0	mg/L	100		106	90-110		
Duplicate (B9D0180-DUP1)		**Source: E058244-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	224		1.0	mg/L		225			0.223	20
Duplicate (B9D0180-DUP2)		**Source: E058284-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	394		4.0	mg/L		392			0.539	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/24/19 09:45

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Will Brewington, President

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Company Name: EA Engineering
Project Manager: Laura Oakes
Project Name: Gude
Project ID: 155404
Sampler(s): Pete Yanesh
P.O. Number: 18961

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-19A	4/12/19	12:10	X			9	X	X	X	X	X	X	X			9041210-01
MW-19B			X			9	X	X	X	X	X	X	X			-02
Trip Blank		—	X			1	X									-03
MW-6		1420	X			9	X	X	X	X	X	X	X			-04

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yanesh	1545	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time 4/12/19 15:43	Received by Lab: (Signature)			
(Printed)		(Printed) Cory Koons			

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 4.5 °C
- ☒ Received on Ice
- ☒ Received same day
- ☒ Preservation Appropriate

Delivery Method:
- ☐ Courier
- ☒ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

SUBCONTRACT ORDER
Maryland Spectral Services

9041210

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Initial
4/12/19 / KD

Due 4:00 PM 04/23/19

Laboratory ID **Comments**

Sample ID: 9041210-01 **MW-19A** **Water** **Sampled:04/12/19 12:10**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041210-02 **MW-19B** **Water** **Sampled:04/12/19 00:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041210-04 **MW-6** **Water** **Sampled:04/12/19 00:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
Sam Hamner		[signature]	4/12/19 1744

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

29 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/15/19 17:00.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-23A		9041520-01	Nonpotable Water	04/15/19 09:50	04/15/19 17:00
MW-23B		9041520-02	Nonpotable Water	04/15/19 00:00	04/15/19 17:00
TRIP BLANK		9041520-03	Nonpotable Water	04/15/19 17:00	04/15/19 17:00
OB-102		9041520-04	Nonpotable Water	04/15/19 12:10	04/15/19 17:00
MW-2A		9041520-05	Nonpotable Water	04/15/19 13:50	04/15/19 17:00
MW-2B		9041520-06	Nonpotable Water	04/15/19 15:30	04/15/19 17:00

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23A

9041520-01 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.42**		pH Units			1	04/16/19	04/16/19 09:54	RH
TURBIDITY BY EPA 180.1									
Turbidity	**119**		NTU	2.50	2.50	5	04/16/19	04/16/19 19:06	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.2**		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
cis-1,2-Dichloroethene	**4.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23A

9041520-01 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 19:00	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:00	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Tetrachloroethene	**2.9**		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Trichloroethene	**1.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:00	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/17/19*	*04/17/19 19:00*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 19:00*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 19:00*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23A

9041520-01 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**102000**		ug/L	100	100	1	04/16/19	04/19/19 17:00	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Barium	**152**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Calcium	**12500**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:00	VVD
Chromium	**15.4**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Cobalt	**5.95**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Copper	**1.73**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Iron	**5600**		ug/L	100	100	1	04/16/19	04/19/19 17:00	VVD
Lead	**2.73**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Magnesium	**17300**		ug/L	100	100	1	04/16/19	04/19/19 17:00	VVD
Manganese	**113**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Mercury	**0.827**		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:00	VVD
Nickel	**12.5**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Potassium	**3420**		ug/L	100	100	1	04/16/19	04/19/19 17:00	VVD
Selenium	**2.24**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Sodium	**27200**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:00	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Vanadium	**8.02**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:00	VVD
Zinc	**20.3**		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:00	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**4.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:51	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23A

9041520-01 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**498**		mg/L	8.9	8.9	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:38	FRD
Chloride	**83.4**		mg/L	2.5	2.5	5	04/17/19	04/17/19 15:49	BMG
Conductivity	**359**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**260**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**4.0**		mg/L	0.2	0.1	1	04/16/19	04/16/19 20:16	BMG
Sulfate	**3.2**		mg/L	1.0	0.5	1	04/16/19	04/16/19 20:16	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**27.1**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23B

9041520-02 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.78**		pH Units			1	04/16/19	04/16/19 09:54	RH
TURBIDITY BY EPA 180.1									
Turbidity	**10.0**		NTU	0.500	0.500	1	04/16/19	04/16/19 18:51	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.3**		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
cis-1,2-Dichloroethene	**3.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23B

9041520-02 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 19:26	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:26	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Tetrachloroethene	**2.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Trichloroethene	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:26	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/17/19*	*04/17/19 19:26*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 19:26*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 19:26*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23B

9041520-02 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**160000**		ug/L	100	100	1	04/16/19	04/19/19 17:07	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Barium	**5.22**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Calcium	**21300**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:07	VVD
Chromium	**5.61**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Cobalt	**3.14**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Copper	**2.30**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Iron	**2450**		ug/L	100	100	1	04/16/19	04/19/19 17:07	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Magnesium	**26000**		ug/L	100	100	1	04/16/19	04/19/19 17:07	VVD
Manganese	**589**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:07	VVD
Nickel	**5.16**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Potassium	**1990**		ug/L	100	100	1	04/16/19	04/19/19 17:07	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Sodium	**21800**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:07	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:07	VVD
Zinc	**6.68**		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:07	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**4.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:52	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-23B

9041520-02 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**34.3**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:40	FRD
Chloride	**89.0**		mg/L	2.5	2.5	5	04/17/19	04/17/19 16:07	BMG
Conductivity	**446**		us/Cm	1.00	1.00	1	04/18/19	04/18/19 19:50	SES
Dissolved Solids	**285**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**0.3**		mg/L	0.2	0.1	1	04/16/19	04/16/19 20:34	BMG
Sulfate	**7.6**		mg/L	1.0	0.5	1	04/16/19	04/16/19 20:34	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**83.9**		mg/L	2.0	2.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TRIP BLANK

9041520-03 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.0**		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TRIP BLANK

9041520-03 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 19:51	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 19:51	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 19:51	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/17/19*	*04/17/19 19:51*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 19:51*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 19:51*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

OB-102

9041520-04 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.80**		pH Units			1	04/16/19	04/16/19 09:54	RH
TURBIDITY BY EPA 180.1									
Turbidity	**0.960**		NTU	0.500	0.500	1	04/16/19	04/16/19 18:55	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.2**		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Chlorobenzene	**2.0**		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,4-Dichlorobenzene	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

OB-102

9041520-04 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 20:17	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:17	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:17	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*107 %*	*04/17/19*	*04/17/19 20:17*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 20:17*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 20:17*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

OB-102

9041520-04 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**492000**		ug/L	100	100	1	04/16/19	04/19/19 17:13	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Barium	**258**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Calcium	**69100**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:13	VVD
Chromium	**1.61**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Cobalt	**60.5**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Copper	**22.8**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Iron	**108**		ug/L	100	100	1	04/16/19	04/19/19 17:13	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Magnesium	**77700**		ug/L	100	100	1	04/16/19	04/19/19 17:13	VVD
Manganese	**12600**		ug/L	20.0	20.0	20	04/16/19	04/22/19 14:01	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:13	VVD
Nickel	**72.7**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Potassium	**46200**		ug/L	100	100	1	04/16/19	04/19/19 17:13	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Sodium	**493000**	QB-01, B	ug/L	2000	2000	20	04/16/19	04/22/19 14:01	VVD
Thallium	**1.00**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:13	VVD
Zinc	**8.97**		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:13	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**131**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:53	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

OB-102

9041520-04 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**2.7**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**18.3**		mg/L	1.00	0.50	10	04/19/19	04/19/19 13:50	FRD
Chloride	**410**		mg/L	12.5	12.5	25	04/17/19	04/17/19 16:25	BMG
Conductivity	**2930**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**1760**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**0.9**		mg/L	0.2	0.1	1	04/16/19	04/16/19 20:52	BMG
Sulfate	**83.3**		mg/L	1.0	0.5	1	04/16/19	04/16/19 20:52	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**957**		mg/L	10.0	10.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2A

9041520-05 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.65**		pH Units			1	04/16/19	04/16/19 09:54	RH
TURBIDITY BY EPA 180.1									
Turbidity	**7.01**		NTU	0.500	0.500	1	04/16/19	04/16/19 18:58	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.7**		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2A

9041520-05 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 20:43	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 20:43	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 20:43	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*109 %*	*04/17/19*	*04/17/19 20:43*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 20:43*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 20:43*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2A

9041520-05 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**14900**		ug/L	100	100	1	04/16/19	04/19/19 17:20	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Barium	**9.74**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Calcium	**2710**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:20	VVD
Chromium	**8.26**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Cobalt	**1.09**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Copper	**3.15**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Iron	**167**		ug/L	100	100	1	04/16/19	04/19/19 17:20	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Magnesium	**1970**		ug/L	100	100	1	04/16/19	04/19/19 17:20	VVD
Manganese	**71.0**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:20	VVD
Nickel	**18.2**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Potassium	**1290**		ug/L	100	100	1	04/16/19	04/19/19 17:20	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Sodium	**4200**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:20	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:20	VVD
Zinc	**6.00**		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:20	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**5.0**		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:53	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2A

9041520-05 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**5.3**		mg/L	4.5	4.5	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:45	FRD
Chloride	**2.9**		mg/L	0.5	0.5	1	04/16/19	04/16/19 21:10	BMG
Conductivity	**54.5**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**17.0**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/16/19	04/16/19 21:10	BMG
Sulfate	**1.9**		mg/L	1.0	0.5	1	04/16/19	04/16/19 21:10	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**19.5**		mg/L	1.0	1.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2B

9041520-06 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.50**		pH Units			1	04/16/19	04/16/19 09:54	RH
TURBIDITY BY EPA 180.1									
Turbidity	**0.794**		NTU	0.500	0.500	1	04/16/19	04/16/19 19:02	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.7**		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2B

9041520-06 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 21:08	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:08	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:08	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/17/19*	*04/17/19 21:08*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 21:08*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 21:08*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2B

9041520-06 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**13500**		ug/L	100	100	1	04/16/19	04/19/19 17:26	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Barium	**8.71**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Calcium	**2260**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:26	VVD
Chromium	**3.59**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Copper	**1.56**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Iron	ND		ug/L	100	100	1	04/16/19	04/19/19 17:26	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Magnesium	**1910**		ug/L	100	100	1	04/16/19	04/19/19 17:26	VVD
Manganese	**23.3**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:26	VVD
Nickel	**3.94**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Potassium	**1150**		ug/L	100	100	1	04/16/19	04/19/19 17:26	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Sodium	**3440**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:26	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:26	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:26	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	ND		mg/L	3.0	3.0	1	04/23/19	04/23/19 16:54	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

MW-2B

9041520-06 (Nonpotable Water)
Sample Date: 04/15/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	ND		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:47	FRD
Chloride	**30.2**		mg/L	1.0	1.0	2	04/17/19	04/17/19 16:43	BMG
Conductivity	**227**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**42.0**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/16/19	04/16/19 21:28	BMG
Sulfate	**1.5**		mg/L	1.0	0.5	1	04/16/19	04/16/19 21:28	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	ND		mg/L	1.0	1.0	1	04/17/19	04/18/19 15:24	FRD

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904249 - Turbidity										
Blank (B904249-BLK1)					Prepared & Analyzed: 04/16/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*53.32*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*47.08*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.67*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
Acetone	10.6		5.0	ug/L	10.0		106	50-150		
Benzene	5.4		1.0	ug/L	5.00		108	50-150		
Bromochloromethane	4.9		1.0	ug/L	5.00		99	50-150		
Bromodichloromethane	5.1		1.0	ug/L	5.00		101	50-150		
Bromoform	5.1		1.0	ug/L	5.00		102	50-150		
Bromomethane	4.3		1.0	ug/L	5.00		85	50-150		
2-Butanone (MEK)	11.0		5.0	ug/L	10.0		110	50-150		
Carbon disulfide	5.5		1.0	ug/L	5.00		109	50-150		
Carbon tetrachloride	5.2		1.0	ug/L	5.00		104	50-150		
Chlorobenzene	4.8		1.0	ug/L	5.00		96	50-150		
Chloroethane	4.3		1.0	ug/L	5.00		86	50-150		
Chloroform	5.3		1.0	ug/L	5.00		107	50-150		
Chloromethane	5.9		1.0	ug/L	5.00		118	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		96	50-150		
1,2-Dibromo-3-chloropropane	4.7		1.0	ug/L	5.00		94	50-150		
1,2-Dibromoethane (EDB)	5.0		1.0	ug/L	5.00		100	50-150		
Dibromomethane	5.1		1.0	ug/L	5.00		101	50-150		
1,2-Dichlorobenzene	5.0		1.0	ug/L	5.00		99	50-150		
1,4-Dichlorobenzene	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dichloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
cis-1,2-Dichloroethene	5.0		1.0	ug/L	5.00		100	50-150		
trans-1,2-Dichloroethene	5.2		1.0	ug/L	5.00		105	50-150		
1,2-Dichloropropane	5.0		1.0	ug/L	5.00		101	50-150		
1,3-Dichloropropane	5.3		1.0	ug/L	5.00		107	50-150		
2,2-Dichloropropane	5.1		1.0	ug/L	5.00		101	50-150		
1,1-Dichloropropene	4.9		1.0	ug/L	5.00		98	50-150		
cis-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		90	50-150		
trans-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		89	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		93	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
2-Hexanone	10.1		5.0	ug/L	10.0		101	50-150		
Methyl tert-butyl ether (MTBE)	5.3		1.0	ug/L	5.00		105	50-150		
4-Methyl-2-pentanone	10.2		5.0	ug/L	10.0		102	50-150		
Methylene chloride	5.5		1.0	ug/L	5.00		110	0-200		
Methyl methacrylate	5.4		5.0	ug/L	5.00		108	50-150		
Styrene	4.4		1.0	ug/L	5.00		88	50-150		
1,1,1,2-Tetrachloroethane	4.7		1.0	ug/L	5.00		93	50-150		
1,1,2,2-Tetrachloroethane	5.8		1.0	ug/L	5.00		117	50-150		
Tetrachloroethene	4.8		1.0	ug/L	5.00		96	50-150		
Toluene	4.7		1.0	ug/L	5.00		94	50-150		
1,1,1-Trichloroethane	5.0		1.0	ug/L	5.00		101	50-150		
1,1,2-Trichloroethane	5.1		1.0	ug/L	5.00		101	50-150		
Trichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
Trichlorofluoromethane (Freon 11)	5.7		1.0	ug/L	5.00		115	50-150		
1,2,3-Trichloropropane	5.1		1.0	ug/L	5.00		103	50-150		
Vinyl acetate	4.9		1.0	ug/L	5.00		97	50-150		
Vinyl chloride	5.5		1.0	ug/L	5.00		110	50-150		
o-Xylene	4.5		1.0	ug/L	5.00		90	50-150		
m- & p-Xylenes	8.8		1.0	ug/L	10.0		88	50-150		
Surrogate: 1,2-Dichloroethane-d4	*53.43*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*46.97*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.42*			ug/L	*50.0*		*101*	*86-115*		
Duplicate (B904261-DUP1)		**Source: 9041116-04**			Prepared & Analyzed: 04/18/19					
Acetone	10.3		5.0	ug/L		7.2			35	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)			**Source: 9041116-04**		Prepared & Analyzed: 04/18/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)		**Source: 9041116-04**		Prepared & Analyzed: 04/18/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*56.65*			ug/L	*50.0*		*113*	*80-120*		
Surrogate: Toluene-d8	*46.67*			ug/L	*50.0*		*93*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.82*			ug/L	*50.0*		*96*	*86-115*		
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Acetone	17.5		5.0	ug/L	10.0	4.5	130	60-120		
Benzene	11.8		1.0	ug/L	10.0	ND	118	60-120		
Bromochloromethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
Bromodichloromethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Bromoform	11.6		1.0	ug/L	10.0	ND	116	60-120		
Bromomethane	2.9		1.0	ug/L	10.0	ND	29	60-120		
2-Butanone (MEK)	13.1		5.0	ug/L	10.0	ND	131	60-120		
Carbon disulfide	11.0		1.0	ug/L	10.0	ND	110	60-120		
Carbon tetrachloride	10.6		1.0	ug/L	10.0	ND	106	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Chlorobenzene	18.7		1.0	ug/L	10.0	7.8	109	60-120		
Chloroethane	8.9		1.0	ug/L	10.0	ND	89	60-120		
Chloroform	10.6		1.0	ug/L	10.0	ND	106	60-120		
Chloromethane	10.2		1.0	ug/L	10.0	ND	102	60-120		
Dibromochloromethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dibromo-3-chloropropane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	11.4		1.0	ug/L	10.0	ND	114	60-120		
1,2-Dichlorobenzene	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,4-Dichlorobenzene	12.7		1.0	ug/L	10.0	3.2	95	60-120		
1,1-Dichloroethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,2-Dichloroethane	11.9		1.0	ug/L	10.0	ND	119	60-120		
1,1-Dichloroethene	11.3		1.0	ug/L	10.0	ND	113	60-120		
cis-1,2-Dichloroethene	18.3		1.0	ug/L	10.0	8.0	104	60-120		
trans-1,2-Dichloroethene	10.9		1.0	ug/L	10.0	ND	109	60-120		
1,2-Dichloropropane	12.2		1.0	ug/L	10.0	1.1	111	60-120		
1,3-Dichloropropane	11.0		1.0	ug/L	10.0	ND	110	60-120		
2,2-Dichloropropane	7.2		1.0	ug/L	10.0	ND	72	60-120		
1,1-Dichloropropene	10.1		1.0	ug/L	10.0	ND	101	60-120		
cis-1,3-Dichloropropene	8.8		1.0	ug/L	10.0	ND	88	60-120		
trans-1,3-Dichloropropene	9.0		1.0	ug/L	10.0	ND	90	60-120		
Ethylbenzene	9.5		1.0	ug/L	10.0	ND	95	60-120		
2-Hexanone	10.7		5.0	ug/L	10.0	ND	107	60-120		
Methyl tert-butyl ether (MTBE)	10.5		1.0	ug/L	10.0	ND	105	60-120		
4-Methyl-2-pentanone	11.1		5.0	ug/L	10.0	ND	111	60-120		
Methylene chloride	11.8		1.0	ug/L	10.0	ND	118	60-120		
Methyl methacrylate	10.3		5.0	ug/L	10.0	ND	103	60-120		
Styrene	8.8		1.0	ug/L	10.0	ND	88	60-120		
1,1,1,2-Tetrachloroethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1,2,2-Tetrachloroethane	12.3		1.0	ug/L	10.0	ND	123	60-120		
Tetrachloroethene	9.5		1.0	ug/L	10.0	ND	95	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Toluene	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,1,1-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
1,1,2-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Trichloroethene	10.5		1.0	ug/L	10.0	ND	105	60-120		
Trichlorofluoromethane (Freon 11)	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,2,3-Trichloropropane	11.3		1.0	ug/L	10.0	ND	113	60-120		
Vinyl acetate	7.1		1.0	ug/L	10.0	ND	71	60-120		
Vinyl chloride	11.3		1.0	ug/L	10.0	1.6	97	60-120		
o-Xylene	8.6		1.0	ug/L	10.0	ND	86	60-120		
m- & p-Xylenes	18.2		1.0	ug/L	20.0	ND	91	60-120		
Surrogate: 1,2-Dichloroethane-d4	*53.24*			ug/L	*50.0*		*106*	*80-120*		
Surrogate: Toluene-d8	*46.93*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.72*			ug/L	*50.0*		*101*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904252 - 3010A-Metals Digestion										
Blank (B904252-BLK1)					Prepared: 04/16/19 Analyzed: 04/19/19					
Hardness as CaCO3	ND		100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	122	B	100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904252-BS1)					Prepared: 04/16/19 Analyzed: 04/19/19					
Antimony	48.0		1.00	ug/L	50.0		96	80-120		
Arsenic	52.2		1.00	ug/L	50.0		104	80-120		
Barium	48.1		1.00	ug/L	50.0		96	80-120		
Beryllium	45.3		1.00	ug/L	50.0		91	80-120		
Cadmium	50.3		1.00	ug/L	50.0		101	80-120		
Calcium	5150		80.0	ug/L	5000		103	80-120		
Chromium	51.8		1.00	ug/L	50.0		104	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904252 - 3010A-Metals Digestion										
LCS (B904252-BS1)					Prepared: 04/16/19 Analyzed: 04/19/19					
Cobalt	51.6		1.00	ug/L	50.0		103	80-120		
Copper	53.6		1.00	ug/L	50.0		107	80-120		
Iron	5240		100	ug/L	5000		105	80-120		
Lead	47.7		1.00	ug/L	50.0		95	80-120		
Magnesium	5220		100	ug/L	5000		104	80-120		
Manganese	50.7		1.00	ug/L	50.0		101	80-120		
Mercury	2.45		0.100	ug/L	2.50		98	80-120		
Nickel	52.5		1.00	ug/L	50.0		105	80-120		
Potassium	5050		100	ug/L	5000		101	80-120		
Selenium	49.2		1.00	ug/L	50.0		98	80-120		
Silver	17.1		1.00	ug/L	50.0		34	80-120		
Sodium	5380	B	100	ug/L	5000		108	80-120		
Thallium	47.0		1.00	ug/L	50.0		94	80-120		
Vanadium	50.1		1.00	ug/L	50.0		100	80-120		
Zinc	73.3		4.00	ug/L	70.0		105	80-120		
Duplicate (B904252-DUP1)		**Source: 9041520-01**			Prepared: 04/16/19 Analyzed: 04/19/19					
Hardness as CaCO3	105000		100	ug/L		102000			2	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	ND		1.00	ug/L		ND				200
Barium	149		1.00	ug/L		152			2	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	12400		80.0	ug/L		12500			0.3	200
Chromium	18.0		1.00	ug/L		15.4			15	200
Cobalt	7.04		1.00	ug/L		5.95			17	200
Copper	2.21		1.00	ug/L		1.73			24	200
Iron	7480		100	ug/L		5600			29	200
Lead	3.12		1.00	ug/L		2.73			13	200
Magnesium	17900		100	ug/L		17300			3	200
Manganese	122		1.00	ug/L		113			8	200
Mercury	0.748		0.100	ug/L		0.827			10	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904252 - 3010A-Metals Digestion										
Duplicate (B904252-DUP1)		**Source: 9041520-01**		Prepared: 04/16/19 Analyzed: 04/19/19						
Nickel	15.6		1.00	ug/L		12.5			22	200
Potassium	3590		100	ug/L		3420			5	200
Selenium	2.58		1.00	ug/L		2.24			14	200
Silver	ND		1.00	ug/L		ND				200
Sodium	27200	B	100	ug/L		27200			0.04	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	9.76		1.00	ug/L		8.02			20	200
Zinc	25.2		4.00	ug/L		20.3			22	200
Matrix Spike (B904252-MS1)		**Source: 9041520-01**		Prepared: 04/16/19 Analyzed: 04/19/19						
Antimony	45.1		1.00	ug/L	50.0	ND	90	60-140		
Arsenic	47.1		1.00	ug/L	50.0	ND	94	60-140		
Barium	197		1.00	ug/L	50.0	152	90	60-140		
Beryllium	47.3		1.00	ug/L	50.0	ND	95	60-140		
Cadmium	50.7		1.00	ug/L	50.0	ND	101	60-140		
Calcium	17600		80.0	ug/L	5000	12500	103	60-140		
Chromium	65.5		1.00	ug/L	50.0	15.4	100	60-140		
Cobalt	54.2		1.00	ug/L	50.0	5.95	97	60-140		
Copper	52.4		1.00	ug/L	50.0	1.73	101	60-140		
Iron	10100		100	ug/L	5000	5600	90	60-140		
Lead	50.7		1.00	ug/L	50.0	2.73	96	60-140		
Magnesium	23100		100	ug/L	5000	17300	116	60-140		
Manganese	163		1.00	ug/L	50.0	113	100	60-140		
Mercury	3.17		0.100	ug/L	2.50	0.827	94	60-140		
Nickel	62.5		1.00	ug/L	50.0	12.5	100	60-140		
Potassium	8390		100	ug/L	5000	3420	99	60-140		
Selenium	45.7		1.00	ug/L	50.0	2.24	87	60-140		
Silver	17.2		1.00	ug/L	50.0	ND	34	60-140		
Sodium	32600	B	100	ug/L	5000	27200	109	60-140		
Thallium	48.6		1.00	ug/L	50.0	ND	97	60-140		
Vanadium	57.5		1.00	ug/L	50.0	8.02	99	60-140		
Zinc	88.5		4.00	ug/L	70.0	20.3	97	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904347 - COD (03) Prep										
Blank (B904347-BLK1)					Prepared & Analyzed: 04/23/19					
COD	ND		3.0	mg/L						
LCS (B904347-BS1)					Prepared & Analyzed: 04/23/19					
COD	54.0		3.0	mg/L	50.0		108	85-115		
Duplicate (B904347-DUP1)		**Source: 9041116-01**			Prepared & Analyzed: 04/23/19					
COD	7.0	QR-02	3.0	mg/L		4.0			55	20
Matrix Spike (B904347-MS1)		**Source: 9041116-01**			Prepared & Analyzed: 04/23/19					
COD	64.0		3.0	mg/L	50.0	4.0	120	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904300 - TSS PREP										
Blank (B904300-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904300-BLK2)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904300-BS1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	50.3		2.5	mg/L	56.0		90	70-130		
Duplicate (B904300-DUP1)		**Source: 9041520-05**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	12.2		6.9	mg/L		ND			79	200
Duplicate (B904300-DUP2)		**Source: 9041718-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	68.3		9.4	mg/L		79.3			15	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0164 - Method 300.0										
LCS (B9D0164-BS1)					Prepared & Analyzed: 04/16/19					
Sulfate	9.9		1.0	mg/L	10.0		99.1	90-110		
Chloride	1.0		0.5	mg/L	1.00		101	90-110		
Nitrate (as N)	1.0		0.2	mg/L	1.00		100	90-110		
Duplicate (B9D0164-DUP1)		**Source: E058275-01**			Prepared & Analyzed: 04/16/19					
Chloride	21.3		0.5	mg/L		21.2			0.294	20
Nitrate (as N)	ND		0.2	mg/L		ND				20
Sulfate	21.0		1.0	mg/L		20.9			0.394	20
Duplicate (B9D0164-DUP2)		**Source: E058285-01**			Prepared & Analyzed: 04/16/19					
Nitrate (as N)	2.2		0.2	mg/L		2.2			0.120	20
Sulfate	28.8		1.0	mg/L		28.8			0.292	20
Matrix Spike (B9D0164-MS1)		**Source: E058275-01**			Prepared & Analyzed: 04/16/19					
Chloride	22.1		0.5	mg/L	1.00	21.2	93.1	80-120		
Nitrate (as N)	1.0		0.2	mg/L	1.00	ND	101	80-120		
Sulfate	31.2		1.0	mg/L	10.0	20.9	103	80-120		
Matrix Spike (B9D0164-MS2)		**Source: E058285-01**			Prepared & Analyzed: 04/16/19					
Nitrate (as N)	3.2		0.2	mg/L	1.00	2.2	96.7	80-120		
Sulfate	39.2		1.0	mg/L	10.0	28.8	105	80-120		
Batch B9D0177 - Method 300.0										
LCS (B9D0177-BS1)					Prepared & Analyzed: 04/17/19					
Chloride	1.0		0.5	mg/L	1.00		101	90-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0177 - Method 300.0										
Duplicate (B9D0177-DUP1)		**Source: E058296-01**			Prepared & Analyzed: 04/17/19					
Chloride	11.4		0.5	mg/L		11.4			0.182	20
Matrix Spike (B9D0177-MS1)		**Source: E058296-01**			Prepared & Analyzed: 04/17/19					
Chloride	12.3		0.5	mg/L	1.00	11.4	88.0	80-120		
Batch B9D0194 - No Prep WC										
Duplicate (B9D0194-DUP1)		**Source: E058227-01**			Prepared & Analyzed: 04/18/19					
Conductivity	1830		1.00	us/Cm		1840			0.437	20
Batch B9D0197 - No Prep WC										
Blank (B9D0197-BLK1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0197-BS1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.01		0.10	mg/L	2.00		100	90-110		
Duplicate (B9D0197-DUP1)		**Source: E058261-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Duplicate (B9D0197-DUP2)		**Source: E058303-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	3.51		0.10	mg/L		3.47			1.01	20
Matrix Spike (B9D0197-MS1)		**Source: E058261-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00	ND	101	90-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0197 - No Prep WC										
Matrix Spike (B9D0197-MS2)		**Source: E058303-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	5.51		0.20	mg/L	2.00	3.47	102	90-110		
Batch B9D0202 - No Prep WC										
Blank (B9D0202-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0202-DUP1)		**Source: 9041520-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	262		5.0	mg/L		260			0.766	20
Batch B9D0246 - No Prep WC										
Duplicate (B9D0246-DUP1)		**Source: 9041520-04**			Prepared & Analyzed: 04/24/19					
Conductivity	2900		1.00	us/Cm		2930			1.34	20
Duplicate (B9D0246-DUP2)		**Source: E058348-02**			Prepared & Analyzed: 04/24/19					
Conductivity	146		1.00	us/Cm		147			1.03	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0180 - No Prep WC										
LCS (B9D0180-BS1)					Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	106		1.0	mg/L	100		106	90-110		
Duplicate (B9D0180-DUP1)		**Source: E058244-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	224		1.0	mg/L		225			0.223	20
Duplicate (B9D0180-DUP2)		**Source: E058284-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	394		4.0	mg/L		392			0.539	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 10:19

