WASTE MANAGEMENT

WASTE MANAGEMENT
Closed Sites Management Group
W124N9355 Boundary Road
Menomonee Falls, WI 53051
262 253 8626
262 255 3798 Fax

September 19, 2017

Mr. Dale Alme
FoamTech Insulation
2259 County Trunk A
Stoughton, WI 53589

Dear Mr. Alme:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples the well (PW02) at the above referenced facility on an annual basis. This letter transmits the analytical data for that water supply well, which was sampled on August 28, 2017. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

A brief review of the recent laboratory results for water samples collected from that well indicates the water quality is typical of groundwater in the area, and does not indicate any affect from the Hagen Farm Landfill. Nitrate-nitrite was present in the sample at a concentration consistent with previous samples and is generally associated with, or related to, farming activities. The concentration is also consistent with the results from analysis of a number of other samples throughout this area, and is above state and federal drinking water criteria.

I would recommend that you contact Ms. Sheila Sullivan from the USEPA if you would like any additional information regarding this correspondence. Ms. Sullivan is USEPA's representative for the Hagen Farm Landfill and provides regulatory oversight at the site. Ms. Sullivan's telephone number is (312) 886-5251.

Thank you for your cooperation.

Sincerely,
Waste Management of Wisconsin, Inc.

Michael L. Peterson

Michael L. Peterson, P.E.
District Manager – Closed Sites Management Group

cc: Sheila Sullivan, USEPA
Gary Edelstein, WDNR

Definitions/Glossary

Client: Waste Management
Project/Site: Hagen Farms - Groundwater

TestAmerica Job ID: 480-123334-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-123334-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-123334-1

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Comments
No additional comments.

Receipt
The samples were received on 8/29/2017 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.3° C and 3.9° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-123334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The Method Blank for preparation batch 480-374525 and analytical batch 480-374754 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5) was not performed.

Method(s) 6010C: The total Zinc results reported for the following sample do not concur with results previously reported for this site: PW04 (480-123334-3). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6010C: The total Calcium, and Potassium results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6020A: The total Arsenic results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 335.4, 9012B, SM 4500 CN E: The laboratory control sample (LCS) for preparation batch 480-375031 and analytical batch 480-375242 recovered outside control limits for the following analytes: Cyanide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5)

Method(s) 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) SM 4500 P E: The results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW04 (480-123334-3). Reanalysis was performed, and results greater than historically reported were confirmed.

Method(s) SM 4500 P E: The method blank for analytical batch 480-374719 contained Total Phosphorus above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. PW05 (480-123334-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: PW02
Date Collected: 08/28/17 11:00
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-1
Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.020	0.013	0.0040	ug/L		08/31/17 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
TBA-d9 (Surr)	*86*		*50 - 150*		*08/31/17 13:11*	*1*
Dibromofluoromethane (Surr)	*102*		*50 - 150*		*08/31/17 13:11*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	2.7	0.82	ug/L		09/02/17 01:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 01:05	1
1,1,2-Trichloroethane	ND		1.0	0.77	0.23	ug/L		09/02/17 01:05	1
1,1-Dichloroethane	ND		1.0	1.3	0.38	ug/L		09/02/17 01:05	1
1,1-Dichloroethene	ND		1.0	0.97	0.29	ug/L		09/02/17 01:05	1
1,2,4-Trichlorobenzene	ND		1.0	1.4	0.41	ug/L		09/02/17 01:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	1.3	0.39	ug/L		09/02/17 01:05	1
1,2-Dibromoethane (EDB)	ND		1.0	2.4	0.73	ug/L		09/02/17 01:05	1
1,2-Dichlorobenzene	ND		1.0	2.6	0.79	ug/L		09/02/17 01:05	1
1,2-Dichloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 01:05	1
1,2-Dichloropropane	ND		1.0	2.4	0.72	ug/L		09/02/17 01:05	1
1,3-Dichlorobenzene	ND		1.0	2.6	0.78	ug/L		09/02/17 01:05	1
1,4-Dichlorobenzene	ND		1.0	2.8	0.84	ug/L		09/02/17 01:05	1
2-Butanone (MEK)	ND		10	4.4	1.3	ug/L		09/02/17 01:05	1
2-Hexanone	ND		5.0	4.1	1.2	ug/L		09/02/17 01:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	7.0	2.1	ug/L		09/02/17 01:05	1
Acetone	ND		10	10	3.0	ug/L		09/02/17 01:05	1
Benzene	ND		1.0	1.4	0.41	ug/L		09/02/17 01:05	1
Bromodichloromethane	ND		1.0	1.3	0.39	ug/L		09/02/17 01:05	1
Bromoform	ND		1.0	0.87	0.26	ug/L		09/02/17 01:05	1
Bromomethane	ND		1.0	2.3	0.69	ug/L		09/02/17 01:05	1
Carbon disulfide	ND		1.0	0.63	0.19	ug/L		09/02/17 01:05	1
Carbon tetrachloride	ND		1.0	0.90	0.27	ug/L		09/02/17 01:05	1
Chlorobenzene	ND		1.0	2.5	0.75	ug/L		09/02/17 01:05	1
Chloroethane	ND		1.0	1.1	0.32	ug/L		09/02/17 01:05	1
Chloroform	ND		1.0	1.1	0.34	ug/L		09/02/17 01:05	1
Chloromethane	ND		1.0	1.2	0.35	ug/L		09/02/17 01:05	1
cis-1,2-Dichloroethene	ND		1.0	2.7	0.81	ug/L		09/02/17 01:05	1
cis-1,3-Dichloropropene	ND		1.0	1.2	0.36	ug/L		09/02/17 01:05	1
Dibromochloromethane	ND		1.0	1.1	0.32	ug/L		09/02/17 01:05	1
Dibromomethane	ND		1.0	1.4	0.41	ug/L		09/02/17 01:05	1
Dichlorodifluoromethane	ND		1.0	2.3	0.68	ug/L		09/02/17 01:05	1
Ethylbenzene	ND		1.0	2.5	0.74	ug/L		09/02/17 01:05	1
Methylene Chloride	ND		1.0	1.5	0.44	ug/L		09/02/17 01:05	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.53	0.16	ug/L		09/02/17 01:05	1
Naphthalene	ND		1.0	1.4	0.43	ug/L		09/02/17 01:05	1
Styrene	ND		1.0	2.4	0.73	ug/L		09/02/17 01:05	1
Tetrachloroethene	ND		1.0	1.2	0.36	ug/L		09/02/17 01:05	1
Tetrahydrofuran	ND		5.0	4.2	1.3	ug/L		09/02/17 01:05	1
Toluene	ND		1.0	1.7	0.51	ug/L		09/02/17 01:05	1
trans-1,2-Dichloroethene	ND		1.0	3.0	0.90	ug/L		09/02/17 01:05	1
trans-1,3-Dichloropropene	ND		1.0	1.2	0.37	ug/L		09/02/17 01:05	1

Client Sample ID: PW02
Date Collected: 08/28/17 11:00
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Trichloroethene	ND		1.0	1.5	0.46	ug/L		09/02/17 01:05	1
Trichlorofluoromethane	ND		1.0	2.9	0.88	ug/L		09/02/17 01:05	1
Vinyl chloride	ND		1.0	3.0	0.90	ug/L		09/02/17 01:05	1
Xylenes, Total	ND		2.0	2.2	0.66	ug/L		09/02/17 01:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*09/02/17 01:05*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*09/02/17 01:05*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/02/17 01:05*	*1*

