

**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 : 01/01/2022 - 03/31/2022  
 Form Due Date : 05/15/2022  
 Permit Number : **0063088**

Date Received:  
 DOC: 487013  
 FIN: 31792  
 FID: 113353020  
 Region: South Central Region  
 Permit Drafter: Brenda L Howald  
 Reviewer: Nathan J Wells  
 Office: Fitchburg

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

WI Unique No:  Sample Date: 03/10/2022  
 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	32.16	feet					
227 - Groundwater Elevation	975.31	feet MSL					
105 - Chloride	22.8	mg/L	125	250			405132750
447 - Sodium Dissolved	23.1	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.55	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	8.36	su	8				
462 - Solids, Total Dissolved	174	mg/L	940				405132750
833 - Arsenic Dissolved	0.34	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	19500	ug/L					405132750
735 - Potassium Dissolved	1970	ug/L					405132750
734 - Magnesium Dissolved	7700	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	0.59	mg/L					
420 - Turbidity	0	NTU					

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

WI Unique No:  Sample Date: 03/10/2022  
 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	42.74	feet					
227 - Groundwater Elevation	976.21	feet MSL					
105 - Chloride	1220	mg/L	125	250			405132750
447 - Sodium Dissolved	632.0	mg/L	136				405132750
274 - Manganese Dissolved	3.0	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	2.0	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.34	su	8				
462 - Solids, Total Dissolved	524	mg/L	940				405132750
833 - Arsenic Dissolved	0.53	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	163000	ug/L					405132750
735 - Potassium Dissolved	1250	ug/L					405132750

**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 : 01/01/2022 - 03/31/2022  
 Form Due Date : 05/15/2022  
 Permit Number : **0063088**

Date Received:  
 DOC: 487013  
 FIN: 31792  
 FID: 113353020  
 Region: South Central Region  
 Permit Drafter: Brenda L Howald  
 Reviewer: Nathan J Wells  
 Office: Fitchburg

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
734 - Magnesium Dissolved	61600	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	7.89	mg/L					
420 - Turbidity	0	NTU					

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

WI Unique No:  Sample Date: 03/10/2022  
 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	41.08	feet					
227 - Groundwater Elevation	958.42	feet MSL					
105 - Chloride	34.6	mg/L	125	250			405132750
447 - Sodium Dissolved	23.80	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	1.3	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.79	su	8				
462 - Solids, Total Dissolved	912	mg/L	940				405132750
833 - Arsenic Dissolved	0.46	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	45500	ug/L					405132750
735 - Potassium Dissolved	690	ug/L					405132750
734 - Magnesium Dissolved	20000	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	3.83	mg/L					
420 - Turbidity	2.55	NTU					

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

WI Unique No:  Sample Date: 03/10/2022  
 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	29.47	feet					
227 - Groundwater Elevation	963.25	feet MSL					
105 - Chloride	104	mg/L	125	250			405132750
447 - Sodium Dissolved	64.8	mg/L	136				405132750
274 - Manganese Dissolved	1.3	ug/L	60	300	1.2	4.0	405132750

**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 : 01/01/2022 - 03/31/2022  
 Form Due Date : 05/15/2022  
 Permit Number : **0063088**

Date Received:  
 DOC: 487013  
 FIN: 31792  
 FID: 113353020  
 Region: South Central Region  
 Permit Drafter: Brenda L Howald  
 Reviewer: Nathan J Wells  
 Office: Fitchburg

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
330 - Nitrogen, Nitrite + Nitrate Total	2.2	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.43	su	8				
462 - Solids, Total Dissolved	968	mg/L	940				405132750
833 - Arsenic Dissolved	0.76	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	71800	ug/L					405132750
735 - Potassium Dissolved	1620	ug/L					405132750
734 - Magnesium Dissolved	31700	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	0.03	mg/L					
420 - Turbidity	0	NTU					

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

WI Unique No:  Sample Date: 03/10/2022  
 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: Y  
 Abandoned On: Abandoned By:

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	102.19	feet					
227 - Groundwater Elevation	898.92	feet MSL					
105 - Chloride	2.8	mg/L	125	250			405132750
447 - Sodium Dissolved	3.33	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	1.5	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.40	su	8				
462 - Solids, Total Dissolved	944	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	69500	ug/L					405132750
735 - Potassium Dissolved	1300	ug/L					405132750
734 - Magnesium Dissolved	36400	ug/L					405132750
204 - Fecal Coliform	<5	#/100 ml					
186 - Dissolved Oxygen	4.64	mg/L					
420 - Turbidity	36.04	NTU					

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

WI Unique No:  Sample Date: 03/10/2022  
 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							
Facility Name: MADISON GAS & ELECTRIC COMPENSATORY RECHARGE							
Reporting Period: 01/01/2022 to 03/31/2022							

**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 : 01/01/2022 - 03/31/2022  
 Form Due Date : 05/15/2022  
 Permit Number : **0063088**

Date Received:  
 DOC: 487013  
 FIN: 31792  
 FID: 113353020  
 Region: South Central Region  
 Permit Drafter: Brenda L Howald  
 Reviewer: Nathan J Wells  
 Office: Fitchburg

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	96.02	feet					
227 - Groundwater Elevation	896.61	feet MSL					
105 - Chloride	0.85	mg/L	125	250			405132750
447 - Sodium Dissolved	2.96	mg/L	136				405132750
274 - Manganese Dissolved	147	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.065	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.26	su	8				
462 - Solids, Total Dissolved	474	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	78500	ug/L					405132750
735 - Potassium Dissolved	1280	ug/L					405132750
734 - Magnesium Dissolved	35000	ug/L					405132750
204 - Fecal Coliform	<9	#/100 ml					
186 - Dissolved Oxygen	0.46	mg/L					
420 - Turbidity	0	NTU					

**Sample Collected By:**

Personnel Name: Adam Watson Organization: SCS Engineers for MGE

# Groundwater Monitoring Form

## General Remarks

MW-1: pH result exceeded the PAL of 8.  
MW-2: Chloride result exceeded the PAL of 125 mg/L, Nitrogen, Nitrite + Nitrate Total was equal to the PAL of 2 mg/L, Sodium exceeded the PAL of 136 mg/L.  
MW-4: Nitrogen, Nitrite + Nitrate Total exceeded the PAL of 2 mg/L, TDS exceeded the PAL of 940 mg/L.  
MW-5: TDS exceeded the PAL of 940 mg/L; well also showed some turbidity and difficult to purge.  
MW-6: Manganese exceeded the PAL of 60 ug/L.

## Laboratory Quality Control Comments