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

CHAIN-OF-CUSTODY RECORD

Company Name: EA Engineering

Project Manager: Laura Oakes

Project Name: Gude

Project ID: 1556404

Sampler(s): Peter Fenciil

P.O. Number: 18961

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-23A	4/15/19	950	X			9	X	X	X	X	X	X	X			904520.01
MW-23B			X			9	X	X	X	X	X	X	X			02
Trip Blank			X			1	X									03
OB-102		1210	X			9	X	X	X	X	X	X	X			04
MW-2A		1356				9	X	X	X	X	X	X	X			05
MW-2B		1530				9	X	X	X	X	X	X	X			06

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Peter Fenciil	1700 4/15/2019	(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)
(Printed)	4/15/19 ~~16:~~ RH 17:00	(Printed) Rachel Horner

Turn Around Time:
- [x] Normal (7 day)
- [ ] 5 day
- [ ] 4 day
- [ ] 3 day
- [ ] Rush (2 day)
- [ ] Next Day
- [ ] Other: _____
- [ ] Specific Due Date: _____

Lab Use:
Temp: 2.0°C
- [ ] Received on Ice
- [ ] Received same day
- [ ] Preservation Appropriate

Delivery Method:
- Courier
- Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- [ ] Return to Client
- [ ] Disposal by lab
- [ ] Archive for _____ days

MSS-F001-003

SUBCONTRACT ORDER
Maryland Spectral Services

9041520

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Due 4:00 PM 04/24/19

Laboratory ID **Comments**

Sample ID: 9041520-01 **MW-23A** **Water** **Sampled:04/15/19 17:21**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041520-02 **MW-23B** **Water** **Sampled:04/15/19 17:21**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041520-04 **OB-102** **Water** **Sampled:04/15/19 17:21**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

4.0°C

Released By	Date	Received By	Date
[signature]	4/16/19 1200	[signature]	4-16-19 1200
Released By	Date	Received By	Date

SUBCONTRACT ORDER
Maryland Spectral Services

9041520

Due 4:00 PM 04/24/19 | **Laboratory ID** | **Comments**

Sample ID: 9041520-05 **MW-2A** **Water** **Sampled:04/15/19 17:21**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041520-06 **MW-2B** **Water** **Sampled:04/15/19 17:21**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[illegible]	4/16/19 1200	[illegible]	4-16-19 1200

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

29 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/16/19 17:30.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-8		9041629-01	Nonpotable Water	04/16/19 08:25	04/16/19 17:30
OB-03A		9041629-02	Nonpotable Water	04/16/19 10:10	04/16/19 17:30
OB-03		9041629-03	Nonpotable Water	04/16/19 09:20	04/16/19 17:30
TRIP BLANK		9041629-04	Nonpotable Water	04/16/19 17:30	04/16/19 17:30
MW-7		9041629-05	Nonpotable Water	04/16/19 11:40	04/16/19 17:30
MW-12		9041629-06	Nonpotable Water	04/16/19 13:50	04/16/19 17:30
MW-9		9041629-07	Nonpotable Water	04/16/19 15:10	04/16/19 17:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-8

9041629-01 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**7.05**		pH Units			1	04/17/19	04/17/19 10:35	AM
TURBIDITY BY EPA 180.1									
Turbidity	**3.18**		NTU	0.500	0.500	1	04/17/19	04/17/19 17:32	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.1**		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Chlorobenzene	**1.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-8

9041629-01 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 21:34	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:34	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:34	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/17/19*	*04/17/19 21:34*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 21:34*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 21:34*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-8

9041629-01 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**670000**		ug/L	500	500	5	04/16/19	04/22/19 14:14	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Barium	**132**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Calcium	**109000**		ug/L	400	400	5	04/16/19	04/22/19 14:14	VVD
Chromium	**2.06**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Cobalt	**18.4**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Copper	**5.35**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Iron	**1090**		ug/L	100	100	1	04/16/19	04/19/19 17:33	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Magnesium	**96700**		ug/L	500	500	5	04/16/19	04/22/19 14:14	VVD
Manganese	**1340**		ug/L	5.00	5.00	5	04/16/19	04/22/19 14:14	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:33	VVD
Nickel	**6.94**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Potassium	**12900**		ug/L	100	100	1	04/16/19	04/19/19 17:33	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Sodium	**84800**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:33	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Vanadium	**1.02**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:33	VVD
Zinc	**6.11**		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:33	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**38.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:01	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-8

9041629-01 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**2.7**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**1.99**		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:49	FRD
Chloride	**112**		mg/L	2.5	2.5	5	04/18/19	04/18/19 17:28	BMG
Conductivity	**1480**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**917**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/17/19	04/17/19 19:23	BMG
Sulfate	**60.8**		mg/L	1.0	0.5	1	04/17/19	04/17/19 19:23	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**660**		mg/L	10.0	10.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03A

9041629-02 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.50**		pH Units			1	04/17/19	04/17/19 10:35	AM
TURBIDITY BY EPA 180.1									
Turbidity	**31.5**		NTU	0.500	0.500	1	04/17/19	04/17/19 17:35	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.8**		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Chlorobenzene	**1.5**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,4-Dichlorobenzene	**2.9**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1-Dichloroethane	**4.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
cis-1,2-Dichloroethene	**15.9**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
trans-1,2-Dichloroethene	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,2-Dichloropropane	**1.3**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03A

9041629-02 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 21:59	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 21:59	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
Vinyl chloride	**3.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 21:59	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/17/19*	*04/17/19 21:59*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 21:59*
Surrogate: 4-Bromofluorobenzene	*86-115*	*96 %*	*04/17/19*	*04/17/19 21:59*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03A

9041629-02 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**446000**		ug/L	100	100	1	04/16/19	04/19/19 17:40	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Arsenic	**3.25**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Barium	**181**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Calcium	**81200**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:40	VVD
Chromium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Cobalt	**26.9**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Copper	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Iron	**18100**		ug/L	100	100	1	04/16/19	04/19/19 17:40	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Magnesium	**59100**		ug/L	100	100	1	04/16/19	04/19/19 17:40	VVD
Manganese	**8650**		ug/L	10.0	10.0	10	04/16/19	04/22/19 14:21	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:40	VVD
Nickel	**9.13**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Potassium	**13500**		ug/L	100	100	1	04/16/19	04/19/19 17:40	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Silver	**2.68**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Sodium	**76800**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:40	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:40	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:40	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**31.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:01	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03A

9041629-02 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**8.8**		mg/L	2.7	2.7	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**3.47**		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:23	FRD
Chloride	**166**		mg/L	5.0	5.0	10	04/19/19	04/19/19 16:00	BMG
Conductivity	**1240**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**794**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/17/19	04/17/19 19:41	BMG
Sulfate	**121**		mg/L	5.0	2.5	5	04/18/19	04/18/19 17:46	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**357**		mg/L	4.0	4.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03

9041629-03 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.23**		pH Units			1	04/17/19	04/17/19 10:35	AM
TURBIDITY BY EPA 180.1									
Turbidity	**13.2**		NTU	0.500	0.500	1	04/17/19	04/17/19 17:39	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.9**		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Benzene	**1.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Chlorobenzene	**1.5**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,4-Dichlorobenzene	**5.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1-Dichloroethane	**9.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,2-Dichloroethane	**1.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
cis-1,2-Dichloroethene	**30.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
trans-1,2-Dichloroethene	**2.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,2-Dichloropropane	**2.7**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03

9041629-03 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 22:25	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:25	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Trichloroethene	**1.9**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
Vinyl chloride	**5.8**		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:25	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/17/19*	*04/17/19 22:25*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 22:25*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 22:25*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03

9041629-03 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**329000**		ug/L	100	100	1	04/16/19	04/19/19 17:59	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Arsenic	**2.45**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Barium	**341**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Calcium	**61300**		ug/L	80.0	80.0	1	04/16/19	04/19/19 17:59	VVD
Chromium	**2.61**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Cobalt	**36.4**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Copper	**5.38**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Iron	**17200**		ug/L	100	100	1	04/16/19	04/19/19 17:59	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Magnesium	**42800**		ug/L	100	100	1	04/16/19	04/19/19 17:59	VVD
Manganese	**16800**		ug/L	20.0	20.0	20	04/16/19	04/22/19 14:40	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 17:59	VVD
Nickel	**12.4**		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Potassium	**7070**		ug/L	100	100	1	04/16/19	04/19/19 17:59	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Sodium	**62000**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 17:59	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 17:59	VVD
Zinc	**23.0**		ug/L	4.00	4.00	1	04/16/19	04/19/19 17:59	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**27.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:02	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

OB-03

9041629-03 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**4.9**		mg/L	2.5	2.5	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**2.45**		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:51	FRD
Chloride	**203**		mg/L	5.0	5.0	10	04/18/19	04/18/19 18:04	BMG
Conductivity	**1050**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**656**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/17/19	04/17/19 19:59	BMG
Sulfate	**50.5**		mg/L	1.0	0.5	1	04/17/19	04/17/19 19:59	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**231**		mg/L	4.0	4.0	1	04/17/19	04/18/19 15:24	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TRIP BLANK

9041629-04 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TRIP BLANK

9041629-04 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 22:50	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 22:50	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 22:50	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*111 %*	*04/17/19*	*04/17/19 22:50*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 22:50*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 22:50*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-7

9041629-05 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.31**		pH Units			1	04/17/19	04/17/19 10:35	AM
TURBIDITY BY EPA 180.1									
Turbidity	**18.1**		NTU	0.500	0.500	1	04/17/19	04/17/19 17:43	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**39.0**		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Benzene	**1.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Chlorobenzene	**2.6**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,4-Dichlorobenzene	**9.4**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
cis-1,2-Dichloroethene	**8.8**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-7

9041629-05 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 23:16	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:16	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
Vinyl chloride	**1.9**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:16	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*110 %*	*04/17/19*	*04/17/19 23:16*
Surrogate: Toluene-d8	*88-110*	*93 %*	*04/17/19*	*04/17/19 23:16*
Surrogate: 4-Bromofluorobenzene	*86-115*	*97 %*	*04/17/19*	*04/17/19 23:16*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-7

9041629-05 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**284000**		ug/L	100	100	1	04/16/19	04/19/19 18:06	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Barium	**225**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Calcium	**52000**		ug/L	80.0	80.0	1	04/16/19	04/19/19 18:06	VVD
Chromium	**3.48**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Cobalt	**44.3**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Copper	**8.21**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Iron	**19500**		ug/L	100	100	1	04/16/19	04/19/19 18:06	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Magnesium	**37400**		ug/L	100	100	1	04/16/19	04/19/19 18:06	VVD
Manganese	**20100**	E	ug/L	20.0	20.0	20	04/16/19	04/22/19 14:47	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 18:06	VVD
Nickel	**8.19**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Potassium	**3990**		ug/L	100	100	1	04/16/19	04/19/19 18:06	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Sodium	**56000**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 18:06	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Vanadium	**1.25**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:06	VVD
Zinc	**5.64**		ug/L	4.00	4.00	1	04/16/19	04/19/19 18:06	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**48.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:02	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-7

9041629-05 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**5.7**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**1.05**		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:53	FRD
Chloride	**118**		mg/L	2.5	2.5	5	04/18/19	04/18/19 18:22	BMG
Conductivity	**863**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**572**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/17/19	04/17/19 20:17	BMG
Sulfate	**21.8**		mg/L	1.0	0.5	1	04/17/19	04/17/19 20:17	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**284**		mg/L	4.0	4.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-12

9041629-06 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.86**		pH Units			1	04/17/19	04/17/19 10:35	AM
TURBIDITY BY EPA 180.1									
Turbidity	**16.6**		NTU	0.500	0.500	1	04/17/19	04/17/19 17:47	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**8.6**		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Benzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Chloroform	**5.1**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
cis-1,2-Dichloroethene	**1.2**		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-12

9041629-06 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Isobutanol	ND		ug/L	100	100	1	04/17/19	04/17/19 23:41	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/17/19	04/17/19 23:41	GM
Styrene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Toluene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/17/19	04/17/19 23:41	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*112 %*	*04/17/19*	*04/17/19 23:41*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/17/19*	*04/17/19 23:41*
Surrogate: 4-Bromofluorobenzene	*86-115*	*98 %*	*04/17/19*	*04/17/19 23:41*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-12

9041629-06 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**163000**		ug/L	100	100	1	04/16/19	04/19/19 18:12	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Barium	**313**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Calcium	**33000**		ug/L	80.0	80.0	1	04/16/19	04/19/19 18:12	VVD
Chromium	**2.34**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Cobalt	**1.37**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Copper	**1.96**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Iron	**675**		ug/L	100	100	1	04/16/19	04/19/19 18:12	VVD
Lead	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Magnesium	**19700**		ug/L	100	100	1	04/16/19	04/19/19 18:12	VVD
Manganese	**63.2**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 18:12	VVD
Nickel	**5.21**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Potassium	**2550**		ug/L	100	100	1	04/16/19	04/19/19 18:12	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Sodium	**119000**	QB-01, B	ug/L	500	500	5	04/16/19	04/22/19 14:53	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:12	VVD
Zinc	**32.4**		ug/L	4.00	4.00	1	04/16/19	04/19/19 18:12	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**11.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:03	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-12

9041629-06 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**20.8**		mg/L	2.8	2.8	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:56	FRD
Chloride	**272**		mg/L	12.5	12.5	25	04/19/19	04/19/19 16:18	BMG
Conductivity	**898**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**661**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**4.0**		mg/L	0.2	0.1	1	04/17/19	04/17/19 20:35	BMG
Sulfate	**19.3**		mg/L	1.0	0.5	1	04/17/19	04/17/19 20:35	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**11.9**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-9

9041629-07 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.65**		pH Units			1	04/17/19	04/17/19 10:35	AM
TURBIDITY BY EPA 180.1									
Turbidity	**28.2**		NTU	0.500	0.500	1	04/17/19	04/17/19 17:51	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.7**		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Benzene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-9

9041629-07 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Isobutanol	ND		ug/L	100	100	1	04/18/19	04/18/19 00:07	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/18/19	04/18/19 00:07	GM
Styrene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Tetrachloroethene	**8.4**		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Toluene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/18/19	04/18/19 00:07	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*112 %*	*04/18/19*	*04/18/19 00:07*
Surrogate: Toluene-d8	*88-110*	*94 %*	*04/18/19*	*04/18/19 00:07*
Surrogate: 4-Bromofluorobenzene	*86-115*	*96 %*	*04/18/19*	*04/18/19 00:07*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-9

