

**Groundwater Monitoring Form**

**For DNR Use Only**

Facility Name : MADISON GAS & ELECTRIC COMPENSATORY RECHARGE  
 Contact Address : PO Box 1231  
 Madison, WI 53701-1231  
 Facility Contact : Jeffrey Marcouiller, Mng Energy Prod Support Serv  
 Phone Number : 608-251-5320  
 Reporting Period : 01/01/2023 - 03/31/2023  
 Form Due Date : 05/15/2023  
 Permit Number : **0063088**

Date Received:  
 DOC: 510912  
 FIN: 31792  
 FID: 113353020  
 Region: South Central Region  
 Permit Drafter: Brenda L Howald  
 Reviewer: Kenzie L Ostien  
 Office: Fitchburg

**Well No/Description: 801/MW-1 Infiltration Area Well**

WI Unique No:  Sample Date: 03/06/2023  
 Casing Top Elevation(Feet, MSL): 1007.47  
 Casing Top Elevation New(Feet, MSL):  
 Well Is: Broken: N Frozen: N Dry: N Sample Has: Odor: N Color: N Turbidity: N  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	33.34	feet					
227 - Groundwater Elevation	974.13	feet MSL					
105 - Chloride	23.8	mg/L	125	250			405132750
447 - Sodium Dissolved	24.0	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.29	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	8.20	su	8				
462 - Solids, Total Dissolved	152	mg/L	940				405132750
833 - Arsenic Dissolved	<0.28	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	<0.24	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.058	mg/L	0.15	0.3			405132750
809 - Calcium Dissolved	20500	ug/L					405132750
735 - Potassium Dissolved	1880	ug/L					405132750
734 - Magnesium Dissolved	8510	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	3.01	mg/L					
420 - Turbidity	0.0	NTU					

**Well No/Description: 802/MW-2 Background Well**

WI Unique No:  Sample Date: 03/06/2023  
 Casing Top Elevation(Feet, MSL): 1018.95  
 Casing Top Elevation New(Feet, MSL):  
 Well Is: Broken: N Frozen: N Dry: N Sample Has: Odor: N Color: N Turbidity: N  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	44.65	feet					
227 - Groundwater Elevation	974.30	feet MSL					
105 - Chloride	989	mg/L	125	250			405132750
447 - Sodium Dissolved	520.0	mg/L	136				405132750
274 - Manganese Dissolved	3.8	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.60	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.38	su	8				
462 - Solids, Total Dissolved	2010	mg/L	940				405132750
833 - Arsenic Dissolved	<0.28	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	<0.24	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.058	mg/L	0.15	0.3			405132750
809 - Calcium Dissolved	147000	ug/L					405132750
735 - Potassium Dissolved	1080	ug/L					405132750

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Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
734 - Magnesium Dissolved	66900	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	8.54	mg/L					
420 - Turbidity	0.0	NTU					

**Well No/Description: 803/MW-3 Downgradient Well**

WI Unique No:  Sample Date: 03/06/2023  
 Casing Top Elevation(Feet, MSL): 999.50  
 Casing Top Elevation New(Feet, MSL):  
 Well Is: Broken: N Frozen: N Dry: N Sample Has: Odor: N Color: N Turbidity: N  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	41.10	feet					
227 - Groundwater Elevation	958.40	feet MSL					
105 - Chloride	28.6	mg/L	125	250			405132750
447 - Sodium Dissolved	25.80	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	1.2	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.42	su	8				
462 - Solids, Total Dissolved	274	mg/L	940				405132750
833 - Arsenic Dissolved	<0.28	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	<0.24	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.058	mg/L	0.15	0.3			405132750
809 - Calcium Dissolved	42800	ug/L					405132750
735 - Potassium Dissolved	498	ug/L					405132750
734 - Magnesium Dissolved	19900	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	4.50	mg/L					
420 - Turbidity	0.0	NTU					