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Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Aluminum	ND		80.0	200	60.0	ug/L		08/30/17 20:10	1
Barium	**42.1**		6.0	2.3	0.70	ug/L		08/30/17 20:10	1
Calcium	**80.6**		5.0	0.33	0.10	mg/L		08/30/17 20:10	1
Chromium	ND		5.0	3.3	1.0	ug/L		08/30/17 20:10	1
Cobalt	ND		6.0	2.1	0.63	ug/L		08/30/17 20:10	1
Copper	**16.1**		25.0	5.3	1.6	ug/L		08/30/17 20:10	1
Iron	**0.098**		0.10	0.064	0.019	mg/L		08/30/17 20:10	1
Magnesium	**42.2**		5.0	0.14	0.043	mg/L		08/30/17 20:10	1
Manganese	**1.6**	B	3.0	1.3	0.40	ug/L		08/30/17 20:10	1
Nickel	ND		4.0	4.2	1.3	ug/L		08/30/17 20:10	1
Potassium	**1.0**		5.0	0.33	0.10	mg/L		08/30/17 20:10	1
Silver	ND		3.0	5.7	1.7	ug/L		08/30/17 20:10	1
Sodium	**7.8**		5.0	1.1	0.32	mg/L		08/30/17 20:10	1
Vanadium	ND		5.0	5.0	1.5	ug/L		08/30/17 20:10	1
Zinc	**114**		4.0	5.0	1.5	ug/L		08/30/17 20:10	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Antimony	ND		0.50	1.2	0.35	ug/L		08/31/17 14:39	1
Arsenic	ND		2.0	0.90	0.27	ug/L		08/31/17 14:39	1
Beryllium	ND		0.20	0.10	0.030	ug/L		08/31/17 14:39	1
Cadmium	ND		0.20	0.24	0.071	ug/L		08/31/17 14:39	1
Selenium	**0.64**	J	5.0	1.5	0.44	ug/L		08/31/17 14:39	1
Thallium	ND		0.20	0.063	0.019	ug/L		08/31/17 14:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.20	0.40	0.12	ug/L		08/30/17 14:41	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Calcium and Magnesium Hardness	**375**		0.50	0.33	0.10	mg/L		09/07/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Chloride	**23.8**		0.50	0.94	0.28	mg/L		09/05/17 12:51	1
Sulfate	**28.8**		2.0	1.2	0.35	mg/L		09/05/17 12:51	1
Alkalinity, Total	**309**		50.0	66.7	20.0	mg/L		08/31/17 18:15	5
Total Cyanide	ND	*	0.020	0.017	0.0050	mg/L		09/05/17 11:42	1

Client Sample ID: PW02
Date Collected: 08/28/17 11:00
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Ammonia (as N)	**0.11**	J	0.20	0.33	0.10	mg/L		08/31/17 15:42	1
Total Kjeldahl Nitrogen	ND		0.20	0.50	0.15	mg/L as N		08/31/17 07:46	1
Nitrate Nitrite as N	**10.4**		0.25	0.33	0.10	mg/L as N		08/30/17 13:49	5
Chemical Oxygen Demand	ND		10.0	16.7	5.0	mg/L		08/29/17 18:27	1
Total Dissolved Solids	**449**		10.0	13.3	4.0	mg/L		08/30/17 16:32	1
Total Suspended Solids	ND		2.0	6.7	2.0	mg/L		08/30/17 05:10	1
Phosphorus, Total	**0.028**		0.20	0.016	0.0050	mg/L as P		08/31/17 16:15	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Color	**No**					NONE		08/28/17 12:00	1
Dissolved Oxygen, Field	**3.1**					mg/L		08/28/17 12:00	1
Field EH/ORP	**34**					millivolts		08/28/17 12:00	1
Odor	**No**					NONE		08/28/17 12:00	1
pH, Field	**7.21**					SU		08/28/17 12:00	1
Specific Conductance, Field	**733**					umhos/cm		08/28/17 12:00	1
Temperature, Field (C)	**17.3**					Degrees C		08/28/17 12:00	1
Turbidity, Field	**No**					NONE		08/28/17 12:00	1

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WASTE MANAGEMENT
Closed Sites Management Group
W124N9355 Boundary Road
Menomonee Falls, WI 53051
262 253 8626
262 255 3798 Fax

September 19, 2017

Mr. and Mrs. Scott Harried
2362 County Trunk A
Stoughton, WI 53589

Dear Mr. and Mrs. Harried:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples your well (PW05) on an annual basis. This letter transmits the analytical data for your water supply well, which was sampled on August 28, 2017. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

A brief review of the recent laboratory results for water samples collected from your well indicates the water quality is typical of groundwater in the area, and does not indicate any affect from the Hagen Farm Landfill.

I would recommend that you contact Ms. Sheila Sullivan from the USEPA if you would like any additional information regarding this correspondence. Ms. Sullivan is USEPA's representative for the Hagen Farm Landfill and provides regulatory oversight at the site. Ms. Sullivan's telephone number is (312) 886-5251.

Thank you for your cooperation.

Sincerely,
Waste Management of Wisconsin, Inc.

Michael L. Peterson

Michael L. Peterson, P.E.
District Manager – Closed Sites Management Group

cc: Sheila Sullivan, USEPA
Gary Edelstein, WDNR

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Waste Management
Project/Site: Hagen Farms - Groundwater

TestAmerica Job ID: 480-123334-1

Job ID: 480-123334-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-123334-1

6

Comments
No additional comments.

Receipt
The samples were received on 8/29/2017 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.3° C and 3.9° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-123334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The Method Blank for preparation batch 480-374525 and analytical batch 480-374754 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5) was not performed.

Method(s) 6010C: The total Zinc results reported for the following sample do not concur with results previously reported for this site: PW04 (480-123334-3). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6010C: The total Calcium, and Potassium results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6020A: The total Arsenic results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 335.4, 9012B, SM 4500 CN E: The laboratory control sample (LCS) for preparation batch 480-375031 and analytical batch 480-375242 recovered outside control limits for the following analytes: Cyanide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5)

Method(s) 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) SM 4500 P E: The results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW04 (480-123334-3). Reanalysis was performed, and results greater than historically reported were confirmed.