9041629-07 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**34700**		ug/L	100	100	1	04/16/19	04/19/19 18:19	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Barium	**52.7**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Calcium	**4780**		ug/L	80.0	80.0	1	04/16/19	04/19/19 18:19	VVD
Chromium	**13.1**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Cobalt	**2.97**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Copper	**5.32**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Iron	**4160**		ug/L	100	100	1	04/16/19	04/19/19 18:19	VVD
Lead	**3.07**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Magnesium	**5520**		ug/L	100	100	1	04/16/19	04/19/19 18:19	VVD
Manganese	**115**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/16/19	04/19/19 18:19	VVD
Nickel	**10.5**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Potassium	**1950**		ug/L	100	100	1	04/16/19	04/19/19 18:19	VVD
Selenium	**1.76**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Silver	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Sodium	**13100**	QB-01, B	ug/L	100	100	1	04/16/19	04/19/19 18:19	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Vanadium	**5.80**		ug/L	1.00	1.00	1	04/16/19	04/19/19 18:19	VVD
Zinc	**41.0**		ug/L	4.00	4.00	1	04/16/19	04/19/19 18:19	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**9.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:03	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

MW-9

9041629-07 (Nonpotable Water)
Sample Date: 04/16/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**51.3**		mg/L	5.2	5.2	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 12:58	FRD
Chloride	**22.9**		mg/L	0.5	0.5	1	04/17/19	04/17/19 20:53	BMG
Conductivity	**123**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**84.0**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**1.4**		mg/L	0.2	0.1	1	04/17/19	04/17/19 20:53	BMG
Sulfate	ND		mg/L	1.0	0.5	1	04/17/19	04/17/19 20:53	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**20.1**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904271 - Turbidity										
Blank (B904271-BLK1)					Prepared & Analyzed: 04/17/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Blank (B904261-BLK1)					Prepared & Analyzed: 04/17/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*53.32*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*47.08*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.67*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
Acetone	10.6		5.0	ug/L	10.0		106	50-150		
Benzene	5.4		1.0	ug/L	5.00		108	50-150		
Bromochloromethane	4.9		1.0	ug/L	5.00		99	50-150		
Bromodichloromethane	5.1		1.0	ug/L	5.00		101	50-150		
Bromoform	5.1		1.0	ug/L	5.00		102	50-150		
Bromomethane	4.3		1.0	ug/L	5.00		85	50-150		
2-Butanone (MEK)	11.0		5.0	ug/L	10.0		110	50-150		
Carbon disulfide	5.5		1.0	ug/L	5.00		109	50-150		
Carbon tetrachloride	5.2		1.0	ug/L	5.00		104	50-150		
Chlorobenzene	4.8		1.0	ug/L	5.00		96	50-150		
Chloroethane	4.3		1.0	ug/L	5.00		86	50-150		
Chloroform	5.3		1.0	ug/L	5.00		107	50-150		
Chloromethane	5.9		1.0	ug/L	5.00		118	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		96	50-150		
1,2-Dibromo-3-chloropropane	4.7		1.0	ug/L	5.00		94	50-150		
1,2-Dibromoethane (EDB)	5.0		1.0	ug/L	5.00		100	50-150		
Dibromomethane	5.1		1.0	ug/L	5.00		101	50-150		
1,2-Dichlorobenzene	5.0		1.0	ug/L	5.00		99	50-150		
1,4-Dichlorobenzene	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dichloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1-Dichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
cis-1,2-Dichloroethene	5.0		1.0	ug/L	5.00		100	50-150		
trans-1,2-Dichloroethene	5.2		1.0	ug/L	5.00		105	50-150		
1,2-Dichloropropane	5.0		1.0	ug/L	5.00		101	50-150		
1,3-Dichloropropane	5.3		1.0	ug/L	5.00		107	50-150		
2,2-Dichloropropane	5.1		1.0	ug/L	5.00		101	50-150		
1,1-Dichloropropene	4.9		1.0	ug/L	5.00		98	50-150		
cis-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		90	50-150		
trans-1,3-Dichloropropene	4.5		1.0	ug/L	5.00		89	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		93	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
LCS (B904261-BS1)					Prepared & Analyzed: 04/17/19					
2-Hexanone	10.1		5.0	ug/L	10.0		101	50-150		
Methyl tert-butyl ether (MTBE)	5.3		1.0	ug/L	5.00		105	50-150		
4-Methyl-2-pentanone	10.2		5.0	ug/L	10.0		102	50-150		
Methylene chloride	5.5		1.0	ug/L	5.00		110	0-200		
Methyl methacrylate	5.4		5.0	ug/L	5.00		108	50-150		
Styrene	4.4		1.0	ug/L	5.00		88	50-150		
1,1,1,2-Tetrachloroethane	4.7		1.0	ug/L	5.00		93	50-150		
1,1,2,2-Tetrachloroethane	5.8		1.0	ug/L	5.00		117	50-150		
Tetrachloroethene	4.8		1.0	ug/L	5.00		96	50-150		
Toluene	4.7		1.0	ug/L	5.00		94	50-150		
1,1,1-Trichloroethane	5.0		1.0	ug/L	5.00		101	50-150		
1,1,2-Trichloroethane	5.1		1.0	ug/L	5.00		101	50-150		
Trichloroethene	5.3		1.0	ug/L	5.00		106	50-150		
Trichlorofluoromethane (Freon 11)	5.7		1.0	ug/L	5.00		115	50-150		
1,2,3-Trichloropropane	5.1		1.0	ug/L	5.00		103	50-150		
Vinyl acetate	4.9		1.0	ug/L	5.00		97	50-150		
Vinyl chloride	5.5		1.0	ug/L	5.00		110	50-150		
o-Xylene	4.5		1.0	ug/L	5.00		90	50-150		
m- & p-Xylenes	8.8		1.0	ug/L	10.0		88	50-150		
Surrogate: 1,2-Dichloroethane-d4	*53.43*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*46.97*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.42*			ug/L	*50.0*		*101*	*86-115*		
Duplicate (B904261-DUP1)		**Source: 9041116-04**			Prepared & Analyzed: 04/18/19					
Acetone	10.3		5.0	ug/L		7.2			35	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)			**Source: 9041116-04**		Prepared & Analyzed: 04/18/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Duplicate (B904261-DUP1)		**Source: 9041116-04**		Prepared & Analyzed: 04/18/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*56.65*			ug/L	*50.0*		*113*	*80-120*		
Surrogate: Toluene-d8	*46.67*			ug/L	*50.0*		*93*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.82*			ug/L	*50.0*		*96*	*86-115*		
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Acetone	17.5		5.0	ug/L	10.0	4.5	130	60-120		
Benzene	11.8		1.0	ug/L	10.0	ND	118	60-120		
Bromochloromethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
Bromodichloromethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Bromoform	11.6		1.0	ug/L	10.0	ND	116	60-120		
Bromomethane	2.9		1.0	ug/L	10.0	ND	29	60-120		
2-Butanone (MEK)	13.1		5.0	ug/L	10.0	ND	131	60-120		
Carbon disulfide	11.0		1.0	ug/L	10.0	ND	110	60-120		
Carbon tetrachloride	10.6		1.0	ug/L	10.0	ND	106	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Chlorobenzene	18.7		1.0	ug/L	10.0	7.8	109	60-120		
Chloroethane	8.9		1.0	ug/L	10.0	ND	89	60-120		
Chloroform	10.6		1.0	ug/L	10.0	ND	106	60-120		
Chloromethane	10.2		1.0	ug/L	10.0	ND	102	60-120		
Dibromochloromethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dibromo-3-chloropropane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	11.4		1.0	ug/L	10.0	ND	114	60-120		
1,2-Dichlorobenzene	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,4-Dichlorobenzene	12.7		1.0	ug/L	10.0	3.2	95	60-120		
1,1-Dichloroethane	11.6		1.0	ug/L	10.0	ND	116	60-120		
1,2-Dichloroethane	11.9		1.0	ug/L	10.0	ND	119	60-120		
1,1-Dichloroethene	11.3		1.0	ug/L	10.0	ND	113	60-120		
cis-1,2-Dichloroethene	18.3		1.0	ug/L	10.0	8.0	104	60-120		
trans-1,2-Dichloroethene	10.9		1.0	ug/L	10.0	ND	109	60-120		
1,2-Dichloropropane	12.2		1.0	ug/L	10.0	1.1	111	60-120		
1,3-Dichloropropane	11.0		1.0	ug/L	10.0	ND	110	60-120		
2,2-Dichloropropane	7.2		1.0	ug/L	10.0	ND	72	60-120		
1,1-Dichloropropene	10.1		1.0	ug/L	10.0	ND	101	60-120		
cis-1,3-Dichloropropene	8.8		1.0	ug/L	10.0	ND	88	60-120		
trans-1,3-Dichloropropene	9.0		1.0	ug/L	10.0	ND	90	60-120		
Ethylbenzene	9.5		1.0	ug/L	10.0	ND	95	60-120		
2-Hexanone	10.7		5.0	ug/L	10.0	ND	107	60-120		
Methyl tert-butyl ether (MTBE)	10.5		1.0	ug/L	10.0	ND	105	60-120		
4-Methyl-2-pentanone	11.1		5.0	ug/L	10.0	ND	111	60-120		
Methylene chloride	11.8		1.0	ug/L	10.0	ND	118	60-120		
Methyl methacrylate	10.3		5.0	ug/L	10.0	ND	103	60-120		
Styrene	8.8		1.0	ug/L	10.0	ND	88	60-120		
1,1,1,2-Tetrachloroethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1,2,2-Tetrachloroethane	12.3		1.0	ug/L	10.0	ND	123	60-120		
Tetrachloroethene	9.5		1.0	ug/L	10.0	ND	95	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904261 - GCMS-WATER-VOLATILES										
Matrix Spike (B904261-MS1)		**Source: 9041116-03**		Prepared & Analyzed: 04/18/19						
Toluene	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,1,1-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
1,1,2-Trichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
Trichloroethene	10.5		1.0	ug/L	10.0	ND	105	60-120		
Trichlorofluoromethane (Freon 11)	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,2,3-Trichloropropane	11.3		1.0	ug/L	10.0	ND	113	60-120		
Vinyl acetate	7.1		1.0	ug/L	10.0	ND	71	60-120		
Vinyl chloride	11.3		1.0	ug/L	10.0	1.6	97	60-120		
o-Xylene	8.6		1.0	ug/L	10.0	ND	86	60-120		
m- & p-Xylenes	18.2		1.0	ug/L	20.0	ND	91	60-120		
Surrogate: 1,2-Dichloroethane-d4	*53.24*			ug/L	*50.0*		*106*	*80-120*		
Surrogate: Toluene-d8	*46.93*			ug/L	*50.0*		*94*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.72*			ug/L	*50.0*		*101*	*86-115*		

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904252 - 3010A-Metals Digestion										
Blank (B904252-BLK1)					Prepared: 04/16/19 Analyzed: 04/19/19					
Hardness as CaCO3	ND		100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	122	B	100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904252-BS1)					Prepared: 04/16/19 Analyzed: 04/19/19					
Antimony	48.0		1.00	ug/L	50.0		96	80-120		
Arsenic	52.2		1.00	ug/L	50.0		104	80-120		
Barium	48.1		1.00	ug/L	50.0		96	80-120		
Beryllium	45.3		1.00	ug/L	50.0		91	80-120		
Cadmium	50.3		1.00	ug/L	50.0		101	80-120		
Calcium	5150		80.0	ug/L	5000		103	80-120		
Chromium	51.8		1.00	ug/L	50.0		104	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904252 - 3010A-Metals Digestion										
LCS (B904252-BS1)					Prepared: 04/16/19 Analyzed: 04/19/19					
Cobalt	51.6		1.00	ug/L	50.0		103	80-120		
Copper	53.6		1.00	ug/L	50.0		107	80-120		
Iron	5240		100	ug/L	5000		105	80-120		
Lead	47.7		1.00	ug/L	50.0		95	80-120		
Magnesium	5220		100	ug/L	5000		104	80-120		
Manganese	50.7		1.00	ug/L	50.0		101	80-120		
Mercury	2.45		0.100	ug/L	2.50		98	80-120		
Nickel	52.5		1.00	ug/L	50.0		105	80-120		
Potassium	5050		100	ug/L	5000		101	80-120		
Selenium	49.2		1.00	ug/L	50.0		98	80-120		
Silver	17.1		1.00	ug/L	50.0		34	80-120		
Sodium	5380	B	100	ug/L	5000		108	80-120		
Thallium	47.0		1.00	ug/L	50.0		94	80-120		
Vanadium	50.1		1.00	ug/L	50.0		100	80-120		
Zinc	73.3		4.00	ug/L	70.0		105	80-120		
Duplicate (B904252-DUP1)		**Source: 9041520-01**			Prepared: 04/16/19 Analyzed: 04/19/19					
Hardness as CaCO3	105000		100	ug/L		102000			2	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	ND		1.00	ug/L		ND				200
Barium	149		1.00	ug/L		152			2	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	12400		80.0	ug/L		12500			0.3	200
Chromium	18.0		1.00	ug/L		15.4			15	200
Cobalt	7.04		1.00	ug/L		5.95			17	200
Copper	2.21		1.00	ug/L		1.73			24	200
Iron	7480		100	ug/L		5600			29	200
Lead	3.12		1.00	ug/L		2.73			13	200
Magnesium	17900		100	ug/L		17300			3	200
Manganese	122		1.00	ug/L		113			8	200
Mercury	0.748		0.100	ug/L		0.827			10	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904252 - 3010A-Metals Digestion										
Duplicate (B904252-DUP1)		**Source: 9041520-01**		Prepared: 04/16/19 Analyzed: 04/19/19						
Nickel	15.6		1.00	ug/L		12.5			22	200
Potassium	3590		100	ug/L		3420			5	200
Selenium	2.58		1.00	ug/L		2.24			14	200
Silver	ND		1.00	ug/L		ND				200
Sodium	27200	B	100	ug/L		27200			0.04	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	9.76		1.00	ug/L		8.02			20	200
Zinc	25.2		4.00	ug/L		20.3			22	200
Matrix Spike (B904252-MS1)		**Source: 9041520-01**		Prepared: 04/16/19 Analyzed: 04/19/19						
Antimony	45.1		1.00	ug/L	50.0	ND	90	60-140		
Arsenic	47.1		1.00	ug/L	50.0	ND	94	60-140		
Barium	197		1.00	ug/L	50.0	152	90	60-140		
Beryllium	47.3		1.00	ug/L	50.0	ND	95	60-140		
Cadmium	50.7		1.00	ug/L	50.0	ND	101	60-140		
Calcium	17600		80.0	ug/L	5000	12500	103	60-140		
Chromium	65.5		1.00	ug/L	50.0	15.4	100	60-140		
Cobalt	54.2		1.00	ug/L	50.0	5.95	97	60-140		
Copper	52.4		1.00	ug/L	50.0	1.73	101	60-140		
Iron	10100		100	ug/L	5000	5600	90	60-140		
Lead	50.7		1.00	ug/L	50.0	2.73	96	60-140		
Magnesium	23100		100	ug/L	5000	17300	116	60-140		
Manganese	163		1.00	ug/L	50.0	113	100	60-140		
Mercury	3.17		0.100	ug/L	2.50	0.827	94	60-140		
Nickel	62.5		1.00	ug/L	50.0	12.5	100	60-140		
Potassium	8390		100	ug/L	5000	3420	99	60-140		
Selenium	45.7		1.00	ug/L	50.0	2.24	87	60-140		
Silver	17.2		1.00	ug/L	50.0	ND	34	60-140		
Sodium	32600	B	100	ug/L	5000	27200	109	60-140		
Thallium	48.6		1.00	ug/L	50.0	ND	97	60-140		
Vanadium	57.5		1.00	ug/L	50.0	8.02	99	60-140		
Zinc	88.5		4.00	ug/L	70.0	20.3	97	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904366 - COD (03) Prep										
Blank (B904366-BLK1)					Prepared: 04/24/19 Analyzed: 04/25/19					
COD	ND		3.0	mg/L						
LCS (B904366-BS1)					Prepared: 04/24/19 Analyzed: 04/25/19					
COD	55.0	S-98	3.0	mg/L	50.0		110	85-115		
Duplicate (B904366-DUP1)		**Source: 9041629-01**			Prepared: 04/24/19 Analyzed: 04/25/19					
COD	38.0		3.0	mg/L		38.0			0	20
Matrix Spike (B904366-MS1)		**Source: 9041629-01**			Prepared: 04/24/19 Analyzed: 04/25/19					
COD	89.0		3.0	mg/L	50.0	38.0	102	80-120		

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904300 - TSS PREP										
Blank (B904300-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904300-BLK2)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904300-BS1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	50.3		2.5	mg/L	56.0		90	70-130		
Duplicate (B904300-DUP1)		**Source: 9041520-05**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	12.2		6.9	mg/L		ND			79	200
Duplicate (B904300-DUP2)		**Source: 9041718-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	68.3		9.4	mg/L		79.3			15	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0177 - Method 300.0										
LCS (B9D0177-BS1)					Prepared & Analyzed: 04/17/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		100	90-110		
Sulfate	10.1		1.0	mg/L	10.0		101	90-110		
Chloride	1.0		0.5	mg/L	1.00		101	90-110		
Duplicate (B9D0177-DUP1)		**Source: E058296-01**			Prepared & Analyzed: 04/17/19					
Chloride	11.4		0.5	mg/L		11.4			0.182	20
Nitrate (as N)	7.2		0.2	mg/L		7.2			0.0832	20
Sulfate	7.5		1.0	mg/L		7.5			0.153	20
Duplicate (B9D0177-DUP2)		**Source: E058307-01**			Prepared & Analyzed: 04/17/19					
Nitrate (as N)	8.7		0.2	mg/L		8.7			0.281	20
Sulfate	7.4		1.0	mg/L		7.4			0.599	20
Matrix Spike (B9D0177-MS1)		**Source: E058296-01**			Prepared & Analyzed: 04/17/19					
Nitrate (as N)	8.2		0.2	mg/L	1.00	7.2	104	80-120		
Sulfate	17.6		1.0	mg/L	10.0	7.5	101	80-120		
Chloride	12.3		0.5	mg/L	1.00	11.4	88.0	80-120		
Matrix Spike (B9D0177-MS2)		**Source: E058307-01**			Prepared & Analyzed: 04/17/19					
Nitrate (as N)	9.7		0.2	mg/L	1.00	8.7	96.4	80-120		
Sulfate	17.7		1.0	mg/L	10.0	7.4	103	80-120		
Batch B9D0188 - Method 300.0										
LCS (B9D0188-BS1)					Prepared & Analyzed: 04/18/19					
Sulfate	9.9		1.0	mg/L	10.0		98.6	90-110		
Chloride	1.0		0.5	mg/L	1.00		102	90-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0188 - Method 300.0										
Duplicate (B9D0188-DUP1)		**Source: E058317-01**			Prepared & Analyzed: 04/18/19					
Sulfate	ND		1.0	mg/L		ND				20
Duplicate (B9D0188-DUP2)		**Source: E058322-02**			Prepared & Analyzed: 04/18/19					
Chloride	7.1		0.5	mg/L		7.2			0.355	20
Sulfate	ND		1.0	mg/L		ND				20
Matrix Spike (B9D0188-MS1)		**Source: E058317-01**			Prepared & Analyzed: 04/19/19					
Sulfate	10.6		1.0	mg/L	10.0	ND	106	80-120		
Matrix Spike (B9D0188-MS2)		**Source: E058322-02**			Prepared & Analyzed: 04/18/19					
Sulfate	10.0		1.0	mg/L	10.0	ND	99.6	80-120		
Chloride	8.2		0.5	mg/L	1.00	7.2	104	80-120		
Batch B9D0197 - No Prep WC										
Blank (B9D0197-BLK1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0197-BS1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.01		0.10	mg/L	2.00		100	90-110		
Duplicate (B9D0197-DUP1)		**Source: E058261-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Duplicate (B9D0197-DUP2)		**Source: 9041629-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	3.51		0.10	mg/L		3.47			1.01	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0197 - No Prep WC										
Matrix Spike (B9D0197-MS1)		**Source: E058261-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00	ND	101	90-110		
Matrix Spike (B9D0197-MS2)		**Source: 9041629-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	5.51		0.20	mg/L	2.00	3.47	102	90-110		
Batch B9D0198 - Method 300.0										
LCS (B9D0198-BS1)					Prepared & Analyzed: 04/19/19					
Chloride	1.1		0.5	mg/L	1.00		105	90-110		
Duplicate (B9D0198-DUP1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Chloride	6.2		0.5	mg/L		6.2			0.314	20
Matrix Spike (B9D0198-MS1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Chloride	7.3		0.5	mg/L	1.00	6.2	109	80-120		
Batch B9D0202 - No Prep WC										
Blank (B9D0202-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0202-DUP1)		**Source: E058286-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	262		5.0	mg/L		260			0.766	20
Batch B9D0246 - No Prep WC										
Duplicate (B9D0246-DUP1)		**Source: E058286-03**			Prepared & Analyzed: 04/24/19					
Conductivity	2900		1.00	us/Cm		2930			1.34	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0246 - No Prep WC										
Duplicate (B9D0246-DUP2)		**Source: E058348-02**		Prepared & Analyzed: 04/24/19						
Conductivity	146		1.00	us/Cm		147			1.03	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0180 - No Prep WC										
LCS (B9D0180-BS1)					Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	106		1.0	mg/L	100		106	90-110		
Duplicate (B9D0180-DUP1)		**Source: E058244-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	224		1.0	mg/L		225			0.223	20
Duplicate (B9D0180-DUP2)		**Source: E058284-01**			Prepared: 04/17/19 Analyzed: 04/18/19					
Alkalinity as CaCO3	394		4.0	mg/L		392			0.539	20
Batch B9D0213 - No Prep WC										
LCS (B9D0213-BS1)					Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	101		1.0	mg/L	100		101	90-110		
Duplicate (B9D0213-DUP1)		**Source: 9041629-05**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	288		4.0	mg/L		284			1.19	20
Duplicate (B9D0213-DUP2)		**Source: E058348-01**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	43.5		1.0	mg/L		43.7			0.550	20

