

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 : 04/01/2023 - 06/30/2023
 Form Due Date : 08/15/2023
 Permit Number : **0063088**

Date Received:
 DOC: 517938
 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: 06/06/2023
 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	33.04	feet					
227 - Groundwater Elevation	974.43	feet MSL					
105 - Chloride	28.3	mg/L	125	250			405132750
447 - Sodium Dissolved	23.0	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.46	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.89	su	8				
462 - Solids, Total Dissolved	154	mg/L	940				405132750
833 - Arsenic Dissolved	0.45	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	21700	ug/L					405132750
735 - Potassium Dissolved	1800	ug/L					405132750
734 - Magnesium Dissolved	8130	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					
186 - Dissolved Oxygen	10.36	mg/L					
420 - Turbidity	2.65	NTU					

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

WI Unique No: Sample Date: 06/06/2023
 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	44.36	feet					
227 - Groundwater Elevation	974.59	feet MSL					
105 - Chloride	540	mg/L	125	250			405132750
447 - Sodium Dissolved	308	mg/L	136				405132750
274 - Manganese Dissolved	7.3	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	0.34	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.44	su	8				
462 - Solids, Total Dissolved	1330	mg/L	940				405132750
833 - Arsenic Dissolved	0.74	ug/L	1	10	0.28	1.0	405132750
261 - Lead Dissolved	0.88	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	123000	ug/L					405132750
735 - Potassium Dissolved	885	ug/L					405132750

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Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
734 - Magnesium Dissolved	51400	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					
186 - Dissolved Oxygen	11.04	mg/L					
420 - Turbidity	1.66	NTU					

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

WI Unique No: Sample Date: 06/06/2023
 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	27.90	feet					
227 - Groundwater Elevation	971.60	feet MSL					
105 - Chloride	14.8	mg/L	125	250			405132750
447 - Sodium Dissolved	19.90	mg/L	136				405132750
274 - Manganese Dissolved	<1.2	ug/L	60	300	1.2	4.0	405132750
330 - Nitrogen, Nitrite + Nitrate Total	1.9	mg/L	2	10	0.059	0.25	405132750
377 - pH Field	7.52	su	8				
462 - Solids, Total Dissolved	340	mg/L	940				405132750
833 - Arsenic Dissolved	0.36	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	66900	ug/L					405132750
735 - Potassium Dissolved	531	ug/L			237	789	405132750
734 - Magnesium Dissolved	28000	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					
186 - Dissolved Oxygen	5.25	mg/L					
420 - Turbidity	2.03	NTU					

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

WI Unique No: Sample Date: 06/06/2023
 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	28.30	feet					
227 - Groundwater Elevation	964.42	feet MSL					
105 - Chloride	196	mg/L	125	250			405132750
447 - Sodium Dissolved	103.0	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	0.25	405132750
377 - pH Field	7.17	su	8				
462 - Solids, Total Dissolved	658	mg/L	940				405132750
833 - Arsenic Dissolved	0.56	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	83900	ug/L					405132750
735 - Potassium Dissolved	1680	ug/L					405132750
734 - Magnesium Dissolved	34500	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					
186 - Dissolved Oxygen	6.56	mg/L					
420 - Turbidity	0.05	NTU					

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

WI Unique No: Sample Date: 06/06/2023
 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	101.21	feet					
227 - Groundwater Elevation	899.90	feet MSL					
105 - Chloride	1.5	mg/L	125	250	0.43	2.0	405132750
447 - Sodium Dissolved	2.83	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	7.20	su	8				
462 - Solids, Total Dissolved	320	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	72600	ug/L					405132750
735 - Potassium Dissolved	1190	ug/L					405132750
734 - Magnesium Dissolved	38000	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					
186 - Dissolved Oxygen	4.88	mg/L					
420 - Turbidity	20.34	NTU					

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

WI Unique No: Sample Date: 06/06/2023
 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: 04/01/2023 to 06/30/2023							

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Parameter	Sample Value	Units	PALs	ESs	LOD	LOQ	Lab Certification Number
166 - Depth To Groundwater	95.0	feet					
227 - Groundwater Elevation	897.63	feet MSL					
105 - Chloride	0.92	mg/L	125	250	0.43	2.0	405132750
447 - Sodium Dissolved	2.700	mg/L	136				405132750
274 - Manganese Dissolved	160	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	6.5	su	8				
462 - Solids, Total Dissolved	308	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	80800	ug/L					405132750
735 - Potassium Dissolved	1140	ug/L					405132750
734 - Magnesium Dissolved	33700	ug/L					405132750
204 - Fecal Coliform	<1	#/100 ml					
186 - Dissolved Oxygen	0.23	mg/L					
420 - Turbidity	0.90	NTU					

Sample Collected By:

Personnel Name: Bridget Russell Organization: SCS Engineers for MGE

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General Remarks

MW-2 Background Well; Chloride sample was over the ES, Dissolved Sodium and Total Dissolved Solids were over the PAL
MW-4 Downgradient Well; Chloride sample was over the PAL
MW-6 Downgradient Piezometer; Dissolved Manganese was over the PAL

Laboratory Quality Control Comments