Method(s) SM 4500 P E: The method blank for analytical batch 480-374719 contained Total Phosphorus above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. PW05 (480-123334-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: PW05

Date Collected: 08/28/17 11:30
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-4

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.020	0.013	0.0040	ug/L		08/31/17 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
TBA-d9 (Surr)	*83*		*50 - 150*		*08/31/17 14:24*	*1*
Dibromofluoromethane (Surr)	*102*		*50 - 150*		*08/31/17 14:24*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	2.7	0.82	ug/L		09/02/17 02:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 02:14	1
1,1,2-Trichloroethane	ND		1.0	0.77	0.23	ug/L		09/02/17 02:14	1
1,1-Dichloroethane	ND		1.0	1.3	0.38	ug/L		09/02/17 02:14	1
1,1-Dichloroethene	ND		1.0	0.97	0.29	ug/L		09/02/17 02:14	1
1,2,4-Trichlorobenzene	ND		1.0	1.4	0.41	ug/L		09/02/17 02:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0	1.3	0.39	ug/L		09/02/17 02:14	1
1,2-Dibromoethane (EDB)	ND		1.0	2.4	0.73	ug/L		09/02/17 02:14	1
1,2-Dichlorobenzene	ND		1.0	2.6	0.79	ug/L		09/02/17 02:14	1
1,2-Dichloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 02:14	1
1,2-Dichloropropane	ND		1.0	2.4	0.72	ug/L		09/02/17 02:14	1
1,3-Dichlorobenzene	ND		1.0	2.6	0.78	ug/L		09/02/17 02:14	1
1,4-Dichlorobenzene	ND		1.0	2.8	0.84	ug/L		09/02/17 02:14	1
2-Butanone (MEK)	ND		10	4.4	1.3	ug/L		09/02/17 02:14	1
2-Hexanone	ND		5.0	4.1	1.2	ug/L		09/02/17 02:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	7.0	2.1	ug/L		09/02/17 02:14	1
Acetone	ND		10	10	3.0	ug/L		09/02/17 02:14	1
Benzene	ND		1.0	1.4	0.41	ug/L		09/02/17 02:14	1
Bromodichloromethane	ND		1.0	1.3	0.39	ug/L		09/02/17 02:14	1
Bromoform	ND		1.0	0.87	0.26	ug/L		09/02/17 02:14	1
Bromomethane	ND		1.0	2.3	0.69	ug/L		09/02/17 02:14	1
Carbon disulfide	ND		1.0	0.63	0.19	ug/L		09/02/17 02:14	1
Carbon tetrachloride	ND		1.0	0.90	0.27	ug/L		09/02/17 02:14	1
Chlorobenzene	ND		1.0	2.5	0.75	ug/L		09/02/17 02:14	1
Chloroethane	ND		1.0	1.1	0.32	ug/L		09/02/17 02:14	1
Chloroform	ND		1.0	1.1	0.34	ug/L		09/02/17 02:14	1
Chloromethane	ND		1.0	1.2	0.35	ug/L		09/02/17 02:14	1
cis-1,2-Dichloroethene	ND		1.0	2.7	0.81	ug/L		09/02/17 02:14	1
cis-1,3-Dichloropropene	ND		1.0	1.2	0.36	ug/L		09/02/17 02:14	1
Dibromochloromethane	ND		1.0	1.1	0.32	ug/L		09/02/17 02:14	1
Dibromomethane	ND		1.0	1.4	0.41	ug/L		09/02/17 02:14	1
Dichlorodifluoromethane	ND		1.0	2.3	0.68	ug/L		09/02/17 02:14	1
Ethylbenzene	ND		1.0	2.5	0.74	ug/L		09/02/17 02:14	1
Methylene Chloride	ND		1.0	1.5	0.44	ug/L		09/02/17 02:14	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.53	0.16	ug/L		09/02/17 02:14	1
Naphthalene	ND		1.0	1.4	0.43	ug/L		09/02/17 02:14	1
Styrene	ND		1.0	2.4	0.73	ug/L		09/02/17 02:14	1
Tetrachloroethene	ND		1.0	1.2	0.36	ug/L		09/02/17 02:14	1
Tetrahydrofuran	ND		5.0	4.2	1.3	ug/L		09/02/17 02:14	1
Toluene	ND		1.0	1.7	0.51	ug/L		09/02/17 02:14	1
trans-1,2-Dichloroethene	ND		1.0	3.0	0.90	ug/L		09/02/17 02:14	1
trans-1,3-Dichloropropene	ND		1.0	1.2	0.37	ug/L		09/02/17 02:14	1

Client Sample ID: PW05
Date Collected: 08/28/17 11:30
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-4
Matrix: Water

8

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Trichloroethene	ND		1.0	1.5	0.46	ug/L		09/02/17 02:14	1
Trichlorofluoromethane	ND		1.0	2.9	0.88	ug/L		09/02/17 02:14	1
Vinyl chloride	ND		1.0	3.0	0.90	ug/L		09/02/17 02:14	1
Xylenes, Total	ND		2.0	2.2	0.66	ug/L		09/02/17 02:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*09/02/17 02:14*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*09/02/17 02:14*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/02/17 02:14*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Aluminum	ND		80.0	200	60.0	ug/L		08/30/17 20:35	1
Barium	**22.6**		6.0	2.3	0.70	ug/L		08/30/17 20:35	1
Calcium	**64.1**		5.0	0.33	0.10	mg/L		08/30/17 20:35	1
Chromium	ND		5.0	3.3	1.0	ug/L		08/30/17 20:35	1
Cobalt	ND		6.0	2.1	0.63	ug/L		08/30/17 20:35	1
Copper	**3.4**	J	25.0	5.3	1.6	ug/L		08/30/17 20:35	1
Iron	**0.051**	J	0.10	0.064	0.019	mg/L		08/30/17 20:35	1
Magnesium	**35.9**		5.0	0.14	0.043	mg/L		08/30/17 20:35	1
Manganese	**1.3**	B	3.0	1.3	0.40	ug/L		08/30/17 20:35	1
Nickel	ND		4.0	4.2	1.3	ug/L		08/30/17 20:35	1
Potassium	**1.3**		5.0	0.33	0.10	mg/L		08/30/17 20:35	1
Silver	ND		3.0	5.7	1.7	ug/L		08/30/17 20:35	1
Sodium	**2.6**		5.0	1.1	0.32	mg/L		08/30/17 20:35	1
Vanadium	ND		5.0	5.0	1.5	ug/L		08/30/17 20:35	1
Zinc	**16.3**		4.0	5.0	1.5	ug/L		08/30/17 20:35	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Antimony	ND		0.50	1.2	0.35	ug/L		08/31/17 14:55	1
Arsenic	ND		2.0	0.90	0.27	ug/L		08/31/17 14:55	1
Beryllium	ND		0.20	0.10	0.030	ug/L		08/31/17 14:55	1
Cadmium	ND		0.20	0.24	0.071	ug/L		08/31/17 14:55	1
Selenium	**1.1**	J	5.0	1.5	0.44	ug/L		08/31/17 14:55	1
Thallium	ND		0.20	0.063	0.019	ug/L		08/31/17 14:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.20	0.40	0.12	ug/L		08/30/17 14:47	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Calcium and Magnesium Hardness	**308**		0.50	0.33	0.10	mg/L		09/07/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Chloride	**3.3**		0.50	0.94	0.28	mg/L		09/05/17 13:15	1
Sulfate	**20.6**		2.0	1.2	0.35	mg/L		09/05/17 13:15	1
Alkalinity, Total	**313**		50.0	66.7	20.0	mg/L		08/31/17 17:17	5
Total Cyanide	ND	*	0.020	0.017	0.0050	mg/L		09/05/17 11:50	1