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 15:40

Notes and Definitions

S-98	Spike recovery outside of establlished control limits.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Company Name: EA Engineering
Project Manager: Laura Oakes
Project Name: Gude
Project ID: 15564.01
Sampler(s): Pete Yeneski
P.O. Number: 18961

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-8	4/16	8:25	X			9	X	X	X	X	X	X	X			9041629-01
OB-03A		10:10	X			9	X	X	X	X	X	X	X			-02
OB-03		9:20	X			9	X	X	X	X	X	X	X			-03
Trip Blank			X			1	X									-04
MW-7		11:40	X			9	X	X	X	X	X	X	X			-05
MW-12		13:50	X			9	X	X	X	X	X	X	X			-06
MW-9		15:10	X			9	X	X	X	X	X	X	X			-07

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yeneski	4/16/19 17:30	(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)
(Printed)	4/16/19 17:30	(Printed) Rachel Horner

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 2.0 °C
- ☑ Received on Ice
- ☐ Received same day
- ☐ Preservation Appropriate

Delivery Method:
- ☐ Courier
- ☒ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

SUBCONTRACT ORDER
Maryland Spectral Services
9041629

58303

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Intial
4/16/19 / KD

Due 4:00 PM 04/25/19

Laboratory ID **Comments**

Sample ID: 9041629-01 **MW-8** **Water** **Sampled:04/16/19 08:25**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041629-02 **OB-03A** **Water** **Sampled:04/16/19 10:10**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041629-03 **OB-03** **Water** **Sampled:04/16/19 09:20**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature]	915 4/17/19	FRD	4/17/19 915

T: 2.0°C

SUBCONTRACT ORDER
Maryland Spectral Services

9041629

Due 4:00 PM 04/25/19 | **Laboratory ID** | **Comments**

Sample ID: 9041629-05 **MW-7** **Water** **Sampled:04/16/19 11:40**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041629-06 **MW-12** **Water** **Sampled:04/16/19 13:50**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041629-07 **MW-9** **Water** **Sampled:04/16/19 15:10**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date	
[illegible] 915	4/17/19	FRD	4/17/19	915

T = 2.0°C

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

29 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/17/19 17:24.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OB-02A		9041723-01	Nonpotable Water	04/17/19 08:50	04/17/19 17:24
OB-02		9041723-02	Nonpotable Water	04/17/19 09:20	04/17/19 17:24
MW-11A		9041723-03	Nonpotable Water	04/17/19 12:45	04/17/19 17:24
MW-11B		9041723-04	Nonpotable Water	04/17/19 13:15	04/17/19 17:24
OB-01		9041723-05	Nonpotable Water	04/17/19 15:25	04/17/19 17:24
TRIP BLANK		9041723-06	Nonpotable Water	04/17/19 00:00	04/17/19 17:24

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02A

9041723-01 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.78**		pH Units			1	04/18/19	04/18/19 10:26	RH
TURBIDITY BY EPA 180.1									
Turbidity	**7.65**		NTU	0.500	0.500	1	04/18/19	04/18/19 19:27	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02A

9041723-01 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 18:23	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:23	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:23	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*117 %*	*04/23/19*	*04/23/19 18:23*
Surrogate: Toluene-d8	*88-110*	*101 %*	*04/23/19*	*04/23/19 18:23*
Surrogate: 4-Bromofluorobenzene	*86-115*	*94 %*	*04/23/19*	*04/23/19 18:23*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02A

9041723-01 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**251000**		ug/L	100	100	1	04/18/19	04/19/19 19:31	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Barium	**214**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Calcium	**48200**		ug/L	80.0	80.0	1	04/18/19	04/19/19 19:31	VVD
Chromium	**8.55**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Copper	**2.01**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Iron	**757**		ug/L	100	100	1	04/18/19	04/19/19 19:31	VVD
Lead	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Magnesium	**31800**		ug/L	100	100	1	04/18/19	04/19/19 19:31	VVD
Manganese	**43.7**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Mercury	**0.595**		ug/L	0.100	0.100	1	04/18/19	04/19/19 19:31	VVD
Nickel	**10.8**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Potassium	**3090**		ug/L	100	100	1	04/18/19	04/19/19 19:31	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Silver	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Sodium	**28000**		ug/L	100	100	1	04/18/19	04/19/19 19:31	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Vanadium	**1.41**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:31	VVD
Zinc	**9.45**		ug/L	4.00	4.00	1	04/18/19	04/19/19 19:31	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**13.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:04	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02A

9041723-01 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**24.1**		mg/L	2.5	2.5	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 13:13	FRD
Chloride	**196**		mg/L	12.5	12.5	25	04/19/19	04/19/19 16:35	BMG
Conductivity	**707**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**659**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**1.9**		mg/L	0.2	0.1	1	04/19/19	04/19/19 00:34	BMG
Sulfate	**24.5**		mg/L	1.0	0.5	1	04/18/19	04/19/19 00:34	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**34.7**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02

9041723-02 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.69**		pH Units			1	04/18/19	04/18/19 10:26	RH
TURBIDITY BY EPA 180.1									
Turbidity	**8.47**		NTU	0.500	0.500	1	04/18/19	04/18/19 19:28	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**7.4**		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02

9041723-02 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 18:48	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 18:48	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 18:48	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*113 %*	*04/23/19*	*04/23/19 18:48*
Surrogate: Toluene-d8	*88-110*	*99 %*	*04/23/19*	*04/23/19 18:48*
Surrogate: 4-Bromofluorobenzene	*86-115*	*93 %*	*04/23/19*	*04/23/19 18:48*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02

9041723-02 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**260000**		ug/L	100	100	1	04/18/19	04/19/19 19:37	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Barium	**299**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Calcium	**49400**		ug/L	80.0	80.0	1	04/18/19	04/19/19 19:37	VVD
Chromium	**2.93**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Cobalt	**5.14**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Copper	**3.30**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Iron	**657**		ug/L	100	100	1	04/18/19	04/19/19 19:37	VVD
Lead	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Magnesium	**33100**		ug/L	100	100	1	04/18/19	04/19/19 19:37	VVD
Manganese	**1180**		ug/L	5.00	5.00	5	04/18/19	04/22/19 15:13	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/18/19	04/19/19 19:37	VVD
Nickel	**13.7**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Potassium	**6300**		ug/L	100	100	1	04/18/19	04/19/19 19:37	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Silver	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Sodium	**25900**		ug/L	100	100	1	04/18/19	04/19/19 19:37	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:37	VVD
Zinc	**20.9**		ug/L	4.00	4.00	1	04/18/19	04/19/19 19:37	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**12.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:04	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-02

9041723-02 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**10.6**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/19/19	04/19/19 13:15	FRD
Chloride	**195**		mg/L	12.5	12.5	25	04/19/19	04/19/19 16:53	BMG
Conductivity	**719**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**642**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**0.2**		mg/L	0.2	0.1	1	04/19/19	04/19/19 00:52	BMG
Sulfate	**15.8**		mg/L	1.0	0.5	1	04/18/19	04/19/19 00:52	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**59.3**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11A

9041723-03 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.91**		pH Units			1	04/18/19	04/18/19 10:26	RH
TURBIDITY BY EPA 180.1									
Turbidity	**16.2**		NTU	0.500	0.500	1	04/18/19	04/18/19 19:30	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11A

9041723-03 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 19:14	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:14	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:14	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*113 %*	*04/23/19*	*04/23/19 19:14*
Surrogate: Toluene-d8	*88-110*	*99 %*	*04/23/19*	*04/23/19 19:14*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/23/19*	*04/23/19 19:14*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11A

9041723-03 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**28700**		ug/L	100	100	1	04/18/19	04/19/19 19:44	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Barium	**23.6**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Calcium	**6290**		ug/L	80.0	80.0	1	04/18/19	04/19/19 19:44	VVD
Chromium	**3.53**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Copper	**2.33**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Iron	**841**		ug/L	100	100	1	04/18/19	04/19/19 19:44	VVD
Lead	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Magnesium	**3160**		ug/L	100	100	1	04/18/19	04/19/19 19:44	VVD
Manganese	**19.3**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/18/19	04/19/19 19:44	VVD
Nickel	**3.24**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Potassium	**635**		ug/L	100	100	1	04/18/19	04/19/19 19:44	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Silver	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Sodium	**3850**		ug/L	100	100	1	04/18/19	04/19/19 19:44	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Vanadium	**2.19**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:44	VVD
Zinc	**12.1**		ug/L	4.00	4.00	1	04/18/19	04/19/19 19:44	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**11.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:05	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11A

9041723-03 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**187**		mg/L	4.5	4.5	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:23	FRD
Chloride	**6.2**		mg/L	0.5	0.5	1	04/18/19	04/19/19 01:10	BMG
Conductivity	**78.5**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**68.0**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**1.2**		mg/L	0.2	0.1	1	04/19/19	04/19/19 01:10	BMG
Sulfate	**6.9**		mg/L	1.0	0.5	1	04/18/19	04/19/19 01:10	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**18.3**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11B

9041723-04 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.50**		pH Units			1	04/18/19	04/18/19 10:26	RH
TURBIDITY BY EPA 180.1									
Turbidity	**2.98**		NTU	0.500	0.500	1	04/18/19	04/18/19 19:33	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.2**		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
cis-1,2-Dichloroethene	**2.1**		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11B

9041723-04 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 19:40	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 19:40	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Tetrachloroethene	**4.9**		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Trichloroethene	**1.7**		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 19:40	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*112 %*	*04/23/19*	*04/23/19 19:40*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 19:40*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/23/19*	*04/23/19 19:40*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11B

9041723-04 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**79800**		ug/L	100	100	1	04/18/19	04/19/19 19:50	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Barium	**19.0**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Calcium	**15600**		ug/L	80.0	80.0	1	04/18/19	04/19/19 19:50	VVD
Chromium	**11.2**		ug/L	1.00	1.00	1	04/18/19	04/22/19 15:20	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Copper	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Iron	**256**		ug/L	100	100	1	04/18/19	04/19/19 19:50	VVD
Lead	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Magnesium	**9910**		ug/L	100	100	1	04/18/19	04/19/19 19:50	VVD
Manganese	**7.65**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/18/19	04/19/19 19:50	VVD
Nickel	**7.50**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Potassium	**869**		ug/L	100	100	1	04/18/19	04/19/19 19:50	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Silver	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Sodium	**10500**		ug/L	100	100	1	04/18/19	04/19/19 19:50	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Vanadium	**3.12**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:50	VVD
Zinc	ND		ug/L	4.00	4.00	1	04/18/19	04/19/19 19:50	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**12.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:05	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

MW-11B

9041723-04 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**18.4**		mg/L	2.9	2.9	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:29	FRD
Chloride	**13.1**		mg/L	0.5	0.5	1	04/18/19	04/19/19 01:28	BMG
Conductivity	**211**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**159**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	**3.9**		mg/L	0.2	0.1	1	04/19/19	04/19/19 01:28	BMG
Sulfate	**4.2**		mg/L	1.0	0.5	1	04/18/19	04/19/19 01:28	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**72.4**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-01

9041723-05 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.83**		pH Units			1	04/18/19	04/18/19 10:26	RH
TURBIDITY BY EPA 180.1									
Turbidity	ND		NTU	0.500	0.500	1	04/18/19	04/18/19 19:35	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Chlorobenzene	**1.4**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
cis-1,2-Dichloroethene	**1.2**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-01

9041723-05 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 20:05	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:05	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:05	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*114 %*	*04/23/19*	*04/23/19 20:05*
Surrogate: Toluene-d8	*88-110*	*99 %*	*04/23/19*	*04/23/19 20:05*
Surrogate: 4-Bromofluorobenzene	*86-115*	*94 %*	*04/23/19*	*04/23/19 20:05*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-01

9041723-05 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**570000**		ug/L	500	500	5	04/18/19	04/22/19 15:26	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Barium	**315**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Calcium	**105000**		ug/L	400	400	5	04/18/19	04/22/19 15:26	VVD
Chromium	**1.14**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Cobalt	**4.56**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Copper	**4.52**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Iron	ND		ug/L	100	100	1	04/18/19	04/19/19 19:57	VVD
Lead	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Magnesium	**74900**		ug/L	500	500	5	04/18/19	04/22/19 15:26	VVD
Manganese	**3540**		ug/L	5.00	5.00	5	04/18/19	04/22/19 15:26	VVD
Mercury	**0.181**		ug/L	0.100	0.100	1	04/18/19	04/19/19 19:57	VVD
Nickel	**26.6**		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Potassium	**5050**		ug/L	100	100	1	04/18/19	04/19/19 19:57	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Silver	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Sodium	**141000**		ug/L	500	500	5	04/18/19	04/22/19 15:26	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/18/19	04/19/19 19:57	VVD
Zinc	**14.2**		ug/L	4.00	4.00	1	04/18/19	04/19/19 19:57	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**19.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:06	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

OB-01

9041723-05 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**9.3**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:31	FRD
Chloride	**591**		mg/L	12.5	12.5	25	04/19/19	04/19/19 17:11	BMG
Conductivity	**1900**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**1700**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/19/19	04/19/19 01:45	BMG
Sulfate	**42.1**		mg/L	1.0	0.5	1	04/18/19	04/19/19 01:45	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**79.7**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TRIP BLANK

9041723-06 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.2**		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TRIP BLANK

9041723-06 (Nonpotable Water)
Sample Date: 04/17/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 20:31	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:31	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:31	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*116 %*	*04/23/19*	*04/23/19 20:31*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 20:31*
Surrogate: 4-Bromofluorobenzene	*86-115*	*93 %*	*04/23/19*	*04/23/19 20:31*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904295 - Turbidity										
Blank (B904295-BLK1)					Prepared & Analyzed: 04/18/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Blank (B904344-BLK1)					Prepared & Analyzed: 04/23/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Blank (B904344-BLK1)					Prepared & Analyzed: 04/23/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*56.11*			ug/L	*50.0*		*112*	*80-120*		
Surrogate: Toluene-d8	*49.58*			ug/L	*50.0*		*99*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.72*			ug/L	*50.0*		*95*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
LCS (B904344-BS1)					Prepared & Analyzed: 04/23/19					
Acetone	12.8		5.0	ug/L	10.0		128	50-150		
Benzene	5.0		1.0	ug/L	5.00		99	50-150		
Bromochloromethane	5.0		1.0	ug/L	5.00		99	50-150		
Bromodichloromethane	5.1		1.0	ug/L	5.00		102	50-150		
Bromoform	5.2		1.0	ug/L	5.00		103	50-150		
Bromomethane	2.1		1.0	ug/L	5.00		42	50-150		
2-Butanone (MEK)	9.6		5.0	ug/L	10.0		96	50-150		
Carbon disulfide	5.4		1.0	ug/L	5.00		108	50-150		
Carbon tetrachloride	5.1		1.0	ug/L	5.00		102	50-150		
Chlorobenzene	5.2		1.0	ug/L	5.00		103	50-150		
Chloroethane	3.3		1.0	ug/L	5.00		66	50-150		
Chloroform	4.9		1.0	ug/L	5.00		99	50-150		
Chloromethane	5.2		1.0	ug/L	5.00		104	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		97	50-150		
1,2-Dibromo-3-chloropropane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dibromoethane (EDB)	5.4		1.0	ug/L	5.00		108	50-150		
Dibromomethane	5.0		1.0	ug/L	5.00		100	50-150		
1,2-Dichlorobenzene	5.2		1.0	ug/L	5.00		103	50-150		
1,4-Dichlorobenzene	5.2		1.0	ug/L	5.00		105	50-150		
1,1-Dichloroethane	5.0		1.0	ug/L	5.00		101	50-150		
1,2-Dichloroethane	4.9		1.0	ug/L	5.00		97	50-150		
1,1-Dichloroethene	5.3		1.0	ug/L	5.00		107	50-150		
cis-1,2-Dichloroethene	4.8		1.0	ug/L	5.00		96	50-150		
trans-1,2-Dichloroethene	5.2		1.0	ug/L	5.00		104	50-150		
1,2-Dichloropropane	4.7		1.0	ug/L	5.00		95	50-150		
1,3-Dichloropropane	5.2		1.0	ug/L	5.00		105	50-150		
2,2-Dichloropropane	5.0		1.0	ug/L	5.00		99	50-150		
1,1-Dichloropropene	4.7		1.0	ug/L	5.00		94	50-150		
cis-1,3-Dichloropropene	4.4		1.0	ug/L	5.00		89	50-150		
trans-1,3-Dichloropropene	4.8		1.0	ug/L	5.00		96	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		94	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
LCS (B904344-BS1)					Prepared & Analyzed: 04/23/19					
2-Hexanone	10.4		5.0	ug/L	10.0		104	50-150		
Methyl tert-butyl ether (MTBE)	5.0		1.0	ug/L	5.00		100	50-150		
4-Methyl-2-pentanone	10.9		5.0	ug/L	10.0		109	50-150		
Methylene chloride	5.1		1.0	ug/L	5.00		102	0-200		
Methyl methacrylate	4.8	J	5.0	ug/L	5.00		97	50-150		
Styrene	4.3		1.0	ug/L	5.00		85	50-150		
1,1,1,2-Tetrachloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1,2,2-Tetrachloroethane	5.7		1.0	ug/L	5.00		115	50-150		
Tetrachloroethene	5.0		1.0	ug/L	5.00		100	50-150		
Toluene	4.8		1.0	ug/L	5.00		96	50-150		
1,1,1-Trichloroethane	5.2		1.0	ug/L	5.00		103	50-150		
1,1,2-Trichloroethane	5.2		1.0	ug/L	5.00		104	50-150		
Trichloroethene	4.8		1.0	ug/L	5.00		97	50-150		
Trichlorofluoromethane (Freon 11)	5.3		1.0	ug/L	5.00		106	50-150		
1,2,3-Trichloropropane	6.0		1.0	ug/L	5.00		120	50-150		
Vinyl acetate	4.6		1.0	ug/L	5.00		92	50-150		
Vinyl chloride	5.0		1.0	ug/L	5.00		100	50-150		
o-Xylene	4.4		1.0	ug/L	5.00		87	50-150		
m- & p-Xylenes	8.9		1.0	ug/L	10.0		89	50-150		
Surrogate: 1,2-Dichloroethane-d4	*53.52*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*50.45*			ug/L	*50.0*		*101*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.59*			ug/L	*50.0*		*99*	*86-115*		
Duplicate (B904344-DUP1)			**Source: 9041723-02**		Prepared & Analyzed: 04/23/19					
Acetone	6.9		5.0	ug/L		7.4			7	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Duplicate (B904344-DUP1)			**Source: 9041723-02**		Prepared & Analyzed: 04/23/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Duplicate (B904344-DUP1)		**Source: 9041723-02**		Prepared & Analyzed: 04/23/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*57.04*			ug/L	*50.0*		*114*	*80-120*		
Surrogate: Toluene-d8	*50.74*			ug/L	*50.0*		*101*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.58*			ug/L	*50.0*		*95*	*86-115*		
Matrix Spike (B904344-MS1)		**Source: 9041723-01**		Prepared & Analyzed: 04/23/19						
Acetone	14.6		5.0	ug/L	10.0	ND	146	60-120		
Benzene	10.1		1.0	ug/L	10.0	ND	101	60-120		
Bromochloromethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
Bromodichloromethane	10.1		1.0	ug/L	10.0	ND	101	60-120		
Bromoform	11.0		1.0	ug/L	10.0	ND	110	60-120		
Bromomethane	4.4		1.0	ug/L	10.0	ND	44	60-120		
2-Butanone (MEK)	12.1		5.0	ug/L	10.0	ND	121	60-120		
Carbon disulfide	9.9		1.0	ug/L	10.0	ND	99	60-120		
Carbon tetrachloride	10.3		1.0	ug/L	10.0	ND	103	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Matrix Spike (B904344-MS1)		**Source: 9041723-01**		Prepared & Analyzed: 04/23/19						
Chlorobenzene	9.9		1.0	ug/L	10.0	ND	99	60-120		
Chloroethane	6.9		1.0	ug/L	10.0	ND	69	60-120		
Chloroform	10.1		1.0	ug/L	10.0	ND	101	60-120		
Chloromethane	9.0		1.0	ug/L	10.0	ND	90	60-120		
Dibromochloromethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,2-Dibromo-3-chloropropane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	10.8		1.0	ug/L	10.0	ND	108	60-120		
1,2-Dichlorobenzene	10.5		1.0	ug/L	10.0	ND	105	60-120		
1,4-Dichlorobenzene	10.1		1.0	ug/L	10.0	ND	101	60-120		
1,1-Dichloroethane	10.6		1.0	ug/L	10.0	ND	106	60-120		
1,2-Dichloroethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1-Dichloroethene	10.6		1.0	ug/L	10.0	ND	106	60-120		
cis-1,2-Dichloroethene	9.9		1.0	ug/L	10.0	ND	99	60-120		
trans-1,2-Dichloroethene	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dichloropropane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,3-Dichloropropane	10.9		1.0	ug/L	10.0	ND	109	60-120		
2,2-Dichloropropane	6.9		1.0	ug/L	10.0	ND	69	60-120		
1,1-Dichloropropene	9.5		1.0	ug/L	10.0	ND	95	60-120		
cis-1,3-Dichloropropene	8.7		1.0	ug/L	10.0	ND	87	60-120		
trans-1,3-Dichloropropene	8.9		1.0	ug/L	10.0	ND	89	60-120		
Ethylbenzene	9.0		1.0	ug/L	10.0	ND	90	60-120		
2-Hexanone	10.6		5.0	ug/L	10.0	ND	106	60-120		
Methyl tert-butyl ether (MTBE)	9.0		1.0	ug/L	10.0	ND	90	60-120		
4-Methyl-2-pentanone	10.8		5.0	ug/L	10.0	ND	108	60-120		
Methylene chloride	10.3		1.0	ug/L	10.0	ND	103	60-120		
Methyl methacrylate	9.9		5.0	ug/L	10.0	ND	99	60-120		
Styrene	8.9		1.0	ug/L	10.0	ND	89	60-120		
1,1,1,2-Tetrachloroethane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,1,2,2-Tetrachloroethane	12.0		1.0	ug/L	10.0	ND	120	60-120		
Tetrachloroethene	10.0		1.0	ug/L	10.0	ND	100	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Matrix Spike (B904344-MS1)		**Source: 9041723-01**		Prepared & Analyzed: 04/23/19						
Toluene	9.8		1.0	ug/L	10.0	ND	98	60-120		
1,1,1-Trichloroethane	10.1		1.0	ug/L	10.0	ND	101	60-120		
1,1,2-Trichloroethane	10.7		1.0	ug/L	10.0	ND	107	60-120		
Trichloroethene	9.6		1.0	ug/L	10.0	ND	96	60-120		
Trichlorofluoromethane (Freon 11)	9.7		1.0	ug/L	10.0	ND	97	60-120		
1,2,3-Trichloropropane	11.6		1.0	ug/L	10.0	ND	116	60-120		
Vinyl acetate	6.5		1.0	ug/L	10.0	ND	65	60-120		
Vinyl chloride	9.1		1.0	ug/L	10.0	ND	91	60-120		
o-Xylene	8.8		1.0	ug/L	10.0	ND	88	60-120		
m- & p-Xylenes	17.7		1.0	ug/L	20.0	ND	88	60-120		
Surrogate: 1,2-Dichloroethane-d4	*54.56*			ug/L	*50.0*		*109*	*80-120*		
Surrogate: Toluene-d8	*50.05*			ug/L	*50.0*		*100*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.69*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904288 - 3010A-Metals Digestion										
Blank (B904288-BLK1)					Prepared: 04/18/19 Analyzed: 04/19/19					
Hardness as CaCO3	ND		100	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904288-BS1)					Prepared: 04/18/19 Analyzed: 04/19/19					
Antimony	47.9		1.00	ug/L	50.0		96	80-120		
Arsenic	51.8		1.00	ug/L	50.0		104	80-120		
Barium	47.4		1.00	ug/L	50.0		95	80-120		
Beryllium	44.5		1.00	ug/L	50.0		89	80-120		
Cadmium	50.5		1.00	ug/L	50.0		101	80-120		
Calcium	5150		80.0	ug/L	5000		103	80-120		
Chromium	51.1		1.00	ug/L	50.0		102	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904288 - 3010A-Metals Digestion										
LCS (B904288-BS1)					Prepared: 04/18/19 Analyzed: 04/19/19					
Cobalt	52.0		1.00	ug/L	50.0		104	80-120		
Copper	54.2		1.00	ug/L	50.0		108	80-120		
Iron	5180		100	ug/L	5000		104	80-120		
Lead	47.6		1.00	ug/L	50.0		95	80-120		
Magnesium	5310		100	ug/L	5000		106	80-120		
Manganese	49.8		1.00	ug/L	50.0		100	80-120		
Mercury	2.38		0.100	ug/L	2.50		95	80-120		
Nickel	54.1		1.00	ug/L	50.0		108	80-120		
Potassium	5060		100	ug/L	5000		101	80-120		
Selenium	51.9		1.00	ug/L	50.0		104	80-120		
Silver	15.2		1.00	ug/L	50.0		30	80-120		
Sodium	5470		100	ug/L	5000		109	80-120		
Thallium	47.4		1.00	ug/L	50.0		95	80-120		
Vanadium	49.6		1.00	ug/L	50.0		99	80-120		
Zinc	75.1		4.00	ug/L	70.0		107	80-120		
Duplicate (B904288-DUP1)			**Source: 9041720-01**		Prepared: 04/18/19 Analyzed: 04/19/19					
Hardness as CaCO3	150000		100	ug/L		148000			1	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	1.12		1.00	ug/L		1.16			3	200
Barium	110		1.00	ug/L		110			0.04	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	40200		80.0	ug/L		39900			0.9	200
Chromium	ND		1.00	ug/L		ND				200
Cobalt	8.09		1.00	ug/L		7.86			3	200
Copper	6.10		1.00	ug/L		6.07			0.5	200
Iron	3460		100	ug/L		3460			0.1	200
Lead	10.6		1.00	ug/L		10.4			2	200
Magnesium	12000		100	ug/L		11800			2	200
Manganese	10500	E	1.00	ug/L		10400			0.6	200
Mercury	ND		0.100	ug/L		ND				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904288 - 3010A-Metals Digestion										
Duplicate (B904288-DUP1)		**Source: 9041720-01**		Prepared: 04/18/19 Analyzed: 04/19/19						
Nickel	2.69		1.00	ug/L		2.44			10	200
Potassium	2060		100	ug/L		2010			2	200
Selenium	ND		1.00	ug/L		ND				200
Silver	ND		1.00	ug/L		ND				200
Sodium	82800		100	ug/L		81700			1	200
Thallium	ND		1.00	ug/L		ND				200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	23.0		4.00	ug/L		20.8			10	200
Matrix Spike (B904288-MS1)		**Source: 9041720-01**		Prepared: 04/18/19 Analyzed: 04/19/19						
Antimony	49.9		1.00	ug/L	50.0	ND	100	60-140		
Arsenic	52.8		1.00	ug/L	50.0	1.16	103	60-140		
Barium	162		1.00	ug/L	50.0	110	103	60-140		
Beryllium	46.5		1.00	ug/L	50.0	ND	93	60-140		
Cadmium	50.4		1.00	ug/L	50.0	ND	101	60-140		
Calcium	45100		80.0	ug/L	5000	39900	105	60-140		
Chromium	51.0		1.00	ug/L	50.0	ND	102	60-140		
Cobalt	57.7		1.00	ug/L	50.0	7.86	100	60-140		
Copper	57.7		1.00	ug/L	50.0	6.07	103	60-140		
Iron	8500		100	ug/L	5000	3460	101	60-140		
Lead	58.4		1.00	ug/L	50.0	10.4	96	60-140		
Magnesium	17100		100	ug/L	5000	11800	106	60-140		
Manganese	10500	E	1.00	ug/L	50.0	10400	114	60-140		
Mercury	2.72		0.100	ug/L	2.50	ND	109	60-140		
Nickel	53.0		1.00	ug/L	50.0	2.44	101	60-140		
Potassium	6960		100	ug/L	5000	2010	99	60-140		
Selenium	45.2		1.00	ug/L	50.0	ND	90	60-140		
Silver	14.5		1.00	ug/L	50.0	ND	29	60-140		
Sodium	88300		100	ug/L	5000	81700	133	60-140		
Thallium	47.7		1.00	ug/L	50.0	ND	95	60-140		
Vanadium	51.0		1.00	ug/L	50.0	ND	102	60-140		
Zinc	91.0		4.00	ug/L	70.0	20.8	100	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904366 - COD (03) Prep										
Blank (B904366-BLK1)					Prepared: 04/24/19 Analyzed: 04/25/19					
COD	ND		3.0	mg/L						
LCS (B904366-BS1)					Prepared: 04/24/19 Analyzed: 04/25/19					
COD	55.0	S-98	3.0	mg/L	50.0		110	85-115		
Duplicate (B904366-DUP1)		**Source: 9041629-01**			Prepared: 04/24/19 Analyzed: 04/25/19					
COD	38.0		3.0	mg/L		38.0			0	20
Matrix Spike (B904366-MS1)		**Source: 9041629-01**			Prepared: 04/24/19 Analyzed: 04/25/19					
COD	89.0		3.0	mg/L	50.0	38.0	102	80-120		