**Well No/Description: 804/MW-4 Downgradient Well**

WI Unique No:  Sample Date: 03/06/2023  
 Casing Top Elevation(Feet, MSL): 992.72  
 Casing Top Elevation New(Feet, MSL):  
 Well Is: Broken: N Frozen: N Dry: N Sample Has: Odor: N Color: N Turbidity: N  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	29.62	feet					
227 - Groundwater Elevation	963.10	feet MSL					
105 - Chloride	139	mg/L	125	250			405132750
447 - Sodium Dissolved	83.10	mg/L	136				405132750
274 - Manganese Dissolved	1.2	ug/L	60	300	1.2	4.0	405132750

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Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
330 - Nitrogen, Nitrite + Nitrate Total	1.7	mg/L	2	10	0.059	.25	405132750
377 - pH Field	7.31	su	8				
462 - Solids, Total Dissolved	538	mg/L	940				405132750
833 - Arsenic Dissolved	<0.28	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	<0.24	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.058	mg/L	0.15	0.3			405132750
809 - Calcium Dissolved	70800	ug/L					405132750
735 - Potassium Dissolved	1580	ug/L					405132750
734 - Magnesium Dissolved	33300	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	4.60	mg/L					
420 - Turbidity	2.94	NTU					

**Well No/Description: 805/MW-5 Downgradient Piezometer**

WI Unique No:  Sample Date: 03/06/2023  
 Casing Top Elevation(Feet, MSL): 1001.11  
 Casing Top Elevation New(Feet, MSL):  
 Well Is: Broken: N Frozen: N Dry: N Sample Has: Odor: N Color: N Turbidity: N  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	105.74	feet					
227 - Groundwater Elevation	895.37	feet MSL					
105 - Chloride	1.6	mg/L	125	250	0.43	2.0	405132750
447 - Sodium Dissolved	3.520	mg/L	136				405132750
274 - Manganese Dissolved	2.6	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	1.4	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.13	su	8				
462 - Solids, Total Dissolved	342	mg/L	940				405132750
833 - Arsenic Dissolved	<0.28	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	<0.24	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.058	mg/L	0.15	0.3			405132750
809 - Calcium Dissolved	71700	ug/L					405132750
735 - Potassium Dissolved	1380	ug/L					405132750
734 - Magnesium Dissolved	40300	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	4.31	mg/L					
420 - Turbidity	48.60	NTU					

**Well No/Description: 806/MW-6 Downgradient Piezometer**

WI Unique No:  Sample Date: 03/06/2023  
 Casing Top Elevation(Feet, MSL): 992.63  
 Casing Top Elevation New(Feet, MSL):  
 Well Is: Broken: N Frozen: N Dry: N Sample Has: Odor: N Color: N Turbidity: N  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
Groundwater Monitoring Parameter							
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Reporting Period: 01/01/2023 to 03/31/2023							

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 Office: Fitchburg

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	99.32	feet					
227 - Groundwater Elevation	893.31	feet MSL					
105 - Chloride	0.79	mg/L	125	250	0.43	2.0	405132750
447 - Sodium Dissolved	2.930	mg/L	136				405132750
274 - Manganese Dissolved	158	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	<0.059	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.18	su	8				
462 - Solids, Total Dissolved	304	mg/L	940				405132750
833 - Arsenic Dissolved	<0.28	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	<0.24	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.058	mg/L	0.15	0.3			405132750
809 - Calcium Dissolved	73400	ug/L					405132750
735 - Potassium Dissolved	1270	ug/L					405132750
734 - Magnesium Dissolved	34800	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	0.39	mg/L					
420 - Turbidity	1.70	NTU					

**Sample Collected By:**

Personnel Name: Bridget Russell and Ethan Schaefer Organization: SCS Engineers for MGE

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## General Remarks

MW-1: pH was over PAL  
MW-2: Chloride was over ES, Sodium Dissolved and Total Dissolved Solids were over PAL  
MW-4: Chloride was over PAL  
MW-6: Manganese Dissolved was over PAL

The Odana facility did not operate during Q1 2023.

## Laboratory Quality Control Comments