Client Sample ID: PW05
Date Collected: 08/28/17 11:30
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-4
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Ammonia (as N)	**0.19**	**J**	0.20	0.33	0.10	mg/L		08/31/17 15:44	1
Total Kjeldahl Nitrogen	ND		0.20	0.50	0.15	mg/L as N		08/31/17 07:46	1
Nitrate Nitrite as N	**1.1**		0.050	0.067	0.020	mg/L as N		08/30/17 13:08	1
Chemical Oxygen Demand	ND		10.0	16.7	5.0	mg/L		08/29/17 18:27	1
Total Dissolved Solids	**310**		10.0	13.3	4.0	mg/L		08/31/17 23:07	1
Total Suspended Solids	ND		2.0	6.7	2.0	mg/L		08/30/17 05:10	1
Phosphorus, Total	**0.013**	**J B**	0.20	0.016	0.0050	mg/L as P		08/30/17 20:20	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Color	**No**					NONE		08/28/17 12:30	1
Dissolved Oxygen, Field	**3.1**					mg/L		08/28/17 12:30	1
Field EH/ORP	**99**					millivolts		08/28/17 12:30	1
Odor	**No**					NONE		08/28/17 12:30	1
pH, Field	**7.38**					SU		08/28/17 12:30	1
Specific Conductance, Field	**561**					umhos/cm		08/28/17 12:30	1
Temperature, Field (C)	**15.5**					Degrees C		08/28/17 12:30	1
Turbidity, Field	**No**					NONE		08/28/17 12:30	1

WASTE MANAGEMENT

WASTE MANAGEMENT
Closed Sites Management Group
W124N9355 Boundary Road
Menomonee Falls, WI 53051
262 253 8626
262 255 3798 Fax

September 19, 2017

Stoughton Conservation Club
984 Collins Road
Stoughton, WI 53589

To whom it may concern:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples the well at the above referenced facility (PW09) on an annual basis. This letter transmits the analytical data for that water supply well, which was sampled on August 28, 2017. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

A brief review of the recent laboratory results for water samples collected from that well indicates the water quality is typical of groundwater in the area, and does not indicate any affect from the Hagen Farm Landfill. Nitrate-nitrite was present in the sample at a concentration consistent with previous samples and is generally associated with, or related to, farming activities. The concentration is also consistent with the results from analysis of a number of other samples throughout this area, and is above the State of Wisconsin drinking water criteria.

I would recommend that you contact Ms. Sheila Sullivan from the USEPA if you would like any additional information regarding this correspondence. Ms. Sullivan is USEPA's representative for the Hagen Farm Landfill and provides regulatory oversight at the site. Ms. Sullivan's telephone number is (312) 886-5251.

Thank you for your cooperation.

Sincerely,
Waste Management of Wisconsin, Inc.

Michael L. Peterson

Michael L. Peterson, P.E.
District Manager – Closed Sites Management Group

cc: Sheila Sullivan, USEPA
Gary Edelstein, WDNR

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-123334-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-123334-1

6

Comments
No additional comments.

Receipt
The samples were received on 8/29/2017 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.3° C and 3.9° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-123334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The Method Blank for preparation batch 480-374525 and analytical batch 480-374754 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5) was not performed.

Method(s) 6010C: The total Zinc results reported for the following sample do not concur with results previously reported for this site: PW04 (480-123334-3). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6010C: The total Calcium, and Potassium results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6020A: The total Arsenic results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 335.4, 9012B, SM 4500 CN E: The laboratory control sample (LCS) for preparation batch 480-375031 and analytical batch 480-375242 recovered outside control limits for the following analytes: Cyanide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5)

Method(s) 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) SM 4500 P E: The results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW04 (480-123334-3). Reanalysis was performed, and results greater than historically reported were confirmed.

Method(s) SM 4500 P E: The method blank for analytical batch 480-374719 contained Total Phosphorus above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. PW05 (480-123334-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: PW09
Date Collected: 08/28/17 11:45
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-5
Matrix: Water

8

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.020	0.013	0.0040	ug/L		08/31/17 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
TBA-d9 (Surr)	*84*		*50 - 150*		*08/31/17 14:49*	*1*
Dibromofluoromethane (Surr)	*102*		*50 - 150*		*08/31/17 14:49*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	2.7	0.82	ug/L		09/02/17 02:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 02:37	1
1,1,2-Trichloroethane	ND		1.0	0.77	0.23	ug/L		09/02/17 02:37	1
1,1-Dichloroethane	ND		1.0	1.3	0.38	ug/L		09/02/17 02:37	1
1,1-Dichloroethene	ND		1.0	0.97	0.29	ug/L		09/02/17 02:37	1
1,2,4-Trichlorobenzene	ND		1.0	1.4	0.41	ug/L		09/02/17 02:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	1.3	0.39	ug/L		09/02/17 02:37	1
1,2-Dibromoethane (EDB)	ND		1.0	2.4	0.73	ug/L		09/02/17 02:37	1
1,2-Dichlorobenzene	ND		1.0	2.6	0.79	ug/L		09/02/17 02:37	1
1,2-Dichloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 02:37	1
1,2-Dichloropropane	ND		1.0	2.4	0.72	ug/L		09/02/17 02:37	1
1,3-Dichlorobenzene	ND		1.0	2.6	0.78	ug/L		09/02/17 02:37	1
1,4-Dichlorobenzene	ND		1.0	2.8	0.84	ug/L		09/02/17 02:37	1
2-Butanone (MEK)	ND		10	4.4	1.3	ug/L		09/02/17 02:37	1
2-Hexanone	ND		5.0	4.1	1.2	ug/L		09/02/17 02:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	7.0	2.1	ug/L		09/02/17 02:37	1
Acetone	**3.0**	**J**	10	10	3.0	ug/L		09/02/17 02:37	1
Benzene	ND		1.0	1.4	0.41	ug/L		09/02/17 02:37	1
Bromodichloromethane	ND		1.0	1.3	0.39	ug/L		09/02/17 02:37	1
Bromoform	ND		1.0	0.87	0.26	ug/L		09/02/17 02:37	1
Bromomethane	ND		1.0	2.3	0.69	ug/L		09/02/17 02:37	1
Carbon disulfide	ND		1.0	0.63	0.19	ug/L		09/02/17 02:37	1
Carbon tetrachloride	ND		1.0	0.90	0.27	ug/L		09/02/17 02:37	1
Chlorobenzene	ND		1.0	2.5	0.75	ug/L		09/02/17 02:37	1
Chloroethane	ND		1.0	1.1	0.32	ug/L		09/02/17 02:37	1
Chloroform	ND		1.0	1.1	0.34	ug/L		09/02/17 02:37	1
Chloromethane	ND		1.0	1.2	0.35	ug/L		09/02/17 02:37	1
cis-1,2-Dichloroethene	ND		1.0	2.7	0.81	ug/L		09/02/17 02:37	1
cis-1,3-Dichloropropene	ND		1.0	1.2	0.36	ug/L		09/02/17 02:37	1
Dibromochloromethane	ND		1.0	1.1	0.32	ug/L		09/02/17 02:37	1
Dibromomethane	ND		1.0	1.4	0.41	ug/L		09/02/17 02:37	1
Dichlorodifluoromethane	ND		1.0	2.3	0.68	ug/L		09/02/17 02:37	1
Ethylbenzene	ND		1.0	2.5	0.74	ug/L		09/02/17 02:37	1
Methylene Chloride	ND		1.0	1.5	0.44	ug/L		09/02/17 02:37	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.53	0.16	ug/L		09/02/17 02:37	1
Naphthalene	ND		1.0	1.4	0.43	ug/L		09/02/17 02:37	1
Styrene	ND		1.0	2.4	0.73	ug/L		09/02/17 02:37	1
Tetrachloroethene	ND		1.0	1.2	0.36	ug/L		09/02/17 02:37	1
Tetrahydrofuran	ND		5.0	4.2	1.3	ug/L		09/02/17 02:37	1
Toluene	ND		1.0	1.7	0.51	ug/L		09/02/17 02:37	1
trans-1,2-Dichloroethene	ND		1.0	3.0	0.90	ug/L		09/02/17 02:37	1
trans-1,3-Dichloropropene	ND		1.0	1.2	0.37	ug/L		09/02/17 02:37	1