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904300 - TSS PREP										
Blank (B904300-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904300-BLK2)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904300-BS1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	50.3		2.5	mg/L	56.0		90	70-130		
Duplicate (B904300-DUP1)		**Source: 9041520-05**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	12.2		6.9	mg/L		ND			79	200
Duplicate (B904300-DUP2)		**Source: 9041718-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	68.3		9.4	mg/L		79.3			15	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0188 - Method 300.0										
LCS (B9D0188-BS1)					Prepared & Analyzed: 04/18/19					
Chloride	1.0		0.5	mg/L	1.00		102	90-110		
Sulfate	9.9		1.0	mg/L	10.0		98.6	90-110		
Nitrate (as N)	1.0		0.2	mg/L	1.00		100	90-110		
Duplicate (B9D0188-DUP1)		**Source: E058317-01**			Prepared & Analyzed: 04/18/19					
Nitrate (as N)	7.3		0.2	mg/L		7.3			0.294	20
Sulfate	ND		1.0	mg/L		ND				20
Duplicate (B9D0188-DUP2)		**Source: E058322-02**			Prepared & Analyzed: 04/18/19					
Sulfate	ND		1.0	mg/L		ND				20
Chloride	7.1		0.5	mg/L		7.2			0.355	20
Nitrate (as N)	2.0		0.2	mg/L		2.0			0.169	20
Matrix Spike (B9D0188-MS1)		**Source: E058317-01**			Prepared & Analyzed: 04/19/19					
Nitrate (as N)	8.3		0.2	mg/L	1.00	7.3	102	80-120		
Sulfate	10.6		1.0	mg/L	10.0	ND	106	80-120		
Matrix Spike (B9D0188-MS2)		**Source: E058322-02**			Prepared & Analyzed: 04/18/19					
Chloride	8.2		0.5	mg/L	1.00	7.2	104	80-120		
Nitrate (as N)	3.0		0.2	mg/L	1.00	2.0	103	80-120		
Sulfate	10.0		1.0	mg/L	10.0	ND	99.6	80-120		
Batch B9D0197 - No Prep WC										
Blank (B9D0197-BLK1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0197 - No Prep WC										
LCS (B9D0197-BS1)					Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.01		0.10	mg/L	2.00		100	90-110		
Duplicate (B9D0197-DUP1)		**Source: E058261-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Duplicate (B9D0197-DUP2)		**Source: E058303-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	3.51		0.10	mg/L		3.47			1.01	20
Matrix Spike (B9D0197-MS1)		**Source: E058261-01**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00	ND	101	90-110		
Matrix Spike (B9D0197-MS2)		**Source: E058303-02**			Prepared & Analyzed: 04/19/19					
Ammonia Nitrogen	5.51		0.20	mg/L	2.00	3.47	102	90-110		
Batch B9D0198 - Method 300.0										
LCS (B9D0198-BS1)					Prepared & Analyzed: 04/19/19					
Chloride	1.1		0.5	mg/L	1.00		105	90-110		
Duplicate (B9D0198-DUP1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Chloride	6.2		0.5	mg/L		6.2			0.314	20
Matrix Spike (B9D0198-MS1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Chloride	7.3		0.5	mg/L	1.00	6.2	109	80-120		
Batch B9D0202 - No Prep WC										
Blank (B9D0202-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	ND		5.0	mg/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0202 - No Prep WC										
Duplicate (B9D0202-DUP1)		**Source: E058286-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	262		5.0	mg/L		260			0.766	20
Batch B9D0236 - No Prep WC										
Blank (B9D0236-BLK1)					Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0236-BS1)					Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00		101	90-110		
Duplicate (B9D0236-DUP1)		**Source: 9041723-03**			Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Matrix Spike (B9D0236-MS1)		**Source: 9041723-03**			Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	1.95		0.10	mg/L	2.00	ND	97.4	90-110		
Batch B9D0246 - No Prep WC										
Duplicate (B9D0246-DUP1)		**Source: E058286-03**			Prepared & Analyzed: 04/24/19					
Conductivity	2900		1.00	us/Cm		2930			1.34	20
Duplicate (B9D0246-DUP2)		**Source: E058348-02**			Prepared & Analyzed: 04/24/19					
Conductivity	146		1.00	us/Cm		147			1.03	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0213 - No Prep WC										
LCS (B9D0213-BS1)					Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	101		1.0	mg/L	100		101	90-110		
Duplicate (B9D0213-DUP1)		**Source: E058303-04**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	288		4.0	mg/L		284			1.19	20
Duplicate (B9D0213-DUP2)		**Source: E058348-01**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	43.5		1.0	mg/L		43.7			0.550	20

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/29/19 16:13

Notes and Definitions

S-98	Spike recovery outside of establlished control limits.
J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410–247–7600 • Fax 410–247–7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water) PW (potable water)

Company Name:	Project Manager:
EA Engineering	Laura Oakes
Project Name:	**Project ID:**
Goode	15564.04
Sampler(s):	**P.O. Number:**
Pete Yunsk	18961

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260 L VOC	L 0720 MSE LANDFILL	Chloride, nitrate, sulfate, Alkalinity, Dissolve Solids	turbidity - pH	Suspended Solids	COD	Ammonia - Nitrogen				Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
OB 02A	4/17/19	850	X			9	X	X	X	X	X	X	X						9041723-01
OB-02		920	X			9	X	X	X	X	X	X	X						-02
MW-11A		1245	X			9	X	X	X	X	X	X	X						-03
MW-11B		1315	X			9	X	X	X	X	X	X	X						-04
OB-01		1525	X			9	X	X	X	X	X	X	X						-05
Trip Blank			X			1	X												-06

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yunsk	4/17/19 17:23	(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)
(Printed)	4/17/19 1724	(Printed) Kim Dink

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 3.0 °C
- ☐ Received on Ice
- ☐ Received same day
- ☐ Preservation Appropriate

Delivery Method:
- ☐ Courier
- ☒ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

58353

SUBCONTRACT ORDER
Maryland Spectral Services

9041723

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Initial
4/17/19 / KD

Due 4:00 PM 04/26/19

Laboratory ID **Comments**

Sample ID: 9041723-01 **OB-02A** **Water** **Sampled:04/17/19 08:50**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041723-02 **OB-02** **Water** **Sampled:04/17/19 09:20**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041723-03 **MW-11A** **Water** **Sampled:04/17/19 12:45**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
	1703 4/18/19		

T: 3.3

58353

SUBCONTRACT ORDER
Maryland Spectral Services

9041723

Due 4:00 PM 04/26/19 | **Laboratory ID** | **Comments**

Sample ID: 9041723-04 **MW-11B** **Water** **Sampled:04/17/19 13:15**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041723-05 **OB-01** **Water** **Sampled:04/17/19 15:25**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
1703	4/18/19		

T: 3.3

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

30 April 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/18/19 18:23.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-21-A		9041809-01	Nonpotable Water	04/18/19 08:10	04/18/19 18:23
MW-21-B		9041809-02	Nonpotable Water	04/18/19 10:33	04/18/19 18:23
Trip Blank		9041809-03	Nonpotable Water	04/18/19 18:05	04/18/19 18:23
MW-14B		9041809-04	Nonpotable Water	04/18/19 12:20	04/18/19 18:23
MW-14A		9041809-05	Nonpotable Water	04/18/19 14:00	04/18/19 18:23
MW-15		9041809-06	Nonpotable Water	04/18/19 16:40	04/18/19 18:23

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-A

9041809-01 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.41**		pH Units			1	04/19/19	04/19/19 10:33	BJP
TURBIDITY BY EPA 180.1									
Turbidity	**35.8**		NTU	0.500	0.500	1	04/19/19	04/19/19 17:49	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.1**		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Chlorobenzene	**1.4**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,4-Dichlorobenzene	**1.1**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1-Dichloroethane	**3.4**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
cis-1,2-Dichloroethene	**9.8**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-A

9041809-01 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 20:56	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 20:56	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Tetrachloroethene	**3.5**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Trichloroethene	**5.6**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
Vinyl chloride	**1.4**		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 20:56	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*114 %*	*04/23/19*	*04/23/19 20:56*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 20:56*
Surrogate: 4-Bromofluorobenzene	*86-115*	*94 %*	*04/23/19*	*04/23/19 20:56*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-A

9041809-01 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**366000**		ug/L	500	500	1	04/23/19	04/24/19 14:12	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Arsenic	**2.63**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Barium	**476**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Calcium	**69400**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:12	VVD
Chromium	**1.98**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Cobalt	**139**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Copper	**2.65**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Iron	**18800**		ug/L	100	100	1	04/23/19	04/24/19 14:12	VVD
Lead	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Magnesium	**46900**		ug/L	100	100	1	04/23/19	04/24/19 14:12	VVD
Manganese	**16100**		ug/L	20.0	20.0	20	04/23/19	04/24/19 16:50	VVD
Mercury	**0.635**		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:12	VVD
Nickel	**26.3**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Potassium	**25300**		ug/L	100	100	1	04/23/19	04/24/19 14:12	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Sodium	**66400**		ug/L	100	100	1	04/23/19	04/24/19 14:12	VVD
Thallium	**1.26**		ug/L	1.00	1.00	1	04/23/19	04/24/19 15:51	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:12	VVD
Zinc	**39.5**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:12	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**37.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:06	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-A

9041809-01 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**10.7**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**11.9**		mg/L	0.40	0.20	4	04/24/19	04/24/19 11:59	FRD
Chloride	**106**		mg/L	2.5	2.5	5	04/22/19	04/22/19 13:33	BMG
Conductivity	**1120**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**624**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/19/19	04/19/19 18:40	BMG
Sulfate	**17.0**		mg/L	1.0	0.5	1	04/19/19	04/19/19 18:40	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**452**		mg/L	2.0	2.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-B

9041809-02 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.50**		pH Units			1	04/19/19	04/19/19 10:33	BJP
TURBIDITY BY EPA 180.1									
Turbidity	**364**		NTU	5.00	5.00	10	04/19/19	04/19/19 18:26	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1-Dichloroethane	**7.9**		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
cis-1,2-Dichloroethene	**17.9**		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-B

9041809-02 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	**2.4**		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 21:22	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:22	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Trichloroethene	**11.7**		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
Vinyl chloride	**2.4**		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:22	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*114 %*	*04/23/19*	*04/23/19 21:22*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 21:22*
Surrogate: 4-Bromofluorobenzene	*86-115*	*94 %*	*04/23/19*	*04/23/19 21:22*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-B

9041809-02 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**294000**		ug/L	500	500	1	04/23/19	04/24/19 14:19	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Arsenic	**2.00**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Barium	**123**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Calcium	**66100**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:19	VVD
Chromium	**11.2**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Cobalt	**67.6**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Copper	**4.27**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Iron	**63100**		ug/L	100	100	1	04/23/19	04/24/19 14:19	VVD
Lead	**1.15**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Magnesium	**31400**		ug/L	100	100	1	04/23/19	04/24/19 14:19	VVD
Manganese	**6390**		ug/L	10.0	10.0	10	04/23/19	04/24/19 16:56	VVD
Mercury	**0.142**		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:19	VVD
Nickel	**33.6**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Potassium	**8050**		ug/L	100	100	1	04/23/19	04/24/19 14:19	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Sodium	**60000**		ug/L	100	100	1	04/23/19	04/24/19 14:19	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 15:57	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:19	VVD
Zinc	**10.5**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:19	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**27.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:07	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-21-B

9041809-02 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**63.4**		mg/L	4.1	4.1	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	**0.57**		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:40	FRD
Chloride	**174**		mg/L	5.0	5.0	10	04/22/19	04/22/19 14:27	BMG
Conductivity	**952**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**621**		mg/L	5.0	5.0	1	04/19/19	04/22/19 00:00	SES
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/19/19	04/19/19 19:34	BMG
Sulfate	**13.4**		mg/L	1.0	0.5	1	04/19/19	04/19/19 19:34	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**263**		mg/L	4.0	4.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Trip Blank

9041809-03 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Trip Blank

9041809-03 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 21:48	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 21:48	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 21:48	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*114 %*	*04/23/19*	*04/23/19 21:48*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 21:48*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/23/19*	*04/23/19 21:48*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14B

9041809-04 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.99**		pH Units			1	04/19/19	04/19/19 10:33	BJP
TURBIDITY BY EPA 180.1									
Turbidity	**6.55**		NTU	0.500	0.500	1	04/19/19	04/19/19 17:55	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**6.9**		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Chloroform	**1.3**		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14B

9041809-04 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 22:13	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:13	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:13	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*115 %*	*04/23/19*	*04/23/19 22:13*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 22:13*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/23/19*	*04/23/19 22:13*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14B

9041809-04 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**59100**		ug/L	500	500	1	04/23/19	04/24/19 14:25	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Barium	**17.2**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Calcium	**11800**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:25	VVD
Chromium	**3.74**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Copper	**2.15**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Iron	**351**		ug/L	100	100	1	04/23/19	04/24/19 14:25	VVD
Lead	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Magnesium	**7200**		ug/L	100	100	1	04/23/19	04/24/19 14:25	VVD
Manganese	**14.3**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Mercury	**0.100**		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:25	VVD
Nickel	**3.00**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Potassium	**1530**		ug/L	100	100	1	04/23/19	04/24/19 14:25	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Sodium	**8010**		ug/L	100	100	1	04/23/19	04/24/19 14:25	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 16:04	VVD
Vanadium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:25	VVD
Zinc	**5.54**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:25	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**11.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:07	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14B

9041809-04 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**95.2**		mg/L	2.8	2.8	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:42	FRD
Chloride	**20.7**		mg/L	0.5	0.5	1	04/19/19	04/19/19 19:52	BMG
Conductivity	**174**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**184**		mg/L	5.0	5.0	1	04/24/19	04/25/19 10:44	FRD
Nitrate (as N)	**5.4**		mg/L	0.2	0.1	1	04/19/19	04/19/19 19:52	BMG
Sulfate	**2.5**		mg/L	1.0	0.5	1	04/19/19	04/19/19 19:52	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**34.3**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14A

9041809-05 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.54**		pH Units			1	04/19/19	04/19/19 10:33	BJP
TURBIDITY BY EPA 180.1									
Turbidity	**9.08**		NTU	0.500	0.500	1	04/19/19	04/19/19 17:59	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**8.9**		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14A

9041809-05 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 22:39	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 22:39	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 22:39	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*114 %*	*04/23/19*	*04/23/19 22:39*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/23/19*	*04/23/19 22:39*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/23/19*	*04/23/19 22:39*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14A

