

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 : 10/01/2023 - 12/31/2023
 Form Due Date : 02/15/2024
 Permit Number : **0063088**

Date Received:
 DOC: 528856
 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: 10/03/2023
 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	31.12	feet					
227 - Groundwater Elevation	976.35	feet MSL					
105 - Chloride	55.3	mg/L	125	250			405132750
447 - Sodium Dissolved	24.700	mg/L	136				405132750
274 - Manganese Dissolved	3.8	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.25	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	8.00	su	8				
462 - Solids, Total Dissolved	256	mg/L	940				405132750
833 - Arsenic Dissolved	0.32	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	0.66	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	0.108	mg/L	0.15	0.3	0.058	0.250	405132750
809 - Calcium Dissolved	41600	ug/L					405132750
735 - Potassium Dissolved	2410	ug/L					405132750
734 - Magnesium Dissolved	16400	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					113133790
186 - Dissolved Oxygen	7.03	mg/L					
420 - Turbidity	0.40	NTU					

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

WI Unique No: Sample Date: 10/03/2023
 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	44.89	feet					
227 - Groundwater Elevation	974.06	feet MSL					
105 - Chloride	1200	mg/L	125	250			405132750
447 - Sodium Dissolved	653.000	mg/L	136				405132750
274 - Manganese Dissolved	<6.1	ug/L	60	300	6.1	20.2	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.75	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.41	su	8				
462 - Solids, Total Dissolved	2410	mg/L	940				405132750
833 - Arsenic Dissolved	0.31	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	0.32	ug/L	1.5	15	0.24	1.0	405132750
248 - Iron Dissolved	<0.290	mg/L	0.15	0.3	0.290	1.250	405132750
809 - Calcium Dissolved	185000	ug/L					405132750
735 - Potassium Dissolved	1330	ug/L			1180	3950	405132750

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Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
734 - Magnesium Dissolved	74200	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					113133790
186 - Dissolved Oxygen	8.69	mg/L					
420 - Turbidity	2.27	NTU					

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

WI Unique No: Sample Date: 10/03/2023
 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	39.95	feet					
227 - Groundwater Elevation	959.55	feet MSL					
105 - Chloride	20.7	mg/L	125	250			405132750
447 - Sodium Dissolved	17.400	mg/L	136				405132750
274 - Manganese Dissolved	1.5	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	7.51	su	8				
462 - Solids, Total Dissolved	286	mg/L	940				405132750
833 - Arsenic Dissolved	0.30	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	52400	ug/L					405132750
735 - Potassium Dissolved	548	ug/L			237	789	405132750
734 - Magnesium Dissolved	22800	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					113133790
186 - Dissolved Oxygen	3.08	mg/L					
420 - Turbidity	0.50	NTU					

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

WI Unique No: Sample Date: 10/03/2023
 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	30.29	feet					
227 - Groundwater Elevation	962.43	feet MSL					
105 - Chloride	178	mg/L	125	250			405132750
447 - Sodium Dissolved	101.000	mg/L	136				405132750
274 - Manganese Dissolved	2.6	ug/L	60	300	1.2	4.0	405132750

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 Reviewer: Kenzie L Ostien
 Office: Fitchburg

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
330 - Nitrogen, Nitrite + Nitrate Total	1.8	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.37	su	8				
462 - Solids, Total Dissolved	608	mg/L	940				405132750
833 - Arsenic Dissolved	0.60	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	74200	ug/L					405132750
735 - Potassium Dissolved	1740	ug/L					405132750
734 - Magnesium Dissolved	33000	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					113133790
186 - Dissolved Oxygen	5.17	mg/L					
420 - Turbidity	2.86	NTU					

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

WI Unique No: Sample Date: 10/03/2023
 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	103.34	feet					
227 - Groundwater Elevation	897.77	feet MSL					
105 - Chloride	2.1	mg/L	125	250			405132750
447 - Sodium Dissolved	2.620	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	1.6	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.34	su	8				
462 - Solids, Total Dissolved	306	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	64900	ug/L					405132750
735 - Potassium Dissolved	1230	ug/L					405132750
734 - Magnesium Dissolved	33500	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					113133790
186 - Dissolved Oxygen	4.70	mg/L					
420 - Turbidity	4.93	NTU					

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

WI Unique No: Sample Date: 10/03/2023
 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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 Office: Fitchburg

Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	97.55	feet					
227 - Groundwater Elevation	895.08	feet MSL					
105 - Chloride	2.2	mg/L	125	250			405132750
447 - Sodium Dissolved	3.170	mg/L	136				405132750
274 - Manganese Dissolved	137	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	7.27	su	8				
462 - Solids, Total Dissolved	298	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	74000	ug/L					405132750
735 - Potassium Dissolved	1350	ug/L					405132750
734 - Magnesium Dissolved	32600	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					113133790
186 - Dissolved Oxygen	0.35	mg/L					
420 - Turbidity	0.29	NTU					

Sample Collected By:

Personnel Name: Colin Gloede Organization: SCS Engineers for MGE

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General Remarks

MW-2: LOD for Iron, Dissolved was over the PAL; Sodium, Dissolved was over the PAL; Chloride, Dissolved was over the ES; TDS was over the PAL.
MW-4: Chloride, Dissolved was over the PAL.
MW-6: Manganese, Dissolved was over the PAL.
The samples for Fecal Coliform was taken on 10/5/2023.

Laboratory Quality Control Comments