Client Sample ID: PW09
Date Collected: 08/28/17 11:45
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-5
Matrix: Water

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Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Trichloroethene	ND		1.0	1.5	0.46	ug/L		09/02/17 02:37	1
Trichlorofluoromethane	ND		1.0	2.9	0.88	ug/L		09/02/17 02:37	1
Vinyl chloride	ND		1.0	3.0	0.90	ug/L		09/02/17 02:37	1
Xylenes, Total	ND		2.0	2.2	0.66	ug/L		09/02/17 02:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*09/02/17 02:37*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*09/02/17 02:37*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/02/17 02:37*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Aluminum	ND		80.0	200	60.0	ug/L		08/30/17 20:39	1
Barium	ND		6.0	2.3	0.70	ug/L		08/30/17 20:39	1
Calcium	**0.11**	**J**	5.0	0.33	0.10	mg/L		08/30/17 20:39	1
Chromium	ND		5.0	3.3	1.0	ug/L		08/30/17 20:39	1
Cobalt	ND		6.0	2.1	0.63	ug/L		08/30/17 20:39	1
Copper	**36.1**		25.0	5.3	1.6	ug/L		08/30/17 20:39	1
Iron	**0.029**	**J**	0.10	0.064	0.019	mg/L		08/30/17 20:39	1
Magnesium	**0.12**	**J**	5.0	0.14	0.043	mg/L		08/30/17 20:39	1
Manganese	**0.96**	**J B**	3.0	1.3	0.40	ug/L		08/30/17 20:39	1
Nickel	ND		4.0	4.2	1.3	ug/L		08/30/17 20:39	1
Potassium	ND		5.0	0.33	0.10	mg/L		08/30/17 20:39	1
Silver	ND		3.0	5.7	1.7	ug/L		08/30/17 20:39	1
Sodium	**175**		5.0	1.1	0.32	mg/L		08/30/17 20:39	1
Vanadium	ND		5.0	5.0	1.5	ug/L		08/30/17 20:39	1
Zinc	**3.5**	**J**	4.0	5.0	1.5	ug/L		08/30/17 20:39	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Antimony	ND		0.50	1.2	0.35	ug/L		08/31/17 15:01	1
Arsenic	**0.32**	**J**	2.0	0.90	0.27	ug/L		08/31/17 15:01	1
Beryllium	ND		0.20	0.10	0.030	ug/L		08/31/17 15:01	1
Cadmium	ND		0.20	0.24	0.071	ug/L		08/31/17 15:01	1
Selenium	**0.78**	**J**	5.0	1.5	0.44	ug/L		08/31/17 15:01	1
Thallium	ND		0.20	0.063	0.019	ug/L		08/31/17 15:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.20	0.40	0.12	ug/L		08/30/17 14:49	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Calcium and Magnesium Hardness	**0.78**		0.50	0.33	0.10	mg/L		09/07/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Chloride	**21.8**		0.50	0.94	0.28	mg/L		09/05/17 13:23	1
Sulfate	**23.2**		2.0	1.2	0.35	mg/L		09/08/17 11:12	1
Alkalinity, Total	**357**		50.0	66.7	20.0	mg/L		08/31/17 17:17	5
Total Cyanide	ND	*	0.020	0.017	0.0050	mg/L		09/05/17 11:52	1

Client Sample ID: PW09
Date Collected: 08/28/17 11:45
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-5
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Ammonia (as N)	**0.16**	**J**	0.20	0.33	0.10	mg/L		08/31/17 15:47	1
Total Kjeldahl Nitrogen	ND		0.20	0.50	0.15	mg/L as N		08/31/17 08:32	1
Nitrate Nitrite as N	**6.1**		0.25	0.33	0.10	mg/L as N		08/31/17 11:51	5
Chemical Oxygen Demand	ND		10.0	16.7	5.0	mg/L		08/29/17 18:27	1
Total Dissolved Solids	**453**		10.0	13.3	4.0	mg/L		08/31/17 23:07	1
Total Suspended Solids	ND		2.0	6.7	2.0	mg/L		08/30/17 05:10	1
Phosphorus, Total	**0.015**	**J**	0.20	0.016	0.0050	mg/L as P		08/30/17 10:40	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Color	**No**					NONE		08/28/17 12:45	1
Dissolved Oxygen, Field	**5.6**					mg/L		08/28/17 12:45	1
Field EH/ORP	**81**					millivolts		08/28/17 12:45	1
Odor	**No**					NONE		08/28/17 12:45	1
pH, Field	**7.47**					SU		08/28/17 12:45	1
Specific Conductance, Field	**730**					umhos/cm		08/28/17 12:45	1
Temperature, Field (C)	**14.9**					Degrees C		08/28/17 12:45	1
Turbidity, Field	**No**					NONE		08/28/17 12:45	1

WASTE MANAGEMENT

WASTE MANAGEMENT
Closed Sites Management Group
W124N9355 Boundary Road
Menomonee Falls, WI 53051
262 253 8626
262 255 3798 Fax

September 19, 2017

Mr. R. Gullickson
1036 Collins Road
Stoughton, WI 53589

Dear Mr. Gullickson:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples your well (PW04) on an annual basis. This letter transmits the analytical data for your water supply well, which was sampled on August 28, 2017. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

A brief review of the recent laboratory results for water samples collected from your well indicates the water quality is typical of groundwater in the area, and does not indicate any affect from the Hagen Farm Landfill. Nitrate-nitrite was present in the sample at a concentration consistent with previous samples and is generally associated with, or related to, farming activities. The concentration is also consistent with the results from analysis of a number of other samples throughout this area and is above state and federal drinking water criteria. Iron is also present in the sample, and groundwater throughout this area, at concentrations consistent with historical data and above the State of Wisconsin groundwater criteria. The presence of this element at the identified concentrations may cause staining and taste concerns.

I would recommend that you contact Ms. Sheila Sullivan from the USEPA if you would like any additional information regarding this correspondence. Ms. Sullivan is USEPA's representative for the Hagen Farm Landfill and provides regulatory oversight at the site. Ms. Sullivan's telephone number is (312) 886-5251.

Thank you for your cooperation.

Sincerely,
Waste Management of Wisconsin, Inc.

Michael L. Peterson

Michael L. Peterson, P.E.
District Manager – Closed Sites Management Group

cc: Sheila Sullivan, USEPA
Gary Edelstein, WDNR

Definitions/Glossary

Client: Waste Management
Project/Site: Hagen Farms - Groundwater

TestAmerica Job ID: 480-123334-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-123334-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-123334-1

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Comments
No additional comments.

Receipt
The samples were received on 8/29/2017 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.3° C and 3.9° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-123334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The Method Blank for preparation batch 480-374525 and analytical batch 480-374754 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5) was not performed.

Method(s) 6010C: The total Zinc results reported for the following sample do not concur with results previously reported for this site: PW04 (480-123334-3). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6010C: The total Calcium, and Potassium results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6020A: The total Arsenic results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 335.4, 9012B, SM 4500 CN E: The laboratory control sample (LCS) for preparation batch 480-375031 and analytical batch 480-375242 recovered outside control limits for the following analytes: Cyanide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5)

Method(s) 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) SM 4500 P E: The results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW04 (480-123334-3). Reanalysis was performed, and results greater than historically reported were confirmed.