9041809-05 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**173000**		ug/L	500	500	1	04/23/19	04/24/19 14:32	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Barium	**242**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Calcium	**30000**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:32	VVD
Chromium	**10.6**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Cobalt	**4.23**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Copper	**10.7**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Iron	**2390**		ug/L	100	100	1	04/23/19	04/24/19 14:32	VVD
Lead	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Magnesium	**23800**		ug/L	100	100	1	04/23/19	04/24/19 14:32	VVD
Manganese	**38.9**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:32	VVD
Nickel	**24.3**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Potassium	**2980**		ug/L	100	100	1	04/23/19	04/24/19 14:32	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Sodium	**40900**		ug/L	100	100	1	04/23/19	04/24/19 14:32	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 16:10	VVD
Vanadium	**6.11**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:32	VVD
Zinc	**40.7**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:32	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**10.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:08	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-14A

9041809-05 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**125**		mg/L	2.6	2.6	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:44	FRD
Chloride	**160**		mg/L	5.0	5.0	10	04/22/19	04/22/19 14:45	BMG
Conductivity	**590**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**526**		mg/L	5.0	5.0	1	04/24/19	04/25/19 10:44	FRD
Nitrate (as N)	**3.3**		mg/L	0.2	0.1	1	04/19/19	04/19/19 20:10	BMG
Sulfate	**15.5**		mg/L	1.0	0.5	1	04/19/19	04/19/19 20:10	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**17.6**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-15

9041809-06 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.78**		pH Units			1	04/19/19	04/19/19 10:33	BJP
TURBIDITY BY EPA 180.1									
Turbidity	**114**		NTU	2.50	2.50	5	04/19/19	04/19/19 18:30	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	**5.6**		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Benzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-15

9041809-06 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Isobutanol	ND		ug/L	100	100	1	04/23/19	04/23/19 23:05	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/23/19	04/23/19 23:05	GM
Styrene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Toluene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/23/19	04/23/19 23:05	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*116 %*	*04/23/19*	*04/23/19 23:05*
Surrogate: Toluene-d8	*88-110*	*99 %*	*04/23/19*	*04/23/19 23:05*
Surrogate: 4-Bromofluorobenzene	*86-115*	*94 %*	*04/23/19*	*04/23/19 23:05*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-15

9041809-06 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**71800**		ug/L	500	500	1	04/23/19	04/24/19 14:45	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Barium	**82.9**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Calcium	**10400**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:45	VVD
Chromium	**13.4**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Cobalt	**5.30**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Copper	**59.8**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Iron	**11400**		ug/L	100	100	1	04/23/19	04/24/19 14:45	VVD
Lead	**2.51**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Magnesium	**11100**		ug/L	100	100	1	04/23/19	04/24/19 14:45	VVD
Manganese	**167**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:45	VVD
Nickel	**15.2**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Potassium	**1980**		ug/L	100	100	1	04/23/19	04/24/19 14:45	VVD
Selenium	**1.62**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Sodium	**7150**		ug/L	100	100	1	04/23/19	04/24/19 14:45	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Vanadium	**9.95**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:45	VVD
Zinc	**48.8**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:45	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**12.0**		mg/L	3.0	3.0	1	04/24/19	04/25/19 16:08	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

MW-15

9041809-06 (Nonpotable Water)
Sample Date: 04/18/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**1500**		mg/L	19.2	19.2	1	04/19/19	04/22/19 11:08	AM
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 12:01	FRD
Chloride	**25.3**		mg/L	1.0	1.0	2	04/22/19	04/22/19 15:02	BMG
Conductivity	**175**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**448**		mg/L	5.0	5.0	1	04/24/19	04/25/19 10:44	FRD
Nitrate (as N)	**5.2**		mg/L	0.2	0.1	1	04/19/19	04/19/19 20:28	BMG
Sulfate	**3.8**		mg/L	1.0	0.5	1	04/19/19	04/19/19 20:28	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**24.0**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904313 - Turbidity										
Blank (B904313-BLK1)					Prepared & Analyzed: 04/19/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Blank (B904344-BLK1)					Prepared & Analyzed: 04/23/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Blank (B904344-BLK1)					Prepared & Analyzed: 04/23/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*56.11*			ug/L	*50.0*		*112*	*80-120*		
Surrogate: Toluene-d8	*49.58*			ug/L	*50.0*		*99*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.72*			ug/L	*50.0*		*95*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
LCS (B904344-BS1)					Prepared & Analyzed: 04/23/19					
Acetone	12.8		5.0	ug/L	10.0		128	50-150		
Benzene	5.0		1.0	ug/L	5.00		99	50-150		
Bromochloromethane	5.0		1.0	ug/L	5.00		99	50-150		
Bromodichloromethane	5.1		1.0	ug/L	5.00		102	50-150		
Bromoform	5.2		1.0	ug/L	5.00		103	50-150		
Bromomethane	2.1		1.0	ug/L	5.00		42	50-150		
2-Butanone (MEK)	9.6		5.0	ug/L	10.0		96	50-150		
Carbon disulfide	5.4		1.0	ug/L	5.00		108	50-150		
Carbon tetrachloride	5.1		1.0	ug/L	5.00		102	50-150		
Chlorobenzene	5.2		1.0	ug/L	5.00		103	50-150		
Chloroethane	3.3		1.0	ug/L	5.00		66	50-150		
Chloroform	4.9		1.0	ug/L	5.00		99	50-150		
Chloromethane	5.2		1.0	ug/L	5.00		104	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		97	50-150		
1,2-Dibromo-3-chloropropane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dibromoethane (EDB)	5.4		1.0	ug/L	5.00		108	50-150		
Dibromomethane	5.0		1.0	ug/L	5.00		100	50-150		
1,2-Dichlorobenzene	5.2		1.0	ug/L	5.00		103	50-150		
1,4-Dichlorobenzene	5.2		1.0	ug/L	5.00		105	50-150		
1,1-Dichloroethane	5.0		1.0	ug/L	5.00		101	50-150		
1,2-Dichloroethane	4.9		1.0	ug/L	5.00		97	50-150		
1,1-Dichloroethene	5.3		1.0	ug/L	5.00		107	50-150		
cis-1,2-Dichloroethene	4.8		1.0	ug/L	5.00		96	50-150		
trans-1,2-Dichloroethene	5.2		1.0	ug/L	5.00		104	50-150		
1,2-Dichloropropane	4.7		1.0	ug/L	5.00		95	50-150		
1,3-Dichloropropane	5.2		1.0	ug/L	5.00		105	50-150		
2,2-Dichloropropane	5.0		1.0	ug/L	5.00		99	50-150		
1,1-Dichloropropene	4.7		1.0	ug/L	5.00		94	50-150		
cis-1,3-Dichloropropene	4.4		1.0	ug/L	5.00		89	50-150		
trans-1,3-Dichloropropene	4.8		1.0	ug/L	5.00		96	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		94	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
LCS (B904344-BS1)					Prepared & Analyzed: 04/23/19					
2-Hexanone	10.4		5.0	ug/L	10.0		104	50-150		
Methyl tert-butyl ether (MTBE)	5.0		1.0	ug/L	5.00		100	50-150		
4-Methyl-2-pentanone	10.9		5.0	ug/L	10.0		109	50-150		
Methylene chloride	5.1		1.0	ug/L	5.00		102	0-200		
Methyl methacrylate	4.8	J	5.0	ug/L	5.00		97	50-150		
Styrene	4.3		1.0	ug/L	5.00		85	50-150		
1,1,1,2-Tetrachloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1,2,2-Tetrachloroethane	5.7		1.0	ug/L	5.00		115	50-150		
Tetrachloroethene	5.0		1.0	ug/L	5.00		100	50-150		
Toluene	4.8		1.0	ug/L	5.00		96	50-150		
1,1,1-Trichloroethane	5.2		1.0	ug/L	5.00		103	50-150		
1,1,2-Trichloroethane	5.2		1.0	ug/L	5.00		104	50-150		
Trichloroethene	4.8		1.0	ug/L	5.00		97	50-150		
Trichlorofluoromethane (Freon 11)	5.3		1.0	ug/L	5.00		106	50-150		
1,2,3-Trichloropropane	6.0		1.0	ug/L	5.00		120	50-150		
Vinyl acetate	4.6		1.0	ug/L	5.00		92	50-150		
Vinyl chloride	5.0		1.0	ug/L	5.00		100	50-150		
o-Xylene	4.4		1.0	ug/L	5.00		87	50-150		
m- & p-Xylenes	8.9		1.0	ug/L	10.0		89	50-150		
Surrogate: 1,2-Dichloroethane-d4	*53.52*			ug/L	*50.0*		*107*	*80-120*		
Surrogate: Toluene-d8	*50.45*			ug/L	*50.0*		*101*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.59*			ug/L	*50.0*		*99*	*86-115*		
Duplicate (B904344-DUP1)			**Source: 9041723-02**		Prepared & Analyzed: 04/23/19					
Acetone	6.9		5.0	ug/L		7.4			7	20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Duplicate (B904344-DUP1)			**Source: 9041723-02**		Prepared & Analyzed: 04/23/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Duplicate (B904344-DUP1)		**Source: 9041723-02**		Prepared & Analyzed: 04/23/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*57.04*			ug/L	*50.0*		*114*	*80-120*		
Surrogate: Toluene-d8	*50.74*			ug/L	*50.0*		*101*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.58*			ug/L	*50.0*		*95*	*86-115*		
Matrix Spike (B904344-MS1)		**Source: 9041723-01**		Prepared & Analyzed: 04/23/19						
Acetone	14.6		5.0	ug/L	10.0	ND	146	60-120		
Benzene	10.1		1.0	ug/L	10.0	ND	101	60-120		
Bromochloromethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
Bromodichloromethane	10.1		1.0	ug/L	10.0	ND	101	60-120		
Bromoform	11.0		1.0	ug/L	10.0	ND	110	60-120		
Bromomethane	4.4		1.0	ug/L	10.0	ND	44	60-120		
2-Butanone (MEK)	12.1		5.0	ug/L	10.0	ND	121	60-120		
Carbon disulfide	9.9		1.0	ug/L	10.0	ND	99	60-120		
Carbon tetrachloride	10.3		1.0	ug/L	10.0	ND	103	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Matrix Spike (B904344-MS1)		**Source: 9041723-01**		Prepared & Analyzed: 04/23/19						
Chlorobenzene	9.9		1.0	ug/L	10.0	ND	99	60-120		
Chloroethane	6.9		1.0	ug/L	10.0	ND	69	60-120		
Chloroform	10.1		1.0	ug/L	10.0	ND	101	60-120		
Chloromethane	9.0		1.0	ug/L	10.0	ND	90	60-120		
Dibromochloromethane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,2-Dibromo-3-chloropropane	9.9		1.0	ug/L	10.0	ND	99	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	10.8		1.0	ug/L	10.0	ND	108	60-120		
1,2-Dichlorobenzene	10.5		1.0	ug/L	10.0	ND	105	60-120		
1,4-Dichlorobenzene	10.1		1.0	ug/L	10.0	ND	101	60-120		
1,1-Dichloroethane	10.6		1.0	ug/L	10.0	ND	106	60-120		
1,2-Dichloroethane	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,1-Dichloroethene	10.6		1.0	ug/L	10.0	ND	106	60-120		
cis-1,2-Dichloroethene	9.9		1.0	ug/L	10.0	ND	99	60-120		
trans-1,2-Dichloroethene	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dichloropropane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,3-Dichloropropane	10.9		1.0	ug/L	10.0	ND	109	60-120		
2,2-Dichloropropane	6.9		1.0	ug/L	10.0	ND	69	60-120		
1,1-Dichloropropene	9.5		1.0	ug/L	10.0	ND	95	60-120		
cis-1,3-Dichloropropene	8.7		1.0	ug/L	10.0	ND	87	60-120		
trans-1,3-Dichloropropene	8.9		1.0	ug/L	10.0	ND	89	60-120		
Ethylbenzene	9.0		1.0	ug/L	10.0	ND	90	60-120		
2-Hexanone	10.6		5.0	ug/L	10.0	ND	106	60-120		
Methyl tert-butyl ether (MTBE)	9.0		1.0	ug/L	10.0	ND	90	60-120		
4-Methyl-2-pentanone	10.8		5.0	ug/L	10.0	ND	108	60-120		
Methylene chloride	10.3		1.0	ug/L	10.0	ND	103	60-120		
Methyl methacrylate	9.9		5.0	ug/L	10.0	ND	99	60-120		
Styrene	8.9		1.0	ug/L	10.0	ND	89	60-120		
1,1,1,2-Tetrachloroethane	10.2		1.0	ug/L	10.0	ND	102	60-120		
1,1,2,2-Tetrachloroethane	12.0		1.0	ug/L	10.0	ND	120	60-120		
Tetrachloroethene	10.0		1.0	ug/L	10.0	ND	100	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904344 - GCMS-WATER-VOLATILES										
Matrix Spike (B904344-MS1)		**Source: 9041723-01**		Prepared & Analyzed: 04/23/19						
Toluene	9.8		1.0	ug/L	10.0	ND	98	60-120		
1,1,1-Trichloroethane	10.1		1.0	ug/L	10.0	ND	101	60-120		
1,1,2-Trichloroethane	10.7		1.0	ug/L	10.0	ND	107	60-120		
Trichloroethene	9.6		1.0	ug/L	10.0	ND	96	60-120		
Trichlorofluoromethane (Freon 11)	9.7		1.0	ug/L	10.0	ND	97	60-120		
1,2,3-Trichloropropane	11.6		1.0	ug/L	10.0	ND	116	60-120		
Vinyl acetate	6.5		1.0	ug/L	10.0	ND	65	60-120		
Vinyl chloride	9.1		1.0	ug/L	10.0	ND	91	60-120		
o-Xylene	8.8		1.0	ug/L	10.0	ND	88	60-120		
m- & p-Xylenes	17.7		1.0	ug/L	20.0	ND	88	60-120		
Surrogate: 1,2-Dichloroethane-d4	*54.56*			ug/L	*50.0*		*109*	*80-120*		
Surrogate: Toluene-d8	*50.05*			ug/L	*50.0*		*100*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.69*			ug/L	*50.0*		*99*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904348 - 3010A-Metals Digestion										
Blank (B904348-BLK1)					Prepared: 04/23/19 Analyzed: 04/24/19					
Hardness as CaCO3	ND		500	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904348-BS1)					Prepared: 04/23/19 Analyzed: 04/24/19					
Antimony	47.1		1.00	ug/L	50.0		94	80-120		
Arsenic	51.0		1.00	ug/L	50.0		102	80-120		
Barium	48.1		1.00	ug/L	50.0		96	80-120		
Beryllium	47.5		1.00	ug/L	50.0		95	80-120		
Cadmium	49.7		1.00	ug/L	50.0		99	80-120		
Calcium	5000		80.0	ug/L	5000		100	80-120		
Chromium	50.5		1.00	ug/L	50.0		101	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904348 - 3010A-Metals Digestion										
LCS (B904348-BS1)					Prepared: 04/23/19 Analyzed: 04/24/19					
Cobalt	50.0		1.00	ug/L	50.0		100	80-120		
Copper	51.6		1.00	ug/L	50.0		103	80-120		
Iron	5180		100	ug/L	5000		104	80-120		
Lead	47.8		1.00	ug/L	50.0		96	80-120		
Magnesium	4980		100	ug/L	5000		100	80-120		
Manganese	50.8		1.00	ug/L	50.0		102	80-120		
Mercury	2.26		0.100	ug/L	2.50		90	80-120		
Nickel	51.5		1.00	ug/L	50.0		103	80-120		
Potassium	5060		100	ug/L	5000		101	80-120		
Selenium	46.7		1.00	ug/L	50.0		93	80-120		
Silver	57.9		1.00	ug/L	50.0		116	80-120		
Sodium	4960		100	ug/L	5000		99	80-120		
Thallium	47.1		1.00	ug/L	50.0		94	80-120		
Vanadium	48.8		1.00	ug/L	50.0		98	80-120		
Zinc	71.4		4.00	ug/L	70.0		102	80-120		
Duplicate (B904348-DUP1)			**Source: 9041809-01**		Prepared: 04/23/19 Analyzed: 04/24/19					
Hardness as CaCO3	366000		500	ug/L		366000			0.2	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	2.45		1.00	ug/L		2.63			7	200
Barium	464		1.00	ug/L		476			3	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	69200		80.0	ug/L		69400			0.4	200
Chromium	2.01		1.00	ug/L		1.98			1	200
Cobalt	138		1.00	ug/L		139			1	200
Copper	2.56		1.00	ug/L		2.65			3	200
Iron	18500		100	ug/L		18800			2	200
Lead	ND		1.00	ug/L		ND				200
Magnesium	46800		100	ug/L		46900			0.06	200
Manganese	15300	E	1.00	ug/L		16100			5	200
Mercury	ND		0.100	ug/L		0.635				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904348 - 3010A-Metals Digestion										
Duplicate (B904348-DUP1)			**Source: 9041809-01**		Prepared: 04/23/19 Analyzed: 04/24/19					
Nickel	25.5		1.00	ug/L		26.3			3	200
Potassium	25200		100	ug/L		25300			0.5	200
Selenium	ND		1.00	ug/L		ND				200
Silver	ND		1.00	ug/L		ND				200
Sodium	66300		100	ug/L		66400			0.007	200
Thallium	1.27		1.00	ug/L		1.26			0.5	200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	39.4		4.00	ug/L		39.5			0.4	200
Matrix Spike (B904348-MS1)			**Source: 9041911-01**		Prepared: 04/23/19 Analyzed: 04/24/19					
Antimony	48.3		1.00	ug/L	50.0	ND	97	60-140		
Arsenic	49.8		1.00	ug/L	50.0	ND	100	60-140		
Barium	52.3		1.00	ug/L	50.0	1.80	101	60-140		
Beryllium	49.5		1.00	ug/L	50.0	ND	99	60-140		
Cadmium	49.8		1.00	ug/L	50.0	ND	100	60-140		
Calcium	10400		80.0	ug/L	5000	5280	102	60-140		
Chromium	51.3		1.00	ug/L	50.0	1.16	100	60-140		
Cobalt	49.9		1.00	ug/L	50.0	ND	100	60-140		
Copper	181		1.00	ug/L	50.0	2.75	357	60-140		
Iron	5730		100	ug/L	5000	419	106	60-140		
Lead	48.8		1.00	ug/L	50.0	ND	98	60-140		
Magnesium	9140		100	ug/L	5000	4020	102	60-140		
Manganese	65.2		1.00	ug/L	50.0	11.9	107	60-140		
Mercury	2.33		0.100	ug/L	2.50	ND	93	60-140		
Nickel	51.8		1.00	ug/L	50.0	1.09	101	60-140		
Potassium	6100		100	ug/L	5000	1080	100	60-140		
Selenium	49.5		1.00	ug/L	50.0	ND	99	60-140		
Silver	58.2		1.00	ug/L	50.0	ND	116	60-140		
Sodium	12900		100	ug/L	5000	7620	106	60-140		
Thallium	48.7		1.00	ug/L	50.0	ND	97	60-140		
Vanadium	50.0		1.00	ug/L	50.0	1.12	98	60-140		
Zinc	75.4		4.00	ug/L	70.0	6.45	98	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904366 - COD (03) Prep										
Blank (B904366-BLK1)					Prepared: 04/24/19 Analyzed: 04/25/19					
COD	ND		3.0	mg/L						
LCS (B904366-BS1)					Prepared: 04/24/19 Analyzed: 04/25/19					
COD	55.0	S-98	3.0	mg/L	50.0		110	85-115		
Duplicate (B904366-DUP1)		**Source: 9041629-01**			Prepared: 04/24/19 Analyzed: 04/25/19					
COD	38.0		3.0	mg/L		38.0			0	20
Matrix Spike (B904366-MS1)		**Source: 9041629-01**			Prepared: 04/24/19 Analyzed: 04/25/19					
COD	89.0		3.0	mg/L	50.0	38.0	102	80-120		