Method(s) SM 4500 P E: The method blank for analytical batch 480-374719 contained Total Phosphorus above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. PW05 (480-123334-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: PW04

Date Collected: 08/28/17 12:30
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-3

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.020	0.013	0.0040	ug/L		08/31/17 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
TBA-d9 (Surr)	*87*		*50 - 150*		*08/31/17 14:00*	*1*
Dibromofluoromethane (Surr)	*104*		*50 - 150*		*08/31/17 14:00*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	2.7	0.82	ug/L		09/02/17 01:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 01:51	1
1,1,2-Trichloroethane	ND		1.0	0.77	0.23	ug/L		09/02/17 01:51	1
1,1-Dichloroethane	ND		1.0	1.3	0.38	ug/L		09/02/17 01:51	1
1,1-Dichloroethene	ND		1.0	0.97	0.29	ug/L		09/02/17 01:51	1
1,2,4-Trichlorobenzene	ND		1.0	1.4	0.41	ug/L		09/02/17 01:51	1
1,2-Dibromo-3-Chloropropane	ND		1.0	1.3	0.39	ug/L		09/02/17 01:51	1
1,2-Dibromoethane (EDB)	ND		1.0	2.4	0.73	ug/L		09/02/17 01:51	1
1,2-Dichlorobenzene	ND		1.0	2.6	0.79	ug/L		09/02/17 01:51	1
1,2-Dichloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 01:51	1
1,2-Dichloropropane	ND		1.0	2.4	0.72	ug/L		09/02/17 01:51	1
1,3-Dichlorobenzene	ND		1.0	2.6	0.78	ug/L		09/02/17 01:51	1
1,4-Dichlorobenzene	ND		1.0	2.8	0.84	ug/L		09/02/17 01:51	1
2-Butanone (MEK)	ND		10	4.4	1.3	ug/L		09/02/17 01:51	1
2-Hexanone	ND		5.0	4.1	1.2	ug/L		09/02/17 01:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	7.0	2.1	ug/L		09/02/17 01:51	1
Acetone	ND		10	10	3.0	ug/L		09/02/17 01:51	1
Benzene	ND		1.0	1.4	0.41	ug/L		09/02/17 01:51	1
Bromodichloromethane	ND		1.0	1.3	0.39	ug/L		09/02/17 01:51	1
Bromoform	ND		1.0	0.87	0.26	ug/L		09/02/17 01:51	1
Bromomethane	ND		1.0	2.3	0.69	ug/L		09/02/17 01:51	1
Carbon disulfide	ND		1.0	0.63	0.19	ug/L		09/02/17 01:51	1
Carbon tetrachloride	ND		1.0	0.90	0.27	ug/L		09/02/17 01:51	1
Chlorobenzene	ND		1.0	2.5	0.75	ug/L		09/02/17 01:51	1
Chloroethane	ND		1.0	1.1	0.32	ug/L		09/02/17 01:51	1
Chloroform	ND		1.0	1.1	0.34	ug/L		09/02/17 01:51	1
Chloromethane	ND		1.0	1.2	0.35	ug/L		09/02/17 01:51	1
cis-1,2-Dichloroethene	ND		1.0	2.7	0.81	ug/L		09/02/17 01:51	1
cis-1,3-Dichloropropene	ND		1.0	1.2	0.36	ug/L		09/02/17 01:51	1
Dibromochloromethane	ND		1.0	1.1	0.32	ug/L		09/02/17 01:51	1
Dibromomethane	ND		1.0	1.4	0.41	ug/L		09/02/17 01:51	1
Dichlorodifluoromethane	ND		1.0	2.3	0.68	ug/L		09/02/17 01:51	1
Ethylbenzene	ND		1.0	2.5	0.74	ug/L		09/02/17 01:51	1
Methylene Chloride	ND		1.0	1.5	0.44	ug/L		09/02/17 01:51	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.53	0.16	ug/L		09/02/17 01:51	1
Naphthalene	ND		1.0	1.4	0.43	ug/L		09/02/17 01:51	1
Styrene	ND		1.0	2.4	0.73	ug/L		09/02/17 01:51	1
Tetrachloroethene	ND		1.0	1.2	0.36	ug/L		09/02/17 01:51	1
Tetrahydrofuran	ND		5.0	4.2	1.3	ug/L		09/02/17 01:51	1
Toluene	ND		1.0	1.7	0.51	ug/L		09/02/17 01:51	1
trans-1,2-Dichloroethene	ND		1.0	3.0	0.90	ug/L		09/02/17 01:51	1
trans-1,3-Dichloropropene	ND		1.0	1.2	0.37	ug/L		09/02/17 01:51	1

Client Sample ID: PW04

Date Collected: 08/28/17 12:30
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Trichloroethene	ND		1.0	1.5	0.46	ug/L		09/02/17 01:51	1
Trichlorofluoromethane	ND		1.0	2.9	0.88	ug/L		09/02/17 01:51	1
Vinyl chloride	ND		1.0	3.0	0.90	ug/L		09/02/17 01:51	1
Xylenes, Total	ND		2.0	2.2	0.66	ug/L		09/02/17 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*09/02/17 01:51*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*09/02/17 01:51*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/02/17 01:51*	*1*

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Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Aluminum	ND		80.0	200	60.0	ug/L		08/30/17 20:31	1
Barium	**33.6**		6.0	2.3	0.70	ug/L		08/30/17 20:31	1
Calcium	**81.3**		5.0	0.33	0.10	mg/L		08/30/17 20:31	1
Chromium	**1.0**	J	5.0	3.3	1.0	ug/L		08/30/17 20:31	1
Cobalt	ND		6.0	2.1	0.63	ug/L		08/30/17 20:31	1
Copper	**10.5**		25.0	5.3	1.6	ug/L		08/30/17 20:31	1
Iron	**0.17**		0.10	0.064	0.019	mg/L		08/30/17 20:31	1
Magnesium	**43.5**		5.0	0.14	0.043	mg/L		08/30/17 20:31	1
Manganese	**1.2**	J B	3.0	1.3	0.40	ug/L		08/30/17 20:31	1
Nickel	ND		4.0	4.2	1.3	ug/L		08/30/17 20:31	1
Potassium	**1.1**		5.0	0.33	0.10	mg/L		08/30/17 20:31	1
Silver	ND		3.0	5.7	1.7	ug/L		08/30/17 20:31	1
Sodium	**7.3**		5.0	1.1	0.32	mg/L		08/30/17 20:31	1
Vanadium	ND		5.0	5.0	1.5	ug/L		08/30/17 20:31	1
Zinc	**69.9**		4.0	5.0	1.5	ug/L		08/30/17 20:31	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Antimony	ND		0.50	1.2	0.35	ug/L		08/31/17 14:50	1
Arsenic	**0.27**	J	2.0	0.90	0.27	ug/L		08/31/17 14:50	1
Beryllium	ND		0.20	0.10	0.030	ug/L		08/31/17 14:50	1
Cadmium	ND		0.20	0.24	0.071	ug/L		08/31/17 14:50	1
Selenium	**0.62**	J	5.0	1.5	0.44	ug/L		08/31/17 14:50	1
Thallium	ND		0.20	0.063	0.019	ug/L		08/31/17 14:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.20	0.40	0.12	ug/L		08/30/17 14:45	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Calcium and Magnesium Hardness	**382**		0.50	0.33	0.10	mg/L		09/07/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Chloride	**22.4**		0.50	0.94	0.28	mg/L		09/05/17 13:07	1
Sulfate	**30.2**		2.0	1.2	0.35	mg/L		09/05/17 13:07	1
Alkalinity, Total	**331**		50.0	66.7	20.0	mg/L		08/31/17 17:26	5
Total Cyanide	ND	*	0.020	0.017	0.0050	mg/L		09/05/17 11:49	1

Client Sample ID: PW04
Date Collected: 08/28/17 12:30
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-3
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Ammonia (as N)	**0.17**	**J**	0.20	0.33	0.10	mg/L		08/31/17 15:44	1
Total Kjeldahl Nitrogen	ND		0.20	0.50	0.15	mg/L as N		09/06/17 09:29	1
Nitrate Nitrite as N	**11.3**		0.25	0.33	0.10	mg/L as N		08/30/17 13:51	5
Chemical Oxygen Demand	ND		10.0	16.7	5.0	mg/L		08/29/17 18:27	1
Total Dissolved Solids	**454**		10.0	13.3	4.0	mg/L		08/30/17 16:32	1
Total Suspended Solids	ND		2.0	6.7	2.0	mg/L		08/30/17 05:10	1
Phosphorus, Total	**0.026**		0.20	0.016	0.0050	mg/L as P		08/31/17 16:15	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Color	**No**					NONE		08/28/17 13:30	1
Dissolved Oxygen, Field	**3.6**					mg/L		08/28/17 13:30	1
Field EH/ORP	**43**					millivolts		08/28/17 13:30	1
Odor	**No**					NONE		08/28/17 13:30	1
pH, Field	**7.17**					SU		08/28/17 13:30	1
Specific Conductance, Field	**738**					umhos/cm		08/28/17 13:30	1
Temperature, Field (C)	**16.9**					Degrees C		08/28/17 13:30	1
Turbidity, Field	**No**					NONE		08/28/17 13:30	1

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WASTE MANAGEMENT
Closed Sites Management Group
W124N9355 Boundary Road
Menomonee Falls, WI 53051
262 253 8626
262 255 3798 Fax

September 19, 2017

Mr. Greg Sundby
Safety and Health Manager
Wingra Redi-Mix, Inc.
P.O. Box 44284
Madison, WI 53744-4284

Dear Mr. Sundby:

As required by the Unilateral Administrative Order for clean-up of the Hagen Farm Landfill, Waste Management of Wisconsin, Inc. (WMWI) samples the well (PW03) at the above referenced facility on an annual basis. This letter transmits the analytical data for that water supply well, which was sampled on August 28, 2017. Analytical results for water samples collected from the well are also sent to the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) for review.

A brief review of the recent laboratory results for water samples collected from that well indicates the water quality is typical of groundwater in the area, and does not indicate any adverse effect from the Hagen Farm Landfill. Iron and manganese are present in the sample, and groundwater throughout this area, at concentrations consistent with historical data and above the State of Wisconsin groundwater criteria. The presence of these elements at the identified concentrations may cause staining and taste concerns.

I would recommend that you contact Ms. Sheila Sullivan from the USEPA if you would like any additional information regarding this correspondence. Ms. Sullivan is USEPA's representative for the Hagen Farm Landfill and provides regulatory oversight at the site. Ms. Sullivan's telephone number is (312) 886-5251.

Thank you for your cooperation.

Sincerely,
Waste Management of Wisconsin, Inc.

Michael L. Peterson

Michael L. Peterson, P.E.
District Manager – Closed Sites Management Group

cc: Sheila Sullivan, USEPA
Gary Edelstein, WDNR

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Reported value was between the limit of detection and the limit of quantitation.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
*	LCS or LCSD is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Waste Management
Project/Site: Hagen Farms - Groundwater

TestAmerica Job ID: 480-123334-1

Job ID: 480-123334-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-123334-1

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Comments
No additional comments.

Receipt
The samples were received on 8/29/2017 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.3° C and 3.9° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: PW03 (480-123334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The Method Blank for preparation batch 480-374525 and analytical batch 480-374754 contained Total Manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5) was not performed.

Method(s) 6010C: The total Zinc results reported for the following sample do not concur with results previously reported for this site: PW04 (480-123334-3). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6010C: The total Calcium, and Potassium results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) 6020A: The total Arsenic results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) 335.4, 9012B, SM 4500 CN E: The laboratory control sample (LCS) for preparation batch 480-375031 and analytical batch 480-375242 recovered outside control limits for the following analytes: Cyanide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.PW02 (480-123334-1), PW03 (480-123334-2), PW04 (480-123334-3), PW05 (480-123334-4) and PW09 (480-123334-5)

Method(s) 353.2: The results reported for the following sample do not concur with results previously reported for this site: PW09 (480-123334-5). Reanalysis was performed, and the result(s) confirmed.

Method(s) SM 4500 P E: The results reported for the following samples do not concur with results previously reported for this site: PW02 (480-123334-1) and PW04 (480-123334-3). Reanalysis was performed, and results greater than historically reported were confirmed.

Method(s) SM 4500 P E: The method blank for analytical batch 480-374719 contained Total Phosphorus above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. PW05 (480-123334-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: PW03

Date Collected: 08/28/17 11:15
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-2