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904300 - TSS PREP										
Blank (B904300-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
Blank (B904300-BLK2)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904300-BS1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	50.3		2.5	mg/L	56.0		90	70-130		
Duplicate (B904300-DUP1)		**Source: 9041520-05**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	12.2		6.9	mg/L		ND			79	200
Duplicate (B904300-DUP2)		**Source: 9041718-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Solids, Suspended	68.3		9.4	mg/L		79.3			15	200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0198 - Method 300.0										
LCS (B9D0198-BS1)					Prepared & Analyzed: 04/19/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		105	90-110		
Chloride	1.1		0.5	mg/L	1.00		105	90-110		
Sulfate	10.2		1.0	mg/L	10.0		102	90-110		
Duplicate (B9D0198-DUP1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Sulfate	11.9		1.0	mg/L		11.9			0.474	20
Nitrate (as N)	1.7		0.2	mg/L		1.7			0.167	20
Chloride	6.2		0.5	mg/L		6.2			0.314	20
Duplicate (B9D0198-DUP2)		**Source: E058345-01**			Prepared & Analyzed: 04/19/19					
Sulfate	27.4		1.0	mg/L		27.3			0.208	20
Nitrate (as N)	6.8		0.2	mg/L		6.8			0.0882	20
Matrix Spike (B9D0198-MS1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Chloride	7.3		0.5	mg/L	1.00	6.2	109	80-120		
Sulfate	22.5		1.0	mg/L	10.0	11.9	107	80-120		
Nitrate (as N)	2.7		0.2	mg/L	1.00	1.7	105	80-120		
Matrix Spike (B9D0198-MS2)		**Source: E058345-01**			Prepared & Analyzed: 04/19/19					
Sulfate	38.1		1.0	mg/L	10.0	27.3	108	80-120		
Nitrate (as N)	7.8		0.2	mg/L	1.00	6.8	103	80-120		
Batch B9D0202 - No Prep WC										
Blank (B9D0202-BLK1)					Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	ND		5.0	mg/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0202 - No Prep WC										
Duplicate (B9D0202-DUP1)		**Source: E058286-01**			Prepared: 04/19/19 Analyzed: 04/22/19					
Dissolved Solids	262		5.0	mg/L		260			0.766	20
Batch B9D0215 - Method 300.0										
LCS (B9D0215-BS1)					Prepared & Analyzed: 04/22/19					
Chloride	1.0		0.5	mg/L	1.00		98.5	90-110		
Duplicate (B9D0215-DUP1)		**Source: 9041809-01**			Prepared & Analyzed: 04/22/19					
Chloride	106		2.5	mg/L		106			0.399	20
Matrix Spike (B9D0215-MS1)		**Source: 9041809-01**			Prepared & Analyzed: 04/22/19					
Chloride	115		2.5	mg/L	5.00	106	183	80-120		
Batch B9D0236 - No Prep WC										
Blank (B9D0236-BLK1)					Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	ND		0.10	mg/L						
LCS (B9D0236-BS1)					Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00		101	90-110		
Duplicate (B9D0236-DUP1)		**Source: E058333-03**			Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Matrix Spike (B9D0236-MS1)		**Source: E058333-03**			Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	1.95		0.10	mg/L	2.00	ND	97.4	90-110		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0245 - No Prep WC										
Blank (B9D0245-BLK1)					Prepared: 04/24/19 Analyzed: 04/25/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0245-DUP1)		**Source: 9041809-04**			Prepared: 04/24/19 Analyzed: 04/25/19					
Dissolved Solids	175		5.0	mg/L		184			5.01	20
Batch B9D0246 - No Prep WC										
Duplicate (B9D0246-DUP1)		**Source: E058286-03**			Prepared & Analyzed: 04/24/19					
Conductivity	2900		1.00	us/Cm		2930			1.34	20
Duplicate (B9D0246-DUP2)		**Source: E058348-02**			Prepared & Analyzed: 04/24/19					
Conductivity	146		1.00	us/Cm		147			1.03	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0213 - No Prep WC										
LCS (B9D0213-BS1)					Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	101		1.0	mg/L	100		101	90-110		
Duplicate (B9D0213-DUP1)		**Source: E058303-04**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	288		4.0	mg/L		284			1.19	20
Duplicate (B9D0213-DUP2)		**Source: E058348-01**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	43.5		1.0	mg/L		43.7			0.550	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
04/30/19 16:01

Notes and Definitions

S-98	Spike recovery outside of establlished control limits.
J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Company Name: EA Engineering
Project Manager: Laura Oakes
Project Name: Gude
Project ID: 1556404
Sampler(s): Pete Yenesik
P.O. Number: 18961

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW 21-A	4/18	810	X			9	X		X	X	X	X	X			1041809-01
MW-21-B		1033	X			9	X	X	X	X	X	X	X			02
Trip Blank			X			1	X									03
MW-14B		1220	X			9	X	X	X	X	X	X	X			04
MW-14A		1400	X			9	X	X	X	X	X	X	X			05
MW-15		1640	X			9	X	X	X	X	X	X	X			06

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yenesik	4/18/19 1805	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)	4/18/19 18:05	(Printed) Cory Kaus			

Turn Around Time:
- ☒ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 4.5 °C
- ☒ Received on Ice
- ☒ Received same day
- ☒ Preservation Appropriate

Delivery Method:
- Courier
- ☒ Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

MSS-F001-003

58347

SUBCONTRACT ORDER
Maryland Spectral Services
9041809

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons

Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Auto-log Sent
Date/Intial
4/19/19 RK

Due 4:00 PM 04/30/19

Laboratory ID **Comments**

Sample ID: 9041809-01 **MW-21-A** **Water** **Sampled:04/18/19 08:10**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041809-02 **MW-21-B** **Water** **Sampled:04/18/19 10:33**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041809-04 **MW-14B** **Water** **Sampled:04/18/19 12:20**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature]	04/19/19	15:07 [signature]	

3.1

Auto-log Sent
Date/Intial
4/19/19 RCK

SUBCONTRACT ORDER
Maryland Spectral Services

9041809

Due 4:00 PM 04/30/19 | **Laboratory ID** | **Comments**

Sample ID: 9041809-05 **MW-14A** **Water** **Sampled:04/18/19 14:00**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041809-06 **MW-15** **Water** **Sampled:04/18/19 16:40**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature]	04/19/19 15:07	[signature]	

3.1

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

01 May 2019

Laura Oakes
EA Engineering
225 Schilling Circle, STE 400
Hunt Valley, MD 21031
RE: GUDE LANDFILL

Enclosed are the results of analyses for samples received by the laboratory on 04/19/19 13:31.

Please visit our website at www.mdspectral.com for a complete listing of our accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1B		9041911-01	Nonpotable Water	04/19/19 07:55	04/19/19 13:31
MW-10		9041911-02	Nonpotable Water	04/19/19 07:55	04/19/19 13:31
TRIP BLANK		9041911-03	Nonpotable Water	04/19/19 13:31	04/19/19 13:31

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-1B

9041911-01 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**5.48**		pH Units			1	04/19/19	04/19/19 17:13	KD
TURBIDITY BY EPA 180.1									
Turbidity	**4.75**		NTU	0.500	0.500	1	04/19/19	04/19/19 18:08	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Benzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-1B

9041911-01 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Isobutanol	ND		ug/L	100	100	1	04/24/19	04/24/19 21:48	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 21:48	GM
Styrene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Toluene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 21:48	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*113 %*	*04/24/19*	*04/24/19 21:48*
Surrogate: Toluene-d8	*88-110*	*100 %*	*04/24/19*	*04/24/19 21:48*
Surrogate: 4-Bromofluorobenzene	*86-115*	*93 %*	*04/24/19*	*04/24/19 21:48*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-1B

9041911-01 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**29700**		ug/L	500	500	1	04/23/19	04/24/19 14:52	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Barium	**1.80**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Calcium	**5280**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:52	VVD
Chromium	**1.16**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Cobalt	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Copper	**2.75**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Iron	**419**		ug/L	100	100	1	04/23/19	04/24/19 14:52	VVD
Lead	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Magnesium	**4020**		ug/L	100	100	1	04/23/19	04/24/19 14:52	VVD
Manganese	**11.9**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:52	VVD
Nickel	**1.09**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Potassium	**1080**		ug/L	100	100	1	04/23/19	04/24/19 14:52	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Sodium	**7620**		ug/L	100	100	1	04/23/19	04/24/19 14:52	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Vanadium	**1.12**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:52	VVD
Zinc	**6.45**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:52	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	ND		mg/L	3.0	3.0	1	04/29/19	04/29/19 19:02	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-1B

9041911-01 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**22.9**		mg/L	2.6	2.6	1	04/22/19	04/22/19 15:37	BJP
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:49	FRD
Chloride	**2.7**		mg/L	0.5	0.5	1	04/19/19	04/19/19 20:46	BMG
Conductivity	**89.3**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**106**		mg/L	5.0	5.0	1	04/24/19	04/25/19 10:44	FRD
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/19/19	04/19/19 20:46	BMG
Sulfate	ND		mg/L	1.0	0.5	1	04/19/19	04/19/19 20:46	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**43.7**		mg/L	1.0	1.0	1	04/22/19	04/22/19 11:00	BMG

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-10

9041911-02 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
pH MEASUREMENT BY EPA 9040B									
pH	**6.07**		pH Units			1	04/19/19	04/19/19 17:13	KD
TURBIDITY BY EPA 180.1									
Turbidity	**12.9**		NTU	0.500	0.500	1	04/19/19	04/19/19 18:13	VVD
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Benzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-10

9041911-02 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Isobutanol	ND		ug/L	100	100	1	04/24/19	04/24/19 22:14	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:14	GM
Styrene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Toluene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:14	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*116 %*	*04/24/19*	*04/24/19 22:14*
Surrogate: Toluene-d8	*88-110*	*98 %*	*04/24/19*	*04/24/19 22:14*
Surrogate: 4-Bromofluorobenzene	*86-115*	*94 %*	*04/24/19*	*04/24/19 22:14*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-10

9041911-02 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL METALS ANALYSIS BY EPA 3010A/6020A									
Hardness as CaCO3	**53900**		ug/L	500	500	1	04/23/19	04/24/19 14:58	VVD
Antimony	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Arsenic	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Barium	**37.3**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Beryllium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Cadmium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Calcium	**12200**		ug/L	80.0	80.0	1	04/23/19	04/24/19 14:58	VVD
Chromium	**1.09**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Cobalt	**2.10**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Copper	**3.42**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Iron	**917**		ug/L	100	100	1	04/23/19	04/24/19 14:58	VVD
Lead	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Magnesium	**5670**		ug/L	100	100	1	04/23/19	04/24/19 14:58	VVD
Manganese	**221**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Mercury	ND		ug/L	0.100	0.100	1	04/23/19	04/24/19 14:58	VVD
Nickel	**3.37**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Potassium	**1430**		ug/L	100	100	1	04/23/19	04/24/19 14:58	VVD
Selenium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Silver	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Sodium	**8120**		ug/L	100	100	1	04/23/19	04/24/19 14:58	VVD
Thallium	ND		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Vanadium	**2.03**		ug/L	1.00	1.00	1	04/23/19	04/24/19 14:58	VVD
Zinc	**165**		ug/L	4.00	4.00	1	04/23/19	04/24/19 14:58	VVD
CHEMICAL OXYGEN DEMAND BY EPA 410.4									
COD	**5.0**		mg/L	3.0	3.0	1	04/29/19	04/29/19 19:02	VVD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

MW-10

9041911-02 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
TOTAL SUSPENDED SOLIDS BY USGS I-3765-85									
Solids, Suspended	**11.2**		mg/L	2.8	2.8	1	04/22/19	04/22/19 15:37	BJP
Wet Chemistry Performed at Enviro-Chem									
Ammonia Nitrogen	ND		mg/L	0.10	0.05	1	04/24/19	04/24/19 10:51	FRD
Chloride	**2.8**		mg/L	0.5	0.5	1	04/19/19	04/19/19 21:03	BMG
Conductivity	**147**		us/Cm	1.00	1.00	1	04/24/19	04/24/19 15:30	FRD
Dissolved Solids	**114**		mg/L	5.0	5.0	1	04/24/19	04/25/19 10:44	FRD
Nitrate (as N)	ND		mg/L	0.2	0.1	1	04/19/19	04/19/19 21:03	BMG
Sulfate	ND		mg/L	1.0	0.5	1	04/19/19	04/19/19 21:03	BMG
Alkalinity SM2320B Performed at Enviro-Chem									
Alkalinity as CaCO3	**60.6**		mg/L	2.0	2.0	1	04/29/19	04/29/19 10:00	FRD

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TRIP BLANK

9041911-03 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS)									
Acetone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Acrylonitrile	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Allyl chloride (3-Chloropropylene)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Benzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Bromochloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Bromodichloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Bromoform	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Bromomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
2-Butanone (MEK)	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Carbon disulfide	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Carbon tetrachloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Chlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Chloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Chloroform	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Chloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Chloroprene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Dibromochloromethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,2-Dibromo-3-chloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,2-Dibromoethane (EDB)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Dibromomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,2-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,4-Dichlorobenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
trans-1,4-Dichloro-2-butene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1-Dichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,2-Dichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
cis-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
trans-1,2-Dichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,3-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
2,2-Dichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TRIP BLANK

9041911-03 (Nonpotable Water)
Sample Date: 04/19/19

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Quantitation Limit (LOQ)	Dilution	Prepared	Analyzed	Analyst
VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) (continued)									
cis-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
trans-1,3-Dichloropropene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Ethyl methacrylate	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Ethylbenzene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
2-Hexanone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Isobutanol	ND		ug/L	100	100	1	04/24/19	04/24/19 22:39	GM
Iodomethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Methyl tert-butyl ether (MTBE)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
4-Methyl-2-pentanone	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Methylene chloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Methyl methacrylate	ND		ug/L	5.0	5.0	1	04/24/19	04/24/19 22:39	GM
Styrene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Tetrachloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Toluene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1,1-Trichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,1,2-Trichloroethane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Trichloroethene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Trichlorofluoromethane (Freon 11)	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
1,2,3-Trichloropropane	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Vinyl acetate	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
Vinyl chloride	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
o-Xylene	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM
m- & p-Xylenes	ND		ug/L	1.0	1.0	1	04/24/19	04/24/19 22:39	GM

Surrogate: 1,2-Dichloroethane-d4	*80-120*	*116 %*	*04/24/19*	*04/24/19 22:39*
Surrogate: Toluene-d8	*88-110*	*98 %*	*04/24/19*	*04/24/19 22:39*
Surrogate: 4-Bromofluorobenzene	*86-115*	*95 %*	*04/24/19*	*04/24/19 22:39*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TURBIDITY BY EPA 180.1 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904313 - Turbidity										
Blank (B904313-BLK1)					Prepared & Analyzed: 04/19/19					
Turbidity	ND		0.500	NTU						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
Blank (B904362-BLK1)					Prepared & Analyzed: 04/24/19					
Acetone	ND		5.0	ug/L						
Acrylonitrile	ND		5.0	ug/L						
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Bromochloromethane	ND		1.0	ug/L						
Bromodichloromethane	ND		1.0	ug/L						
Bromoform	ND		1.0	ug/L						
Bromomethane	ND		1.0	ug/L						
2-Butanone (MEK)	ND		5.0	ug/L						
Carbon disulfide	ND		1.0	ug/L						
Carbon tetrachloride	ND		1.0	ug/L						
Chlorobenzene	ND		1.0	ug/L						
Chloroethane	ND		1.0	ug/L						
Chloroform	ND		1.0	ug/L						
Chloromethane	ND		1.0	ug/L						
Chloroprene	ND		1.0	ug/L						
Dibromochloromethane	ND		1.0	ug/L						
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L						
1,2-Dibromoethane (EDB)	ND		1.0	ug/L						
Dibromomethane	ND		1.0	ug/L						
1,2-Dichlorobenzene	ND		1.0	ug/L						
1,4-Dichlorobenzene	ND		1.0	ug/L						
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L						
1,1-Dichloroethane	ND		1.0	ug/L						
1,2-Dichloroethane	ND		1.0	ug/L						
1,1-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
1,2-Dichloropropane	ND		1.0	ug/L						
1,3-Dichloropropane	ND		1.0	ug/L						
2,2-Dichloropropane	ND		1.0	ug/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
Blank (B904362-BLK1)					Prepared & Analyzed: 04/24/19					
1,1-Dichloropropene	ND		1.0	ug/L						
cis-1,3-Dichloropropene	ND		1.0	ug/L						
trans-1,3-Dichloropropene	ND		1.0	ug/L						
Ethyl methacrylate	ND		5.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
2-Hexanone	ND		5.0	ug/L						
Isobutanol	ND		100	ug/L						
Iodomethane	ND		1.0	ug/L						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L						
4-Methyl-2-pentanone	ND		5.0	ug/L						
Methylene chloride	ND		1.0	ug/L						
Methyl methacrylate	ND		5.0	ug/L						
Styrene	ND		1.0	ug/L						
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L						
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L						
Tetrachloroethene	ND		1.0	ug/L						
Toluene	ND		1.0	ug/L						
1,1,1-Trichloroethane	ND		1.0	ug/L						
1,1,2-Trichloroethane	ND		1.0	ug/L						
Trichloroethene	ND		1.0	ug/L						
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L						
1,2,3-Trichloropropane	ND		1.0	ug/L						
Vinyl acetate	ND		1.0	ug/L						
Vinyl chloride	ND		1.0	ug/L						
o-Xylene	ND		1.0	ug/L						
m- & p-Xylenes	ND		1.0	ug/L						
Surrogate: 1,2-Dichloroethane-d4	*57.37*			ug/L	*50.0*		*115*	*80-120*		
Surrogate: Toluene-d8	*50.04*			ug/L	*50.0*		*100*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.73*			ug/L	*50.0*		*95*	*86-115*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
LCS (B904362-BS1)					Prepared & Analyzed: 04/24/19					
Acetone	12.4		5.0	ug/L	10.0		124	50-150		
Benzene	5.1		1.0	ug/L	5.00		103	50-150		
Bromochloromethane	5.1		1.0	ug/L	5.00		103	50-150		
Bromodichloromethane	5.3		1.0	ug/L	5.00		105	50-150		
Bromoform	5.0		1.0	ug/L	5.00		100	50-150		
Bromomethane	3.0		1.0	ug/L	5.00		60	50-150		
2-Butanone (MEK)	10.0		5.0	ug/L	10.0		100	50-150		
Carbon disulfide	5.5		1.0	ug/L	5.00		110	50-150		
Carbon tetrachloride	5.2		1.0	ug/L	5.00		105	50-150		
Chlorobenzene	5.1		1.0	ug/L	5.00		101	50-150		
Chloroethane	4.0		1.0	ug/L	5.00		80	50-150		
Chloroform	5.3		1.0	ug/L	5.00		106	50-150		
Chloromethane	5.3		1.0	ug/L	5.00		105	50-150		
Dibromochloromethane	4.8		1.0	ug/L	5.00		96	50-150		
1,2-Dibromo-3-chloropropane	5.6		1.0	ug/L	5.00		112	50-150		
1,2-Dibromoethane (EDB)	5.2		1.0	ug/L	5.00		104	50-150		
Dibromomethane	5.0		1.0	ug/L	5.00		100	50-150		
1,2-Dichlorobenzene	5.5		1.0	ug/L	5.00		109	50-150		
1,4-Dichlorobenzene	5.3		1.0	ug/L	5.00		107	50-150		
1,1-Dichloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,2-Dichloroethane	5.3		1.0	ug/L	5.00		106	50-150		
1,1-Dichloroethene	5.2		1.0	ug/L	5.00		105	50-150		
cis-1,2-Dichloroethene	4.9		1.0	ug/L	5.00		97	50-150		
trans-1,2-Dichloroethene	5.3		1.0	ug/L	5.00		107	50-150		
1,2-Dichloropropane	5.3		1.0	ug/L	5.00		106	50-150		
1,3-Dichloropropane	5.4		1.0	ug/L	5.00		108	50-150		
2,2-Dichloropropane	5.0		1.0	ug/L	5.00		99	50-150		
1,1-Dichloropropene	4.9		1.0	ug/L	5.00		98	50-150		
cis-1,3-Dichloropropene	4.8		1.0	ug/L	5.00		95	50-150		
trans-1,3-Dichloropropene	4.9		1.0	ug/L	5.00		97	50-150		
Ethylbenzene	4.7		1.0	ug/L	5.00		93	50-150		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
LCS (B904362-BS1)					Prepared & Analyzed: 04/24/19					
2-Hexanone	10.6		5.0	ug/L	10.0		106	50-150		
Methyl tert-butyl ether (MTBE)	5.1		1.0	ug/L	5.00		102	50-150		
4-Methyl-2-pentanone	10.4		5.0	ug/L	10.0		104	50-150		
Methylene chloride	5.7		1.0	ug/L	5.00		114	0-200		
Methyl methacrylate	5.2		5.0	ug/L	5.00		103	50-150		
Styrene	4.5		1.0	ug/L	5.00		90	50-150		
1,1,1,2-Tetrachloroethane	4.9		1.0	ug/L	5.00		98	50-150		
1,1,2,2-Tetrachloroethane	6.2		1.0	ug/L	5.00		124	50-150		
Tetrachloroethene	5.2		1.0	ug/L	5.00		103	50-150		
Toluene	5.0		1.0	ug/L	5.00		100	50-150		
1,1,1-Trichloroethane	5.0		1.0	ug/L	5.00		100	50-150		
1,1,2-Trichloroethane	5.2		1.0	ug/L	5.00		104	50-150		
Trichloroethene	5.0		1.0	ug/L	5.00		100	50-150		
Trichlorofluoromethane (Freon 11)	5.2		1.0	ug/L	5.00		104	50-150		
1,2,3-Trichloropropane	6.3		1.0	ug/L	5.00		126	50-150		
Vinyl acetate	4.7		1.0	ug/L	5.00		94	50-150		
Vinyl chloride	5.7		1.0	ug/L	5.00		115	50-150		
o-Xylene	4.5		1.0	ug/L	5.00		90	50-150		
m- & p-Xylenes	8.8		1.0	ug/L	10.0		88	50-150		
Surrogate: 1,2-Dichloroethane-d4	*56.25*			ug/L	*50.0*		*113*	*80-120*		
Surrogate: Toluene-d8	*49.67*			ug/L	*50.0*		*99*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*49.63*			ug/L	*50.0*		*99*	*86-115*		
Duplicate (B904362-DUP1)			**Source: 9041911-02**		Prepared & Analyzed: 04/24/19					
Acetone	ND		5.0	ug/L		ND				20
Acrylonitrile	ND		5.0	ug/L		ND				20
Allyl chloride (3-Chloropropylene)	ND		1.0	ug/L		ND				20
Benzene	ND		1.0	ug/L		ND				20
Bromochloromethane	ND		1.0	ug/L		ND				20
Bromodichloromethane	ND		1.0	ug/L		ND				20
Bromoform	ND		1.0	ug/L		ND				20
Bromomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
Duplicate (B904362-DUP1)			**Source: 9041911-02**		Prepared & Analyzed: 04/24/19					
2-Butanone (MEK)	ND		5.0	ug/L		ND				20
Carbon disulfide	ND		1.0	ug/L		ND				20
Carbon tetrachloride	ND		1.0	ug/L		ND				20
Chlorobenzene	ND		1.0	ug/L		ND				20
Chloroethane	ND		1.0	ug/L		ND				20
Chloroform	ND		1.0	ug/L		ND				20
Chloromethane	ND		1.0	ug/L		ND				20
Chloroprene	ND		1.0	ug/L		ND				20
Dibromochloromethane	ND		1.0	ug/L		ND				20
1,2-Dibromo-3-chloropropane	ND		1.0	ug/L		ND				20
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		ND				20
Dibromomethane	ND		1.0	ug/L		ND				20
1,2-Dichlorobenzene	ND		1.0	ug/L		ND				20
1,4-Dichlorobenzene	ND		1.0	ug/L		ND				20
trans-1,4-Dichloro-2-butene	ND		1.0	ug/L		ND				20
1,1-Dichloroethane	ND		1.0	ug/L		ND				20
1,2-Dichloroethane	ND		1.0	ug/L		ND				20
1,1-Dichloroethene	ND		1.0	ug/L		ND				20
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				20
1,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,3-Dichloropropane	ND		1.0	ug/L		ND				20
2,2-Dichloropropane	ND		1.0	ug/L		ND				20
1,1-Dichloropropene	ND		1.0	ug/L		ND				20
cis-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
trans-1,3-Dichloropropene	ND		1.0	ug/L		ND				20
Ethyl methacrylate	ND		5.0	ug/L		ND				20
Ethylbenzene	ND		1.0	ug/L		ND				20
2-Hexanone	ND		5.0	ug/L		ND				20
Isobutanol	ND		100	ug/L		ND				20
Iodomethane	ND		1.0	ug/L		ND				20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
Duplicate (B904362-DUP1)		**Source: 9041911-02**		Prepared & Analyzed: 04/24/19						
Methyl tert-butyl ether (MTBE)	ND		1.0	ug/L		ND				20
4-Methyl-2-pentanone	ND		5.0	ug/L		ND				20
Methylene chloride	ND		1.0	ug/L		ND				20
Methyl methacrylate	ND		5.0	ug/L		ND				20
Styrene	ND		1.0	ug/L		ND				20
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		ND				20
Tetrachloroethene	ND		1.0	ug/L		ND				20
Toluene	ND		1.0	ug/L		ND				20
1,1,1-Trichloroethane	ND		1.0	ug/L		ND				20
1,1,2-Trichloroethane	ND		1.0	ug/L		ND				20
Trichloroethene	ND		1.0	ug/L		ND				20
Trichlorofluoromethane (Freon 11)	ND		1.0	ug/L		ND				20
1,2,3-Trichloropropane	ND		1.0	ug/L		ND				20
Vinyl acetate	ND		1.0	ug/L		ND				20
Vinyl chloride	ND		1.0	ug/L		ND				20
o-Xylene	ND		1.0	ug/L		ND				20
m- & p-Xylenes	ND		1.0	ug/L		ND				20
Surrogate: 1,2-Dichloroethane-d4	*57.61*			ug/L	*50.0*		*115*	*80-120*		
Surrogate: Toluene-d8	*50.38*			ug/L	*50.0*		*101*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*47.18*			ug/L	*50.0*		*94*	*86-115*		
Matrix Spike (B904362-MS1)		**Source: 9041911-01**		Prepared & Analyzed: 04/24/19						
Acetone	17.7		5.0	ug/L	10.0	3.8	138	60-120		
Benzene	11.1		1.0	ug/L	10.0	ND	111	76-120		
Bromochloromethane	10.7		1.0	ug/L	10.0	ND	107	60-120		
Bromodichloromethane	10.9		1.0	ug/L	10.0	ND	109	60-120		
Bromoform	11.0		1.0	ug/L	10.0	ND	110	60-120		
Bromomethane	5.7		1.0	ug/L	10.0	ND	57	60-120		
2-Butanone (MEK)	13.3		5.0	ug/L	10.0	ND	133	60-120		
Carbon disulfide	10.7		1.0	ug/L	10.0	ND	107	60-120		
Carbon tetrachloride	10.8		1.0	ug/L	10.0	ND	108	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
Matrix Spike (B904362-MS1)		**Source: 9041911-01**		Prepared & Analyzed: 04/24/19						
Chlorobenzene	10.4		1.0	ug/L	10.0	ND	104	75-120		
Chloroethane	8.1		1.0	ug/L	10.0	ND	81	60-120		
Chloroform	11.2		1.0	ug/L	10.0	ND	112	60-120		
Chloromethane	9.2		1.0	ug/L	10.0	ND	92	60-120		
Dibromochloromethane	10.0		1.0	ug/L	10.0	ND	100	60-120		
1,2-Dibromo-3-chloropropane	10.8		1.0	ug/L	10.0	ND	108	60-120		
1,2-Dibromoethane (EDB)	10.9		1.0	ug/L	10.0	ND	109	60-120		
Dibromomethane	11.3		1.0	ug/L	10.0	ND	113	60-120		
1,2-Dichlorobenzene	10.3		1.0	ug/L	10.0	ND	103	60-120		
1,4-Dichlorobenzene	10.3		1.0	ug/L	10.0	ND	103	60-120		
1,1-Dichloroethane	11.1		1.0	ug/L	10.0	ND	111	60-120		
1,2-Dichloroethane	11.0		1.0	ug/L	10.0	ND	110	60-120		
1,1-Dichloroethene	10.3		1.0	ug/L	10.0	ND	103	61-120		
cis-1,2-Dichloroethene	10.4		1.0	ug/L	10.0	ND	104	60-120		
trans-1,2-Dichloroethene	10.4		1.0	ug/L	10.0	ND	104	60-120		
1,2-Dichloropropane	11.3		1.0	ug/L	10.0	ND	113	60-120		
1,3-Dichloropropane	11.6		1.0	ug/L	10.0	ND	116	60-120		
2,2-Dichloropropane	7.8		1.0	ug/L	10.0	ND	78	60-120		
1,1-Dichloropropene	10.2		1.0	ug/L	10.0	ND	102	60-120		
cis-1,3-Dichloropropene	9.1		1.0	ug/L	10.0	ND	91	60-120		
trans-1,3-Dichloropropene	9.2		1.0	ug/L	10.0	ND	92	60-120		
Ethylbenzene	9.8		1.0	ug/L	10.0	ND	98	60-120		
2-Hexanone	10.9		5.0	ug/L	10.0	ND	109	60-120		
Methyl tert-butyl ether (MTBE)	9.3		1.0	ug/L	10.0	ND	93	60-120		
4-Methyl-2-pentanone	11.5		5.0	ug/L	10.0	ND	115	60-120		
Methylene chloride	11.0		1.0	ug/L	10.0	ND	110	60-120		
Methyl methacrylate	10.2		5.0	ug/L	10.0	ND	102	60-120		
Styrene	9.0		1.0	ug/L	10.0	ND	90	60-120		
1,1,1,2-Tetrachloroethane	10.7		1.0	ug/L	10.0	ND	107	60-120		
1,1,2,2-Tetrachloroethane	12.6		1.0	ug/L	10.0	ND	126	60-120		
Tetrachloroethene	10.5		1.0	ug/L	10.0	ND	105	60-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