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Vinyl chloride	ND		0.020	0.013	0.0040	ug/L		08/31/17 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
TBA-d9 (Surr)	*89*		*50 - 150*		*08/31/17 13:36*	*1*
Dibromofluoromethane (Surr)	*100*		*50 - 150*		*08/31/17 13:36*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	2.7	0.82	ug/L		09/02/17 01:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 01:28	1
1,1,2-Trichloroethane	ND		1.0	0.77	0.23	ug/L		09/02/17 01:28	1
1,1-Dichloroethane	ND		1.0	1.3	0.38	ug/L		09/02/17 01:28	1
1,1-Dichloroethene	ND		1.0	0.97	0.29	ug/L		09/02/17 01:28	1
1,2,4-Trichlorobenzene	ND		1.0	1.4	0.41	ug/L		09/02/17 01:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0	1.3	0.39	ug/L		09/02/17 01:28	1
1,2-Dibromoethane (EDB)	ND		1.0	2.4	0.73	ug/L		09/02/17 01:28	1
1,2-Dichlorobenzene	ND		1.0	2.6	0.79	ug/L		09/02/17 01:28	1
1,2-Dichloroethane	ND		1.0	0.70	0.21	ug/L		09/02/17 01:28	1
1,2-Dichloropropane	ND		1.0	2.4	0.72	ug/L		09/02/17 01:28	1
1,3-Dichlorobenzene	ND		1.0	2.6	0.78	ug/L		09/02/17 01:28	1
1,4-Dichlorobenzene	ND		1.0	2.8	0.84	ug/L		09/02/17 01:28	1
2-Butanone (MEK)	ND		10	4.4	1.3	ug/L		09/02/17 01:28	1
2-Hexanone	ND		5.0	4.1	1.2	ug/L		09/02/17 01:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	7.0	2.1	ug/L		09/02/17 01:28	1
Acetone	ND		10	10	3.0	ug/L		09/02/17 01:28	1
Benzene	ND		1.0	1.4	0.41	ug/L		09/02/17 01:28	1
Bromodichloromethane	ND		1.0	1.3	0.39	ug/L		09/02/17 01:28	1
Bromoform	ND		1.0	0.87	0.26	ug/L		09/02/17 01:28	1
Bromomethane	ND		1.0	2.3	0.69	ug/L		09/02/17 01:28	1
Carbon disulfide	ND		1.0	0.63	0.19	ug/L		09/02/17 01:28	1
Carbon tetrachloride	ND		1.0	0.90	0.27	ug/L		09/02/17 01:28	1
Chlorobenzene	ND		1.0	2.5	0.75	ug/L		09/02/17 01:28	1
Chloroethane	ND		1.0	1.1	0.32	ug/L		09/02/17 01:28	1
Chloroform	ND		1.0	1.1	0.34	ug/L		09/02/17 01:28	1
Chloromethane	ND		1.0	1.2	0.35	ug/L		09/02/17 01:28	1
cis-1,2-Dichloroethene	ND		1.0	2.7	0.81	ug/L		09/02/17 01:28	1
cis-1,3-Dichloropropene	ND		1.0	1.2	0.36	ug/L		09/02/17 01:28	1
Dibromochloromethane	ND		1.0	1.1	0.32	ug/L		09/02/17 01:28	1
Dibromomethane	ND		1.0	1.4	0.41	ug/L		09/02/17 01:28	1
Dichlorodifluoromethane	ND		1.0	2.3	0.68	ug/L		09/02/17 01:28	1
Ethylbenzene	ND		1.0	2.5	0.74	ug/L		09/02/17 01:28	1
Methylene Chloride	ND		1.0	1.5	0.44	ug/L		09/02/17 01:28	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.53	0.16	ug/L		09/02/17 01:28	1
Naphthalene	ND		1.0	1.4	0.43	ug/L		09/02/17 01:28	1
Styrene	ND		1.0	2.4	0.73	ug/L		09/02/17 01:28	1
Tetrachloroethene	ND		1.0	1.2	0.36	ug/L		09/02/17 01:28	1
Tetrahydrofuran	ND		5.0	4.2	1.3	ug/L		09/02/17 01:28	1
Toluene	ND		1.0	1.7	0.51	ug/L		09/02/17 01:28	1
trans-1,2-Dichloroethene	ND		1.0	3.0	0.90	ug/L		09/02/17 01:28	1
trans-1,3-Dichloropropene	ND		1.0	1.2	0.37	ug/L		09/02/17 01:28	1

Client Sample ID: PW03
Date Collected: 08/28/17 11:15
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Trichloroethene	ND		1.0	1.5	0.46	ug/L		09/02/17 01:28	1
Trichlorofluoromethane	ND		1.0	2.9	0.88	ug/L		09/02/17 01:28	1
Vinyl chloride	ND		1.0	3.0	0.90	ug/L		09/02/17 01:28	1
Xylenes, Total	ND		2.0	2.2	0.66	ug/L		09/02/17 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*09/02/17 01:28*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*09/02/17 01:28*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/02/17 01:28*	*1*

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Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Aluminum	ND		80.0	200	60.0	ug/L		08/30/17 20:28	1
Barium	**39.9**		6.0	2.3	0.70	ug/L		08/30/17 20:28	1
Calcium	**87.6**		5.0	0.33	0.10	mg/L		08/30/17 20:28	1
Chromium	ND		5.0	3.3	1.0	ug/L		08/30/17 20:28	1
Cobalt	ND		6.0	2.1	0.63	ug/L		08/30/17 20:28	1
Copper	ND		25.0	5.3	1.6	ug/L		08/30/17 20:28	1
Iron	**0.34**		0.10	0.064	0.019	mg/L		08/30/17 20:28	1
Magnesium	**40.2**		5.0	0.14	0.043	mg/L		08/30/17 20:28	1
Manganese	**117**	B	3.0	1.3	0.40	ug/L		08/30/17 20:28	1
Nickel	**2.4**	J	4.0	4.2	1.3	ug/L		08/30/17 20:28	1
Potassium	**1.6**		5.0	0.33	0.10	mg/L		08/30/17 20:28	1
Silver	ND		3.0	5.7	1.7	ug/L		08/30/17 20:28	1
Sodium	**51.2**		5.0	1.1	0.32	mg/L		08/30/17 20:28	1
Vanadium	ND		5.0	5.0	1.5	ug/L		08/30/17 20:28	1
Zinc	**76.6**		4.0	5.0	1.5	ug/L		08/30/17 20:28	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Antimony	ND		0.50	1.2	0.35	ug/L		08/31/17 14:44	1
Arsenic	ND		2.0	0.90	0.27	ug/L		09/05/17 13:15	1
Beryllium	ND		0.20	0.10	0.030	ug/L		08/31/17 14:44	1
Cadmium	ND		0.20	0.24	0.071	ug/L		08/31/17 14:44	1
Selenium	ND		5.0	1.5	0.44	ug/L		09/05/17 13:15	1
Thallium	ND		0.20	0.063	0.019	ug/L		08/31/17 14:44	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Mercury	ND		0.20	0.40	0.12	ug/L		08/30/17 14:43	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Calcium and Magnesium Hardness	**384**		0.50	0.33	0.10	mg/L		09/07/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Chloride	**93.3**		2.5	4.7	1.4	mg/L		09/05/17 12:59	5
Sulfate	**14.7**		10.0	5.8	1.7	mg/L		09/05/17 12:59	5
Alkalinity, Total	**358**		50.0	66.7	20.0	mg/L		08/31/17 17:26	5
Total Cyanide	ND	F1 *	0.020	0.017	0.0050	mg/L		09/05/17 11:46	1

Client Sample ID: PW03
Date Collected: 08/28/17 11:15
Date Received: 08/29/17 13:00

Lab Sample ID: 480-123334-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Ammonia (as N)	**0.14**	**J**	0.20	0.33	0.10	mg/L		08/31/17 15:43	1
Total Kjeldahl Nitrogen	ND		0.20	0.50	0.15	mg/L as N		09/11/17 11:21	1
Nitrate Nitrite as N	**0.025**	**J**	0.050	0.067	0.020	mg/L as N		08/30/17 13:06	1
Chemical Oxygen Demand	ND		10.0	16.7	5.0	mg/L		08/29/17 18:27	1
Total Dissolved Solids	**527**		10.0	13.3	4.0	mg/L		08/30/17 16:32	1
Total Suspended Solids	**2.8**	**J**	2.0	6.7	2.0	mg/L		08/30/17 20:22	1
Phosphorus, Total	ND		0.20	0.016	0.0050	mg/L as P		08/30/17 20:20	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	LOQ	LOD	Unit	D	Analyzed	Dil Fac
Color	**No**					NONE		08/28/17 12:15	1
Dissolved Oxygen, Field	**0.9**					mg/L		08/28/17 12:15	1
Field EH/ORP	**21**					millivolts		08/28/17 12:15	1
Odor	**No**					NONE		08/28/17 12:15	1
pH, Field	**7.03**					SU		08/28/17 12:15	1
Specific Conductance, Field	**928**					umhos/cm		08/28/17 12:15	1
Temperature, Field (C)	**17.5**					Degrees C		08/28/17 12:15	1
Turbidity, Field	**No**					NONE		08/28/17 12:15	1