VOLATILE ORGANICS BY EPA METHOD 8260B (GC/MS) - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904362 - GCMS-WATER-VOLATILES										
Matrix Spike (B904362-MS1)		**Source: 9041911-01**		Prepared & Analyzed: 04/24/19						
Toluene	10.8		1.0	ug/L	10.0	ND	108	76-120		
1,1,1-Trichloroethane	10.8		1.0	ug/L	10.0	ND	108	60-120		
1,1,2-Trichloroethane	10.9		1.0	ug/L	10.0	ND	109	60-120		
Trichloroethene	11.1		1.0	ug/L	10.0	ND	111	71-120		
Trichlorofluoromethane (Freon 11)	10.3		1.0	ug/L	10.0	ND	103	60-120		
1,2,3-Trichloropropane	11.8		1.0	ug/L	10.0	ND	118	60-120		
Vinyl acetate	7.6		1.0	ug/L	10.0	ND	76	60-120		
Vinyl chloride	10.2		1.0	ug/L	10.0	ND	102	60-120		
o-Xylene	9.3		1.0	ug/L	10.0	ND	93	60-120		
m- & p-Xylenes	18.8		1.0	ug/L	20.0	ND	94	60-120		
Surrogate: 1,2-Dichloroethane-d4	*55.54*			ug/L	*50.0*		*111*	*80-120*		
Surrogate: Toluene-d8	*50.15*			ug/L	*50.0*		*100*	*88-110*		
Surrogate: 4-Bromofluorobenzene	*50.09*			ug/L	*50.0*		*100*	*86-115*		

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904348 - 3010A-Metals Digestion										
Blank (B904348-BLK1)					Prepared: 04/23/19 Analyzed: 04/24/19					
Hardness as CaCO3	ND		500	ug/L						
Antimony	ND		1.00	ug/L						
Arsenic	ND		1.00	ug/L						
Barium	ND		1.00	ug/L						
Beryllium	ND		1.00	ug/L						
Cadmium	ND		1.00	ug/L						
Calcium	ND		80.0	ug/L						
Chromium	ND		1.00	ug/L						
Cobalt	ND		1.00	ug/L						
Copper	ND		1.00	ug/L						
Iron	ND		100	ug/L						
Lead	ND		1.00	ug/L						
Magnesium	ND		100	ug/L						
Manganese	ND		1.00	ug/L						
Mercury	ND		0.100	ug/L						
Nickel	ND		1.00	ug/L						
Potassium	ND		100	ug/L						
Selenium	ND		1.00	ug/L						
Silver	ND		1.00	ug/L						
Sodium	ND		100	ug/L						
Thallium	ND		1.00	ug/L						
Vanadium	ND		1.00	ug/L						
Zinc	ND		4.00	ug/L						
LCS (B904348-BS1)					Prepared: 04/23/19 Analyzed: 04/24/19					
Antimony	47.1		1.00	ug/L	50.0		94	80-120		
Arsenic	51.0		1.00	ug/L	50.0		102	80-120		
Barium	48.1		1.00	ug/L	50.0		96	80-120		
Beryllium	47.5		1.00	ug/L	50.0		95	80-120		
Cadmium	49.7		1.00	ug/L	50.0		99	80-120		
Calcium	5000		80.0	ug/L	5000		100	80-120		
Chromium	50.5		1.00	ug/L	50.0		101	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904348 - 3010A-Metals Digestion										
LCS (B904348-BS1)					Prepared: 04/23/19 Analyzed: 04/24/19					
Cobalt	50.0		1.00	ug/L	50.0		100	80-120		
Copper	51.6		1.00	ug/L	50.0		103	80-120		
Iron	5180		100	ug/L	5000		104	80-120		
Lead	47.8		1.00	ug/L	50.0		96	80-120		
Magnesium	4980		100	ug/L	5000		100	80-120		
Manganese	50.8		1.00	ug/L	50.0		102	80-120		
Mercury	2.26		0.100	ug/L	2.50		90	80-120		
Nickel	51.5		1.00	ug/L	50.0		103	80-120		
Potassium	5060		100	ug/L	5000		101	80-120		
Selenium	46.7		1.00	ug/L	50.0		93	80-120		
Silver	57.9		1.00	ug/L	50.0		116	80-120		
Sodium	4960		100	ug/L	5000		99	80-120		
Thallium	47.1		1.00	ug/L	50.0		94	80-120		
Vanadium	48.8		1.00	ug/L	50.0		98	80-120		
Zinc	71.4		4.00	ug/L	70.0		102	80-120		
Duplicate (B904348-DUP1)			**Source: 9041809-01**		Prepared: 04/23/19 Analyzed: 04/24/19					
Hardness as CaCO3	366000		500	ug/L		366000			0.2	200
Antimony	ND		1.00	ug/L		ND				200
Arsenic	2.45		1.00	ug/L		2.63			7	200
Barium	464		1.00	ug/L		476			3	200
Beryllium	ND		1.00	ug/L		ND				200
Cadmium	ND		1.00	ug/L		ND				200
Calcium	69200		80.0	ug/L		69400			0.4	200
Chromium	2.01		1.00	ug/L		1.98			1	200
Cobalt	138		1.00	ug/L		139			1	200
Copper	2.56		1.00	ug/L		2.65			3	200
Iron	18500		100	ug/L		18800			2	200
Lead	ND		1.00	ug/L		ND				200
Magnesium	46800		100	ug/L		46900			0.06	200
Manganese	15300	E	1.00	ug/L		16100			5	200
Mercury	ND		0.100	ug/L		0.635				200

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TOTAL METALS ANALYSIS BY EPA 3010A/6020A - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904348 - 3010A-Metals Digestion										
Duplicate (B904348-DUP1)			**Source: 9041809-01**		Prepared: 04/23/19 Analyzed: 04/24/19					
Nickel	25.5		1.00	ug/L		26.3			3	200
Potassium	25200		100	ug/L		25300			0.5	200
Selenium	ND		1.00	ug/L		ND				200
Silver	ND		1.00	ug/L		ND				200
Sodium	66300		100	ug/L		66400			0.007	200
Thallium	1.27		1.00	ug/L		1.26			0.5	200
Vanadium	ND		1.00	ug/L		ND				200
Zinc	39.4		4.00	ug/L		39.5			0.4	200
Matrix Spike (B904348-MS1)			**Source: 9041911-01**		Prepared: 04/23/19 Analyzed: 04/24/19					
Antimony	48.3		1.00	ug/L	50.0	ND	97	60-140		
Arsenic	49.8		1.00	ug/L	50.0	ND	100	60-140		
Barium	52.3		1.00	ug/L	50.0	1.80	101	60-140		
Beryllium	49.5		1.00	ug/L	50.0	ND	99	60-140		
Cadmium	49.8		1.00	ug/L	50.0	ND	100	60-140		
Calcium	10400		80.0	ug/L	5000	5280	102	60-140		
Chromium	51.3		1.00	ug/L	50.0	1.16	100	60-140		
Cobalt	49.9		1.00	ug/L	50.0	ND	100	60-140		
Copper	181		1.00	ug/L	50.0	2.75	357	60-140		
Iron	5730		100	ug/L	5000	419	106	60-140		
Lead	48.8		1.00	ug/L	50.0	ND	98	60-140		
Magnesium	9140		100	ug/L	5000	4020	102	60-140		
Manganese	65.2		1.00	ug/L	50.0	11.9	107	60-140		
Mercury	2.33		0.100	ug/L	2.50	ND	93	60-140		
Nickel	51.8		1.00	ug/L	50.0	1.09	101	60-140		
Potassium	6100		100	ug/L	5000	1080	100	60-140		
Selenium	49.5		1.00	ug/L	50.0	ND	99	60-140		
Silver	58.2		1.00	ug/L	50.0	ND	116	60-140		
Sodium	12900		100	ug/L	5000	7620	106	60-140		
Thallium	48.7		1.00	ug/L	50.0	ND	97	60-140		
Vanadium	50.0		1.00	ug/L	50.0	1.12	98	60-140		
Zinc	75.4		4.00	ug/L	70.0	6.45	98	60-140		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

CHEMICAL OXYGEN DEMAND BY EPA 410.4 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904431 - COD (03) Prep										
Blank (B904431-BLK1)					Prepared & Analyzed: 04/29/19					
COD	ND		3.0	mg/L						
LCS (B904431-BS1)					Prepared & Analyzed: 04/29/19					
COD	51.0		3.0	mg/L	50.0		102	85-115		
Duplicate (B904431-DUP1)		**Source: 9041911-01**			Prepared & Analyzed: 04/29/19					
COD	ND		3.0	mg/L		ND				20
Matrix Spike (B904431-MS1)		**Source: 9041911-01**			Prepared & Analyzed: 04/29/19					
COD	50.0		3.0	mg/L	50.0	ND	100	80-120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

TOTAL SUSPENDED SOLIDS BY USGS I-3765-85 - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B904326 - TSS PREP										
Blank (B904326-BLK1)					Prepared & Analyzed: 04/22/19					
Solids, Suspended	ND		2.5	mg/L						
LCS (B904326-BS1)					Prepared & Analyzed: 04/22/19					
Solids, Suspended	48.7		2.5	mg/L	54.8		89	70-130		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0198 - Method 300.0										
LCS (B9D0198-BS1)					Prepared & Analyzed: 04/19/19					
Nitrate (as N)	1.0		0.2	mg/L	1.00		105	90-110		
Chloride	1.1		0.5	mg/L	1.00		105	90-110		
Sulfate	10.2		1.0	mg/L	10.0		102	90-110		
Duplicate (B9D0198-DUP1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Nitrate (as N)	1.7		0.2	mg/L		1.7			0.167	20
Chloride	6.2		0.5	mg/L		6.2			0.314	20
Sulfate	11.9		1.0	mg/L		11.9			0.474	20
Duplicate (B9D0198-DUP2)		**Source: E058345-01**			Prepared & Analyzed: 04/19/19					
Nitrate (as N)	6.8		0.2	mg/L		6.8			0.0882	20
Sulfate	27.4		1.0	mg/L		27.3			0.208	20
Matrix Spike (B9D0198-MS1)		**Source: E058337-01**			Prepared & Analyzed: 04/19/19					
Sulfate	22.5		1.0	mg/L	10.0	11.9	107	80-120		
Nitrate (as N)	2.7		0.2	mg/L	1.00	1.7	105	80-120		
Chloride	7.3		0.5	mg/L	1.00	6.2	109	80-120		
Matrix Spike (B9D0198-MS2)		**Source: E058345-01**			Prepared & Analyzed: 04/19/19					
Nitrate (as N)	7.8		0.2	mg/L	1.00	6.8	103	80-120		
Sulfate	38.1		1.0	mg/L	10.0	27.3	108	80-120		
Batch B9D0236 - No Prep WC										
Blank (B9D0236-BLK1)					Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	ND		0.10	mg/L						

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

Wet Chemistry - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0236 - No Prep WC										
LCS (B9D0236-BS1)					Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	2.02		0.10	mg/L	2.00		101	90-110		
Duplicate (B9D0236-DUP1)		**Source: E058333-03**			Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	ND		0.10	mg/L		ND				20
Matrix Spike (B9D0236-MS1)		**Source: E058333-03**			Prepared & Analyzed: 04/24/19					
Ammonia Nitrogen	1.95		0.10	mg/L	2.00	ND	97.4	90-110		
Batch B9D0245 - No Prep WC										
Blank (B9D0245-BLK1)					Prepared: 04/24/19 Analyzed: 04/25/19					
Dissolved Solids	ND		5.0	mg/L						
Duplicate (B9D0245-DUP1)		**Source: E058347-03**			Prepared: 04/24/19 Analyzed: 04/25/19					
Dissolved Solids	175		5.0	mg/L		184			5.01	20
Batch B9D0246 - No Prep WC										
Duplicate (B9D0246-DUP1)		**Source: E058286-03**			Prepared & Analyzed: 04/24/19					
Conductivity	2900		1.00	us/Cm		2930			1.34	20
Duplicate (B9D0246-DUP2)		**Source: 9041911-02**			Prepared & Analyzed: 04/24/19					
Conductivity	146		1.00	us/Cm		147			1.03	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

Alkalinity SM2320B - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B9D0213 - No Prep WC										
LCS (B9D0213-BS1)					Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	101		1.0	mg/L	100		101	90-110		
Duplicate (B9D0213-DUP1)		**Source: E058303-04**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	288		4.0	mg/L		284			1.19	20
Duplicate (B9D0213-DUP2)		**Source: 9041911-01**			Prepared & Analyzed: 04/22/19					
Alkalinity as CaCO3	43.5		1.0	mg/L		43.7			0.550	20
Batch B9D0269 - No Prep WC										
LCS (B9D0269-BS1)					Prepared & Analyzed: 04/29/19					
Alkalinity as CaCO3	108		1.0	mg/L	100		108	90-110		
Duplicate (B9D0269-DUP1)		**Source: 9041911-02**			Prepared & Analyzed: 04/29/19					
Alkalinity as CaCO3	61.5		2.0	mg/L		60.6			1.48	20
Duplicate (B9D0269-DUP2)		**Source: E058411-03**			Prepared & Analyzed: 04/29/19					
Alkalinity as CaCO3	62.4		1.0	mg/L		62.6			0.384	20

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: GUDE LANDFILL

Project Number: 1556404.0008.0001
Project Manager: Laura Oakes

Reported:
05/01/19 15:36

Notes and Definitions

E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accredidation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Company Name: EA Engineering
Project Manager: Laura Oakes
Project Name: Gude
Project ID: 1556404
Sampler(s): Pete Yenesik
P.O. Number: 18961

Matrix Codes: NW (non-potable water) PW (potable water)

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	8260LL VOC	6020 MDE Landfill List	Chloride, Nitrate, Sulfate, Alkalinity, Dissolved Solids Conductivity	Turbidity, pH	Suspended Solids	COD	Ammonia-Nitrogen	Preservative: 1+1 HCl, H_2SO_4, Methanol, $Na_2S_2O_3$, $NaHCO_3$	Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank	MSS Lab ID
MW-13	4/19/19	755	X			9	X	X	X	X	X	X	X			9041911-01
MW-1	↓		X			9	X	X	X	X	X	X	X			-02
Trip Blank	↓		X			1	X									-03

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Pete Yenesik	4/19/19	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by Lab: (Signature)			
(Printed)	13:31 4/19/19	(Printed) Rachel Horner			

Turn Around Time:
- [x] Normal (7 day)
- [ ] 5 day
- [ ] 4 day
- [ ] 3 day
- [ ] Rush (2 day)
- [ ] Next Day
- [ ] Other: _____
- [ ] Specific Due Date: _____

Lab Use:
Temp: 4.3 °C
- [ ] Received on Ice
- [ ] Received same day
- [ ] Preservation Appropriate

Delivery Method:
- Courier
- [x] Client
- UPS
- FedEx
- USPS
- Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- [ ] Return to Client
- [ ] Disposal by lab
- [ ] Archive for _____ days

MSS-F001-003

58 348

Auto-log Sent
Date/Intial
4/19/19 / RK

SUBCONTRACT ORDER
Maryland Spectral Services
9041911

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Enviro-Chem Laboratories, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
Phone :(410) 472-1112
Fax: (410) 472-1116

Due 4:00 PM 04/30/19

Laboratory ID **Comments**

Sample ID: 9041911-01 **MW-1B** **Water** **Sampled:04/19/19 07:55**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Sample ID: 9041911-02 **MW-1** **Water** **Sampled:04/19/19 07:55**

Alkalinity	Chloride	Conductance	Nitrogen, Ammonia
Nitrogen, Nitrate	Solids (Total Dissolved)	Sulfate	

Containers Supplied:
Plastic, 0.5L None (E) Plastic, 0.25L H2SO4 (F)

Released By	Date	Received By	Date
[signature]	4/19/19 15:07	[signature]	

3.1